Making Science Seen: Le Corbusier’s Photomural at the Pavillon Suisse

Daniel Naegele, Ph.D.
Iowa State University

ABSTRACT: Le Corbusier aligned science with Modern movement architecture. At the opening of the Pavillon Suisse in 1933, he was directed by the Pavillon’s president to ‘cover up’ the exposed stone wall in the building’s lounge-dining room. Opposed to the decorative arts, Le Corbusier conceived of a photomural comprised of highly scientific, dramatically enlarged ‘new vision’ views of nature, artistically composed and integrated into the building. The mural imaged science and high technology, metaphorically aligning both with the new architecture. The provincial press understood the mural as propaganda exuding the virtues of high materialism. André Breton praised the mural as an example of ‘concrete irrationality’ that set the ‘object in crisis’. Like beauty, Le Corbusier’s picture of science resided, it seemed, in the eye of the beholder. This paper proceeds by interpreting Le Corbusier’s early works as ‘exhibition’, underscoring notions of propaganda and mobility in Modern movement architecture, and then details the demand for the Pavillon Suisse photomural, its make-up, and the assessment of the mural by the press and by artists. It attempts to illuminate one way of making science visible while underscoring the ambiguity of visual imagery in an age when science carried great authority.

INTRODUCTION
1 Fresh Eyes

In 1933, with the opening of the Pavillon Suisse, a dormitory for Swiss students in Paris, the President of the Cité universitaire—the community in which the building resided—was appalled by Le Corbusier’s brutalist gesture of leaving the curved rubble wall exposed to the inside of the students’ dining lounge. He directed Le Corbusier to cover it up with pictures, this despite the architect’s adamant opposition to the decorative arts. What to do?

Le Corbusier had intended the exposed wall as manifestation of his belief in a direct, honest use of material. He understood the rustication and coloration of the stone as part of a larger palette, a palette that—conspiring with the rough-cast concrete ‘legs’ of the building—offered contrast to the ultra-slick block of sleeping rooms. A traditional French wall, the rubble design had been employed by Le Corbusier to great effect at the Villa de Mandrot a few years earlier. Its carefully construed mortars projected beyond the face of the wall and appeared a veil in front of the stone itself.

In 1933, in the initial years of Great Depression, Le Corbusier could only do as his client directed. His cover up, though, would not be of the arts-and-craft kind; rather he would conceal the wall with a photomural. Together with his partner, Pierre Jeanneret, he composed a mural comprised of 44 ‘new means’ images of nature. The photographs came from Parisian scientists and naturalists and were generally of three kinds: x-ray, microscopic, and aerial views of nature. There were exceptions, these being centrally located in the photomural and essential to Le Corbusier’s polemic. They showed mass-produced building materials and the Pavillon Suisse itself under construction.

The photomural was a visual polemic, promoting Le Corbusier’s well-honed new vision. Throughout the 1920’s, when objectivity, materialism and machine technology dominated his writings on art and architecture, Le Corbusier was intrigued and delighted with ‘seeing things’ not visible to the unaided eye. This fascination did not contradict his firm belief in science and rational thinking, though. On the contrary, making visible that which could not be seen was both the task and procedure of science then, and the 1920’s and 1930’s were decades in which ‘seeing through things’ and thus unveiling layers of life not visible to the human eye, was a much-celebrated, popular activity.

In 1923, in Vers une architecture, Le Corbusier wrote, “Our epoch is fixing its own style day by day. […] It is there under our eyes. Eyes which do not see.” And he urged his readers to adopt a new way of thinking.
about what and how they saw. "Forget for a moment that a steamship is a machine for transport and look at it with a fresh eye," he advised, look at it "as an architect (i.e. a creator of organisms)."

"Fresh eyes" were found in tools intended to enhance vision: cameras, telescopes, microscopes, binoculars, distorting mirrors, instrument panels, celestial charts, maps, and speedometers. Zeppelins and airplanes offered views of the world never before experienced. Photographs featured in the then-blossoming illustrated press were indicative of the public's appetite for images of the otherwise invisible or momentary. The photograph was, itself, a new way of seeing.

2 Representation Becomes Architecture
For Le Corbusier in these years, representation was becoming to architecture. In addition to his novel houses packaged in geometry and elevated on legs, Le Corbusier designed two exhibition pavilions in the 1920’s. In both pavilions, representation was integral and essential. Both were promoted as portable.

Portability was an essential and distinguishing quality of the new technology architecture. "With the plan in our pockets," Le Corbusier wrote of the house he and Pierre Jeanneret designed for his parents in the mid-1920’s, "we spent a long time looking for a site." More so than the house, though, the exhibition pavilion provided a program for building in which portability and graphic art were vital, essential functions. The pavilion was both architecture and propaganda art. It was a sign, a billboard, a display intended to call attention to itself. Functional, its function was to provoke.

With his 1925 Pavillon Esprit Nouveau (Figure 1), Le Corbusier quite literally built a full-scale model. The Pavillon represented modern architecture itself. It presented a typical living unit in Le Corbusier's "Immeuble-Villa" housing complex while serving to test new materials and techniques. It possessed a kind of economy. A simple painted rectilinear box, it was promoted as a portable building. Le Corbusier intended it to be sold, dismantled and reassembled in a Paris suburb after the exhibit. He priced it at 209,000 Francs excluding land.

![Figure 1: Pavillon Esprit Nouveau. Source: FLC](image1)

In 1927, the Nestlé Pavilion was built—not as the representation of a new architecture, but as advertisement (Figure 2). Demountable and portable, it traveled from exhibition to exhibition—brightly colored signs artfully collaged into an on-the-ground, walk-thru billboard.

![Figure 2: Nestlé Pavilion. Source: FLC](image2)
Le Corbusier wrote on both pavilions, but the letters and words that the buildings carried were not decoration. Rather, writing and architecture were conjoined, made one. Delicate, logical, abstract, autonomous, the mural was undoubtedly propaganda, but also art. Le Corbusier would employ it as integral element of the Pavillon’s palette. In the hands of Le Corbusier, the photo would be similarly integrated into architecture.

3 Make Bigger, Add Function
Le Corbusier was commissioned to design the Pavillon Suisse in the late 1920’s, a grand project far larger than the residences and small pavilions he had previously built. (Figure 3) Like the Pavillon Esprit Nouveau, the Pavillon Suisse was itself a kind of set piece, a building ‘type’ Le Corbusier believed essential to his various visions of a contemporary city. Heavy, rectilinear, on stilts, it permitted the flow of continuous landscape below it, offering an entry and necessary amenities in a slightly whimsical building slipped under the elevated block. Though soil conditions were not conducive to carrying the enormous weight of the 5-story building on only 6 points, Le Corbusier was eager to build the box-on-stilts model and ordered tremendously deep piles to be drilled.

In the Œuvre complete-2, Le Corbusier imaged these piles not as an unnecessarily costly design decision, but as a technological feat (Figure 4)—contemporary building science defeating an inconvenient obstacle imposed by nature. The Œuvre complete presented Le Corbusier’s activities as ‘reportage’. This reportage was not personal promotion, but objective, outside review and assessment. With this forum, Le Corbusier
could cast himself as both daring and progressive, frequently achieving this combination by admonishing those who were critical of his enterprise. This was the case regarding the Pavillon Suisse photomural. The one-sided debate shows Le Corbusier at his dialectical best.

As was noted, Le Corbusier had specified that the uninterrupted 36-foot curved wall in the lounge-dining room be of rubble, its surface exposed on the interior. When the building neared completion in the Spring of 1933, according to Le Corbusier, the President of the Cité Internationale asked him to put "aux murs de ce Pavillon Suisse de grands tableaux représentant les rocs, les neiges et les glaces, etc., etc... rappelant leur patrie aux pauvres étudiants venus se perde dans le Paris dangereux."9

Regarding this request, Le Corbusier noted "J'eus alors l'idée de réaliser, en deux ou trois jours, le premier 'mural photographique,' considéré non pas comme un document mais comme une œuvre d'art."10 The resulting photomural was composed of forty-four square photographs, each approximately one meter by one meter, butted together covering the curved wall of the Pavillon Suisse library floor to ceiling and end to end. (Figure 5). Eighteen or so additional images covered the lozenge-shaped ‘column’ in the entry hall, next to the staircase (Figure 6). All the photographs on the column were micro-cellular views, most of them white, ghost-like images on a black background.11

Figure 5: left portion of Pavillon Suisse photomural. Source: FLC

Figure 6: photomural on elliptical 'column' in lobby of Pavillon Suisse. Source: FLC

The photographs were first selected by Le Corbusier and Pierre Jeanneret from pre-existing photographs and then re-composed. Thirty years after its creation, Le Corbusier told how he found the 'documents' for this mural in "chez les naturalistes, dans les laboratoires, chez les araignées, chez les briqueurs, sur les dunes de sable et les plages d'océan à marée basse, etc. etc." He described the murals as "Magnifique tapisserie opulente et belle en soi, d'un gris profond, - un camaïeu: tout simplement le gris des photographies au bromure."12

The images—both alone and as an ensemble—tended towards abstraction and otherworldliness. Most of them presented unnatural, 'new vision' views of nature and of man-made materials, views which emphasized patterns or designs. Micro-photography and the aerial photograph were prominently represented. Micro-photography had a long history in France, was popular among certain avant-garde artists at the time,13 and
as early as 1921 was featured in L’Esprit Nouveau. Some of the micro-photographs shown in the mural were by the renowned photographer Laure Albin-Guillot, who collaborated with numerous French scientists.14

The images of stacked, mass-produced building materials featured in the mural were similar to photographs made at the Bauhaus some five years earlier; while close-up abstractions mirrored those done by Edward Weston and Paul Strand in the mid- and late-1920’s. The abstract landscapes on the right were similar to those made in Egypt by Frederic Boissonnas at the time.15 Other mural images were comparable to those found in Ozenfant’s 1927 book, Foundations of Modern Art. Plans, the journal Le Corbusier co-edited in the early thirties, featured similar, if weaker, images; and in the early 1930’s, aerial, micro- and close-up photography were regularly found in the popular press as were the truly remarkable photographs of Karl Blossfeldt, whose extraordinary images of plant life were celebrated by numerous avant-garde artists, from Ozenfant to Bataille.16 As a magnifique tapisserie the photo mural bore remarkable resemblance to the exercises in pictorial composition done years earlier by students in the basic design course of Johannes Itten at the Bauhaus.

4 Imaging Science as Art
The geological and biological themes dominating the mural were indicative of the organic analogies Le Corbusier adopted at the time to describe architecture metaphorically.17 In Croisade, published the same year that he was asked to make the mural, he wrote:

Where is architecture? […] everywhere nature manifests in its creations: geology; organic life; seeds, roots, trunks, branches, leaves, flowers and fruits […]18

And three years later in his reply to a group of modern architects in Johannesburg who had written him for counsel regarding inspiration for a new architecture, Le Corbusier wrote:

[...] of combinations of harmonious engenderings in which nature offers a spectacle in each thing. Inside to outside: serena perfection, Plants, animals, trees, sites, seas, plains or mountains. Even the perfect harmony of natural disasters, of geological cataclysms, etc. Open your eyes! […] Architecture is an extraction of the spirit and not a trade [...]19

And something like this must have been Le Corbusier’s message to the students for whom he created this photomural. Such analogies were an essential part of his own early education in Switzerland, so much so that the photomural might be regarded as an ‘advanced technology’ version of the drawings of the patterns of nature that filled the walls of the School of Art studio that he taught there in 1915 (Figure 7).20

![Figure 7](image_url)

Figure 7: hand drawn exercises in abstracting nature from La Chaux des Fonds School of Art, ca. 1915. Source: FLC

Yet despite the intended wholesomeness of the message, in December 1933, six months after the inauguration of the Pavillon Suisse, the Lausanne Gazette denounced the photomural as a corruption of minors. Le Corbusier responded by reproducing their article in full in Volume-2 of his Œuvre complète.21 The Gazette article dismissed the exterior of the building, labeling its aesthetic as “the Parthenon of the modern Greeks’ emptiness” and noting that this kind of Noah’s Ark that is the Hellenic pavillion, goes quite well with the Swiss Pavilion and what is, I believe, a water tank, towards Gentilly.22 The author of the article (it was signed “CH. - F.L.”) believed the most troubling aspect of the building was its interior, specifically its photomural. “I will tell you firstly about that which is against the walls, the same as the walls, on the walls,”23 he began, intelligently identifying the mural’s ambiguous relationship to architecture. He
then proceeded to compare the images of the mural with those featured in *L'Esprit Nouveau* and in Ozenfant's *Art*. Insightfully, he concluded that:

> [..] a theory accompanies these photographs. A theory of materialism: "everything is only a question of structure; everything is only, more or less, good organization of material." (The soul, naturally, the Spirit, are replaced by structuralization).

What affect, the *Gazette* author asked, would this have on Swiss youth—"intellectuals en formation"—who, by necessity, must reside in this dormitory and daily come into contact with "cette théorie de matérialisme"? The author answered his rhetorical question by directing the reader to:

> Look at any number of Soviet Russian illustrations. Russia is a country that knows well the role that image plays. *Here is its name: Propaganda.*

Presumably Le Corbusier published this reactionary review to satirize the *Gazette*, defusing its criticism, while at the same time, portraying himself and his art as provocative, stirring, radical, important, and quite distant from his very provincial native land. Yet the *Gazette* criticism astutely underscored the most significant quality of the mural: its narrative and symbolic capacity.

### 5 Object in Crisis

Less than two years later, in 1935, as a guest of the Czech functionalist architect Karel Teige, the Surrealist André Breton gave a lecture titled "Surrealist Situation of the Object." Breton was no fan of Le Corbusier; the opposite was true. But in his lecture, he heartily praised the photomural Le Corbusier had created for the Pavillon Suisse, highly commending it as an example of "concrete irrationality." He viewed its inclusion in the Swiss Pavilion—a building he felt answered "all the conditions of rationality and coldness that anyone could want in recent years since it is the work of Le Corbusier"—as indication that architecture was again attempting "to break through all its limits." He compared it directly to "the desire for ideal things" found in Art Nouveau architecture, likening Le Corbusier's "irrationally wavy" wall to the mailman Cheval's 'ideal Palace' and to Gaudi's "magnificent church, all in vegetables and crustaceans, in Barcelona." Breton understood the mural as an example what he called 'the object in crisis', and applauded it for exactly that reason.

It is doubtful that Breton had personally seen the Pavillon Suisse before making his remarks, for the curved wall and lozenge-shaped column that held the photomural were not irrational waves. Nor did Le Corbusier intend the photomural to provoke the irrational, quite the contrary. But Breton recognized in the photomural what pertained and again evident to Le Corbusier at the time of its execution. The mural was a representational overlay. As such it placed 'irrational order' beside the 'rational order' of Corbusian architecture, created a dialectic condition that was both spatial and humanizing. It dematerialized architecture. Like camouflage, it placed the object in crisis, shifting emphasis away from a sense of architecture as an objective artifact, reinforcing the subjective and phenomenal perception of building and space.

### 6 Making Science Seen

At the end of his life, in the 1960 book *Creation is a Patient Search*, Le Corbusier again considered the photomural and again returned to the *Lausanne Gazette* article. He noted that some had regarded the mural with enthusiasm, but From others, for example the Lausanne Gazette—a newspaper which benefited from an international situation during the First World War—came front page headlines which read "THE TRUTH ABOUT THE PAVILLON SUISSE OF THE CITE UNIVERSITAIRE: Who requested this photographic mural? Who has dared to accept it? It is necessary to denounce those responsible! A single goal might describe this mural: "IT IS THE CORRUPTION OF MINORS!"

To his account of the article, he added: "Ten years later, Hitler's people, during the Occupation, sharing the anxiety of the Lausanne Gazette, scraped this photo mural from the Pavilion."

Nevertheless, the claims made by the *Lausanne Gazette* did have merit. The images of the photomural, like those found in Le Corbusier's many books, were unavoidable. Anyone who resided in the Pavillon had to see them. And they were propaganda. In the late-1930's, the photomural became commonplace, almost banal. The renowned photographer Gisele Freund, in her review of the 1937 Paris Exposition, described it as perfect for propaganda because, she said, its "power to exactly reproduce reality" conferred on it "documentary value of the first order."

When world war and atomic power brought the human race to the brink of destruction in 1945, Le Corbusier could no longer align a redemptive Modern movement architecture with science and technology. For the Pavillon Suisse, in place of the photomural that had been 'scraped' from its wall, Le Corbusier painted a mural of myth and color. And if the photomural had de-materialized architecture throwing the object into crises, the new mural—painting that might have been considered decorative appliqué before Picasso's *Guernica*—re-materialized it. Ambiguity was dissolved even as science itself turned from hard to soft.
ENDNOTES


References below to 'FLC Box' are to archival material at the Fondation Le Corbusier in Paris as organized in the 1990's. This material has since been digitized and ordered according to a new numerical system. Unfortunately, no cross-referencing between the old system and the new was established.

In his 1925 L'Esprit Nouveau essay "Milestones," Le Corbusier insisted "The decorative arts were anti-technology[...]. Their efforts were directed to opposite ends from the common effort of the age. They aimed to restore manufacture by hand." Because of this, he concluded, "The physical products of decorative arts have no place within the context of the age." "Milestones" became a chapter in Le Corbusier's L'Art decoratif d'hourd'hui.


1These extra-somatic devices are depicted in Amédée Ozenfant, Foundations of Modern Art, trans. John Rodker (New York: Dover, 1952), originally published in French as L'Art (Paris: J. Budry & Cie., 1928). Ozenfant juxtaposed these images with others: modern paintings, the 'ladies club' Sunday painters, primitive sculpture, miniaturization in toys, the bicyclist, Negro 'eggshell' architecture, etc.


4See "Procédés et matériaux nouveaux" in Le Corbusier, Almanach d'architecture moderne (Paris: Éditions G. Crés, 1926) pp190-197 as well as in the many advertisements which appear in the back of this book. The book was written as a response to Le Corbusier's détracteurs following 'le scandale du Pavillon de l'Esprit Nouveau.'

5"La Pavillon est sur pilotis, isolé du sol." Le Corbusier, Almanach d'architecture moderne, p152.

6Given the pavillon's materials and detailing, such an intention seems absurd.

7FLC Box C2-5, #127, a four-page draft dated 8 October 1962 for the preface of a catalogue for the "Exposition de Peinture Le Corbusier" in Barcelona.

8FLC Box C2-5, #127. Following this claim, Le Corbusier noted that "This document of 55 square meters (11m x 55m) was made of 55 documents[...]. However, published photographs of the photomural show it as four documents high, eleven wide.

9These photographs were rectilinear, not square. Three photographs of the lobby of the Pavillon Suisse show the column clearly. Today this column is wrapped in rectilinear images, mostly of Le Corbusier's urban and architectural projects.

10FLC Box C2-5, #128.

11In the 19th C several journals were dedicated to this new vision. See, for example, Zeitschrift für wissenschaftliche Mikroskopie und mikroskopische Technik, first published in 1884.


Blossfeldt achieved international recognition with the publication of his stunning portfolio of magnified images of plants, Urformen der Kunst (Berlin: Ernst Wasmuth, 1929).

16Walter Gropius exhibited 'tableaux suggestive of functions of the human body in relation with architecture' at the International Building Exposition in Berlin in 1931 [See L'Architecture Vivante (Winter, 1931), pl. 28]. In a lecture in Delft that same year, Marcel Breuer dismissed accusations of formalism in modern architecture, arguing: "We see our mission in creating a home that is simpler, lighter, more comfortable in a biological sense, and independent of exterior factors [...] See Christopher Wilk, Marcel Breuer: Furniture and Interiors, (London: The Architectural Press, 1981), p37. In the same year, Le Corbusier published Precisions, titling one of its chapters "A Man=A Dwelling, Dwellings=A City". He developed this analogy in a
series of articles—“L’élément biologique: la cellule de 14m. par habitant,” "Vivre (Habiter)," and "Vivre (Respirer)—which first appeared in Plans 9 (Nov. 1931), pp49-65; Plans 4 (April, 1931), pp49-66; and Plans 3 (March 1931), pp33-48 and later in his Ville Radieuse. The Pavillon Suisse photo mural visually manifested of what Le Corbusier stated most succinctly in Aircraft in 1935: “In nature microcosm and macrocosm are one.”

18Of those years, Le Corbusier wrote: “Here in rational France the appeal to nature: analysis. The entomologist Fabre excited us. We realized that natural phenomena have an organization, and we opened our eyes. 1900. An outpouring. Truly, a fine moment!” See his The Decorative Art of Today, p137.
20 “Je vous dirai premièrement ce qui est contre les murs, à même les murs, dans les murs […]”
21Voir le nombre des illustrés russes U. R. S. S. Or il est des pays où l’on connaît très bien le rôle que peut jouer l’image. Cela se nomme: Propagande.
24There is no evidence that ‘Hitler’s people’ were responsible for removing the photomural.