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Guillaume Jullian de la Fuente: On the fundamental idea of Le Corbusier's Design

Guillaume Jullian de la Fuente: la idea fundamental del diseño de Le Corbusier

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Abstract

Guillaume Jullian de la Fuente (1931-2008) was Le Corbusier's (1887 - 1965) primary assistant in many of his later projects. I first became acquainted with Jullian in 2007 at MIT, when Stanford Anderson very kindly introduced me to Ann Pendleton-Jullian and through her I met Jullian. My brief correspondence and discussions with him led me to be introduced to a facet of Le Corbusier work that remains largely unexplored, and which Jullian termed the 'Potato Building typology'. This paper is an attempt to briefly present the 'horizontal' element in Le Corbusier's oeuvre and its significance in determining the parameters of this proposed typology.

Key words: Le Corbusier, typology, design discourse, spatial order, horizontal urban-architectural constructs.

Resumen

Guillaume Jullian de la Fuente (1931-2008) fue el asistente principal de Le Corbusier en muchos de sus últimos proyectos (1887-1965). Para 2007, en el Massachusetts Institute Of Technology (MIT), tuve conocimiento por primera vez de Jullian cuando Stanford Anderson, muy amablemente, me presentó a Ann Pendleton-Jullian. Por medio de ella conocí a Jullian. Nuestras breves comunicaciones y discusiones me introdujeron en una faceta del trabajo de Le Corbusier que aún se mantiene ampliamente inexplorada y que fue denominado por Jullian *Potato Building typology*. Este artículo es un breve esfuerzo para presentar el elemento "horizontal" en el trabajo de Le Corbusier y su significado al determinar los parámetros de la tipología que propuso.

Palabras clave: Le Corbusier, tipología, discurso del diseño, orden espacial, construcciones urbanas y arquitectónicas horizontales.

Introduction

Une telle disposition des bâtiments est une conception paysagiste. nous connaissions le site a merveille; nous sommes loin de la ville, le lac, les arbres, les prairies, les montagnes, des horizons immenses. On ne pouvait songer a une conception urbaine, forum, piazza de Venise, place de l'opéra, etc., ou des successions de rues, de places, des masses de bâtisses diverses peuvent épauler les coupoles ou les dômes couronnant une composition pyramidale. Chez nous, la fermeté n'était point dans des soubassements cyclopéens ; elle était en haut, sur le ciel, par la ligne impeccable d'une unique horizontale.

Le Corbusier: On the fundamental idea of his design¹

This paper, in a way, argues that during the later part of his life Le Corbusier moved away from his initial summation of a figure-ground discourse to more of an inside-outside discourse where the distinction between urban/landscape and architecture/built-object becomes secondary and almost irrelevant. In this paper I will investigate Le Corbusier's extrapolation on the concept of the horizontal within his design vocabulary and, hence, try to understand the significance of the potato building typology.

The key drawings that are now considered to be part of Potato building typology² studies series are archived under two main projects: The Venice hospital project 1962–1965 which included a single yet extremely significant sketch by Le Corbusier; and the Musée du XXe siècle, Nanterre, France, 1965, which includes the sixteen sketches that are now considered to be the main point of reference for the typology. I will be reviewing the seminal sketches from both the above projects along with some early sketches and drawings from the Jullian Archives in Chile, outlining the initial sketches of the Ambassade de France, Brasilia, Brazil, 1964. The Brasilia project has been included in this study for its similarity in design with the two latter projects.

It is postulated that all the above mentioned projects accentuate the concept of horizontal configuration within their design discourse. The development of any discourse, according to Diana Agrest (1974), may develop along two semantic-syntactic lines; one theme in the expression or content may lead to another, either by means of similarity or by contiguity.³ The most appropriate term for the former term is 'metaphoric' while the later might be considered to be 'metonymic'.⁴ In Le Corbusier's later projects he took recourse to both metaphoric and metonymic design elements through the introduction of transparencies. The concept of transparency in architecture has become synonymous with the readings of Colin Rowe's text and analysis of Le Corbusier's design of the Villa Stein (1926). This paper will be reviewing the concept of transparency as a form of 'horizontal stratification' that analyses the site and the project as a series of inter-contextualized layers – thereby introducing a broader spatial order.

1 Le Corbusier, *Une maison - un palais*, 76

2. Le Corbusier's Potato Building Typology (1962-1965) consists of a series of thirteen draft sketches drawn by Le Corbusier during the last years of his life. The author was introduced to these drawings along with the term by the late Guillaume Jullian de la Fuente in 2007. The drawings and typology has since been analysed and explored by the author with the support of RIBA Research Trust Award (2011-2013).

3 Jackson, *Studies in Child Language and Aphasia* (The Hague: Mouton, 1971) as quoted in Diana Agrest, "Design versus non-Design".

4 This is developed by Mario Gandelsonas, "On reading architecture", *Progressive Architecture*, May 1972; idem; *Linguistic and Architecture*, *Casabella* 373 (February 1973), as quoted in Diana Agrest, "Design versus non-Design".

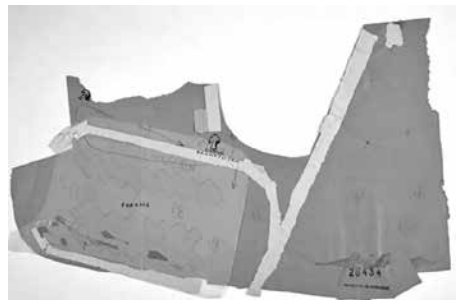
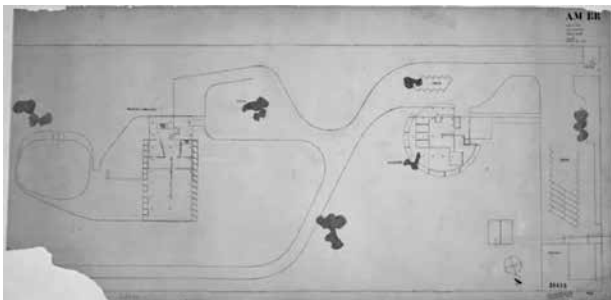
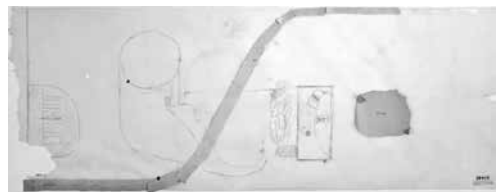
Gyorgy Kepes in the *Language of Vision* (1944) provides an excellent definition of this 'spatial order', in his summation on the concept of transparency:

If one sees two or more figures partly overlapping one another, and each of them claims for itself the common overlapped part, then one is confronted with a contradiction of spatial dimensions. To resolve this contradiction, one must assume the presence of a new optical quality. The figures are endowed with transparency; that is, they are able to interpenetrate without an optical destruction of each other. Transparency, however, implies more than an optical characteristic: *it implies a broader spatial order*. Transparency means a simultaneous perception of different spatial locations. Space not only recedes but fluctuates in a continuous activity. The position of the transparent figures has equivocal meaning as one sees each figure now as the closer and now as the further one.⁵ [Emphasis is the authors]

- 5 Gyorgy Kepes, *Language of Vision*, 1944 as borrowed in Rowe and Slutzky, *Transparency: Literal and Phenomenal* (1955) in Rowe, *The Mathematics of the Ideal Villa and Other Essays*. As suggested by Sebastien Marot, *Extrapolating Transparency*, in *L'architettura come testo e la figura di Colin Rowe*, Marsilio: IUAV 2010.
- 6 Colin Rowe and Robert Slutzky, *Transparency I and II*, written in 1956 and first published in 1971. It should also be noted here that Tim Benton (1987) in *The Villas of Le Corbusier, 1920-1930: with Photographs in the Lucien Hervé Collection* argues that the effect of transparency, which depends on the curtain walls, was not part of the initial design, but was introduced gradually in the course of a six month design process.

In their analysis of Ville Stein, Rowe and Slutzky (1956) had argued that; Le Corbusier is primarily occupied with planar qualities of glass... in itself, each of these planes is incomplete or perhaps even fragmentary; yet it is with these parallel planes as point of reference that the facade is organised, and the implication of all is that of a vertical layer-like stratification of the interior space of the building, of a succession of laterally extended space travelling one behind the other.⁶

The Brasilia project uses a similar mechanism as the lateral layer-like planar stratification discussed above. However, in this project, the field of insertion occupies the horizontality of the site in its entirety. This becomes quite apparent in the initial studies and sketches of the Brasilia project (fig. 1). The drawings emphasise a schematic interpenetration of a number of horizontally placed forms without effecting an optical destruction or distortion of each other.



In a sense, phenomenal transparency is generated by the site rather than the individual architectural objects placed within its composition. The site, with its deep and shallow interspersed voids, provides a contradiction of spatial dimensions with the added complexity of the built objects as forms and planes that recede and penetrate within this field. A series of layers are enforced with the horizontality of the site acting as the main axis point of inference. The multiple vertical and perpendicular layers, which intersperse within this horizontality, can, from time to time, draw attention to themselves; and this gridding of space can then result in continuation of interpretations.⁷

Whereas literal transparency tends to generate confusion in space, phenomenal transparency and in this case the Brasilia project, organises its multivalence.⁸ Le Corbusier's Venice hospital project further develops this design strategy by extending the variables from the site into the urban fabric and vice versa. A detailed analysis of the conceptual sketch for this project (fig. 2) clearly substantiates this claim.

A brief description of the above sketch was kindly provided by Prof. Ann M. Pendleton-Jullian after her conversation with Guillaume Jullian de la Fuente in February 2007:

[...] it is a quick sketch 'done like that' [by Le Corbusier] to put down some first ideas. Le Corbusier was interested in buildings that grow in a certain way from the inside. The right bottom half of the sketch was indeed the idea of an amorphous shape that grows from the inside. The upper right corner was a sketch for the beginning of the first unit for the sick. To the left in the bottom half of the sketch is the first idea of a square-ish plan with a court in it, and to the right of that (down a little) is the idea of the light coming from the top. He [Jullian] says that this sketch was given to Professor Mazzariol in Venice. Also,

- 7 I borrow the analogy and vocabulary from Colin Rowe and Robert Slutzky, *Transparency: Literal and Phenomenal 1* (1955), in Rowe, *The Mathematics of the Ideal Villa and other Essays*, 169-170.
- 8 I rephrase and recontextualize the argument from Marot, "Extrapolating Transparency", 123.



Figure 2. Le Corbusier's Venice hospital project, initial sketch AP, IUAV Venice

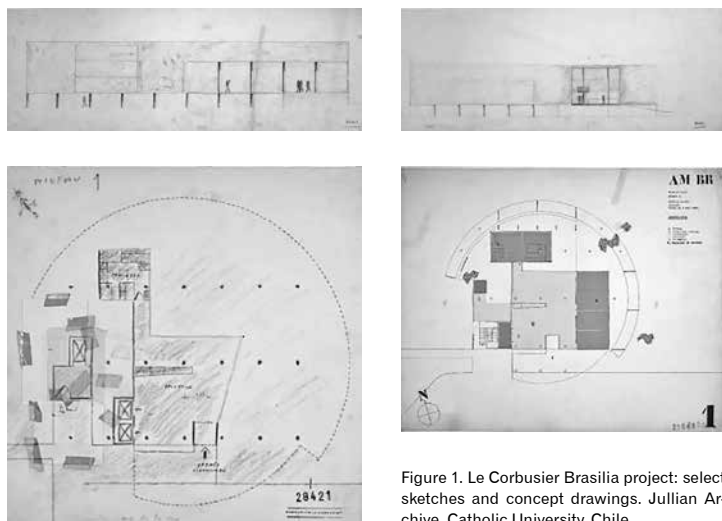


Figure 1. Le Corbusier Brasilia project: select sketches and concept drawings. Jullian Archive, Catholic University, Chile

that Le Corbusier was working on several plans at once, including a museum for La Défense in which he was exploring the idea of the 'Potato Building'.⁹

9 The author met the wife of Guillaume Jullian de la Fuente, Prof. Ann M. Pendleton-Jullian, Faculty of Architecture, MIT, during her research trip to Cambridge MA in Feb. 2007.

I believe that the idea of an 'amorphous shape' that grows from the inside is again an element of phenomenal transparency, in which the same element or portion of space can be incorporated into different and virtually dissonant readings or spatial organisations. The elements of the cityscape that the architect borrows in the hospital project (squarish plan with court inside replicates the spatial configuration of the city and the light coming from the top replicates the skylights common in dense medieval urban cities such as Venice) triggers the subject's mental activity, who is prompted to develop planes that, although suggested rather than given, nevertheless weave a network of expectations that the volumes defined within the project will continually surprise or reorient. Here phenomenal transparency generates an element of depth, even though its devices appear to contain or restrain it.¹⁰ This element of depth is succinctly analysed by Rowe, in his studies of Le Corbusier's unbuilt project, the League of Nations (1926-7); Le Corbusier's planes are like knives for the apportionate slicing of space. If we could attribute to space the qualities of water, then his building is like a dam by means of which space is contained, embanked, tunnelled, sluiced, and finally spilled into the informal gardens alongside the lake.¹¹

10 I rephrase and recontextualize the argument from Marot, "Extrapolating Transparency", 123.

11 *Ibid.*, 174.

In the case of the hospital project this tunnelling and rechanneling of space is as much reflected into the city, as the urban context of the city is refracted back into the project. Thereby, it attributes an almost flux like quality to the project.

This flux like attribute in design is further explored in Le Corbusier's Musée du XXe siècle project of 1965. Here the sketches and studies provide an insight into two distinct yet parallel modes of research. The first is the use of the pinwheel system as the axial point on the basis of which the entire project is structured and rotated (fig. 3a). This centrality of the pinwheel system is also evident in the hospital project and the Strasbourg project (fig. 3b).

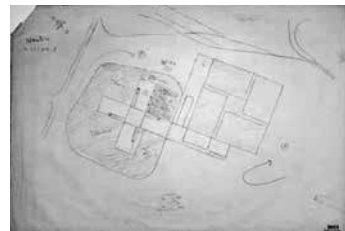
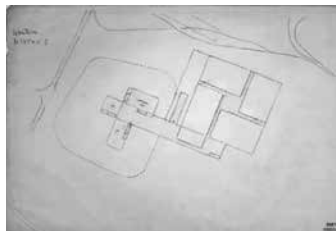
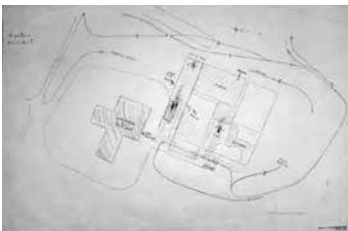


Figure 3a. Le Corbusier's Musée du XXe siècle, initial sketches and studies. Jullian Archives, Catholic University, Chile

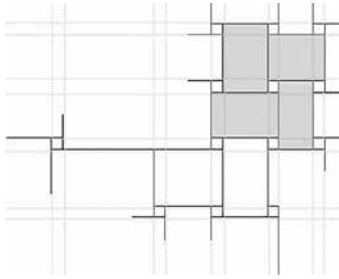


Figure 3b-i. Diagrammatic rendering of Hospital project [Author]. 3b-ii Le Corbusier's Strasbourg Project. FLC, Paris

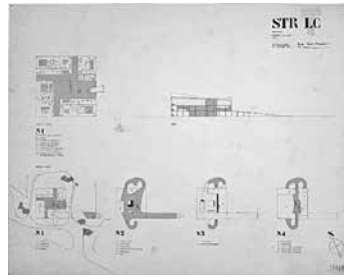


Figure 3b-ii. Le Corbusier's Strasbourg Project. © FLC/ ADAGR, Paris and DACS, London 2014

The pinwheel system, according to Alan Colquhoun, dislocates and it is dynamic...being a part of the ideology of the 19th century against static symmetry... and because it is asymmetrical, it rotates and connects,¹² thereby propelling a sense of continuous movement and flow within the built and void spaces that Rowe identified with the quality of water. The water analogy is an important one here, since it gives attributions to the qualities of amorphous shapes that Jullian identified in his analysis of the potato building typology.

The above observation in a sense correlates with my earlier discussions with Alan Colquhoun on the Potato building typology, the primary concept of which is that the external form of the structure continues to be unimportant as it is only the internal mechanism that is of significance.¹³ According to Marot, the pinwheel system further promotes oblique perceptions and diagonal views which always offer the unambiguous perception of a background and a foreground. In other words, it is like a machine explicitly fashioned to produce maximum of literal depth.¹⁴ The horizontality thus becomes the key element of discursion in this design strategy. In contrast, the planes introduced within this discussion define a system of striations that confine and connect this sense of rhythmic flow between the internal and external spaces and between the urban and architectural voids.

This can be further understood within the design rhetoric presented in the second series of studies for the Musée du XXe siècle project. These were comprised of thirteen schematic drawings that Jullian classed under the potato building typology. (fig. 4) These sketches also include a number of comments and observations that Le Corbusier jotted down as part of his explanatory notes to his research. These sketches provide an acute study of the fluid transportation analogies found in Venice, by means of a schematic diagram of the relationship between the lagoon, the *rii* and the *calli*. The writing on the top right hand of fig. 4a reads: *Venice the mesh and the hospital [horizontal]*. In fig. 4b Le Corbusier describes his type solution: *it is a puddle pool*. He again mentions the *experience of Italy, sans façade, but with three points of entry on a street interior, courts... patios etc.*, and in fig.4c clearly remains a study of geometrical and additive schema.

12 Author's discussions on the pinwheel system with Alan Colquhoun, April 2007.

13 The above observations are based on the author's discussion with Alan Colquhoun in Autumn 2007.

14 Marot, here discusses the pinwheel system in the context of the Bauhaus. "Extrapolating Transparency", 124.

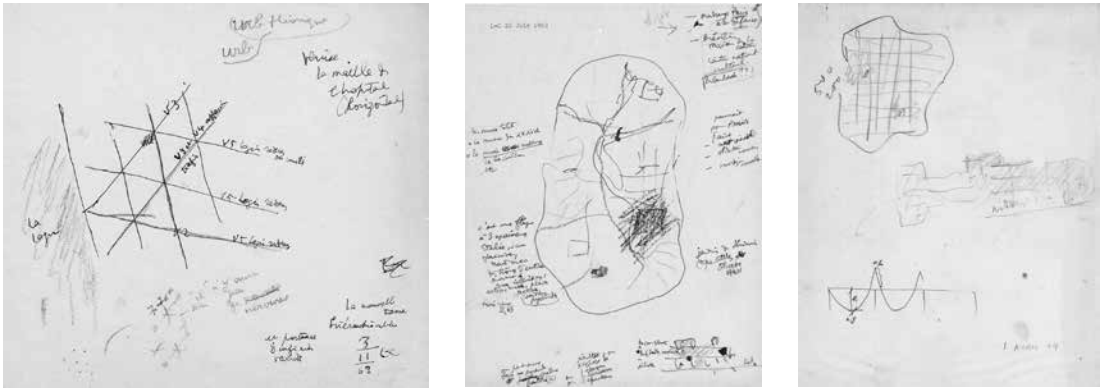


Figure 4 a, b, c. Select drawings from Le Corbusier's Potato building typology series. Hôpital, Venice, Italy: Diagram, 1963; Musée du XXe siècle, Nanterre, France: Sketc, 1963 and 1964. © Fonds Guillaume Jullian de la Fuente. Collection Centre Canadien d'Architecture/ Canadian Centre for Architecture, Montréal

The above drawings distinctly reference the proposed hospital for Venice along with the city itself as important guiding principles in the study of horizontal structures and possible sprawls. As is my understanding, Le Corbusier identifies:

1. Venice as a Mesh, outlining the schematic relationship between the lagoon, the *rii* and the *calli*. The proposed hospital project referenced is an important example of this horizontal mesh.
2. Type solution: *sans façade*. Identifying three points of entry, through the interior streets, courts and patios.
3. The logic of the horizontal circulation system is emphasized as well as a restricted building height. The piloti creates a porous geometrical structure.

Based on the above analysis, it can be postulated that in the studies of the 'Potato Building' typology, the proposed Venice hospital project's scheme was used as a diagram to determine the logic of horizontal circulation in resolving urban planning issues.¹⁵

It should however be noted here that, for Le Corbusier, this horizontality of the site, and/ or the broader sense of horizontal circulation, may have acted as a principle of abstraction in which he continued to disturb and retract the observer at his will. This is further substantiated in Rowe's analysis:


With regards to this idea of disturbing, rather than providing immediate pleasure for the eye, the element of delight in modern architecture appears chiefly to lie. An intense precision or an exaggerated rusticity of detail is presented within the bounds of a strictly conceived complex of planned obscurity. Also, a labyrinthine scheme is offered which frustrates the eye by intensifying the visual pleasure of individual episodes, only for them to become coherent as a result of a mental act of reconstruction.¹⁶

¹⁵ As postulated in my PhD dissertation: Shah, "Le Corbusier's Venice Hospital Project (1964-65)".

¹⁶ Rowe, "Mannerism and Modern Architecture", 45.

The idea of a 'mental act of reconstruction' remains an important element in Le Corbusier's later projects and it seems it is the key element in understanding the new typology that he was developing at the atelier. In *Une Maison, un palais* (1928) Le Corbusier had identified this mental construct by stating: *Jamais l'œuvre architecturale participant du site qui l'entoure n'a dit son dernier mot.*¹⁷

17 Le Corbusier, *Une Maison, un palais*, as quoted in Marot "Extrapolating Transparency", 127.

What Le Corbusier initiated in 1928 as an ongoing horizontal discourse between the built object and site, he developed in his later years as a substantially dynamic and discursive exercise between a number of horizontally stratified internal and external urban/architectural mechanisms that both connect and refute the viability of voids and spaces. In a way it can be argued that Jullian's direction and personal archives both in Chile and CCA have been instrumental in understanding this facet of Le Corbusier's oeuvre. 

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