

MODERN HERITAGE BETWEEN CARE AND RISK

Venice, 4-5th May 2021

Edited by Maria Bonaiti, Sara Di Resta

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The International Conference “Modern Heritage between Care and Risk” (Venice, 4-5th May 2021) was held at Università Iuav di Venezia, in collaboration with Fondation Le Corbusier and Docomomo Italia. The event offered an opportunity for an international exchange on crucial issues of documentation and preservation of the 20th century architectural heritage in a time of rapid social, cultural and political changes. The first day has been dedicated to “Ahmedabad. Laboratory of Modern Architecture”, a site-manifesto threatened today by the demolition of relevant dormitories of the Indian Institute of Management by Louis I. Kahn. The second day has been dedicated to “Living the Architectural Preservation. Modern Houses in the Conservation of 20th Century Heritage”, focused on recent conservation/restoration works of Modern authorial houses and neighbourhoods. The proceedings collect selected papers presented by international researchers and architects involved in the fields of History of Architecture and Architectural Preservation.

Maria Bonaiti is a Full Professor in History of Architecture at Università Iuav di Venezia. In her research Bonaiti investigates twentieth-century architecture, focusing on post-World War II architecture in Europe and the United States, with particular emphasis on the debate that develops around the complex relationship established in those years between modernity and tradition. Among her publications are the monograph Louis I. Kahn 1901-1974, Electa, Milano 2012, and Le Corbusier in India. Villa Sarabhai, Ahmedabad, 1951-1956, Electa, Milano 2021.

Sara Di Resta is Associate Professor of Architectural Preservation at Università Iuav di Venezia. Her research activities are focused on the preservation of 20th-century heritage, with particular attention to the conservation of modern building materials. She is the author of more than 70 publications including the volumes “Le forme della conservazione. Intenzione e prassi dell’architettura contemporanea per il restauro” (2016) and “Materiali autarchici. Conservare l’innovazione” (2021). She is currently member of the executive committee of SIRA - the Italian Society of Architectural Conservation/Restoration and Docomomo Italia.

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Edited by Maria Bonaiti, Sara Di Resta
with the collaboration of Elena Sofia Moretti

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1 MODERN HERITAGE BETWEEN CARE AND RISK

MARIA BONAITI, SARA DI RESTA

In 2021, the Università Iuav di Venezia, in collaboration with Fondation Le Corbusier and Docomomo Italia, hosted the International Conference “Modern Heritage between Care and Risk” (Venice, 4-5th May 2021).

The event offered an opportunity for an international exchange on crucial issues of documentation and preservation of the 20th-century architectural heritage in a time of rapid social, cultural and political changes.

The first day has been dedicated to “Ahmedabad. Laboratory of Modern Architecture”, a site-manifesto today in danger due to the threat of demolition of relevant dormitories of the Indian Institute of Management by Louis I. Kahn. One of the most industrious and modern cities in the Indian state of Gujarat, Ahmedabad is a unique laboratory of architecture. Alongside the historic walled city with its superb examples of Mughal architecture, the city is home to essential works by some of the leading masters of the 20th century such as Le Corbusier and Louis I. Kahn, as well as works by contemporary architects such as Balkrishna Doshi and Charles Correa.

This excellence in architecture was made possible thanks to the presence in Ahmedabad of a cultured and enlightened industrial class committed to promoting and supporting

industrial activity without forgetting the local cultural tradition, whose characteristics are offered as a foundation on which to build a renewed national identity.

The proposed interventions, some of which are the result of recent research work undertaken by the Università Iuav di Venezia, reconstruct Ahmedabad's cultural, entrepreneurial and architectural landscape. The interventions focus on the nature and role played by patrons, such as Gira and Gautham Sarabhai, as well as by masters such as Le Corbusier and Louis Kahn.

The second day has been dedicated to "Living the Architectural Preservation. Modern Houses in the Conservation of 20th Century Heritage", focused on recent conservation/restoration works of authorial houses and neighborhoods of 20th-century. Modern architecture has involved radical changes in the way of housing and living that are now part of the legacy of 20th-century. These changes embody not only aesthetic and functional features, but political and social transformations that still define some aspects of Modern life. From the exclusive authorial villas to the large-scale housing programs, this legacy gives today a multi-faceted and polysemic heritage which poses still unsolved issues for conservation.

The understanding of how to deal with this legacy represents a crucial challenge in social, cultural and political context unceasingly changing, which is endangering the material conservation of these buildings. From the technological obsolescence caused by the rapid changes of current demanding standards, to the shifting of tangible and intangible values of this heritage, the cultural relevance of preserving the buildings emerges, as well as the active role in conservation played by the owners and inhabitants. The contributions outline an outlook of research, including international academic studies in the fields of architectural preservation, anthropology and art, and the

documentation of recent restoration works carried out on relevant 20th-century houses.

The proceedings collect recent studies and researches carried out by the Iuav research unit “HeModern – Heritage, Culture and Modern design” and by international researchers and architects involved in the fields of History of Architecture and Architectural Preservation.

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Members: P. Faccio (coordinator), C. Balletti, A. Bassi, L. Berto, M. Bonaiti, G. Bruschi, A. Dal Fabbro, S. Di Resta, B. Gandini, P. Grandinetti, F. Guerra, G. Jean, A. Maggi, G. Marras, R. Martinis, F. Peron, M. Pretelli, M. Rossetti, A. Saetta.

PART 1.
AHMEDABAD.
LABORATORY
OF MODERN
ARCHITECTURE

2 ARCHITECTS AND PATRONS: GIRA AND GAUTAM SARABHAI

ELISA ALESSANDRINI

Architect

The subject of this paper is about the work of the Indian architects Gira and Gautam Sarabhai, a sister and a brother particularly noted as patrons of many architectures in the city of Ahmedabad, but still little known as architects.

This is a short extract from my PhD thesis^① developed in 2009-12 based on archival documents traced in Ahmedabad, US. and European archives in a research that enlightens their pivotal role in the modernization of entire India. Along with the other members of their family, they were visionary actors in Ahmedabad, a city that became a laboratory of new architectural ideas.

Gira (1923-2021) and Gautam (1917-1995) Sarabhai, two of the eight siblings of a well known textile family of industrialists, belonged to the first Indian generation of architects of the postcolonial era. They were born in the years 1910-20, the same generation as Doshi and Correa. However, the Sarabhais distinguished themselves among the others to be extraordinary skillful in interweaving a wide net of national and international relations with the most famous architects and artists of the moment which led to fruitful cultural exchanges for all parties involved. The Indian young generation had the opportunity to work and relate to Western

modern masters in a unique dialogue from which the evolution of postcolonial Indian architecture arose.

I would like to emphasize the active role of the young Indian architects who invited their masters to India in order to establish deep connections that would have brought to representative buildings to their city.

The decades 1940-60 are the historical context, when the most important political figures were Prime Minister Nehru and Gandhi. We know that the Sarabhai family was particularly connected to both Nehru and also Gandhi who used to live in an *ashram* in this city just across the river, not far from the Sarabhai house. Especially the women of this family, such as Mridula, Gira's older sister, and Anasuya, Gira's aunt, were deeply involved in the struggle for Independence in close contact with Gandhi. On the other hand, Vikram Sarabhai, Gautam's young brother, a scientist with a doctorate in Physics at the University of Cambridge, was in close contact with Nehru for the foundation of new Institutes of research in the city of Ahmedabad ●, which was crucial for the country's development pursued by both. All the Sarabhai members, extraordinarily brilliant and erudite entrepreneurs, invested in the field of scientific research and education to build and raise a new modern nation. In early 1947, Vikram patronized two institutes of scientific research, the Physical Research Laboratory (PRL) and an Institute related to the textile industries (ATIRA), both designed by the young Indian architect Kanvinde who had just returned from his studies with Gropius at MIT. Vikram was also decisive for the foundation of IIM in the city of Ahmedabad instead of Mumbai where it had initially been planned. This project was commissioned to Louis Kahn thanks to the newborn National Institute of Design (NID) by Gira and Gautam Sarabhai.

The Sarabhais founded and sponsored numerous other schools in their city, such as the montessorian Schreys School and the Darpana Academy of Performing Arts.

Therefore, they played a key role in founding new buildings for education which became the testing ground of a new architectural language (fig. 1).

Thus, in the years 1940-60, Ahmedabad became the beating heart of ideas, experiments and encounters that had no equal in India. For this reason, it can be considered the cradle of postcolonial Indian architecture. Among the most famous projects of these years, born of the cultural exchange between the masters and the young generation, there are the Gandhi Memorial Museum by Correa, the School of Architecture by Doshi, and the National Institute of Design (NID) by Gira and Gautam Sarabhai. These buildings can easily match the works realized in Ahmedabad by Le Corbusier and Kahn.

Let's focus on the architects of the Sarabhai family, Gira and Gautam, and proceed in chronological order.

In the first years of the 1940s, Gira and Gautam Sarabhai along with some other members of the family moved to New York to boost the Calico market, one of the most important textile industries of India. Once they arrived in the USA, Gira and Gautam planned to search for an American architect who had already been working for big industrialists. Hence, they met the Kaufmann family and connected with F. Ll. Wright in order to have both a working experience in his studio in Taliesin West and to design together a Calico shop for the city of Ahmedabad. Therefore, Gira Sarabhai moved to Scottsdale, Arizona, to work with the master. The intense exchange of letters between Gira and Gautam gives evidence that the Calico Mills Store was the result of their program and ideas together with Wright's expertise and creativity.

Unfortunately, the multistory Calico store, which was supposed to be placed in the city center of Ahmedabad, was never realized. Designed on seven levels, the avant-garde shop would have included a catwalk for fashion shows, a large screen for projecting images, an art bookshop, a

restaurant and an observation roof with garden, and even a system of loudspeakers to play music on all levels. As a result, it should not have been a simple store, but a sophisticated boutique where fashion, art and architecture should have blended in a unique space.

The drawings of the building show the cantilevered terraces with lots of nature, and the use of *textile blocks* in the facade probably to adapt to the hot climate but also to make the front appear embroidered like the Calico textiles. Unfortunately, the municipality never approved this project that required a great amount of iron which lacked in India. Nevertheless, Wright's lesson had been learned and translated into the subsequent projects the Sarabhai's developed. For example, in the Calico Administrative Office ● nature played a very important architectural role as reflected in the use of the surrounding gardens outside as well as inside, with small water basins in multiple levels with slight differences in height on the ground floor which are treated with stones and pebbles, and even brick walls that seem to draw a texture similar to embroidered textiles. Also in the design of the Calico Mills, the influence of Wright is clear. In a picture of an interior published in a Calico pamphlet ④ we can see "dendriform" pillars that recall those of Johnson Wax Building, which are the same columns admired by Le Corbusier who sketched them in his *Carnets* when he arrived in Ahmedabad in 1951 ●.

From a very early age, Gira and Gautam collaborated with a great number of western artists and architects and this attitude had been advantageous from several points of view: for the Calico industries, for the modernization of the city and even professionally for Gira and Gautam as architects.

When they were in the USA, they most likely met also Le Corbusier for the first time, and with him they remained in touch. Then, some years later they invited him to Ahmedabad to design a Museum and a villa for Manorama

Sarabhai. We can infer that from the exchange of letters kept at the Fondation Le Corbusier, since the summer 1950 Gira was thankful to Le Corbusier for the book he sent her ●. Moreover, Le Corbusier's high esteem and confidence towards Gira emerges from their long exchange of letters as well as his admiration for all the members of the Sarabhai family who were very passionate about art and architecture. Maybe this was the reason why Le Corbusier accepted all the works in this city. Gira and Gautam learned a lot from him, and his teaching is visible in their subsequent main project, the NID.

Gira and Gautam's projects are the synthesis between their design ability and manufacturing capacity, and their understanding of modern architecture learned directly from the Masters.

Since the early '50s, Gautam, a mathematician and investigator of new forms and materials, became aware of the geodesic domes by Buckminster Fuller in the USA, and along with his sister Gira, decided to realize a small traveling and demountable Calico shop with the aim to display fabrics, do fashion shows, and promote the Calico items all over India. As early as 1956, Gautam started to experiment with the construction of small geodesic domes ●. The encounter with Fuller allegedly took place in Bombay in April 1958 when also the designers Charles and Ray Eames where in India to study the foundation of the first Institute of Design in the country ●. On that occasion they developed together an itinerant Calico shop, called "Calicloth dome" with the shape of a geodesic dome, 100 feet in diameter, with a tubular structure and fabric that provided covering. This framework, then dismantled, had been captured in one of Charles Eames' pictures stored at the Library of Congress ●. In the same year, Gautam erected a second geodesic dome in Delhi without Fuller's help. This dome too was 100 feet in diameter, and it was considered a better variant from a technical point of view. In a picture

kept by Gautam and sent to Charles Eames, he wrote that he was proud to be able to use less pipe and fabric and to have managed a structure faster to assemble and disassemble¹⁰. Therefore, at the end of 1958, two traveling geodesic domes, "Cali-cloth Dome", hit the road from Delhi and from Bombay to promote the Calico items with the slogan *fashion comes to town*¹¹.

At the end of this experience, Gautam and Gira decided to realize a permanent shop in the city center of Ahmedabad in the same plot where Wright's store should have been built.

Therefore, the Sarabhais designed a two-story shop: a basement constituted by a big hall without pillars in the center, but using truss girders (the first space of this kind realized in India), and a first floor covered by a geodesic dome of 50 feet in diameter supported by 5 poles with a very thin wooden shell overlaid by copper¹². Gautam succeeded in reducing the thickness of the wood components as well as the iron structure with the aim to use as little material as possible.

Therefore, they managed to adapt the form of the Fuller geodesic dome in a smart and elegant way with less expensive materials. Finally, the white deep lettering "Cali-Shop" fixed in vertical on a lateral wall, with a font designed by photographer and graphic designer Ernst Scheidegger at the invitation of Gira, represented a finishing modern touch. In the '90s, the shop was abandoned and in 1997 the dome collapsed after a storm. A legacy of their clever work has been lost (fig. 2).

It is curious to notice that in the same year, when the Sarabhais encountered Fuller in India, he had just been hired by the Indian Government to realize a traveling geodesic dome that would have displayed all over India the exhibition *Design Today in America and Europe*, which had been organized by MoMA¹³ in New York in order to show the best western home design in the main cities of India and

stimulate an initiation of this kind of industry in the country. Was it a mere coincidence?

Obviously not.

In fact, the capable entrepreneurs of the Sarabhai family, always ready to promote their Calico brand, were at the same time dedicated to study the evolution of Indian hand-crafts into modern design, and also to preserve the traditional craft work especially in the textile field. At this point, we should move forward to another chapter of the Sarabhais history, the one that sees their commitment to study the local heritage and craft.

In 1948, as soon as Gira and Gautam came back from the States, they designed the first Museum dedicated to Indian textile arts, The Calico Museum of Textiles, which was inaugurated by Nehru in February 1949¹⁴. Unfortunately, this architecture has been destroyed too, nevertheless, from the few images published in the magazines of those years, we can see that it was a cutting-edge Museum with a modern facade with well balanced vertical and horizontal lines, big luminous lettering, and a unique attention to the layout and display of the items. Not only the Museum exhibited the most precious fabrics but it also promoted the research and the protection of those Indian ancient traditions¹⁵. To this purpose, Gira got in touch with the main experts in the textile field and started a collaboration with the Victoria&Albert Museum in London, as well as the Ulm and Basel Schools. The Calico Museum of Textiles (1948-49), one of the first building realized in Ahmedabad by Gira and Gautam, turned out to be the seminal project for the birth of industrial design, and a catalyst for new encounters.

In fact, thanks to this Museum, in 1955 the Sarabhais were employed by the MoMA (New York) to showcase their traditional cloths in the exhibition *Textile and Ornamental Art of India* in order to promote Indian arts and crafts in the States¹⁶. Therefore, thanks to the Calico Museum and the MoMA, the Sarabhais started a new incredible adventure

aimed to study in depth and defend Indian traditional handicrafts.

In 1955, the Sarabhais for the first time got in touch with the designers Charles and Ray Eames, which marked the beginning of a deep and everlasting friendship that led to the foundation and construction of the first National Institute of Design (NID) in Ahmedabad including its cultural projects. The dialogue between the four actors was remarkable for all of them. The Eameses were interested in Indian spirituality, colors and tradition, and also in the impact of technology on them. The Sarabhais received support and good advice on the new Institute of Design, and in turn they offered great hospitality and their deep knowledge of Indian culture. All the letters I have found in the Library of Congress Archive demonstrate the intense exchange of ideas related to NID foundation as well as the important exchange of gifts such as film, chairs, toys, textile and also sincere mutual esteem.

Let's summarize the long history that led to the design of NID. After their first encounter with the Sarabhais in 1955, only in 1958 the Eameses were appointed by the Indian Government to travel to India and study handicraft. The result was *The India Report*, a significant text in which the Eameses wrote the cultural project of the first Design School in India, its goals, the relationship between students and teachers, the *learning by doing* methodology and even the features of the building.

It follows that NID was not a simple school but rather an institution for education, research and practice at the service of the Nation with production laboratories useful to society¹⁷. This cultural agenda made NID unique in the national and international panorama. Interestingly, the Eameses were not the only advisors of NID foundation. Other designers were also consulted such as Ernst Scheidegger, Vilhelm Wohlert, and even Gio Ponti.

After six years of gestation, in 1961 the Institute was finally founded in Ahmedabad, and in the absence of a proper building, it was based on the last floor of Le Corbusier's Museum of Art, a landmark also commissioned by the Sarabhai family. In the following years, Gira and Gautam Sarabhai conceived one of their most significant projects: the NID headquarters.

The building was the result of a study that aimed to combine spatial flexibility to contemporary construction methods in consideration of local material, craftsman's skills, and a desire for innovation.

NID is a compact building, three stories high, in which modularity is clear due to its unit structure.

Set opposite Le Corbusier's Museum, just like this one, it is made of bricks and concrete *pilotis* that form a structural squared grid to guarantee security in case of river floods, which generates a free, multifunctional ground floor sheltered from the sun and the rain.

As we can see from the coverage plan (fig. 3), only a portion of the project has been realized (the one in gray color). The Institute could have been enlarged by adding modules like in a *mat-building*¹⁰. The ground floor is versatile and autonomous with few walls and slight difference in levels, areas with fountains, white pebbled gardens and filtered light that recall Wright's design (figs. 4-5). The first floor is the main level with double height laboratories. The modular structural unit that is repeated in the complex is 12.3 x 12.3 m, with three pillars per side, three floors high, a slab on the first floor and a shell roof. Similar to Indian pavilions, this unit allowed for a quick construction and at the same time experimented with the use of different materials for the shells, from ferrocement to bricks and concrete, with only the last one completely made of bricks. Gautam's aim was to reduce the use of iron and concrete and to realize at least one shell in bricks.

Ultimately, considering that Gira and Gautam Sarabhai invited the best professors as consultants, and the most talented International masters to teach young Indian students and professors, we can deduce that NID became a laboratory of Indian excellence in design, art and architecture in the city of Ahmedabad, which developed into the cradle of postcolonial architecture. Hence, NID was not a mere school of design, but also an Institute of research at the service of the Nation, and this is why the Government commissioned NID to perform many assignments to such as the exhibition *Nehru his life and his India* in 1965, which was realized by the Sarabhais, the Eameses and their students. In this cultural exchange between East and West at NID, we also find the renowned IIM project by Louis Kahn who was invited by the Department of Architecture to design IIM together with NID students and young architects of the city of Ahmedabad such as Doshi, Raje and Kapadia.

Another interesting building they designed in Ahmedabad is the B.M. Institute of Mental Health (1963-64), which in 1977 was enlarged with the help of the German engineer Frei Otto, who was also invited to teach at NID. Gautam and Otto tested a very thin ferrocement roof with an elegant fascinating curved shape.

In conclusion, in the quest for an international network of contacts, Gira and Gautam and the whole Sarabhai family were brilliant in securing the best figures in a miraculous network of relationships in the United States, Italy, France and Switzerland. They managed to coordinate different views of a new India that was simultaneously cutting-edge and rooted in ancient tradition.

Thanks to their different love for all the arts and to the new Institute of Design that needed partnership with open-minded masters, they called renowned artists such as Calder, Noguchi, Cage, Rauschenberg and Cartier-Bresson. There is a long list of guests who arrived to Ahmedabad invited by the Sarabhais, even scientists such as Homi

Bhabha and C.V. Raman, and politicians like Maulana Azad and Sarojini Naidu, philosophers and educators such as Rabindranath Tagore, Maria Montessori and many other intellectuals. In their house, called the *Retreat*, surrounded by an idyllic nature on the outskirts of the chaotic city, peace and creativity must have been particularly inspiring since every guest was grateful for the hospitality, exchange of ideas and even presents.

I would like to conclude by mentioning Alexander Calder's art. He too was invited by Gira Sarabhai in 1955 to work at the *Retreat* in a creative advantageous exchange for both. Calder realized eleven *mobiles* and donated them to the Sarabhai family. Among these, one called *Happy Family* really impressed me. It is a *mobile* with eight white hanging circles that represent the eight children of Ambalal Sarabhai, the father, who is probably represented by the red figure, and Saraladevi, the mother, most likely the yellow star or the sun. It is a representation of the Sarabhai family, a group of unique incredibly charismatic visionaries enlightened like this star, united in the modernization of their Nation and leaning forward like this aerial sculpture, and also particularly bright and happy as in the title of Calder's work.

COMMITTENTI	ARCHITETTI	PROGETTO	ANNO
Ambalal Sarabhai Saraladevi Gosalia	Gautam e Gira Sarabhai	Calico Museum of Textile	1948-49
Vikram Sarabhai	Achyut Kanvinde Achyut Kanvinde Balkrishna V. Doshi Bernard Kohn Louis Kahn	Physical Research Laboratory Ahmedabad Textile Industry's Research A. Community Science Centre Indian Space Research Organization Indian Institute of Management	1947-54 1947-54 1966 1969-72 1962-74
Vikram Sarabhai Mrinalini Swaminathan	Gira Sarabhai Achyut Kanvinde	Villa per Vikram e Mrinalini Sarabhai Darpana Academy of Performing Arts	1947-50 1958-62
Gautam Sarabhai Gira Sarabhai	Frank Lloyd Wright Le Corbusier Gautam e Gira Sarabhai Gautam e Gira Sarabhai Gautam e Gira Sarabhai Gautam e Gira Sarabhai Gautam e Gira Sarabhai	Calico Mills Office (non realizzato) Sanskar Kendra Museum Darshan Apartments Cali-Cloth Travelling Dome Cali-Shop B.M. Institute of Mental Health National Institute of Design	1946 1951-59 1953-54 1956-58 1962 1963-64 1964-68
Mahadeva Chimanbhai	Le Corbusier	Villa Sarabhai	1951-56

fig. 1. The Sarabhais, patrons and architects



fig. 2. Cali-shop. (© Elisa Alessandrini, 2009)

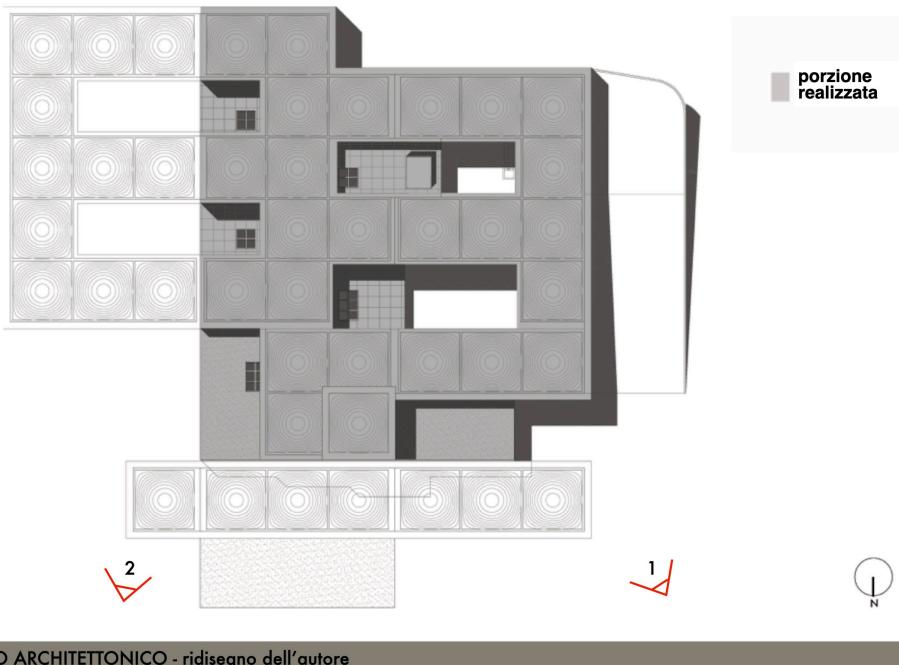


fig. 3. National Institute of Design
coverage plan drawn by the
author. The portion realized is in
grey



fig. 4. National Institute of Design ground floor. (© Elisa Alessandrini, 2011)



fig. 5. National Institute of Design ground floor. (© Elisa Alessandrini, 2011)

ENDNOTES

①: Alessandrini (2012).

●: In 1954, they together inaugurated the new complex building of Physical Research Laboratory in Ahmedabad, founded in 1947 and operative in the historical premises of the Sarabhai House, called *Retreat*.

●: *Calico pamphlet* (n.d., presumably 1961, p. 66-67), designed by Ernst Scheidegger, concept by Gira Sarabhai, spiral binding, picture of Administrative Office Building in Baroda or Mumbai. Ernst Scheidegger showed me this pamphlet when I met him in his home in Zurich, August 2011. There is another Calico pamphlet, comparable to this one, I found in Ahmedabad in 2010 with similar pictures: *Calico since 1880* (n.d., presumably 1980) designed by Shilpi Advertising Limited.

④: *Calico pamphlet* (n.d., presumably 1961, p. 13 and p. 26), interior of a Calico Spinning Department.

●: Le Corbusier. (1951), E23-678, Fondation Le Corbusier (from now on FLC), Paris, France.

●: Sarabhai, G. (1950, July 13). [Letter to Le Corbusier]. Correspondance (R3-2-355), FLC, Paris, France.

●: Sarabhai (1968, p. 72-75).

●: Neuhart, J., Neuhart, M., Eames, R. (1989, p. 232-233).

●: Eames, C. (1980, June 15). [birthday card to Buckminster Fuller with pictures he took, including his geodesic dome in Bombay in 1958]. Work of Charles and Ray Eames, Library of Congress, Washington DC, US.

⑩: Sarabhai, G. (1958, November 15). [Letter to Charles Eames]. Work of Charles and Ray Eames, unprocessed files consulted by the author in October 2011, Library of Congress, Washington DC, US. In the letter Gautam wrote to Charles Eames: "Dome 2: Here is a photograph of the

new dome we built – it has the same diameter at the base as the first one which you saw (100 feet), but uses an easier constructional technique, the total length of pipe used is half that of Dome 1 and the number of intersections a third. The area of the fabric is reduced by 30%. It takes only half as long to erect and dismantle as the first one”.

¹¹: *Calico pamphlet* (n.d, 1961?, p. 49).

¹²: Cadot (2004, p. 131-139).

¹³: Drexler (1958).

¹⁴: Goetz (1949).

¹⁵: In doing so, the Sarabhai put also their Calico industry at the peak of a secular Indian tradition. See: Williamson (2016).

¹⁶: Wheeler (1956).

¹⁷: Sarabhai and Sarabhai (1969).

¹⁸: Alessandrini (2011, p. 799-807).

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3 BETWEEN MODERNITY AND TRADITION. LE CORBUSIER'S VILLA SARABHAI

MARIA BONAITI
Università Iuav di Venezia

When Le Corbusier arrived in Ahmedabad in March 1951, he was far from imagining that in this city, just north of Mumbai, he would give form to his most enigmatic masterpieces: a museum (Sanskar Kendra, 1951-57), the Millowners' Association Building (1951-57) and two villas (Villa Shodhan, 1951-57 and Villa Sarabhai, 1951-56).

These buildings have seldom been investigated in a historiographical perspective and have remained on the margins of the main events of contemporary architecture. Probably this is because they remain in the shadow of the more publicized and outstanding venture that engaged Le Corbusier starting from 1951 in the construction of Chandigarh, the newly founded capital of the State of Punjab①. Villa Sarabhai, the subject of this discussion, is particularly difficult to access since it is located inside the large property of the Sarabhai

family in the exclusive residential area of Shahibag, a few kilometers north of the old town.

Manorama Sarabhai, the client, who had a strong personality and was a member of one of the most powerful families in Ahmedabad, played a leading role in the narrative of the design and construction of the villa. The Sarabhais belonged to the entrepreneurial elite of the city, whose fortune was linked to the cotton textile industry. They were part of an enlightened, cultured bourgeoisie committed to promoting and supporting industrial activity without forgetting the cultural specificity of their country. The awareness of the potential of an economic growth aimed at taking India towards modernity, without sacrificing the value of tradition, was typical and at the same time the most controversial aspect that characterized the entrepreneurial class of Ahmedabad to which Manorama belonged ●. Widow of Suhrid Sarabhai, mother of two children, and curious about contemporary Western art, Manorama commissioned her house from Le Corbusier in November 1951 on the occasion of his second visit to Ahmedabad ●. From the very first meetings with the architect, Manorama emerged as a demanding client committed to designing a home that would accommodate the rhythms of life and deep-rooted customs while imposing herself as a vigilant guardian of tradition. Le Corbusier returned to Ahmedabad the following March bringing with him the first design proposals. At the Fondation Le Corbusier two drawings with annotated corrections that were made just after that crucial meeting with the client are preserved ④. This documentation is useful for understanding the particular nature of the relationship that tied Le Corbusier to Manorama, who guided with a firm hand the various phases of the design of the villa whose solutions were the result of a close, and at times exhausting, debate between architect and client ●.

Nearly hidden in the lush tropical vegetation, the house presents forms that are assimilated to the local

cultural context. Still it distinguishes itself from the type of Shodhan house – “the reincarnation of Villa Savoye turned upside down” ● – and its sculptural monumentality. Crossing the park of the estate, a service block consisting of a garage, servants’ quarters and kitchen, delimits the access area to the house. The main body of the villa is marked by a sequence of brick vaults set on oversized reinforced concrete beams and brick walls. Load bearing parallel walls are interrupted by various sized openings which allow the creation of a continuous spatial system. A two bay space separates the two units that make up villa Sarabhai and connects the front of the house to the internal garden where a refreshing small swimming pool is located and the villa opens with ample verandas. While the sequence of the vaults is concealed in the solution of the elevations, the interiors display a series of rooms permeable to air and light where space is the real protagonist of the composition (fig. 1). Heavy wooden doors, perforated by regular geometric openings, close the rooms towards the garden in the hottest hours, but when the evening approaches, the doors open again to let in the air and the view. Therefore, the verandas become suggestive thresholds of shade. By alternating simple brickwork solutions and white or brightly colored plastered partitions – in blue, green, red and yellow – the internal walls of the villa resonate with the texture of the surfaces of the vaults in exposed bricks, and with the black stone slabs of the flooring. The polychromy of the domestic spaces is balanced by the austerity of the external walls whose construction stands out for the primitive brutalism of the workmanship of materials such as brick and exposed reinforced concrete. This is a recurring characteristic of Le Corbusier’s latest works, but it achieves a particular strength in what was built in Ahmedabad. The elevations of Villa Sarabhai appear measured by the modules of metal formwork – which use was widespread in Ahmedabad – that generate rough surfaces which reverberate with the exposed

bricks (fig. 2). These are used almost with tactile pleasure in the partitions that separate verandas, loggias and internal rooms. A similar materiality matches the expressive force of plastic inserts with an unprecedented primitivism – real *objects trouvés* – such as the oversized gutter that marks the entrance to the villa, the gutter spouts that give rhythm to the elevations and the steep staircase leading to the swimming pool slide.

Completed in 1956 and recognized as the most *Indian* of the architectures realized by Le Corbusier in Ahmedabad, Villa Sarabhai poses significant interpretative questions, the answers to which are probably to be sought in the set of circumstances intrinsic to the design and construction of the villa. In fact, the house designed by Le Corbusier for Manorama is problematically located within the architect's production, and even though it echoes contemporary works, it reveals significant deviations.

When considering the model proposed for Villa Sarabhai, it is possible to trace clear lines of continuity with what Le Corbusier designed up to that moment. Vaulted roofings are in fact found, between the thirties and forties, in a succession of solutions for Mediterranean dwellings, from the agricultural estate Peyrissac at Cherchell in Algeria to the complex Roq et Rob at Roquebrune-Cap Martin. Moreover, particular affinities are found in the Maisons Jaoul, whose construction preceded by only a few months what was then developed in India, and anticipated the solution of the Catalan vault ●. If the overall structure of Villa Sarabhai appears consistent with the contemporary work of Le Corbusier, at the same time we can observe a significant cross-fertilization with specifically local solutions. As documented in the correspondence, it was Manorama who suggested continuous modifications and adjustments, and directed the architect in defining the details of spaces adjusted to accommodate a fashion suitable to the Indian lifestyle. And this is an aspect that returns to characterize

different scales of the project. For example, the presence of connecting bays evokes the function performed in traditional architecture by the so-called *chowk*, which also distinguish the urban palace of Sarabhai. These are internal courtyards designed to ensure adequate ventilation to the rooms and at the same time they connect service and representative areas in common to the different units that comprise the private part of the house. In a similar way, the connecting rooms that separate the two units that make up Villa Sarabhai act as a hinge between the quarters of Manorama's son and the living area in common with the quarters of the mother which develop on the upper floor ●.

The impression is that from the first drawings the plan of the villa takes shape sourcing different architectural references which see typical spaces of traditional architecture translated into recognizable figures of the language of Le Corbusier. The result is a real *creation of a tension* between different cultural models. For example, while echoing the models of the Unité d'habitation of Marseilles and of the La Tourette convent the verandas that open their front towards the garden appear completely transfigured in Manorama's house. In fact, the loggias stand out as real threshold spaces – places of transition between inside and outside conceived to protect from the extremes of the weather and allow, at the same time, the circulation of air and light.

Space and its free flow between the rooms of the house is actually the protagonist of Villa Sarabhai, which is described as a “meandering house” ● by Balkrishna Doshi, one of the most attentive witnesses of Le Corbusier's encounter with India. The space, he recalled, “flows simultaneously in different directions” @ and reveals an unprecedented relationship between inside and outside. Le Corbusier's ability to modulate the spaces of Villa Sarabhai may be considered an original reinterpretation of traditional Indian architecture, which he observed with curiosity during his many stays in India as documented in the

pages of the *Carnets*^⑪. In fact, since his first Indian passages he scrupulously took note of the impressions he acquired by the architectural landscape that was revealed by what he saw. What impressed him was precisely the lack of solid walls to define the facades of the houses which were marked rather by a sequence of deep verandas and porches. The succession of loggias, which gives rhythm to the elevations of Villa Sarabhai, betrays the tension with which Le Corbusier redesigned known elements of his vocabulary adapting them to the site. A close observation of the villa at different scales, from the plan to the architectural details, allows us to recognize in the *cross-fertilization* the principle that distinguishes the design. Even the solution of the garden roof, conceived to offer shelter from the summer heat in the hot monsoon nights, reflects modes typical of traditional architecture to conform to the customs of life of which Manorama was the vigilant guardian. And so it is the roof-terrace, a true manifesto of Le Corbusier's architecture, which in Ahmedabad is transformed into a new space as the result of a process of adaptation of forms typical of the *civilisation machiniste* to ways of life assimilated from the local culture.

In the attempt to understand the actual role played by Le Corbusier during the construction works and the intentions placed into the *cross-fertilized* solutions of which the architecture is a document, an essential source is constituted by the correspondence from the worksite between Ahmedabad and the Parisian studio, that was exchanged almost weekly. This was made possible by the presence in Ahmedabad of Jean-Louis Véret, a young French architect selected by Le Corbusier to follow the Indian worksites^⑫. Véret arrived in Ahmedabad on June 7, 1953, and remained there until January 1955 when he was replaced by a then very young Doshi. In his first assignment as director of works, Véret sought a ceaseless recounting with Paris and the correspondence became an irreplaceable tool in directing the

various phases of construction. Véret's main interlocutors were Le Corbusier and two of the firm's collaborators, Jacques Michel and Balkrishna Doshi¹³. In most cases the letters were accompanied by explanatory notes and quick sketches that literally guided Véret through the realization of the building, such as the composition of the formwork of the beams, the details for their correct construction, and the description of the executive techniques suitable for the installation of the brick walls. However, the inevitable time lag between sending the requests to Paris and the arrival of the answers was in some cases the cause of misunderstandings causing Véret's great frustration. One example is the design of the formwork of the beams that was not approved by Le Corbusier but already in place when the information from the studio in rue de Sèvres arrived in Ahmedabad, which led to the extreme decision to demolish "three beams and the corresponding exterior wall"¹⁴.

The detailed analysis of the correspondence has provided the understanding of the crucial role played by the worksite of the Maisons Jaoul which was started in Paris some months before the one in Ahmedabad¹⁵. In particular, it is the Catalan vaulted solution of Villa Sarabhai that recognizes in the Maisons Jaoul its own specific model as once again documented by the correspondence which was particularly frequent during the construction of the roof¹⁶. The Parisian worksite, followed among others by Michel and Doshi, was mentioned several times as an example. For instance, the arrangement of the electrical system and ventilation as well as the arrangement of the internal beams and the solution of the laying of the bricks. In this regard, the correspondence reveals how the irregular and imperfect masonry that distinguishes Villa Sarabhai was not at all the spontaneous outcome of the construction practices of local craftsmen, but rather the result of precise instructions carefully issued by the studio¹⁷.

All things considered, the impression is that the Maisons Jaoul was deemed as a sort of real laboratory where Le Corbusier and his collaborators experimented with single design solutions which were then recommended to the more difficult to access Indian site. As mentioned, this happened at different scales of the project, from the vaults to the ceramic coverings, leaving very little spontaneity or accidentally in the Manorama house, which on the contrary took shape with the same care and artifices found in the most famous Parisian houses.

In the light of what has been reconstructed so far, how should we look at Villa Sarabhai? How can we interpret that clear expression for the “taste for the rustic”¹⁸ as in the Maisons Jaoul, and which appears to take shape independently of geography and building inclinations?¹⁹

Like the Maisons Jaoul, Villa Sarabhai can be interpreted as a manifestation of the new brutalist aesthetics that ran through Le Corbusier’s work from the forties onward taking over from the “polished and cellophanized”²⁰ forms of the *civilisation machiniste*. This explains the care given to the detailed plastic solutions as well as the poetics of materials that characterize the spaces of the Indian “small house”²¹.

However, the real narrative of the building process shows how the house of Manorama cannot be interpreted in the same way as one of the many Mediterranean villas of Le Corbusier. It is not to be considered a copy of what was more comfortably built in Paris. On the contrary, in spite of the affinities and even the repetitions of motifs and solutions which can be considered at the origin of the supervision of the building site, Villa Sarabhai is the expression of a slow process of traditional assimilation which forces the formal experimentation started in Paris.

In this regard, another valuable source for delineating the events of the villa are the photographs of the worksite taken by Véret between 1954 and the end of 1955²². There are more than 200 photographs today kept in the Véret

archives that document on a monthly basis the progress of work in the various worksites of the buildings designed by Le Corbusier in Ahmedabad. This material, mostly unpublished, allows a close observation of the buildings during their making. Some photos of Villa Sarabhai caught significant dissimilarities between what had been built and what was indicated in the plans. The main differences concern the service nucleus of the villa consisting of the kitchen block and the garage. The rooms of the latter, for example, appear rotated by 90° with respect to what was indicated in the plans published in the pages of the *Oeuvre Complète*, where the solution presents a succession of bays parallel to those of the main house. This was a modification already traced by Véret in a sketch dated July 7, 1953 and later confirmed by a drawing dated December 26, 1953⁽²³⁾. This discordance can be interpreted as the extreme manifestation of a principle of variation which pervades the narrative of the villa both in its design phases and in its construction as a result of exhausting negotiations between architect and client.

That process did not cease with the end of the works when Le Corbusier had no longer any control. Indeed, the villa experienced continuous and progressive adaptations to life starting from the fans placed under the vaults at the end of the construction works – to the architect's total disappointment – to the addition of copper overhangs to the gutter spouts, whose brutal plasticity characterizes today the elevations of the house.

Regardless of the metamorphoses that the work underwent once it was immersed in the passage of time, from the earliest stages of design Villa Sarabhai became a document of the openness of Le Corbusier's work to a multiplicity of cultural influences, so far neglected in the name of laws whose universal value came into sharp crisis in particular in his Indian work.

Signs of unprecedented openness are the friendships developed by Le Corbusier during the months when he was engaged in the construction of Villa Sarabhai. Just to list a few, some examples are the bond established with the Sardinian sculptor Costantino Nivola – thanks to whom he came close to the work of Bernard Rudofsky – and the deep understanding that connected him with Minnette de Silva²⁴. The first woman to establish herself as an architect in Sri Lanka in the aftermath of its independence, Minnette de Silva met Le Corbusier on the occasion of the Ciam conference in Bridgewater in 1947, where the young Sri Lankan participated as a representative of the Indian group MARG²⁵. The friendship with de Silva, documented by a dense correspondence, part of which is now preserved at the Fondation Le Corbusier in Paris, developed in the years when Le Corbusier was working in India, between Chandigarh and Ahmedabad²⁶. In these years, thanks to Minnette de Silva, Le Corbusier experienced a further and surprising encounter with the Asian country. The relationship that connected the two architects raises the question of the complexity of being together of distant languages and worlds. On the one hand, de Silva hoped to be able to open up the contemporary debate to a cultural complexity that had been ignored until then. On the other hand, the Indian continent appeared to Le Corbusier as an opportunity to stage the crisis of an entire season of architecture, then powerless in the face of the complexity of the historical passage it was called upon to interpret. The *cross-fertilized* forms of Villa Sarabhai tell the story of the effort made to keep in relation what one would like to separate ensuring, as witnessed in the project documents, the resistance of a comparison that is created through differences and continuous “divides”²⁷.

In the light of the above, the impression is that Villa Sarabhai is not at all like a “small house”²⁸ aimed at satisfying a luxurious and geographically isolated client.

Interpretable as a masterly example of Le Corbusier's mature work, the villa represents rather a document of a crucial historical passage that took shape in Ahmedabad to narrate, together with the cultural specificity, the second half of the twentieth century and its crises.



fig. 1. Le Corbusier, villa Sarabhai,
Ahmedabad, Inde, 1951-1956,
interior view. (© Manuel Bougot)



fig. 2. Le Corbusier, villa Sarabhai,
Ahmedabad, Inde, 1951-1956,
partial view of the front towards
the inner garden. (© Carlo
Fumarola)

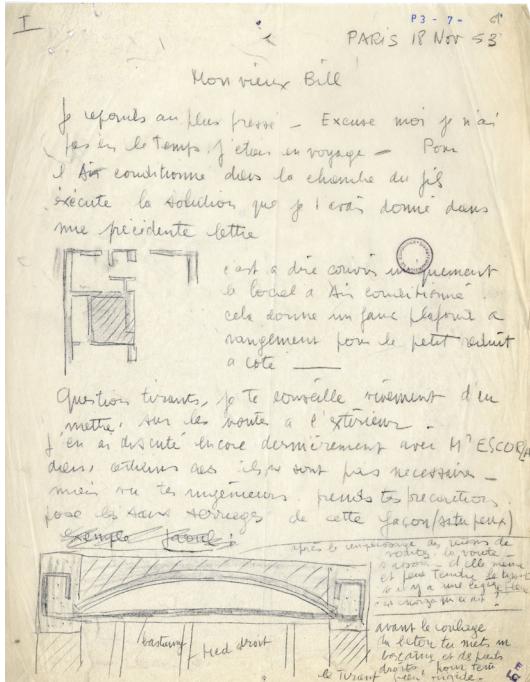


fig. 3. Letter from J. Michel to J. L. Véret, November 18, 1953 (P3-7-69). (© Fondation Le Corbusier / SIAE)

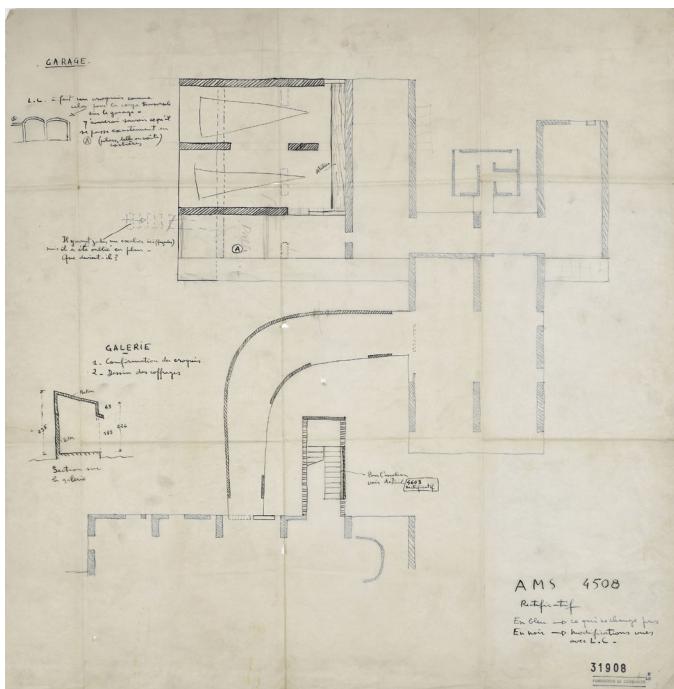


fig. 4. Floor plan sketch of the garage and gallery (FLC 31908).
(© Fondation Le Corbusier / SIAE)

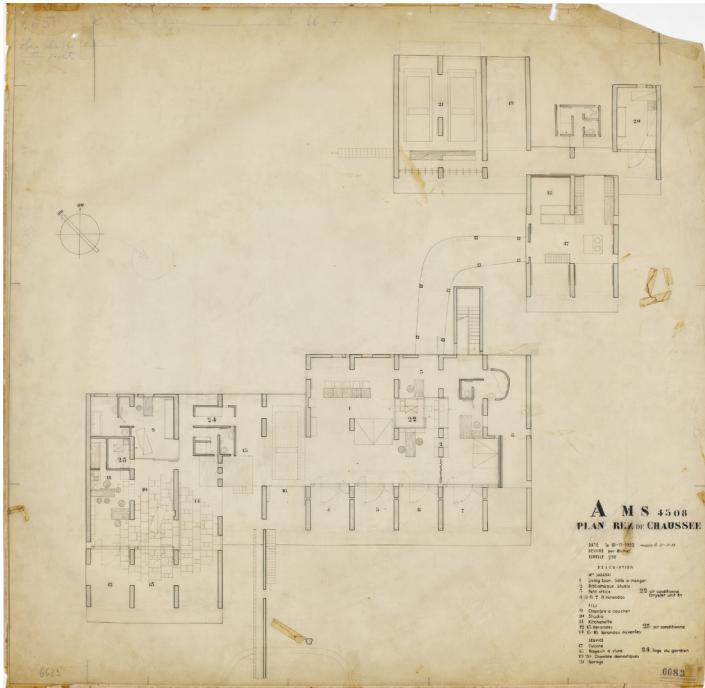


fig. 5. Floor plan with indication for interior furniture, 1952, November 10 (FLC 6683). (© Fondation Le Corbusier / SIAE)

ENDNOTES

①: This paper summarizes issues and topics more broadly discussed by Bonaiti (2021a). Fundamental contributions are: Serenyi (1983) and Curtis (1986). Among the most recent works that offer a peculiar interpretation of Villa Sarabhai, see in particular: Ubbelohde (2003), Suarez (2006), Masud (2010), Gargiani and Rosellini (2011, pp. 361-372) and Williamson (2016, pp. 385-412). In addition, the testimonies of Balkrishna Doshi, met by the author in his studio in Ahmedabad in February 2018, are essential: Doshi (2012a), Doshi (2012b) and Doshi (2012c).

●: On the figure of Manorama Sarabhai, on the Sarabhai family and in general on the role played by Ahmedabad's business elite see in particular: Pandya (2002), Nanda (1991), Mehta (2005), Alessandrini (2012), Leone (2013) and Williamson (2016, pp.118-275). Also, Mrinalini Sarabhai's autobiography (2004) is an indispensable work. As Williamson (2016) explains, architecture, with forms that balance modern universal aesthetic and local culture became a powerful "tool" in representing the "small group of textile millowners and their families, who dominated the city economically and politically" (p. 26). The role entrusted to art as a useful tool in the process of development of the city and its social fabric was recognized by the entrepreneurial class of Ahmedabad even before the arrival of Le Corbusier and it was at the origin of the birth of several cultural institutions including the Ahmedabad Textile Industry Research Association (ATIRA), directed by Vikram Sarabhai, whose building was significantly designed in 1951 by Achyut Kanvinde.

●: Le Corbusier arrived in Ahmedabad for the first time in March 1951. In fact, the architect was invited to visit

Ahmedabad with the task of designing a new museum with a letter dated March 10, 1951, sent to Simla where Le Corbusier had been staying for a few days while he was engaged in the preliminary phases of the Chandigarh plan. Gautam and Gira Sarabhai, Manorama's brother-in-laws, were among Le Corbusier's main interlocutors in this first phase of the Indian projects. Kadri, M.B. (1951, March 10). [Letter to Le Corbusier]. Musée Ahmedabad-(Inde), 1956 (P3-4-15), Fondation Le Corbusier (from now on FLC), Paris, France. See also: Sarabhai, G. (1951, March 23). Proposal for the Municipal Museum of Ahmedabad. Musée Ahmedabad-(Inde), 1956 (P3-4-16), FLC, Paris, France. After arriving in Ahmedabad, Le Corbusier was asked to design, in addition to the new city civic center, two private villas. One, never built, was for the mayor Chinubhai Chimanbhai, the other one was for Surottam Hutheesing, and later sold to Shodhan. In November 1951, during his second stay in Ahmedabad Le Corbusier was appointed to design, in addition to the villa for Manorama, also the new headquarters of the Millowners' Association. See Bonaiti (2021a, pp. 11-12).

④: Le Corbusier. (1952, March 7). AMS 4400. Villa de Mrs. Manorama Sarabhai, Ahmedabad-(Inde), 1951, (6676), FLC, Paris, France; Le Corbusier. (1952, March 7). AMS 4401. Villa de Mrs. Manorama Sarabhai, Ahmedabad-(Inde), 1951, (6678), FLC, Paris, France.

●: When compared to other works of the same years by Le Corbusier, the project of the villa is documented by a limited number of drawings. An indispensable tool for retracing the events of the design and construction of the villa is the correspondence, particularly rich and detailed, between the site and the Parisian studio, and between Le Corbusier and Manorama Sarabhai. See in particular: Sarabhai, villa-Ahmedabad (Inde), 1951, P3-5 (153-309) and P3-7 (1-237), FLC, Paris, France; Shodhan, villa-Ahmedabad (Inde), 1951, P3-5 (1-152), FLC, Paris, France; Correspondance, Sarabhai Gira, R3-2 (331-335), FLC, Paris, France.

- : Doshi (2012a, p. 16).
- : See in particular: Maniaque (2005). On the use of brick vaults on the designs and works of Le Corbusier see also: Serenyi (1965), von Moos (1971), Kartik (2007), Papillaut (2011, pp. 190-196), Bonaiti (2021a, pp. 15-18) and Bonaiti (2021b).
- : As Williamson (2016) explains: “Le Corbusier essentially updated the chowk for the suburbs, not open vertically like a traditional chowk, but open longitudinally to take advantage of the breeze and views of the secluded landscape” (p. 410).
- : Doshi (2012a, p. 14).
- ¹⁰: Doshi (2012a) concluded: “Very different from the Jaoul houses [...] This house purposefully denies its own existence. It is indescribable in terms of spaces. It is like a sponge, porous toward the garden” (p. 14).
- ¹¹: Le Corbusier (1950-1954, E18-343 and E21bis-497).
- ¹²: Since July 1953, Véret was simultaneously following the construction of all the buildings designed by Le Corbusier, dealing on a daily basis with economic, bureaucratic and technical problems. For the overall role played by Véret in Ahmedabad, see: Bonaiti (2021a) and Rampazzo (2021).
- ¹³: As is well known, Le Corbusier used to entrust each project to one or more collaborators, who he delegated for keeping contacts with clients and companies, granting them varying degrees of autonomy. In this regard, see in particular: Loach (1992) and Maniaque (2005, p. 70).
- ¹⁴: Véret, J.L. (1953, October 15). [Letter to Michel]. Sarabhai, villa-Ahmedabad (Inde), 1951 (P3-5-196), FLC, Paris, France.
- ¹⁵: Maniaque (2005).
- ¹⁶: Michel, J. (1953, November 18). [Letter to Véret]. Villa Shodhan, villa Sarabhai, palais des filateurs- Ahmedabad (Inde), 1951-1954 (P3-7-69), FLC, Paris, France.
- ¹⁷: Bonaiti (2021a, pp. 29-31).
- ¹⁸: Sottsass (2017, p. 148).
- ¹⁹: An attentive observer of Le Corbusier’s work is James Stirling (1955), who in a fundamental essay published in

“Architectural Review” recognizes the similarities between the Maisons Jaoul and the Indian architectural context emphasizing with rare lucidity the profound difference that separates these works from the villas of the twenties (Bonaiti, 2021a, pp. 16-18).

(20): Sottsass (2017, p. 148).

(21): Sarabhai, M. (1952, February 13). [Letter to Le Corbusier]. Sarabhai, villa-Ahmedabad (Inde), 1951 (P3-5-246), FLC, Paris, France.

(22): Fund Véret-SIAF/Cité de l’architecture et du patrimoine/Archives d’architecture du XXe siècle, Paris, France. Thanks to Bénédicte Gandini for reporting the Fund. The photographic collections are dated July 1953, February/March 1954, April 1954, August 1954, October 1954, November 1954, January 1955.

(23): The drawings are respectively: Le Corbusier. (1953, July 7). AMS 4508 Revision-Garage. Villa de Mrs. Manorama Sarabhai, Ahmedabad-(Inde), 1951 (31909), FLC, Paris, France; Le Corbusier (1953, December 26). Plan de garage and Kitchen. Villa de Mrs. Manorama Sarabhai, Ahmedabad-(Inde), 1951 (6723), FLC, Paris, France. There is a further sketch – AMS 4508 Revision-Garage/Gallery, Villa de Mrs. Manorama Sarabhai, Ahmedabad-(Inde), 1951, (31908) FLC, Paris, France – undated and presumably earlier than the July 7 drawing, which shows the same changes indicating them as “approved by LC”. Together with the rotation of the garage bays, drawings FLC 31908 and FLC 31909 report for the first time the connecting passage between the house and the kitchen with brick masonry, as it will then be actually built. In a letter to Le Corbusier, dated July 9, 1953, presumably referring to sketch FLC 31909, Véret wrote: “Vous receveret aussi les dernières modifications pour le garage. La place de l’escalier d’acces au toit reste à fixer”. A survey of the garage and some areas of the villa is currently underway.

(24): Bonaiti (2021a, pp. 32-40).

⁽²⁵⁾: On the figure of Minnette de Silva her autobiography is fundamental: de Silva (1998). See also: Dissanayake (1982), Lee and Chakraborty (2012), Siddiqi (2017) and Akter (2018).

⁽²⁶⁾: Correspondance, Silva Minnette de, R3-4 (2-70), FLC, Paris, France.

⁽²⁷⁾: Jullien (2016).

⁽²⁸⁾: Sarabhai, M. (1952, February 13). [Letter to Le Corbusier]. Sarabhai, villa-Ahmedabad (Inde), 1951 (P3-5-246), FLC, Paris, France.

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■ 4 BETWEEN INDIAN TRADITION AND CORBUSIAN MODERNITY: THE CASE OF THE VILLA HUTHEESING SHODHAN

MARÍA CANDELA SUÁREZ
CITCEM, ULP, Universidade do Porto

In early 1951, Le Corbusier was commissioned by the Government of the State of Punjab to plan a new capital^①.

When he was in Chandigarh, a group of Jainist clients from Ahmedabad invited him to develop five projects, the museum of Ahmedabad, the Mill Owners' Association and three family houses ●. Four of the five were built, one of which was the Villa Hutheesing-Shodhan (fig. 1). The Villa is the last example of Corbusian family-housing architecture. Built between 1951 and 1956, it was conceived on the basis of a conscious combination of modern architecture and the climate and culture of India.

Le Corbusier's design for Villa Shodhan – from here on referred to as Villa Hutheesing or Hutheesing-Shodhan ● – has three versions, which synthesise the extensive research he undertook over three years ④. The programme for the Villa is described on a sheet dated 23 March, 1951, entitled “Bungalow de Surottam P. Hutheesing, Shahibag, Ahmedabad” ●. It reveals the importance of building *vérandahs* and terraces, on every floor, which would serve each bedroom so that one could sleep outside during summer nights. Among the handwritten notes, possibly expressing Hutheesing's request, Le Corbusier wrote: “very best modern (*très bon modern*)”. This suggests the client's receptiveness to Corbusian architecture. Referring to the villa, Le Corbusier wrote in *Oeuvre Complète*:

“The Villa has a story: the commission was given to Le Corbusier in 1951 for the residence of a Mr. Hutheesing, Secretary of the Mill Owners', with a set of require-

ments, primarily personal, complicated and subtle. Just when the construction plans were completed, Mr. Hutheesing thereupon sold them to Mr. Shodhan, who owned another plot and desired to start construction immediately. As luck would have it, Le Corbusier's Indian projects are always dictated *a priori* by the Indians. The transfer of this house to a new plot was therefore a perfectly natural event” ●.

For Le Corbusier, the Indian climate explains why Shodhan had bought the project without asking for any changes. Peter Serenyi provides more clues:

“The old town house of the Shodhan family located in the heart of the city provides an interesting clue to an understanding of the client's willingness to accept Le Corbusier's design exactly as it was intended for Surottam Hutheesing. Having been raised in a house which had pilotis, terraces, roof gardens, and open façades, Shiamubhai Shodhan must not have found the designs for the house he was to buy too unusual. Coming from such an architectural environment, he was in fact better prepared to accept Le Corbusier's ideas, than a Parisian client” ●.

According to Serenyi, some features of the project would have been familiar to Shodhan given the affinities with the traditional architecture of the city. This is the case of the double-height living room: “When Shiamubhai Shodhan first saw the designs for the double-storied interiors of his future house, he must have recognised in them a modern reinterpretation of a familiar symbol of status and wealth” ●. The same applies to the double-height *salle d'attente*:

“The large houses of old Ahmedabad were usually built around a double-storied entry hall, or chowk, which signifies their symbolic and ceremonial center. As seen in the eighteenth-century Chunilal house, this space was given the greatest artistic attention in terms of spatial organisation and decorative treatment” ●.

While double-height rooms were commonly used in Le Corbusier's work, Serenyi's observations seem to suggest that the Villa Hutheesing-Shodhan entails a dialogue between Le Corbusier's modern architecture and Indian architectural tradition. My aim is to explore this dialogue. By focusing on the vérandahs and terraces, I will suggest that Le Corbusier reinterpreted modern architecture through Indian architectural tradition, and that these reinterpretations became key elements of his domestic architecture in Ahmedabad.

4.2 LE CORBUSIER AND THE INDIAN IDEA OF "VÉRANDAH"

India's climate was a main concern of Le Corbusier from the beginning. When he presented the architectural solutions for the new capital of India, he cautioned in “Chandigarh. La naissance de la nouvelle capitale du Punjab (Indes) 1950”:

“The problem is accentuated by the ruling factor of the sun, under which this new Indian way of life must be created. The sun is so violent that until now the habits of siesta and laziness were inevitable, in native architectural conditions which allowed no work whatsoever at certain hours and seasons. The rainy season also has its problems” ¹⁰.

Le Corbusier paid special attention to local architecture, having found in the *vérandah* one of its most fundamental elements. This is shown in his notes and drafts: “La *vérandah* (mot indien) est la condition même du logis [...] La nuit on dort sur le toit d'avril à octobre sauf juillet et août = pluie / on dort dans le *vérandah*”¹¹.

Several months after his first visit to India – and after having finished the first version of Villa Huthéesing, which provided each floor with *vérandahs* – Le Corbusier was still reflecting on this element of Indian architecture. Next to a sketch of the façade and section of a building, he explains: “La face des *vérandahs* est en murs non en piliers. Mais tout ceci est approximatif et Vignole”¹². In another note, he observes:

“Les villas et maisons alignées de Delhi sont une coquetterie charmante (Bd où est l'Hôtel Ambassador). Mais le soleil fait ce qu'il veut. Il faut partir des 4 orientations off Thapar et créer ce qu'il faut : ce qui est indispensable : des sujets du soleil avec les techniques disponibles”¹³.

From the first moment, Le Corbusier understood the value of the *vérandah* for Indian climate and culture. Yet, he also recognised the architectural possibilities it created: a transitional space, a void generating light and dark, an element capable of being reworked and integrated into the message he intended to pass on to the Indians, translated into modern architectural language. Thus, he explored it in Huthéesing's house. In this villa, the *vérandah* is a key element of architectural form that invigorates its volume. The way it is adapted to all versions of the Villa during the design process is clear evidence of how Le Corbusier regarded the *vérandah* from the beginning as an ally and not an obstacle, repeatedly taking advantage of it. Le Corbusier's notes on Indian miniatures confirm – as noted

by several authors – his admiration for the way in which they generate depth, light and shadow. One of two drawings (fig. 2) reads: “Miniatures / la niche modulorée [?] Ceci confirme le thème villa maire Ahmedabad”¹⁴.

The attributes of Indian miniatures seem to be reinterpreted at different levels in the Villa Hutheesing-Shodhan. As suggested in the note mentioned above, the first level can be found in the “alveolus” of the *brise-soleil* of the southwest façade (2,26 x 2,26 m), providing the interior spaces and the suspended garden with a new veiling texture. A second level is suggested by Balkrishna Doshi: the connection between Indian miniatures and the concrete texture of the *brise-soleils*, enhancing depth through the use of a diagonal, textured formwork. A third level is to be found in the association between the spatial quality of Indian miniatures and the spatial complexity of the suspended garden, with its various platforms and stairs.

4·3 FIRST LEVEL: THE ALVEOLAR "BRISE-SOLEIL"

The *brise-soleil* in Villa Hutheesing-Shodhan shows a direct relationship with the alveolar facade of the Unité d’habitation in Marseilles¹⁵ and, before that, with the façade of the Law Court in Algiers. Le Corbusier had used the *brise-soleil* in some of his previous projects, but it was with these two cases that the *brise-soleil* gained a new dimension.

In cases such as the Maison Curutchet or the Manufacture in Saint Dié, the depth of the *brise-soleil* was reduced to the requirement to protect it from the sun. The Unité d’habitation develops a new kind of *brise-soleil*, in which depth becomes a dominant dimension, acquiring greater formal protagonism than in the earlier cases. This was turned into a new design tool to be applied in other projects simply by adjusting its height and width to the spaces that it would protect. In Villa Hutheesing-Shodhan,

the “inhabitable alveolus” of the *brise-soleil* generates a textural structure in front of the interior spaces and suspended garden, veiling the inner and outer spaces. In contrast with the *Unité d'habitation*, the *brise-soleils* of the Villa Hutheesing-Shodhan are separated from the building itself, manifesting their independence. They are 2,26 x 2,26 m, a measure of the *Modulor* that Le Corbusier had recognised in the alveolus of the Indian miniature that he drew in his *E23* sketchbook. The Indian version of the alveolar *brise-soleil* can thus be seen as a three-dimensional repetition of the alveolus represented in Indian miniatures.

4.4 SECOND LEVEL: THE TEXTURE OF THE "BRISE-SOLEIL"

When questioned about the impact of India on Le Corbusier's work, Doshi answered:

“Well, mainly that he was looking at things in a different way than he had in the West. What do you do in a country where there's no technology but lots of skilled people, people with ideas; a country far behind in time but also very vital – full of energy! He began to think of using natural materials in a different way. When he came to Ahmedabad in 1951 and he saw the concrete column at Kanvinde's ATIRA building, I know that he took pictures back to Paris and said: “why not use concrete like this? ^⑯”

Doshi knows that Le Corbusier did not discover rough concrete in India. He had already used it before. In India, however, he learned how to take further advantage of its texture and plasticity.

“No, not really discovered – Marseilles had already been in rough concrete. But we had to do the form-work in

*small plates, because pouring and casting is difficult. And he said, 'why not take planks and do what we call shuttering?'. He also used steel form-work and said, 'why don't we show the rivets also so we can feel how the concrete is poured'. In India he looked at concrete as texture. What he did here was to add plasticity. Le Corbusier was a man of great plasticity"*¹⁷.

So, he explains how, feeding upon the Indian miniatures he had drawn, Le Corbusier attempted to intensify the visual depth of concrete:

*"He spent a lot of time looking at Indian miniatures and he once showed me a painting of Krishna and Radha dancing and he said, 'You see, how front and back are shown, how you can twist the plane to get a complete image.' The problem that was intriguing him was how to get another dimension within the same plane. And this is what he did in Ahmedabad, he made the form-work go against the nature of concrete, i.e., normally the form-work is designed vertically, but here he placed the shuttering planks diagonally, so that the shadows cast are diagonal, while the basic level remained horizontal. This was done with the idea that the plane must get another dimension through shadow. So he discovered that you can use planes in a different way. No one really invents, you know, only re-discovers"*¹⁸.

4.5 THIRD LEVEL: THE SPATIALITY OF THE SUSPENDED GARDEN AND THE TRADITIONAL INDIAN TERRACES

The Indian miniatures seem to have awakened in Le Corbusier another architectural aspect: the new spatiality that his concept of suspended garden could acquire, a

spatiality now multiplied in platforms of different levels, connected by stairs just as in traditional Indian architecture (figs. 3-4). This new conception of the suspended garden can be found from the beginning of the design process to the built version.

Various authors, including Le Corbusier himself, compared the Villa Huthéesing-Shodhan with Villa Savoye. Sunand Prasad has argued that a shortfall of the Indian villa resides in the interruption of the ascending path along the ramp, ending on the first floor¹⁹. It is further argued that the specific problem of the ramp is that the end occurs at a small and secondary point: the first floor hall. One must however ask how Villa Huthéesing-Shodhan should be looked at in light of Villa Savoye, with the end of its journey at the *toit-jardin*, facing a window framing the landscape.

This questionable comparison seems to rest on the premise that both villas take into consideration the surrounding natural environment in the same way. This, I think, is not the case. Whereas Villa Savoye struggles against nature, considers it antagonist to architecture, is overwhelmed by it, and only manages to counterpoise its strength and order at the end of the path through the window on the *toit-jardin*, Villa Huthéesing-Shodhan engages in a dialogue with its natural environment as an equal. This is because Le Corbusier did not feel here the harassment that Western nature imposed in the 1920s. Unravelling the issue is necessary to understand the position of Le Corbusier with regard to nature when he designed these two projects, distanced from each other by over thirty years.

In *Vers une architecture*, Le Corbusier had written: “Une maison qui soit cette limite humaine, nous entourant, nous séparant du phénomène naturel antagoniste, nous donnant notre milieu humain, à nous hommes”²⁰. In *Almanach d'architecture moderne*, he added:

“Que voyez-vous se dérouler sous vos yeux, sinon une immense mise en ordre? Lutte contre la nature pour la dominer, pour classer, pour se donner ses aises, en un mot, pour s’installer dans un monde humain qui ne soit le milieu de la nature antagoniste, un monde à nous, d’ordre géométrique?” ⁽²¹⁾

For Le Corbusier, in the 1920s, nature meant chaos, and only architectural order could neutralise nature's negative effects, tame it with its geometrical laws to reverse the relationship of domination. It is the window at the end of the path that organises the initial chaos in every suspended garden of the 1920s:

“Because it is in the window that nature becomes landscape, where the ultimate focus of the path is to be found, the episode that puts an end to representation, where the initial antagonism between nature and man is overcome, fusing both characters” ⁽²²⁾.

The impact of what he saw after reaching India, however, led Le Corbusier to recognise the need for reconciliation with nature which he once considered antagonistic, the need to make a pact with her:

“He saw many things for the first time, the bright blue sky, the relentless sun, the hot winds, the cool moon, the beauty of tropical nights, the fury of the monsoon, and he said to me once that while his work so far had been a counterpoint to nature, he now realised that he had to make a pact with nature” ⁽²³⁾.

In comparing the Villa Savoye and Villa Huthéesing-Shodhan, it is possible to argue that in the latter, the ramp reaches the point it should reach. There is no path end. Neither is there a window framing nature. There is no such

window because nature is no longer a chaotic entity for Le Corbusier to tame. Instead, there is: a suspended garden deployed across multiple platforms topping the Villa, multiple path endings, and various windows. There is a ramp that has expanded into multiple steps through which the continuity of the climb to the *toit-parasol* is assured. In reality, the ascent provided by the villa is achieved through the conjunction of the ramp, the roofs of the inner spaces, and stairs. It is this conjunction that guarantees the path, which is not linear, as in the 1920s, but zigzagging, with intermittent openings and closures, full of events. Only through the platforms that cover the inner spaces, in the suspended garden, is it possible to reach the stairs, which, reinterpreting the ladder of traditional Indian architecture, serve to reach the *toit-parasol*, even if the main spaces remain underneath, protected from the Indian sun.

4 · 6 CONCLUSION

A cross-reading of the Villa Hutheesing-Shodhan, combining the principles of modern Corbusian architecture with Indian tradition, allows us to understand the relevant experience that building in India meant to Le Corbusier. Knowing what Greece and the Middle East had also meant to him in his youth, Doshi wrote:

“... he admired most profoundly the quality of activities around the huge water tank enclosed by the spaces and forms of the Sarkhej mosque and tomb complex. His only comment to me was ‘Doshi, you do not need to go to the Acropolis, you have all that we seek from architecture” ⁽²⁾.

For Le Corbusier, India meant looking backwards into his youth and, at the same time, the confirmation of the

timelessness and universality of some of the architectural tools that he had explored throughout his work. Indian tradition led him to reinterpret and re-elaborate his modern design, just as Mediterranean culture had participated in the basis of his architecture. The design of the Villa Hutheesing-Shodhan illustrates how, until the end of his life, Le Corbusier's architecture emerges from a continuous dialogue between tradition and modernity, allowing him to further develop the architectural elements of his research, from the depth of the *brise-soleil* to the relevance of its texture, and from the spatiality of the suspended garden to the paths it generates, ultimately expressing a dialogue between architecture and nature that he had discovered forty years earlier in the Mediterranean.



fig. 1. Villa Hutheesing-Shodhan,
Ahmedabad, India, 1951-
56, south-west elevation. (©
Fondation Le Corbusier / SIAE)



fig. 2. Le Corbusier, sketch of
Indian miniature, 1951, Carnet
E23. (© Fondation Le Corbusier /
SIAE)

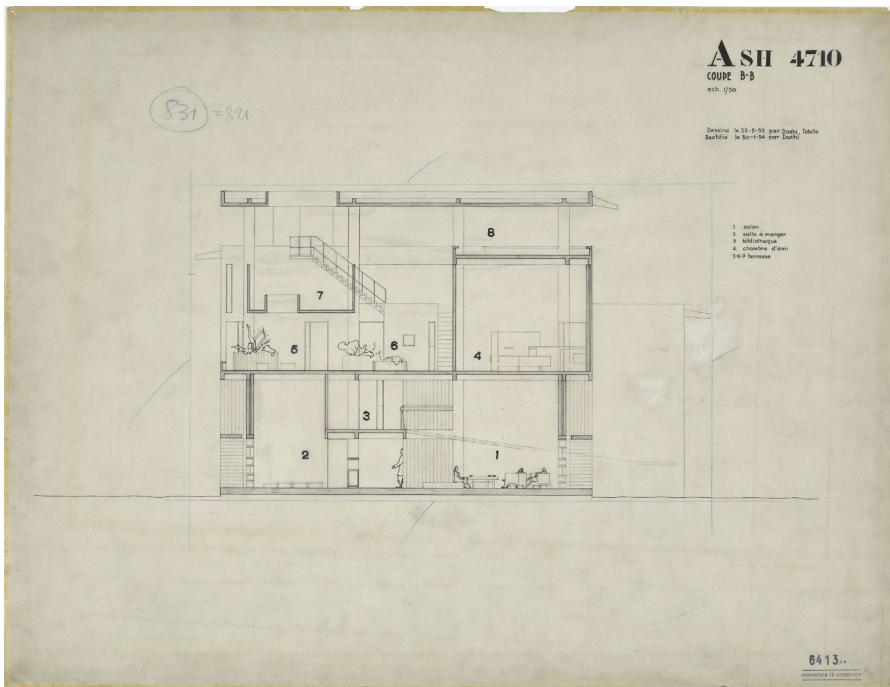


fig. 3. Villa Huthéesing-Shodhan,
section across the suspended
garden (FLC 6413). (© Fondation
Le Corbusier / SIAE)



fig. 4. Villa Huteesing-Shodhan,
suspended garden (© Fondation
Le Corbusier / Vastu Shilpa
Foundation / SIAE); traditional
Indian courtyard with ladder to
the roof terrace. (© Fondation Le
Corbusier / SIAE)

ENDNOTES

①: This paper was initially published in Rabaça, Armando, ed. (2017). Le Corbusier, History and Tradition. Coimbra, Imprensa da Universidade de Coimbra, Departamento de Arquitectura Universidade de Coimbra, pp. 276-294. ISBN 978-989-26-1337-6. <https://digitalis.uc.pt/pt-pt/livro/lecorbusierhistoryandtradition>. It was financed by National Funds through FCT - Foundation for Science and Technology under the project UID/HIS/04059/2013, and the European Regional Development Fund (ERDF) through the Operational Program Competitiveness and Internationalization - COMPETE 2020 (POCI-01-0145-FEDER-007460).

●: The museum was commissioned by the Mayor of Ahmedabad, Chinubai Chimanbhai, who also asked Le Corbusier for the design of his house. The building for the Mill Owners' Association was commissioned by Surottam Hutheesing, President of the Association and Chimanbhai's cousin, who also asked Le Corbusier for the design of a house. The third house was commissioned by Manorama Sarabhai, Chimanbhai's sister. These commissions date from March 1951, during Le Corbusier's first trip to Ahmedabad, except for that of Sarabhai House, dating from November 1951, during Le Corbusier's second trip.

●: The house was designed for Surottam Hutheesing. The final plans were then sold to Shiamubhai Shodhan, Hutheesing's friend, for whom the villa was eventually built.

④: Versions are dated October 1951, November 1952 and May 1953. The first and third versions were published in volumes 5 and 6 of *Œuvre Complète*. Nevertheless, the Registration book from the atelier reveals the existence of a fourth "avant-projet" dated June 1952 which would

have been sent to Huthéesing. Le Corbusier. (1952, June). Shodan Villa, Ammedabad-(Inde), 1956 (6445), Fondation Le Corbusier (from now on FLC), Paris, France.

●: Le Corbusier. (1951, March 23). (Bungalow de Surottam P. Huthéesing, Shahibag, Ahmedabad). Shodan Villa, Ammedabad-(Inde), 1956 (P3-5-2), FLC, Paris, France.

●: Le Corbusier (1957, p. 134). The French version of this text adds more information: “Par bonheur, les projets indiens de Le Corbusier sont toujours dictés a priori par le soleil et les vents dominants qui sont constants, par régions de l’Inde. Le transfert de cette habitation sur un nouveau terrain se fit donc assez naturel”.

●: Serenyi (1984, 26:xvi).

●: Serenyi (1984, 26:xvi).

●: Serenyi (1984, 26:xvi).

⑩: Le Corbusier (1953, p. 114).

⑪: “The véranda (Indian word) is the essence of the home [...]. One sleeps at night on the roof from April to October, except during July and August = rain / one sleeps on the vérandas” (Le Corbusier, 1951, p. 17).

⑫: “The face of the vérandas results in a wall, not in pillars. But everything is approximated and Vignola” (Le Corbusier, 1981).

⑬: “The villas and aligned houses of Delhi are a charming coquetry (Bd where the Hotel Ambassador is). But the sun does what it wants. It is necessary to start from the 4 orientations off Thapar and create what is needed: what is indispensable: subjects of the sun with the available techniques” (Le Corbusier, 1981).

⑭: “miniatures / the modulating niche (?) This confirms the theme of the villa for the Mayor of Ahmedabad” (Le Corbusier, 1981).

⑮: Le Corbusier named this façade “les brise-soleil en alvéoles”.

⑯: Doshi (1986, p. 5).

⑰: Doshi (1986, p. 5).

^⑯: Doshi (1986, p. 5-6).

^⑰: Prasad (1987, p. 305).

^⑲: “A house that will be this human boundary that encloses us from antagonistic natural phenomena, giving us, giving man, our human milieu” (Le Corbusier, 1924, p. i).

^㉑: “What do you see developing before your eyes, if not an immense setting in order? Fighting against nature to dominate it, to classify it, to profit from it, in a word, to settle oneself in a human world that is not the milieu of antagonistic nature, a world of our own, of geometric order?” (Le Corbusier, 1926, p. 26).

^㉒: Quetglas (2009, p. 593).

^㉓: Doshi (1986, p. 5).

^㉔: Doshi (2001, p. 22).

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5 "L'ARGENT EST
AUTRE, LE CLIMAT
EST AUTRE, L'ÂME
EST AUTRE".
LE CORBUSIER
SANSKAR KENDRA
MUSEUM IN
AHMEDABAD

ELENA SOFIA MORETTI
Università Iuav di Venezia

On March 10th, 1951, while Le Corbusier was in Chandigarh, or rather, while he was working on his project for the new capital of Punjab^①, he received a letter signed by the mayor and the Municipal Corporation of Ahmedabad, a western Indian city and capital of the state of Gujarat●.

In the letter, the architect was informed of the intention to build a museum and the willingness to offer him the commission●.

Specifically, those who suggested inviting Le Corbusier to the city were Surottam Hutthesing, Gautam Sarabhai and his sister Gira, members of Ahmedabad's most important textile entrepreneur families^④. The latter stood out in the Indian panorama for their culture and elegance, believing that educating the population would help modernize the city. Their patronage and the dense network of international relations with relevant figures from East and West, contributed to making Ahmedabad, in the aftermath of independence (1947), a lively laboratory of ideas, projects, and artistic experiences. In particular, the commissioning of the museum triggers an important sodality between Ahmedabad's

industrialists and Le Corbusier, leading the city to host four works by the Franco-Swiss architect: not only the museum, but the Sarabhai and Huttheses villas and the Mill Owners Association Building ●.

Although it is not known whether Le Corbusier knew Ahmedabad ●, it is not surprising that he reached the city and accepted the assignment. India was offering him, as it already happened with the city of Chandigarh - seen as a realization of the Ville Radieuse model - the precious opportunity to materialize an architectural idea he had been investigating for many years.

Among the twenty-seven projects for exhibition spaces in the *Œuvre Complète*, it is possible to identify a sort of prototype, whose definition Le Corbusier worked on for over twenty years and which was never realized: the square spiral museum with unlimited growth ●. Between 1928 and 1939, Le Corbusier proposed four square spiral museums: the Mundaneum in 1928 ●, the Musée des Artistes Vivants in 1930 ●, the first version of the Pavillon des Temps Nouveaux in 1936¹⁰ and the Musée à Croissance Illimitée in 1939¹¹. The Mundaneum was part of a larger project to build an ideal city near Geneva - the "world city"¹² - that represents the genesis of Le Corbusier's museum prototype in which all the elements, through continuous adjustment, will lead to defining the Musée à Croissance Illimitée in 1939. The latter, which can be considered as a sort of "manifesto" project of his museum, is characterized by a square spiral plan developed around a central void. As the use of the spiral suggests, one of the main opportunities offered by the prototype is the ability to grow over time, in successive stages, according to the needs of the site and the economic possibilities. Knowledge as much as the museum can keep expanding, as those Le Corbusier's square spiral building called "museums of knowledge" from the 20s onwards. Raised on pilotis, the building is thus three floors high, and contains a technical floor between the roof and the

exhibition rooms, with installations that optimize the building's performance by allowing natural and artificial light to enter strictly in the zenith direction. The design of the façade is marked only by the overhanging beams to accommodate possible future growth of the building. The exhibition rooms on the first floor, reachable through a ramp in the central patio, are organized around four corridors that draw a swastika in the plan and repeated on the next level through four mezzanines. It is a model that finds its first partial realization in the Ahmedabad museum and then repeated, with some variations, in Chandigarh and Tokyo.

We must turn our attention to the Ahmedabad museum¹³.

A handwritten note by Le Corbusier informs us that he reached the city on March 22nd, 1951, and returned to Paris the following day¹⁴. Particularly helpful in reconstructing the directions given to the architect during this first meeting with the clients is a letter from Gautam Sarabhai dated March 23, 1951, describing the Museum's future program, assumptions, and areas for each activity¹⁵. The planned site is an irregularly shaped lot, wider to the west and narrower to the east, close to the Sabarmati river. Sargar Bridge stands in the east and Ellis Bridge up north, which connects the 15th-century city with this new urban agglomeration developed during the colonial era.¹⁶ The letter is significant because it shows how Le Corbusier is not simply asked to build a museum, but a cultural center for Ahmedabad, aimed at contributing to the education and social growth of the citizens. Gautam Sarabhai's suggestions seem to echo Le Corbusier's previous museum projects. The idea of the museum as a powerful educational tool, a catalyst for different topics, is similar; as well as the suggestion to design a building in successive stages, to which new exhibition sections can be added over time¹⁷. From the very beginning, a mutual understanding between architect and client is established.

As evidenced by the numerous drawings and sketches conserved at the Fondation Le Corbusier, one of the issues that seemed to engage the collaborators of Le Corbusier's Parisian Atelier was the "adaptation" of the museum model to the specific Indian territorial conditions. Ahmedabad, in particular, is characterized by very hot and dry weather alternating with violent monsoon rains during summer. The climatic response plays a key role in the definition of the project, converting what is a prototype into a unique building, embedded in the Indian dimension both technologically and symbolically. The work on the Museum demonstrates Le Corbusier's desire to keep these two aspects together.

Thus he writes:

*"On imaginerait peut- être avecce légèreté que puor répondre aux besoins d'aujourd'hui, sur cet immense territoire peuplé de cinq cent millions d'âmes, des modèles existent partout sur le monde moderne, en Europe comme aux Amériques, prêts à être copiés et multipliés. Rien de plus illusoire! L'argent est autre, le climat est autre, l'âme est autre"*¹⁸.

If not analyzing the project several development stages, it is useful nevertheless to underline how some of the drawings Le Corbusier brought to Ahmedabad during his fourth trip in November 1952, are particularly helpful for the understanding of the direction taken by the project. Among these, the masterplan, dated 9 November 1952 and published in the fifth volume of the *Oeuvre Complète*, featuring the Museum in its first phase of growth (50x50 m), located to the west of the lot to avoid flooding from the river¹⁹.

Site's drawing shows how Le Corbusier designed not a museum but rather a cultural center, a place where all the arts seem to find their expression²⁰. The land appears almost entirely occupied by volumes placed between gardens, paths, and squares. Three pavilions protrude from

the main body of the Museum to the north, south, and west respectively, equivalent to three additional sections planned for the Museum (History, Anthropology, and Archaeology). To the east, an experimental theatre eventually called *Boîte à Miracles*²¹ by Le Corbusier, a library with a conference room; to the north and west, ateliers for individual and collective artists; and finally the director's house to the south.

In this first version, the Ahmedabad Cultural Centre is presented as a new part of the city, re-proposing what was imagined in 1928 with the World City project, where his idea of a museum first appeared. The project is conceived as a citadel of institutions where the Museum is the "heart" of a complex of activities. In addition, the master plan shows building's ground floor, dotted with pilotis and a pool of water in the center. Additional drawings show other floors layout, the second one presents four openings at the corners of the central patio in axis with four openings around the outer perimeter, highlighting the swastika design of the plan²². This matches with four mezzanines on the upper level that create breaks and interruptions in the visitor's spiral movement²³.

Finally, the roof plan shows a geometric design with forty water tanks, also imagined for the volumes to be annexed to the Museum²⁴. The drawing, with a grid pattern composed by the repetition of squares, suggests that Le Corbusier presumably heard about the science of the *Vastu-Shastra* in India²⁵. This is an architectural theory of settlement principles characterized by a geometric grid on the four cardinal points which regulates the construction of houses, buildings, temples, and even entire parts of cities, according to the idea of connecting physical space and cosmic movement²⁶. Through the swastika on the first floor and the *Vastu-Shastra* on the roof, Le Corbusier hints at the rotating circulation compared to his previous projects. The spiral,

despite remaining implicit, keeps being the rule for the building's organic growth.

At this stage, the technical plan also emerges, presented in an earlier version that Le Corbusier calls "No man's land"²⁷. This floor, located between the roof and the exhibition halls, becomes a sort of second cover: it allows natural and artificial light to enter and, at the same time, an air chamber, an additional insulator to the water tanks on the roof.

As in the previous versions, the façades are characterized by the extension of the beams, suggesting the subsequent growth of the Museum and also conceived as a possible anchorage point for plants supposed to better insulate the building²⁸. Although it is not specified what material Le Corbusier planned to use for wall cladding, the fact that he draws a geometric system of rectangular slabs with aligned joints is a further element that pinpoints the character of the façade as a single applied and removable element.

In the final drawings, sent to Ahmedabad in February 1953, although the floor plans do not change significantly, they are clarified by additional details²⁹. The ground floor undergoes some adjustments: the water basin has a sinuous shape and is surrounded by a ring of pilotis of the same height as the ground floor, to which three more columns of greater height are added, reaching to the roof. When visitors enter the patio on a rainy day, the water – which falls copiously from the roof during the summer months – descends into the basin on the ground through three downpipes, shaping three further water columns, giving rise to the final layout of this space (fig. 2).

The roof is also defined³⁰. In its final version, it is walkable through a platform that encircles the central patio and presents forty-five water tanks which Le Corbusier imagines covered with flowers and vegetation, offering a spectacle of multicolored pools that seems to evoke the Mughal gardens of Indian tradition³¹ (fig. 3). It is relevant to

emphasize that in Ahmedabad the constructions to collect water are different and very impressive: the arid climate has made it necessary to imagine solutions to catch and store water such as tanks, wells, and cisterns. Moreover, water also plays an important role in the Indian religious culture (Muslim and Hindu), characterizing numerous places of worship and prayer. During his travels, Le Corbusier was fascinated by the relationship between inhabitants and water, recognizing in the basins or in the river flowing through Ahmedabad, the city's main urban space. The design of the roof allows to read Le Corbusier's desire to offer the Museum visitors a collective place, a way to rediscover their unique relationship with water.

The drawings for the Museum give the idea of a building composed of several overlapping "skins": plants, water, concrete, and finally the "No man's land", which lets the building "breathe". The solutions developed for the Museum show the architect's response to specific territorial conditions, but also the building's strong connection to the local tradition of a country like India, whose culture deeply influenced Le Corbusier's imagery. The type around which he had been working since 1928 now appears deformed and reshaped for the Indian natural and cultural context.

Once the final plans were delivered on 27 February 1953, the correspondence at the *Fondation Le Corbusier* opens a new chapter in the history of the Indian Museum: its construction^{②2}.

The construction site events are marked by the arrival of new protagonists. First, the young French architect Jean Louis Véret, who arrived in Ahmedabad in June 1953 to supervise the works designed by Le Corbusier; and later by Balkrishna Doshi, who from 1955 became the studio's main interlocutor^{③3}. Véret had previously supervised the single projects for Ahmedabad while at the Atelier in rue de Sèvres, and his signature is on the final drawings for the Museum with collaborators Andrée Maisonnier and

Kujawsky Oleck³⁴. As proved by the correspondence available at the Fondation Le Corbusier, the beginning of the Museum's construction was delayed, as a matter of fact the foundation stone is laid on April 9, 1953³⁵). Anyway, the Museum one appeared to be the most easily managed by Véret, at least in its phases. It is possible to suppose that the Museum's prototype nature and its popularity in the Atelier, as well as Veret's involvement in the production of the final drawings, helped to proceed with the construction with more confidence. Moreover, the use of the *Modulor* model, theorized by Le Corbusier in 1948, proves to be one of the most useful tools the studio uses to "governs" the numerous construction sites from distance³⁶.

The number of correspondence related to the construction of the Museum is meager, as is the presence of detail drawings until 1955 (when the construction site came under Doshi's supervision). However, some of Véret's photographs taken in the summer of 1954 and preserved in the Archives of the Institut Français d'Architecture in Paris (IFA) are particularly useful for reconstructing what was accomplished in this first phase. Photographs document the construction of the foundations and circular columns on the ground floor, cast with 1.40-m wide metal formwork, where the assembly creates staggered joints as in a stone masonry.³⁷.

The exchanges with the studio also make it possible to investigate the young Véret's autonomy and the control of the site by the Parisian atelier. The correspondence reveals the difficulty of the collaborators and Le Corbusier in responding quickly to Véret's doubts about the construction, even though there never was any independent initiative by the young architect. As a result, the construction site was sometimes suspended temporarily while waiting for answers from Paris. It is also possible to assume that many of the unrepplied questions and requests in the

correspondence, were resolved directly by Le Corbusier himself on-site during his travels.

As already mentioned, Véret left Ahmedabad in January 1955 to return to Paris. Nonetheless, before his departure he makes another photographic campaign to document the progress of the work³⁸.

A series of photographs taken in January 1955 show the ongoing construction of the building's second level; others, dating from December 1954, testify to Le Corbusier's visit to the site. Some of these capture Véret and Le Corbusier arguing in front of the building under construction, while others indicate the presence of Doshi, who is presumably being briefed on what has been done so far. This is a significant moment in setting the future development of the site, where Véret and Doshi are working closely together throughout January³⁹.

On January 25, Doshi finally replaced Véret and proceeded with the next phase of construction, which included the building envelope and the installation of windows and doors.⁴⁰ We also have information about the material chosen to clad the façade, that is local handmade bricks arranged end-to-end forming a regular grid with aligned joints, as Le Corbusier had imagined in previous projects. This solution enables the architect to formally mark the reinforced concrete load-bearing structure, which is also emphasized by the presence of beams protruding from the envelope in both the internal patio and the external façades.

The correspondence between the studio and Doshi at the Fondation Le Corbusier once again allows us to investigate the progress of the construction site and the independence granted to the young supervisor. If at first Le Corbusier exercised much control over Doshi's work, later he will recognize his professional maturity, inviting him to take responsibility for the choices made on the site⁴¹. This is a decisive step in the history of the construction of the Museum. From now on, Doshi will have more autonomy in

the construction phases, taking charge of designing specific solutions, always under Le Corbusier's consent. From this point of view, the Museum seems to stand out from all the other buildings made in Ahmedabad and completed more quickly, offering a test bench for Doshi's debut as an autonomous architect (although documenting and identifying his specific interventions is sometimes difficult)⁴². However, it is possible to suppose that the continuous delays suffered by the construction site, the Municipal Corporation's desire to complete the Museum more and more independently, and the impossibility of shaping the entire urban project, also led Le Corbusier to gradually move away from the project. The lively plan presented to the authorities in November 1952 would not be realized, nor would the additional sections of the Museum be built.

In the last communications between Doshi and the studio, Le Corbusier delegates to him all decisions about the building. This suggests, due to the lack of communication about the outcome of the construction, that Doshi completed the building alone in the first half of 1957⁴³.

During the 1960s the Museum seemed to experience a fortunate period in its history, as a landmark in the life of the city. However, as early as the 1970s and 1980s it begins to experience a gradual decline, taking on uses unsuited to its original function. In the 1990s the building the Municipal Corporation finally decided to start a new layout project involving partial restoration⁴⁴. But insufficient funds led to only occasional interventions, while the set-up project was made possible by donations from citizens themselves.

Today, the building exhibit is in a state of deep deterioration, as can be seen, for example, in the cladding and the remaining parts of concrete - whose reinforcements are partially exposed -

and manifests the urgency of immediate action.

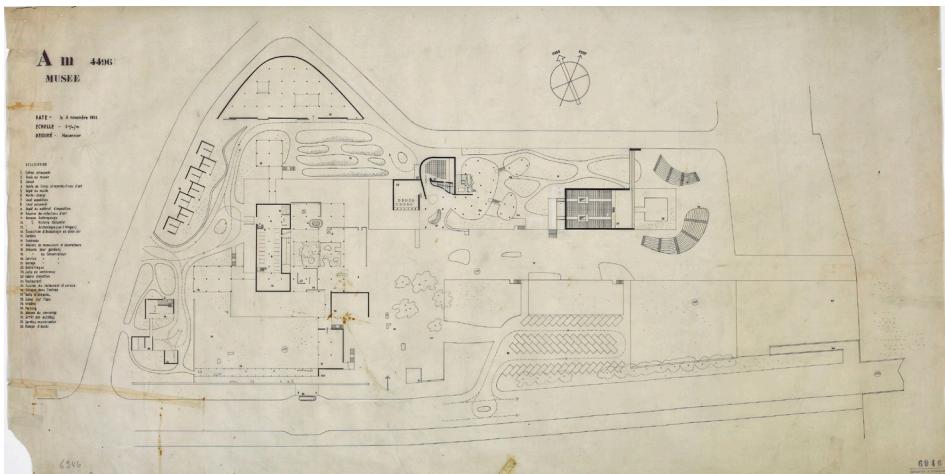


fig. 1. Le Corbusier, Ahmedabad Museum, General Plan of the Complex, 1952, November 9 (FLC 6946). (© Fondation Le Corbusier / SIAE)

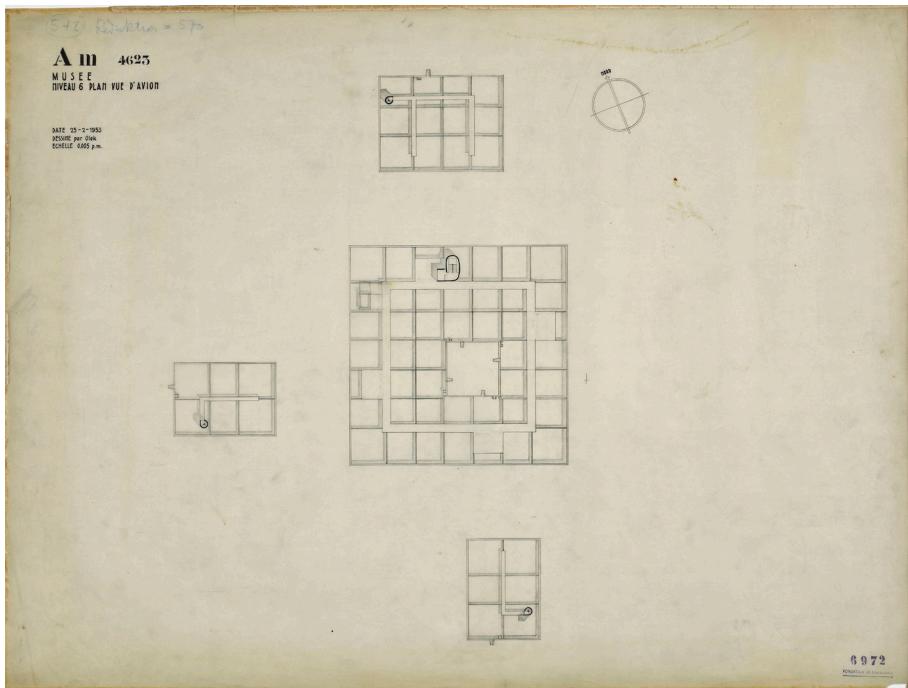


fig. 2. Le Corbusier, Ahmedabad
Museum, Roof plan, 1953,
February 25 (FLC 6972). (©
Fondation Le Corbusier / SIAE)



fig. 3. Ahmedabad Museum,
internal patio. (© MIT, photograph
by G.E. Kidder Smith)



fig. 4. Ahmedabad Museum, photo of the outside (FLC R3-8-67). (© Fondation Le Corbusier / SIAE)

ENDNOTES

- ①: Kalia (1987), Papillault (2011).
- : Leone (2013, pp. 7-16), Serenyi (1983, pp. 91-118), Pandya (2002), Doshi (2000) and Doshi (2012a).
- : Chairman, Recreational and Cultural Committée, Municipal corporation, Ahmedabad. (1951, March 10). [letter to Le Corbusier]. Musée Ahmedabad-(Inde), 1956 (P3-4-15/18), Fondation Le Corbusier (from now on FLC), Paris, France.
- ④: Gautam and Gira are two of the eight sons of Ambalal Sarabhai who have owned the Calico Mills since 1881. During their formative years, they traveled in Europe and America, developing and enriching their culture (Alessandrini, 2012, p. 161). On the peculiarities of the entrepreneurial class in Ahmedabad see: Curtis (1986, p. 202), Nanda (1991, pp. 26-38), Tripathi (1981), and Williamson (2016).
- : There are actually five works designed by Le Corbusier in Ahmedabad. The fifth work, the Chinubhai Chimabhai's house, was never built (Le Corbusier, 1952, pp. 163-164).
- : In Le Corbusier's library there is a book that he received from his aunt Pauline in 1909 that contains three images of Ahmedabad (O'Byrne Orozco, 2015, p. 11).
- : On the museums see De Smet (2019).
- : Le Corbusier (1937, pp. 190-197).
- : Le Corbusier (1934, p. 72-73) and Le Corbusier (1931, pp. 25-28).
- ⑩: Published in the *Oeuvre Complète* under the name of: "Project C. Un centre d'esthétique contemporaine" (Le Corbusier, 1939, pp. 152-155).
- ⑪: Le Corbusier (1946, pp. 16-21) and Ragot (1987, p. 267).

⑫: Gresleri and Matteoni (1982), Fagiolo (1978, pp. 22-29) and O'Byrne Orozco (2004).

⑬: The most recent studies on Le Corbusier's Ahmedabad Museum have been conducted by Maria Cecilia O'Byrne Orozco in the third chapter of her Ph.D. thesis (2015).

⑭: Le Corbusier. (1951, March 17). [Handwritten note]. Musée Ahmedabad-(Inde), 1956 (P2-5-24), FLC, Paris, France. Le Corbusier's trips to Ahmedabad correspond to his visits to Chandigarh, where he is contractually required to go twice a year. There are seven documented visits to Ahmedabad by Le Corbusier, although there is evidence in the correspondence of the organization of an eighth visit, see: Le Corbusier. (1956, March 6). [Letter to Doshi]. Musée Ahmedabad-(Inde), 1956 (P3-6-416/P3-6-422), FLC, Paris, France. However, there is no clear documentation about this trip. It is possible to assume that Le Corbusier did not spend more than one day in the city on this occasion.

⑮: Sarabhai, G. (1951, March 23). Proposal for the Municipal Museum of Ahmedabad. Musée Ahmedabad-(Inde), 1956 (P3-4-16), FLC, Paris, France. The Travel Carnets are also an essential source of Le Corbusier's impressions during his first visit to Ahmedabad, in which he sketches and notes various types of information (Le Corbusier, 1981, E18-350 and 358).

⑯: Doshi (2000, p. 92).

⑰: The Museum would initially have seven sections: Archaeology of the region, Indian Art (painting and sculpture), the Art of Everyday Life, Natural History, Indian Anthropology, and a library.

⑱: Le Corbusier. (1951, December 28). [article by Le Corbusier for "Le Bulletin indien de l'Indépendance"]. Variuos Essays, Article 1951 (U3-7-212), FLC, Paris, France.

⑲: Le Corbusier. (1952, November 4). AM 4496. Musée Ahmedabad-(Inde), 1956 (6946), FLC, Paris, France. In the early stages of the project, Le Corbusier planned to locate the Museum to the east of the lot, near the Sabarmati river.

After studying solutions to contrast possible flooding, this option was abandoned.

㉚: The project for the Ahmedabad Citizens Centre was presented at the eighth Ciam in Hoddesdon, focusing on the topic "the heart of the city" (Le Corbusier, 1954, p. 52).

㉛: The Boite a Miracles is an external and internal theatre of the same time, which Le Corbusier published in the five-volume of the *Oeuvre Complète* and which we will find again in Chandigarh and Tokyo (1952, p. 161). On the Miracle Box see in particular: O'Byrne Orozco (2008).

㉜: Le Corbusier. (1952, November 9). AM 4518 Plan niveau 3. Musée Ahmedabad-(Inde), 1956 (6948), FLC, Paris, France.

㉝: The figure of the swastika seems to be strongly re-proposed in the project, as a very ancient figure found in many cultures, India included. With its four arms extending towards the cardinal points, it represents the movement of the sun in the sky. Le Corbusier seems to reflect on this symbolic figure in his carnet (1981, 855).

㉞: Le Corbusier. (1952, November 9). AM 4520 Plan niveau 6. Musée Ahmedabad-(Inde), 1956 (6950), FLC, Paris, France.

㉟: This is confirmed by Doshi to O'Byrne Orozco in his doctoral thesis (2015).

㉟: Shukla (1995).

㉟: Le Corbusier. (1952, November 9). AM 4521 Coupe. Musée Ahmedabad-(Inde), 1956 (6951), FLC, Paris, France.

㉟: Le Corbusier. (1952, Nivember 9). AM 4522 Façade. Musée Ahmedabad-(Inde), 1956 (6952), FLC, Paris, France.

㉟: Le Corbusier. (1953, February 10). AM 4565 Niveau 2. Musée Ahmedabad-(Inde), 1956 (6953), FLC, Paris, France.

㉟: Le Corbusier. (1953, February 25). AM 4623 Plan vue d'avion. Musée Ahmedabad-(Inde), 1956 (6972), FLC, Paris, France.

㉟: See Moynihan (1979). The volumes containing the lift systems appear on the roof like small pavilions in a garden.

㉟: The final drawings are twenty-one plans including the general plan of the complex, plans, sections, façades, and

detailed drawings of the lift systems. On the construction see in particular: Gargiani and Rosellini (2011, pp. 379-389).

(33): Jean Louis Véret (1927-2011) met Le Corbusier in Paris, probably at the end of 1951, when he was presenting his final project at the Ecole des Beaux-Arts. After starting and supervising construction work in Ahmedabad, he returned to Paris and in 1958 and founded the Atelier Montrouge with three colleagues, which he ran until 1981. Balkrishna Doshi was born in 1927 in Pune, in the Indian state of Maharashtra. His meeting with Le Corbusier took place at the VIII Ciam in Hoddesdon. After working in Le Corbusier's studio in Paris, he was first sent to Chandigarh to supervise the High Court building, and then to Ahmedabad for the final stages of the construction of the architect's four works. At the end of the collaboration, Doshi decided to settle in Ahmedabad to start his independent work. On the work with Le Corbusier see: Doshi (2012a), Doshi (2012b), and Doshi (2012c).

(34): In the construction site correspondence between Véret and the studio's collaborators, the figure of Jacques Michel also emerges. Michel who, with Maisonnier, will be the main person in charge of providing, under Le Corbusier's supervision, solutions, plans, and drawings for the development of the site.

(35): The telegram announcing the laying of the first stone was received by Le Corbusier on 12 April 1954. see: Chinubahi, C. (1954, April 5). [Telegram to Le Corbusier]. Musée Ahmedabad-(Inde), 1956 (P3-4-168), FLC, Paris, France. On this day, in the lot where the Cultural center would be built, Véret with Le Corbusier organized an exhibition with twelve explanatory panels, a model, and an informative brochure to present the project to the citizens.

(36): The Modulor model, from the Unité d'Habitation in Marseilles (1949-1952), start to be used in all Le Corbusier's subsequent projects (Le Corbusier, 1974; Curtis, 1986, pp. 162-174).

③⁷: Gargiani and Rosellini (2011, pp. 379-389).

③⁸: Véret, J.L. (1954, November 27). [Letter to Michel]. Musée Ahmedabad-(Inde), 1956 (P3-6-92), FLC, Paris, France.

③⁹: Doshi leaves numerous testimonies about his work with Le Corbusier, elevated to the figure of a "guru", grateful for the work he had done with the architect first in Paris and then in India (Doshi, 1992; Pandya, 2002; Mellotto, 2014). Also, Véret will always keep this high educational experience in mind, so much so that he returned to Ahmedabad in the 1980s to visit the buildings again, as some of the photographs in the IFA's collection betray.

③⁹: These respond to the questions that had remained unresolved up until then, which mainly concerned the designs for the "Pan de Verre" and those relating to the volumes on the ground floor, such as the shop at the entrance to the Museum.

④¹: In a letter from Le Corbusier to Doshi dated 21 May 1955 he writes: "vous etes très gentil de me demander tous ces détails mais ce sont des choses que vous pouvez liquidier fort bien vous-même, sur place, avec le gout de vos clients et votre gout, sans me trahir". Le Corbusier. (1955, May 21). [Letter to Doshi]. Musée Ahmedabad-(Inde), 1956 (G2-18-463), FLC, Paris, France.

④²: On November 12, 1955, Le Corbusier sent a letter to the city council, listing the missing work, and indicating that Doshi would be responsible for it. See: Le Corbusier. (1955, May 21). [Letter to City Council]. Musée Ahmedabad-(Inde), 1956 (P3-4-157), FLC, Paris, France. The last communications between Doshi and Le Corbusier about the Museum took place between December 1956 and April 1957. This leads one to suppose that it the presumably completed in early 1957.

④³: The project for the Ahmedabad Museum had been published in the fifth volume of the *Oeuvre Complète* (Le Corbusier, 1952, pp. 160-161). The sixth volume also published the building with a series of photographs taken

by Doshi in October 1956, at which time the Museum was still under construction, as opposed to the villas and the museum is named after Sanskar Kendra, the first mayor of the city of Ahmedabad (Le Corbusier, 1957, pp. 158-167).

⁽⁴⁴⁾: The story of the life of the Museum was told by the architect Yatin Pandya in Ahmedabad in an interview given to the writer in April 2019. Pandya informs that he had been in charge of the restoration project of the building in the early 2000s. However, due to a lack of funds, these operations were limited to the severely deteriorated structures and the removal of all additions that did not comply with the original design, such as shutters and partitions. Pandya was also responsible for fitting out the Museum halls, which can still be seen today.

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■ 6 LE CORBUSIER'S ARCHITECTURAL WORK, AN EXCEPTIONAL CONTRIBUTION TO THE MODERN MOVEMENT, A SERIAL AND TRANSCONTINENTAL INSCRIPTION ON THE WORLD HERITAGE LIST

BÉNÉDICTE GANDINI
Fondation Le Corbusier

As the universal legatee of Le Corbusier and owner of three emblematic works, the Fondation was at the heart of the process undertaken since 2002 by seven countries wishing to have the universal character of his creation recognized and to have his architectural work inscribed on the World Heritage List.

Recognized by a decree of 24 July 1968, the Fondation was born from Le Corbusier's desire, without heirs, to avoid the dispersal of his collection, works and archives and to entrust them to an organization whose mission would be to conserve and disseminate them.

Since its creation, the Fondation has devoted all its resources to the accomplishment of the missions defined by its creator, one of the most important and complex of which consists of watching over the architectural work. The Fondation Le Corbusier monitors the conservation and restoration of his architectural work, both for the works it owns and for buildings owned by other public or private bodies.

The Fondation now has almost all the plans and documents (estimates, contracts, correspondence, etc.) concerning the projects and worksites carried out throughout his life by Le Corbusier and his collaborators. These archives are digitalized and are available to project managers and owners who wish to undertake work. The Fondation responds to requests for information on all buildings and puts in touch various experts, specialists or project managers dealing with similar problems. It also keeps a considerable amount of personal papers, notes, letters, diaries and notebooks, which can also be very useful in the context of restoration studies.

The Fondation has set up a system that allows it to benefit from the best possible information on the state of the buildings and the work projects likely to affect the works and their environment (restorations, extensions, destruction, substantial modifications of all kinds, woodwork, colors, etc.). The Fondation is in regular contact with the entire network of owners and has a network of correspondents in all the countries concerned who inform it of any threats that may endanger all or part of a work. It is also in contact with the national and regional heritage services, which seek advice and opinions when restoration projects are submitted to them.

Each restoration is an opportunity to enrich the material understanding of the work, to understand its genesis, the processes used, the details of its construction, etc. This is why it is fundamental that the Fondation be associated with the preliminary studies and the work carried out during the restoration. The research undertaken, the new materials uncovered and the documents discovered, feed the history, scientific research and the understanding and knowledge of the work.

The conservation of current and future archives has become a matter of the utmost importance for architects and owners: it avoids wasting precious time, serves to

verify the assumptions of the preliminary studies and even helps to avoid irreparable mistakes. All these elements will contribute to a better knowledge of the building and facilitate its long-term maintenance. They also add to the general knowledge of the work, its creation and its transformations. The indispensable articulation between historical sources and living archives and the role played in this respect by the Fondation Le Corbusier was highlighted by the World Heritage Committee in its July 2018 opinion:

"Welcomes the dynamic reconciliation clarification adopted by the Standing Conference to take into account the potential impact of development proposals and standards for conservation work across the series and the establishment by the Fondation Le Corbusier of a Committee to inform decisions on conservation, restoration and development projects".

Also:

"welcomes the creation by the Fondation Le Corbusier of a restoration archive, which represents an essential contribution to the harmonization of technical and methodological approaches to the conservation of Le Corbusier's buildings, particularly in view of their potential to guide the rehabilitation or replacement of materials and elements..." ①.

Any restoration or development project, or even any project for the realization of an element or an entire unrealized work by Le Corbusier must be submitted to a committee of experts coordinated by an architect-art historian within the Fondation. Its role is to verify the conformity of the project with the work of Le Corbusier, to issue recommendations and to inform the Foundation's Board in order to authorize the project, express its reservations or even express its

possible disagreement. The importance of the work carried out by the Fondation Le Corbusier was underlined by the World Heritage Committee when the Series was inscribed in July 2016:

"The contribution of the expertise of the Fondation Le Corbusier -which holds moral rights to Le Corbusier's work- is also crucial for the proper management and conservation of the nominated series, especially in cases where the properties are privately owned other than by the Fondation. In these situations, the effectiveness of the protection is highly dependent on the will of their private owners. Since 2003, the Fondation Le Corbusier has tried to establish closer contacts between the owners of Le Corbusier's buildings. The Fondation also has an important archive of recent worldwide correspondence with private owners and governmental organizations. The nomination procedure has strengthened the exchange of information between stakeholders. In the additional information provided by States Parties, the intention to employ a full-time architect is mentioned, as well as a project to improve the Fondation's data collection with the idea of forming an observatory. In view of the special problems associated with the conservation of 20th-century architecture, continued involvement of (inter)national specialists in the field of conservation of modern architectural heritage is also essential" ●.

At the request of all the States Parties, Argentina, Belgium, France, Germany, India, Japan and Switzerland, the Fondation therefore coordinated the preparatory work for the submission of the nomination and, as such, was responsible for the material management of the dossier. In the framework of the international management plan, the Fondation was entrusted by the project's sponsor countries with the responsibility of the secretariat of the International

Permanent Conference, which is in charge of managing the Series of seventeen buildings or sites inscribed as World Heritage in July 2016 ●.

6.2 THE WORLD HERITAGE SERIES OF LE CORBUSIER

Compared to other architects (Frank Lloyd Wright, Alvar Aalto, Oscar Niemeyer, etc.), Le Corbusier built few buildings. Although he studied more than 300 projects, between 1906 and 1965 he built only 78, but in eleven countries and on four continents. While the majority of his works are in Europe, particularly in France and Switzerland, some buildings, and not the least, are located in Tunisia, Japan, Argentina, the United States and particularly in India.

The buildings are very different in nature and size: villas and individual houses, religious buildings, collective housing, administrative buildings, gymnasiums, stadiums, etc. The owners also have very different statuses: public authorities, associations, private owners, co-ownerships, etc. while legislation or practices concerning the protection of heritage differ widely between the various countries. Many works were already protected during the architect's lifetime, notably in Stuttgart, Chandigarh, Marseille and Poissy, and just after his death, notably in France (La Roche and Jeanneret houses, Ronchamp, etc.).

The aim of the project was to reflect Le Corbusier's contribution to the modern movement by bringing together in a series not only the "masterpieces" of his work, but also significant but lesser-known buildings that are representative in one way or another of his contribution to modern architecture without forgetting the geographical and trans-national dimension of his work. Beyond an ideal list drawn up by the working group, made up of various experts and the Fondation, each of the works chosen had to meet the

conditions set by the World Heritage Committee in order to be eligible.

It should be remembered that only properties that are already protected by their national legislation can be considered for nomination, and it is the States that propose these properties by including them on the tentative list, prior to any other step towards a nomination file. As part of a proactive and consensual approach, the eleven countries that are currently custodians of at least one work by Le Corbusier were associated with the very first meetings and invited to participate in the project. They were then kept constantly informed of the progress of the project.

This selection led to a relatively broad list, with Le Corbusier's buildings enjoying total or partial protection in many countries, with the exception of the USA, Tunisia, Iraq and Russia. As for the works in Ahmedabad, India, Villa Shodan, Villa Sarabhai, the Mill Owners' Building and the Museum, built in the 1950s, which are recognized as major works by Le Corbusier, could not be included in the list. Indeed, according to the legislation in force, could not be protected until one hundred years after their construction. The lack of protection for Le Corbusier's buildings in Ahmedabad poses a real risk for some of them, such as the museum which is currently in a serious state of decay. The conference organized by the Getty in Ahmedabad in 2018 and dedicated to the three Museums built by Le Corbusier in Ahmedabad, Chandigarh and Tokyo aimed, among other things, to raise awareness among local governments about the value of the works present on their territories.

This identified corpus was then to form a coherent whole and meet the criteria for the definition of outstanding universal value retained for the third nomination file around the notion of "influence", taking into account also the authenticity and integrity of the work and the carrying out of a complex mapping (delimitation of each constituent element and its buffer zone) and local management plans.

All these exchanges have led to an ideal list of 17 elements with the following characteristics:

- ❖ a transnational, transcontinental series of a category under-represented on the World Heritage List: twentieth-century architecture
- ❖ it brings together elements of various types and uses: collective and individual housing, public facilities, museums, places of worship, factories, etc., most of which have retained their original use;
- ❖ of varying dimensions: from the immense esplanade of Chandigarh with its three buildings symbolic of power, to the Unité d'habitation de Marseille and its 1,200 inhabitants, to the Cabanon de Roquebrune-Cap-Martin;
- ❖ with very different statuses: private, state, regional, communal, associative properties;
- ❖ whose image, reception and recognition also vary greatly: alongside the icons are modest, lesser-known, smaller works...

It should be remembered that all these buildings or sites are now connected. They are a single property for which each of the elements contributes by its attributes to the universal value of the Series. From the Purism of the 1920s to the sculptural forms of the 1960s, via Brutalism, the series illustrates the evolution of modern architecture over nearly half a century, and attests to Le Corbusier's ability to renew contemporary architectural aesthetics. Tense between two poles, that of a monumental architecture with exceptional forms on the one hand, and, on the other, that of an architecture of standards, sometimes of modest dimensions, but learned and exemplary of a desire to offer quality architecture to the greatest number, the series fully testifies to all the issues and the internationalization of the Modern Movement. It is a permanent work of research and innovation conceived over a period of almost fifty years.

The outcome of this application, in July 2016, was possible thanks to a collective effort which has raised awareness and interest in Le Corbusier's work among a wide range of partners who were not very interested in it or had changing perception. The inscription on the World Heritage List of a series of 17 works or sites by Le Corbusier connected the countries concerned, federated initiatives in the countries, and brought together owners and managers, specialists and amateurs of this living work.

After the failures of the bid in 2008 and 2011, the mobilization of the inhabitants and communities played a decisive role in the decision of the seven partner countries to relaunch the bid. The same attention is still being paid by many of the owners and the heirs of the sponsors, such as the Suhrid Sarabhai family and the Shodan family, who take care of the works entrusted to them and are committed to preserving them. Although these works Le Corbusier built in Ahmedabad cannot be part of this World Heritage Series for the time being, they have been reported to the UNESCO World Heritage Centre as among the only ones eligible for extension of the Series inscribed in 2016.



Numéro identification	Liste chronologique des éléments constitutifs		
1	1923	<i>Maisons La Roche et Jeanneret, Paris</i>	Île-de-France
2	1923	<i>Petite villa au bord du lac Léman, Corseaux</i>	Vaud
3	1924	<i>Cité Frugès, Pessac</i>	Aquitaine
4	1926	<i>Maison Guiette, Anvers</i>	Flandre
5	1927	<i>Maisons de la Weissenhof-Siedlung, Stuttgart</i>	Bade-Wurtemberg
6	1928	<i>Villa Savoye et loge du jardinier, Poissy</i>	Île-de-France
7	1930	<i>Immeuble Clarté</i>	Genève
8	1931	<i>Immeuble locatif à la Porte Molitor, Boulogne-Billancourt</i>	Île-de-France
9	1945	<i>Unité d'habitation, Marseille</i>	Provence-Alpes-Côte d'Azur
10	1946	<i>Manufacture à Saint-Dié, Saint-Dié-des-Vosges</i>	Lorraine
11	1949	<i>Maison du Docteur Curutchet, La Plata</i>	Province de Buenos-Aires
12	1950	<i>Chapelle Notre-Dame-du-Haut, Ronchamp</i>	Franche-Comté
13	1951	<i>Cabanon de Le Corbusier, Roquebrune-Cap-Martin</i>	Provence-Alpes-Côte d'Azur
14	1952	<i>Complexe du Capitole, Chandigarh</i>	Pendjab
15	1953	<i>Couvent Sainte-Marie-de-la-Tourette, Éveux</i>	Rhône-Alpes
16	1955	<i>Musée National des Beaux-Arts de l'Occident, Taito-Ku</i>	Tokyo
17	1953	<i>Maison de la Culture de Firminy, Firminy</i>	Rhône-Alpes

fig. 2. Chronological list of components. (© Fondation Le Corbusier)



fig. 3. Le Corbusier and Balkrishna Doshi. (© Fondation Le Corbusier / Vastu Shilpa Foundation / SIAE)



fig. 4. Anand Sarabhai, Balkrishna Doshi, Le Corbusier and Suhrud Sarabhai. (© Fondation Le Corbusier / Vastu Shilpa Foundation / SIAE)

ENDNOTES

- ①: Decision of the World Heritage Committee, July 2018, in response to the recommendations of July 2016: <https://lecorbusier-worldheritage.org/documents/>.
- : Decision of the World Heritage Committee, July 2016, report to the nomination: <https://lecorbusier-worldheritage.org/documents/>.
- : Les Maisons La Roche et Jeanneret, Paris, Île-de-France, France ; la Petite villa au bord du lac Léman, Corseaux, Vaud, Suisse ; la Cité Frugès, Pessac, Aquitaine, France ; la Maison Guiette, Anvers, Flandre, Belgique ; les Maisons de la Weissenhof-Siedlung, Stuttgart, Bade-Wurtemberg, Allemagne ; la Villa Savoye et loge du jardinier, Poissy, Île-de-France, France ; l'Immeuble Clarté, Genève, Suisse ; l'Immeuble Locatif à la Porte Molitor, Paris, Île-de-France, France ; l'Unité d'Habitation, Marseille, Provence-Alpes-Côte d'Azur, France ; la Manufacture à Saint-Dié, Saint-Dié-des-Vosges, Lorraine, France ; la Maison du Docteur Curutchet, La Plata, Province de Buenos Aires, Argentine ; la Chapelle Notre-Dame-du-Haut, Ronchamp, Grand Est, France ; le Cabanon de Le Corbusier, Roquebrune-Cap-Martin, Provence-Alpes-Côte d'Azur, France ; le Complexe du Capitole, Chandigarh, Punjab, Inde ; le Couvent Sainte-Marie-de-la-Tourette, Éveux, Auvergne-Rhône-Alpes, France ; le Musée National des Beaux-Arts de l'Occident, Taito-Ku, Tokyo, Japon ; la Maison de la Culture de Firminy, Firminy, Auvergne-Rhône-Alpes, France.

7 STEEL LIKE STRAW. THE CASE OF THE INDIAN INSTITUTE OF MANAGEMENT IN AHMEDABAD DESIGNED BY LOUIS I. KAHN

ALESSANDRA RAMPAZZO
Università Iuav di Venezia

Designed by Louis I. Kahn (1901-1974) between 1962 and 1974, the Indian Institute of Management in Ahmedabad (IIMA) is considered to be one of the mature works of the Estonian-American architect.

However, when Kahn first arrived in Ahmedabad in 1962, he was a mature architect at the height of his career and the city itself has already become a place of academic excellence for the Country thanks to important experiences of main protagonists of 20th-century architecture, such as Frank Lloyd Wright and Le Corbusier.

The particular setting, together with the properties of the available building materials and the nature of the professional assignment, which initially involved Kahn only as a consultant, challenged the architect with new and unparalleled questions particularly concerning the management of a "remote" construction site in a Country where he was not familiar with tradition and construction methods.

The geographical distance between India and the United States contributes to lengthen the time of the decisional process until it became the reason why specific solutions – technical more than composite – have been adopted, being then the cause of the actual conditions of the buildings.

Looking at the Campus and its peculiar elements, the problem has indeed to be found directly within the construction itself, so then all recent make-up interventions

on the exterior facades have been useless and not decisive (see fig. 2).

Considering this, in 2014 the IIMA decided to launch a significant restoration process with the publication of the Request for Proposals (RFP) and the consequent selection of Somaya & Kalappa Consultants office from Mumbai as Conservation Architects with the task of protecting the integrity of the Louis Kahn Campus Complex.

The actual conditions of degradation of the buildings raise questions on responsibilities for design and technical choices taken during the construction phase, which suggest then to take a step back and deeply look into the entire process.

In the aftermath of India's independence conquered in 1947, the important entrepreneurial families related to textile industries, thanks also to their connections with the United States, brought to the Gujarati city of Ahmedabad significant cultural and educational institutions, born as part of a broader program of economic, political and cultural reorganization developed by Jawaharlal Nehru, Prime Minister of the new India.

According to him, social progress was closely linked to the general level of education of the population which in turn depended on the offer guaranteed by the State.

The same interest in the topic of education as social problem indeed involved not only the Central state, but also the other protagonists – the State of Gujarat, the Ford Foundation and the Sarabhai's and Lalbhai's families – who played an important role in the process of founding the National Institute of Design (NID) that came first in 1960, followed the year after by the Indian Institute of Management in Ahmedabad (IIMA), inspired by the organization of the American Harvard Business School (HBS).

All these things together ensure the involvement of the NID, established with the specific aim of training local architects through the collaboration of

international professionals, in the design of the Institute of the Management. The commission was then assigned to the NID.

Elected Trusted Architect by the influential industrial families of Ahmedabad for completing the Le Corbusier's Indian construction site, it was then Balkrishna V. Doshi, who suggested Louis I. Kahn as Consultant Architect^①.

Finally, in 1962, Gautam Sarabhai, president of the newly born NID, asked Kahn to participate as a Consultant Teacher in the project for IIMA financed by the Indian Government with the assistance of the Ford Foundation and HBS. As Gautam Sarabhai recalled, the project aimed "to provide a useful learning opportunity not only in theory but in practice for the Institute's staff and apprentices" ●. The letter sent to Kahn on April, 1962, specified the terms of the assignment in detail: the expected duration of three years would include three or four site visits, while the drawings were supposed to be made exclusively in Ahmedabad by the architects of NID.

For Kahn, therefore, the commission is just a consultancy.

But what has this meant for Kahn? This particular collaboration was so unusual for him to the point that he perceived it as a limit to his possibilities when compared to the working method already tested in his Philadelphia office.

The control during the construction phase has always been decisive for reaching the same Order that lays as the base of his architectural research.

Considering this, Kahn suggested some changes in order to carry out his service as architect in the best possible way. He stressed the importance of his constant involvement during the design and building process. For this reason, the number of visits provided for in the agreement should have been increased to at least six. In addition, "the time of these

visits and duration of stay", clarified Kahn, "must be left to my judgement" ●.

After this preliminary negotiation, the conception of the project started, revealing step by step Kahn's difficult acceptance of the imposed role. During the entire process, he would work indeed in order to centralize within his figure all the decisions and responsibilities regarding the design of the IIMA.

Five months after the first proposed appointment received from NID's President, Kahn finally made his first trip to Ahmedabad between 5 and 18 November, 1962 to work on the general layout of the Campus supported by the architects of the National Institute of Design.

The general idea of a new school was based on the distinction in three functional areas of the plan – the school, the dormitories and the residences –, followed the method adopted for the first time in the project of the Salk Institute④ and also later on in Dhaka ●.

This solution responded to the idea of architecture understood as research about institutions, which Kahn presented in the closing speech of the CIAM Congress in Otterlo in 1959 and therefore took as a key principle in the design of the Ahmedabad Institute.

After resolving the configuration of the central body as an educational fortress ●, the dormitories for the students were then positioned precisely aligned along the north-south direction that came off at 45° from the school building, consequently allowing an adequate orientation of the rooms in the direction of the prevailing breezes. The buildings significantly stretched out towards the body of water that surrounded them in the plan forming an L-shape, separating the public life of the students from the private one of the professors. The housing sector dedicated to teachers and staffs is then closing the geometrical composition in plan on the opposite side of the lake.

Climatic factors together with the contrast between light and shadow became the real protagonists of the structure. On the occasion of his first trip to India, thanks also to Doshi's advice, Kahn devoted himself to a careful research on the correct orientation of the single units of the complex so that these characteristics could be best exploited.

This has been the reason why the masterplan rotated three times before reaching its final orientation in June, 1964.

From this moment on, the architects of the NID started detailing each building of the complex.

The Indian Institute of Management represents the synthesis of the architect's work. Kahn's projects stand out for the accuracy of the geometry that regulates plans and elevations, for the crucial role played by light in the definition of spaces and for the significance of the Institution as the founding idea of the project.

More in detail, Kahn's cuts through the volumes, following again a diagonal tracing, emptied the corners of the rectangular geometry metaphorically recalling the image of ancient ruins, in the same way as the power of the material used, the brick, together with the construction details.

Admittedly, at the time the use of brick as building material was a field not yet fully explored. In fact, until then Kahn used bricks almost exclusively as "cladding" material with limited structural capacity except those related to their own load, such as for the south wall of the Yale Art Gallery (completed in 1953), the service towers of the Richards Medical Research Building in Philadelphia (1960), and the outer shell of the Unitary Church complex in Rochester (1963).

Also, those bricks had material and workmanship characteristics significantly different from what was available in India.

Indeed, the brick used by Kahn in the American structures mentioned above was a machine-cut, rectified and

perfect product of an industry that in those years was already completely mechanized, in order to minimize dimensional and chromatic variations. Therefore, through the study of brick bonds and the right calibration of the joints, brick walls had a completely homogeneous form, which, in this case, was well suited to satisfy the demands of the poetics of architecture where nothing was left to chance and everything responded to the control of the project.

According to these ideas, the identifying image of the Campus was then achieved through homogeneous masses of bricks, interrupted only by the concrete used for few horizontal elements, such as chain beams and slabs, and for the staircases.

Once this was defined, Kahn's return to Philadelphia indicated the true beginning of this unusual collaboration marked by daily transmission of information using the means available at the time, which were letters, telegrams, annotated drawings and, more rarely, telephone calls ●.

In this complex process Doshi played a central role as he was responsible on behalf of both the client and the architect for the success of the project in its various phases. During the seven years (1962-1969) of collaboration with NID, the documents showed how Kahn continually turned to Doshi for a critical evaluation of the project.

The complex handing over of documents just described, together with the difficulties encountered by Kahn in transmitting his ideas in the absence of direct contact with employees, created a time expansion that marked the decision-making process.

This was what the newborn Institute worried about the most since their concern was to be able to welcome the first students enrolled in accordance with the request of the central government which financed the project.

Despite these complications and delays, the construction started in October, 1964 with two buildings – one students'

dormitory (D12) and one staff's house (Residence 501) – used as samples.

Kahn waited until December, 1964, for his first site visit.

It was undoubtedly of fundamental importance for the future development of the construction and, more generally, of the project. Indeed, crucial decisions were taken during that visit which represented a real turning point in the design process aimed at bringing together the theoretical assumptions with the practical aspects of a construction managed from a distance.

The construction had reached a height of about 2 m and had begun under the direction of the NID operative team with the collaboration of Doshi in the manner that was traditionally used on site. Moreover, Doshi had already had the opportunity to follow Le Corbusier's construction site in Ahmedabad and therefore he started the works on IIMA's building site with the methodology he had acquired during the construction he had followed alongside the French-Swiss master.

But the construction of the Indian Institute of Management appeared to be a completely new experience compared to the one he already had. In fact, Doshi described how:

"During the initial stages, not realizing that Lou is not Corbusier, we built all the brick foundations of the dormitory blocks in the manner we had done for Corbusier's projects. On his arrival, he somehow concealed his disappointment on seeing our work. And he worked almost 18 hours a day for a whole week at the site guiding the masons how to make a brick wall or a brick buttress or a brick arch" ●.

The result was therefore unacceptable for Kahn. Let's go into detail.

One of the major problems Kahn noticed when looking at the brick walls was the constant but irregular presence of a queen closer – a quarter of a brick – near the end of the wall. This technique was traditionally used to solve the gap between the header and the stretcher courses near the vertical edge of the wall (see fig. 3).

However, in the buildings in Ahmedabad the sequence of these smaller bricks emerged as a disturbing factor that altered the perception of the brickwork as a homogeneous *unicum* and expression of a single volume, undermining the researched Order.

In such a way an apparently visual problem became a technical one.

In this regard, the solution was found precisely with the construction of the Sample Yard ●. For an entire week the architects in charge of NID worked on the design of the single parts that were to compose this explanatory model. What established in its construction had to be followed in detail on site.

The Sample Yard included two sections of 1½ brick wall built up to a height of one meter to show the correct method of execution for both brick bonds – English and Flemish – so as to avoid the presence of a queen closer placed at the end of the brick wall. Through the use of the ¾ bat it was possible to adapt the modularity of the brick to the dimensions of the project without altering the natural arrangement of the bond which maintained the characteristic alternation of header-stretcher-header on the same course.

The Flemish-style bond, thus approved, became the new basic postulate and every single part of IIMA derived its own peculiarities from that. Each characterizing element found a place in the Sample Yard – the arch, the semicircular wall, the 10" thick (about 25 cm) wall, the depressed arch with a reinforced concrete tie, the 1½ brick wall to enclose a rectangular space, the flat arch, a section of outdoor paving and also two electrical boxes- even the way to execute the

mortar joint, in order to solve the issue of its substantial thickness due to the irregular shape and dimensions of the bricks, which were produced with a traditional handmade process in the surroundings of Ahmedabad.

The evident lack of homogeneity between the vertical and horizontal joints once again convinced Kahn to look for possible alternative solutions. He then took into consideration the American construction sites and, in particular, the American colonial tradition¹⁹ where the use of mortar joints, both horizontally and vertically, was characterized by an incision made with a special metal tool, which he brought with him to India directly from the US.

The choice of module and material (and of the way of using them) led to a vocabulary that was decisive for the success of the project: "Design demands that one understands the order", explained Kahn, "when you are dealing, or designing in brick, you must ask brick what it wants, or what it can do"²⁰.

The experience of the Sample Yard was indeed a turning point in the design technique of the entire project. The dimensional data of the elements, in their most traditional form of proportions, disappeared from the tables – or when present they were just accessory data – in favor of indicating the number of courses or modular elements (the brick) and their exact position in the configuration.

The construction proceeded then according to the rules and language established during Kahn's first visit to the building site, but the design of main school building (the Main Complex) was still in progress²¹.

The initial forecast of concluding the project and the construction of IIMA by 1966 was thus eluded during the course of the events as inevitable consequence of a long-distance collaboration. Furthermore, the delay in the construction of the complex appeared to be caused by Kahn's insistence to control every aspect of the project despite the geographical distance²².

However, the dedication to the work and the project did not fully satisfy the mainly economic needs of the client who in 1969, six years after making the assignment, decided to reconsider the method adopted until then in order to speed up the procedure to complete the Campus.

This concluded the collaboration with NID and its staff of architects as well as the first phase of the project. The architect chosen by Kahn to complete the IIMA project was then Anant D. Raje, who had worked in Doshi's Vastu Shilpa studio for several years, before going to Philadelphia for five years from 1964 to 1969, when he returned to Ahmedabad on Kahn's request precisely to follow the IIMA project. A Site Office directed by Raje was established in the Campus and his presence thus inaugurated a new and different phase of the project. Despite the geographical distance that separated Kahn from the construction site, the already established relationship with Raje laid the foundations for a more relaxed collaboration.

Because of the geometrical and volumetric characteristics, the new buildings of the Main Complex required further checks from the structural point of view. The core, already defined compositionally, "have large spans, are high, and have stretches of walls with large unsupported lengths and heights"¹⁴ and for these reasons it was necessary to structurally reinforce the walls to create a 'monolithic' behavior between the vertical elements and the horizontal floors, and to guarantee the whole system the necessary resistance to the horizontal forces generated by an earthquake.

The first hypothesis proposed by the engineers relieved the masonry from its initial load-bearing role and transferred the loads to a reinforced concrete frame structure which was then incorporated into the masonry. Although Kahn had adopted a similar solution in the Exeter Library¹⁵, in Ahmedabad he categorically refused to combine two different building systems preferring to preserve the nature

of the masonry as a structural element. Therefore, the only effective solution consisted in building a reinforced masonry which meant to insert steel bars inside the brickwork.

Raje knew that this technique, in the way it was already used in the Indian context, appeared completely alien to the idea of honesty in the use of the material repeatedly expressed by Kahn¹⁶. Despite his awareness of Kahn's mindset regarding this issue, he had to identify five different possible solutions, from the quickest and economic to make to the most coherent one, which, however, would have introduced a further problem, since the full exposure of the concrete frame underlined by the presence of the metal reinforcement, would have significantly changed the external appearance of the brick wall, comparing to what it was built until that stage.

According to Kahn, technique, economics and other 'circumstantial' factors should have left space for Architecture. This had generally happened in Ahmedabad up to that moment thanks to the trust and respect the Indian architects showed towards Khan.

Considering this, it was unexpected that, in his answer to Raje, Kahn showed a new "common sense" accepting the cheapest solution even if less "honest" from an architectural point of view. He said:

"Altogether, let me say that I am practical enough to see the point of view that the effectiveness of the steel within the wall begins to look to me like straw or cow-hair that reinforces old plaster and I am quite willing to give in to what would keep the job going without undue effort because we are already so far behind [the schedule]"¹⁷.

What appears here as a passive acceptance of the most advantageous solution in terms of money, and especially

time, can probably be traced back to the particular moment when this decision was taken.

If in the Dhaka construction site Kahn had proven to know the correct way of building reinforced masonry, the obvious time delay needs here to be taken into account and the pressure put by Lalbhai played a significant role in the decision to endorse a simpler technical execution while trying to assign to this technique the principles that had governed the project until then.

In the letter to Raje cited above, Kahn accompanied the explanation with an explicit reference to tradition: "the effectiveness of the steel within the wall begins to look to me like straw or cow-hair that reinforces old plaster" ¹⁸. According to this original interpretation, the masonry then again became a combination of only two elements, the brick and the binder, with a peculiarity. The latter had a reinforcing element just like straw in the plaster¹⁹.

The technical choices related to the construction influenced the making of the Ahmedabad complex over time. Visible and considerable effects of deterioration began to appear since the 1990s, which means only 15 years after the construction of the buildings. Considering the poor-quality clay used to make bricks and their consequent high porosity together with the limited protection offered by the mortar joint to the steel reinforcement, the choice to reinforce the masonry that way seemed to be one of the main causes of that deterioration, such as to be defined "the recipe for a disaster" ²⁰.

The issue lays within the construction itself and derives, as discussed above, from specific decisions taken during the process, which, despite the geographical distance, Kahn was always aware of. This raises considerations on how priorities could be defined and on which possible methodology could be applied in order to preserve the essence of the buildings.

These appear to be inevitable questions addressed in the work of Brinda Somaya.



fig. 1. IIMA, Ahmedabad, Main Complex and Louis I. Kahn Plaza.
(© Alessandra Rampazzo, 2015)



fig. 2. IIMA, Ahmedabad, Main Complex: the covering and the simulation of the brickwork as a pictorial work. (© Alessandra Rampazzo, 2015)



fig. 3. IIMA, Ahmedabad, Dorm D12: change on the used bond. The picture shows the English bond in the lower part and the flemish bond in the upper one. (© Alessandra Rampazzo, 2015)



fig. 4. IIMA, Ahmedabad, Sample Yard. (© Alessandra Rampazzo, 2015)

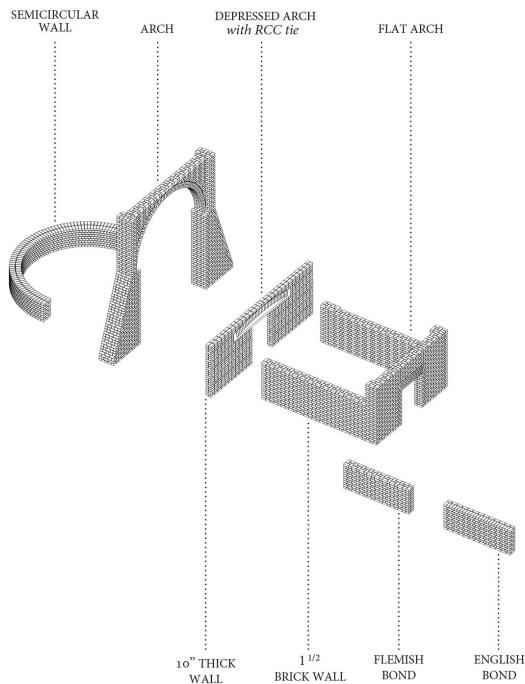


fig. 5. IIMA, Ahmedabad, Sample
Yard. Axonometric view of
the elements. (© Alessandra
Rampazzo, 2015)

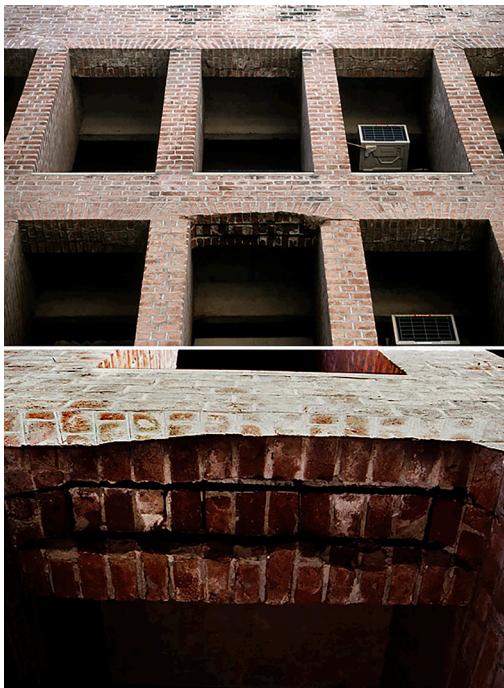


fig. 6. IIMA, Ahmedabad. Evidences of the steel reinforcement within the mortar joint and consequent brickwork degradation. (© Massimo Carmassi, 2007)

ENDNOTES

- ①: Doshi traveled to the US for the first time in 1958 to receive the Graham Foundation Fellowship for Advanced Studies in the Fine Arts. On that occasion, a friend from New York introduced him to Kahn's work and accompanied him to 1501 Walnut Street in Philadelphia.
- : Sarabhai G. (1962, April 4-5). [Letter to Kahn]. 030.II.A.113.24, Louis I. Kahn Collection (from now on LIK Collection), Architectural Archives, Philadelphia, US.
- : Kahn L.I. (November 10, 1962). Note given by Mr. Louis Kahn, LIK Collection, 030.II.A.113.3, Architectural Archives, Philadelphia, US.
- ④: The initial plan was revised in order to introduce, in addition to the spaces of laboratories and residences, a third element known as Meeting House.
- : The Assembly Building took on a separate connotation from the Supreme Court complex and the buildings devoted to housing for the members of the Assembly.
- : The volume of the school building emerged as a closed and central place that dominated the plan until 1966 – a courtyard surrounded by uninterrupted buildings in line with the strong typological tradition (the library, the class-rooms, the administrative building and the canteen).
- : The making of this unusual method, built up specifically for the IIMA project, is extensively explained in Rampazzo (2020).
- : Doshi (2000, p. 19).
- : The Sample Yard is still standing today inside the Campus, on a common garden located in-between the housing for professors.

⑩: For example, the Independence Hall, a Georgian-style brick building, which was situated only ten blocks east of Kahn's studio in Philadelphia.

⑪: L.I. Kahn, 1972, I love beginnings (Latour, 1991, p. 288).

⑫: Between 1963 and 1969, 22 project versions were developed for this building. Each of them was documented by an extensive corpus of drawings preserved in the Philadelphia Archive.

⑬: During the first 7 years of the assignment (1962-1969), Kahn made 12 visits to Ahmedabad, as reported by the documents, as follows: one visit in 1962 and 1963, four visits in 1964, two visits in 1965, one visit in 1966 and 1967, two visits in 1969.

⑭: Raje A. (1969, August 1). [Letter to Kahn]. LIK Collection, 030.II.A.113.6, Architectural Archives, Philadelphia, US.

⑮: At Exeter the perimeter masonry is combined with reinforced concrete to distribute floor loads.

⑯: "Is it therefore too far-fetched to consider expressive brick of tension?". With these words Raje questioned Kahn before describing the different solutions proposed from a practical point of view. Cf. Raje A. (1969, August 1). [Letter to Kahn]. LIK Collection, 030.II.A.113.6, Architectural Archives, Philadelphia, US.

⑰: Kahn L.I. (1969, August 13). [Letter to Raje]. LIK Collection, 030.II.A.113.6, Architectural Archives, Philadelphia, US.

⑱:

⑲: Straw, like animal hair and other vegetable fibers, was traditionally used as a structuring additive to the plaster mixture.

⑳: Satsangi M.S. (one of the NID architects involved in the project) (2015, March 9). [Interview with author]. New Delhi, India.

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8 CONSERVATION PLANS FOR MODERN ARCHITECTURE: THE CASE OF IIM. A CONVERSATION WITH BRINDA SOMAYA

ALESSANDRA RAMPAZZO, BRINDA SOMAYA

Interview by Alessandra Rampazzo (2 March, 2022)

Brinda Somaya is Principal Architect & Managing Director of Somaya & Kalappa Consultants (SNK), based in Mumbai, India.

She is an architect and urban conservationist who has merged architecture, conservation and social equity in projects ranging from institutional campuses and rehabilitation of a village impacted by an earthquake, to the restoration of an 18th-century cathedral. She founded SNK in 1978. The office was selected in 2014 as conservation architects for the restoration of Louis I. Kahn's buildings at the Indian Institute of Management in Ahmedabad (IIMA).

Alessandra Rampazzo: Brinda, first of all thanks a lot for your time.

In order to help us following the complexity of your assignment, could you briefly summarize how did the commission started and how did you get involved in the process of restoring the Louis I. Kahn's buildings at the IIMA?

Brinda Somaya: So, everything I'm saying is to the best of my knowledge and my recollection because now it is almost eight years since we began this proposal.

We first read about this competition in 2014. We applied for it and then we had to face a series of interviews. We had, of course, to submit our proposal first and then we were called to Ahmedabad for the interview. Earlier than this Request For Proposals (RFP) came out, the IIMA had already talked to Peter Inskip and Stephen Gee and they had prepared the initial report on what they saw and on the

way to go ahead on the restoration of the Campus. During the interview we had them connected on Zoom (or whatever the platform used was) and they asked me several questions on our approach, on how we would go about it, etc. but, of course, the IIMA also had their own nominated jury.

Subsequently, at the end of 2014, we got to know that we had won the project, which included the Plaza with the three main buildings - the Library, the Classrooms Block and the Faculty Block - and 18 of the Dormitories. This was what we were told to deal with.

AR: From what you said, the jury of the competition was then composed by selected people from IIMA plus the Office who did the conservation report. Is that correct?

BS: Yes. I don't know how exactly the internal working happened but, as I said before, at the presentation of our proposal to the IIMA jury we were asked several questions by the architects from the United Kingdom.

AR: Talking about the condition report Inskip and Gee did: they were used to these kind of commissions, since they had worked on another Conservation Plan for the Louis I. Kahn Yale Center for British Art Building^① In the case of IIMA, was the report deeply going into the problem?

BS: The one for Yale was a very detailed report because, in that case, they were much more involved in the process itself. In the case of IIMA it was more an initial report and then we were chosen as conservation architects. But still, it was an interesting document that the IIMA gave to us.

AR: After you won the competition, you were finally officially involved with the restoration plan. So then, how did you decide to proceed in the assignment, focusing on understanding the value of the building itself before suggesting any possible intervention? I know that you've been at the Louis I. Kahn Archive in Philadelphia.

BS: So, we first tried to find out what was available in Ahmedabad itself. I also contacted Anant D. Raje's wife and his daughter but, at that time, they were in the process

of giving the entire set of drawings to the University of Pennsylvania, to the Louis I. Kahn Archive. So I didn't get the opportunity to see anything in Ahmedabad from them. However, I was able to get from IIMA whatever they had, which was a set of structural drawings from Sharad Shah and a limited amount of other documents, including the wonderful calendar, which I always talk about in my talks, with a specific note on the day Kahn actually died.

But since I was not fully satisfied, I tried very hard to find more informations and I finally decided to go to Philadelphia and spend few days there at the Archive. It is an enormous Archive. Where to begin? This is actually a difficult question, you know. You have to take certain decisions, understanding the limitations we have in terms of so many issues. It is not so easy: we are in India, we have to work with different types of constraints, including the fact that IIMA is still a running Institution. Budgets were also there (as constraints). It was, again, fully occupied. So what was interesting to me was to understand Kahn - the man and his thoughts and his work - as well as I could. So it was more trying to intellectualize in a way, even if I don't think this is the proper word to use, since I consider myself a professional, but certainly those ideas have to come in the picture, in order to better understand him and consequently the project. So I found some wonderful photographs, lots of Kahn's specifications about the method of construction. So whatever we could afford, we bought, we took pictures of. At the Archive they were very helpful to us, especially the Head of the Archive ●, who was very good to us (he is very involved with Kahn, of course). I brought back (to India) as much material I could. It helped in different ways, but mainly it helped my team to understand the project, the value of what they were doing and the importance of it, in terms of being able to restore a group of buildings that was so important in 20th-century architecture. I think that my

going there, making this effort and coming back conveyed to everybody why this assignment was so important to us. The other thing which I was able to do, which has been absolutely wonderful, is that I made friend with Nathaniel and Sue Anne Kahn and Alexandra Tyng. Nathaniel particularly has been a great support to me but I also spoke with his mother, the landscape architect (Harriet Pattison), who recently sent me the book they published on him●. So it became also a friendship with the family: getting Nathaniel and Sue Ann's support for what we have done and what we are doing means a lot to me and helps me a lot especially considering the difficult road we have taken.

AR: Moving to the client – the IIMA Institution – and the commission: which were the main requests and how did you manage to combine the contemporary needs of an Academy such as the IIMA with the idea of just preserving the building and its value?

BS: Regarding the client, when I started the reference was the Director Dr. Ashish Nanda, who was very clear on what he wanted to do. In 2018, after he returned back to Harvard (he teaches at the Harvard Business School), the IIMA appointed a new Director, Dr. Errol D'Souza, who has actually been connected to the Faculty as a professor for decades. Plus, they also have a Board of Governors, who takes some of these decisions.

I'm sure you are aware of the big controversy that has been taken place and the resolution has still to be taken④. My beliefs were very clear: I had been appointed to restore this group of buildings, this critical mass as a whole was absolutely essential to retain the thoughts and ideas that Louis I. Kahn had when he designed it. If any part of it would have been removed, it would have never been the same again. That was my belief.

I think you are indeed aware of the situation about the Dormitories: there have been a huge amount of both global and national discussions and debates on this. I don't have

any answer, but my role here is very clear: I have completed the library building for which we won the UNESCO award of distinction ●. The Jury Citation said:

“Through careful studies and extensive modelling, the conservation team has conquered a range of difficult technical challenges to extend the life of the composite brick and concrete structure with its distinctive geometric forms. The project has recovered configurations and uses of space in line with the architect’s original vision, while upgrading functionality to ensure that the library is ready to meet contemporary requirements and provide universal access”.

And then what they say at the end is interesting:

“With Modernist heritage enjoying increasing acclaim, but still facing the widespread threat of demolition, this initiative promises to have major policy impact within Ahmedabad and throughout India”.

We had already won this award at the time this controversy erupted. I hope that this – what UNESCO said – went to a lot of people who then would think about the future of this Campus.

At this point in time we are in the process of beginning the restoration of the Faculty Building, which has been completely emptied out (the entire building). We are now actually studying the conditions. There are huge challenges, not just in the present condition of the building, but also in deciding how to bring it up to the codes – which are requirements nowadays, since Ahmedabad is in a heavy seismic zone of the Country - and still respect, to the best of our ability, what exists. For sure, there are always going to be people who will advise and who will tell us what was right, what was wrong, what we could have done or what

we should have done differently. However I think that with our experience and with our knowledge we will try and take the best route to create a balance between all these different challenges that face us.

AR: Knowing that you were going on with the restoration process, the news about the possible demolition of part of the Campus was actually more shocking. It looked like the IIMA was completely changing its mind on the adopted approach.

BS: You are very right. I had absolutely no idea that this was even been contemplated, until they actually put it on the newspaper, so it came out as a big shock. The Institute knows that I was really surprised and shocked by the fact that they had gone on this route. We were worried as well, especially thinking that we were just in the middle of the restoration process. It was a difficult time, for sure, but now I'm concentrating on the Faculty Building. Whatever I can do, I will. The rest will have to be on the owner... the owner has to finally assume responsibility for decisions taken on what they have. This is much more than the physical presence of Louis I. Kahn's buildings: the Institute is associated spiritually, physically and mentally with these structures. The image of IIM Ahmedabad has always been related to Kahn's buildings and the Institution has greatly benefited by having this architecture in the Campus. This is an added value to their own institution (compared to the other IIMs) and it has considerably come from the architectural quality of Louis Kahn's work on the Campus.

AR: And this was actually the reason why he was selected in the first place...

Regarding some practical issues within the assignment, how do laws and regulations work in Ahmedabad, especially concerning heritage preservation?

BS: In Mumbai we have the Heritage Conservation Committee of which we have been members for many many years and I helped with the listing of the buildings.

In Mumbai we have very clear listing of Grades 1, 2 or 3, in which Grade 1 stands for the buildings which are mainly reverential buildings, Grade 2 and 2b are the next line, buildings which have to be preserved, lastly Grade 3 puts together buildings where changes can be made. In Mumbai I have restored several Grade 1 buildings, including the St. Thomas Cathedral which is an ancient church, the Rajabai Tower and Library Building and many more. For all of them we had to go through the Heritage Committee, we had to prepare a huge amount of documentation on the history of the building and on what we were going to do and on how we were going to do our restoration. Then the Committee would come and inspect the buildings and subsequently would give us the permission to proceed with the work. At the end of the process they would come and inspect again.

Strangely enough in Ahmedabad - I don't know... maybe now things have changed - as a 20th-century building the Campus was not listed and there was no Committee I had to present what we were doing.

AR: So you are basically referring to the client only...

BS: That's correct. And to the codes, which is actually the most difficult part. Codes have been addressed more seriously now, even the government is realizing that for heritage buildings it is almost impossible to apply to these codes without destroying the essence and the spirit of the original building. So how do we balance? And that is one of the reasons why, a part from our own structural engineers, we went to the Indian Institute of Technology in Madras to Dr. Arun Menon, who is a specialist in heritage connected restoration of historical masonry structures. There is a big department for that in Madras. We worked very closely with him for the Library Building to try to create that kind of balance within the intervention. The problem is also that the stability certificate for the building had to be given by the structural engineer we used and certain things he was not willing to accept. That sort of discussion and debate is

also difficult. How do you manage to convince the structural engineer that what we were doing would have been right? But, in the end, he is the one that has the responsibility on giving the stability certificate. Our profession is not so simple as sometimes people think it is from the outside, and, unless you are an architect who is actually executing projects after projects, you do not perceive the inherent complexities of each assignment.

AR: At the end, the project is a matter of finding the right compromise, which is everything but easy...

Are codes mainly related to stability requirements, or do other rules refer to specific needs in terms of spaces and uses?

BS: We do have those codes as well (the National Building Codes), stating for example the number of fire staircases or the number of toilets you need, but because of the existing building we have and we can create that balance in order to avoid the alteration of the original geometry. As for example, since nowadays all public buildings need to be accessible to everybody, how could we insert an elevator within the shape of the building? In other words, the issue is: how do we put the elevator without hurting the building either in plan or in the exterior?

There are so many challenges like that, but the biggest issues are, for sure, the seismic conservation over years and the difficulty in being able to adhere to the recent codes. And then the other thing that the Client is always asking is “how long is this going to last?”. How does anybody have an answer to that? There are so many issues to take into account...

If you think about the City of Ahmedabad, at the same time, we have brick buildings from the 20th century which are almost collapsing, RCC buildings in bad conditions all over the place, very strong 150-years-old colonial buildings and thousand-years-old temples that are still standing. You then realize that various issues have to be considered while

talking about the life of a building: how do you look after it? How do you maintain it? What happened throughout the years or the centuries? Those are just to give examples about the complexity of the matter, but, of course, nobody has all the answers, and even if somebody is professing to have them, well, that's questionable in my opinion.

AR: Did you have the chance to work on other buildings built up with the same technical solution, where you have the steel reinforcement directly put in the mortar joint?

BS: No, this is actually so unique. We have the steel within the brickwork, the spoiling, the flaking, the lime... so many issues put all together! Sometimes it makes me think that the 150-years-old buildings we restored in Mumbai were much easier than the IIMA.

AR: This is why it is important to understand how the entire process of both project and construction happened in order to be aware of what you would face during the restoration.

BS: It is also important to remember that Kahn had the opportunity to experiment in Ahmedabad (the experimental arch is still standing inside the Campus). The quality of the materials - the brick and the cement - was indeed questionable at that time. There were so many issues even at that time. I just feel that I have to be strong and believe that my Team will do the best they can thanks to our experience and our sensitivity to Kahn. We, for sure, want to finish the restoration of the Faculty Building and then, let just see what will go on in the future. But the IIMA Institution needs to understand that these buildings are not easy to maintain. It is going to cost to maintain them, even after the restoration we did and we are still in the process of completing. This is actually part of the problem, because they need to find the funds also in order to look after the buildings for the next decades.

Unfortunately, it is not just the restoration and then chapter closed.

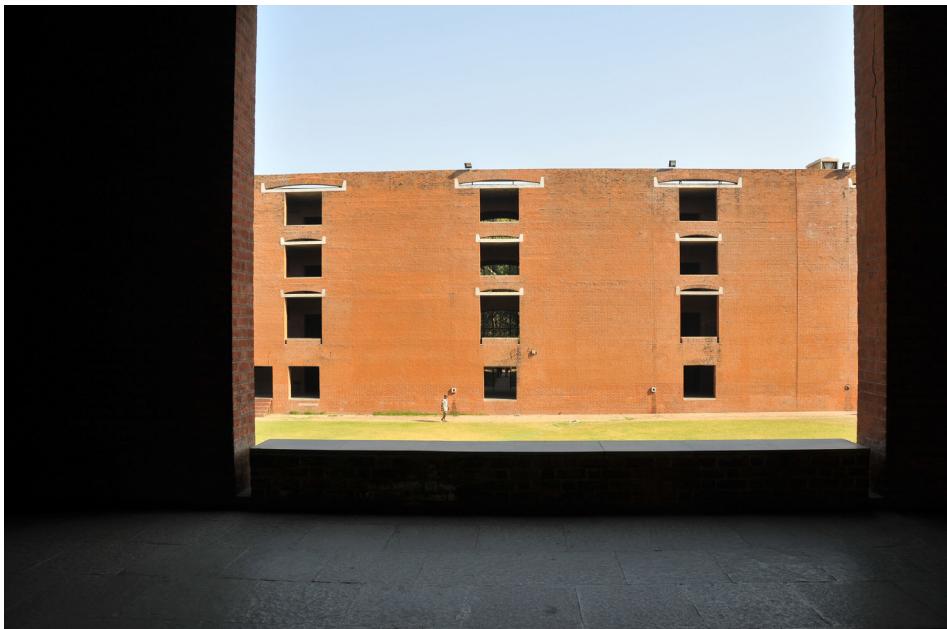


fig. 1. IIMA, Faculty Block: view
from the Classrooms corridor. (©
Alessandra Rampazzo)

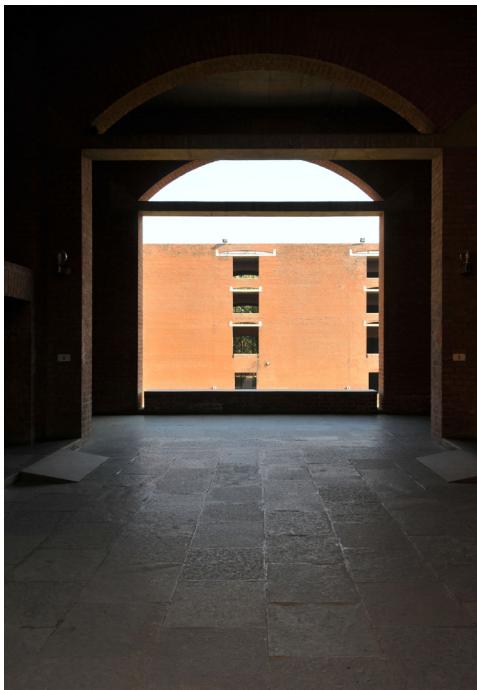


fig. 2. IIMA, Faculty Block: view from the Classrooms passage. (© Alessandra Rampazzo)

ENDNOTES

- ①: Inskip and Gee (2012).
- : William Whitaker, curator and collections manager of the Architectural Archives of the University of Pennsylvania Weitzman School of Design.
- : Pattison (2020).
- ④: She is referring to what happened on 23 December, 2020 when the Indian Institute of Management, Ahmedabad, through a letter to its alumni, made public plans to replace (demolish and rebuild) 14 student dormitory buildings on its Campus.
- : The Vikram Sarabhai Library has been awarded the Award of Distinction at the UNESCO Asia Pacific Award for Cultural Heritage Conservation 2019. The awards were announced at Penang, Malaysia on 14 October, 2019. The library was inaugurated on 11 March, 2019 after a four-years restoration process.

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■ 9 AHMEDABAD: ARCHITECTURE WITHIN SPIRIT AND BODY

GIOVANNI LEONE

Architect

The reference to spirit in the title is not esoteric or transcendental.

It is rooted in the experience of reality, and in the historical-cultural as well as the physical-perceptual foundation because it reveals meaning through the convergence of senses and intellect. The spirit enlivens the body, whether it is natural, social, or individual. Although by definition spirit has no body, it is thanks to the body and mind that we can perceive and conceive it. On the other hand, in art, architecture and literature, the living body of the work itself the repository of the spirit.

9.2 LIVING ARCHITECTURE

Architecture is the art of transforming the environment according to the life necessities of every living form (no matter if plant, animal, or mineral). It progressively refines the ability to shape space by adapting it to the needs of the evolution of individual species and environments, which are the scene of plurality/diversity and various kinds of forces that come into play. Both the environment and the species influence *each other in their continuous change*. **Living architecture expresses a dual meaning, both that of architecture that is alive, and at the same time *living architecture as the action of living in and with it.* The more architecture is lived, the more vital it is. The environment and the species influence each other under the influence of the forces at play, generating an infinite variety of combinations of form: life changes a particular habitat, and vice versa. The result is a plural unity, an amalgamation of diversity and variety. The habitat,

whether urban or rural, is the mirror of the community, objectively and sincerely reflecting what it has in front of it to those who want to see. Inside and around, container and content, text and context... it is not a given to have one without the other; we in the West bind them together with rational thought. In India, on the contrary, this is the function of rituals that bind together different aspects in a holistic perspective.

"First, we shape our buildings, afterwards our buildings shape us". This quote by Winston Churchill refers to the indissoluble relationship of mutual influence between the individual and the surrounding environment from which derives the responsibility of the architect, who has great psychological and social power in his ability to affect the well-being of the inhabitants: in architecture you can feel good or you can stay feeling bad. The first source of discomfort is a lack of 'dialogue' and interaction between the inhabitants and the place they inhabit. These actors condition each other, generating a multiform unity that forges the spirit of the places and the identity of the inhabitants. It is not a rigid unit, defined once and for all, because it has a variable structure that is constantly modified as circumstances change. For this reason, it must be adaptable and continuously adapted, to the individual body in the house, the social body in the territory and the natural body of the environment. Beyond the aesthetic qualities (composition) and the technical-material characteristics (project), the purpose of architecture is to provide space for living. Thus, architecture must first and foremost be welcoming, an inhabited space to be worn like a tailor-made dress that fits well and makes the wearer feel comfortable. Living architecture therefore has strength in its "weakness" and finds stability in the acceptance of impermanence and unpredictability. The more elastic and dynamic architecture is, the more it animates, moves, changes, experiencing crisis and discontinuity as an opportunity, cultivating resilience and

thus being reborn. If, on the other hand, it becomes rigid, proving to be incapable of denying itself to go beyond what it is, it is destined to become a lifeless corpse - like those who have looked into the eyes of the mythological Gorgon - remaining lifeless, motionless, ...petrified. All this is irrecconcilable with the ill-concealed aspiration of many architects to see the fruit of their labor remain unchanged over time. Many architects, but not all.

9.3 LIVING ARCHITECTURE: B. V. DOSHI

I remember that when I went to visit Aranya, a settlement designed by Doshi in Indore, I had a hard time locating it, with so many variations having been made by the residents to personalize their homes. Back in Ahmedabad, I told Doshi this, something that would have been a source of frustration for many architects. Not for Doshi, who rejoiced at the circumstance, stating that it was confirmation of the work's success; the addition of an important share of freedom allowed the residents to feel at home in this exemplary project where architectural design becomes a participatory process. The appearance has changed, but not the founding principles of the settlement's model, which remain intact and indeed are strengthened by the thematic variations introduced by the inhabitants to adapt the settlement to their way of life. The configuration of space has been decisively modified with the introduction of a plethora of exceptions that only confirm the rule: life should not be contained but facilitated. For the Indian master, the inhabitant taking possession of the architecture (modifying it and adapting it to his own needs) is not cause for annoyance but, on the contrary, satisfaction, unlike what usually happens with architects who are annoyed by every modification made to their works. Chapeau. Doshi steps to the side and

overcomes the swamps of his ego by putting himself at the service of the community.

The peculiarity of his work is methodological, not linguistic or stylistic. Each project is unique, the result of listening and reading places and people that leads to a synthetic and synchronic interpretation. The approach of the Indian master is based on acceptance and welcome, a practice and philosophy of life that leads to considering differences and variety as a value to be absorbed and merged into a composite unity of a higher order. There are no firsts or precedents to respect. What counts is action, as Iannis Xenakis, engineer and composer of contemporary music, reminds us: "Dans la vie, il y a deux manières d'agir: l'une est de faire des choses, l'autre est de les analyser. Mais la meilleure analyse est, pour moi, de faire des choses" ^①.

The primacy of action is the basis of karma yoga (the yoga of action), and for Doshi the philosophy of architecture is not thought but action, not intellectual speculation but a theory in practice that does not derive from abstract studies and analyses of reality. It is applied science, experienced in practice and lived: it is *forma mentis* and lifestyle. The principles that underlie his production come from life and are acquired through experience that becomes knowledge with the decisive contribution of consciousness. Doshi's architecture is not immediately recognizable in its results. His style is methodological in nature and operational in character, based on the appreciation of variety and respect for the other, for the differences without which there would be no alternatives and we would all be uniform, deprived of choice and prevented from searching for identity. Doshi observes life as it unfolds and thinks about it freely, without judging; rather, he tries to learn by catching the positive in an action. He observes the how, the where, the when, and then asks himself why. He reflects, and sees himself in that reflection, a bit like what happens in front of a mirror that combines figure and background.

His is not a detached vision, but one anchored in the search for the Self, not his personal Self but the universal one. With his work, he shows us a destination towards which to direct ourselves. The goal is not a foreseen result but a direction that only indicates an orientation. The proposed solutions are always open to change in which the inhabitant plays a leading role. The inhabitant's action of transformation contributes to the configuration of the appearance of the landscape, the character of the territory, and the nature of the environment as a faithful expression of the relationship between the individual and the social spheres in their various declinations (from family to neighborhood, from local and national communities to international ones).

9.4 LIVING ARCHITECTURE: HABITAT

It is the exercise of living that builds a habitat, an inseparable union of man and environment, the result of the interaction between living species that changes the planet upon which we all (co)live, although man often forgets this and abuses it. In ecology the habitat is the set of environmental conditions in which a specific species lives, while in botany it is the place where a species finds favourable environmental conditions for its development and so establishes itself there. These are scientific definitions, but there is also a humanistic interpretation: *habitat* is, in fact, the third person singular of the present indicative of the word *habitare*, therefore it means to inhabit, an expression that includes both the action and the subject who performs it. If we go back to the source, we find the Latin verb *habeo*, which strictly speaking means to have, in oneself, on oneself or with oneself. Thus we can deduce that in essence, *having* is an intimate form of *being*.

To live is to wear one's own house, just as clothing is an expression that represents more than a simple dress. In fact, it reflects being in a broad sense, our ways of behaving, what and who we are, nullifying the sense of the phrase "the dress does not make the monk", which is a way of saying "appearances deceive" (somewhat akin to "you cannot judge a book by its cover"): in this case the dress is integrated with the body of the monk, as it is his skin.

Over time, architecture must follow the needs and changes of the body that inhabits/wears it. When necessary, we must shorten the sleeves, widen the waist, or take in the legs, without forgetting that architecture itself, besides the inhabitant, has its own life and destiny. Therefore the transformations must be compatible, requiring effort but not causing excessive suffering to oneself and the environment. We often forget this, just as we forget that architecture is not only the product of voluntary actions but also the result of involuntary influences that first affect the level of energy, since even walls, stones and plants absorb and release energy. There is no such thing as inanimate matter. Everything has its own life and finds its highest outcome in the energetic reality and in the spiritual dimension. On the energetic level matter is complex, subject to forces related to the presence of certain materials. Then there are the energetic reference elements on the cosmic scale, starting with the sun and moon, male and female, along with the fundamental forces or interactions (gravitational, electromagnetic, weak and strong nuclear, the nature's most intense force, which acts in the vacuum inside the nucleus to keep protons and neutrons together). There are also local charges and forces that are variable from place to place. Finally, there is the energy contribution introduced by human presence and action, variable and changing. One can believe in the sedimentation of energy or not, but, regardless of the causes, the variation in the detection of the sign of the charges and waves is an instrumentally demonstrable reality. To give

a scientific basis to the identification of the energy characteristics of places, instruments such as Lecher's antenna ●, still widespread today and used both for the diagnosis of diseases and in green building, have been used since the beginning of the twentieth century to measure electromagnetic and thermal fields, that is the vital vibrations present in every form of life. The energetic framework, understood as an endemic quality of the place and the assets of the situation is not a factor placed exclusively upstream of the process of optimal organization of spaces and their proper use. The energetic dimension is a dynamic factor that changes not only by means of possible canonical corrective expedients (standardized in India by Vastu and in China by Feng-shui), but it is also and especially a consequence of the energy that such actions and those who perform them produce, release and deposit in the places they manipulate. Space is a geometric entity, but it is the way of using it that makes the difference between one space and another. A place derives character thanks to the energetic qualities that remain suspended or are absorbed in the context, intangible but perceptible to those who have developed the aptitude to feel subtle spiritual solicitations.

9.5 THE BREATH: GENIUS AND PRĀNA

Let's return to the idea of spirit. This essay of mine is more than an intervention - in fact it is a spiritual session in which I will try to evoke:

- ◊ the *genius loci* (the spirit of the place)
- ◊ the *genius seculi* (the spirit of the time, defined in Romanticism by Hegel, Goethe, etc. as *zeitgeist*. The concept of *kunstwollen* - artistic will - introduced by Alois Rieggl can be considered its legitimate offspring).

In Roman religion, the Latin term *genius* denotes a tutelary deity who is the individual instance (God) of a general divine nature (divinity) present in every person, place or thing. It is the essence, the intimate nature: the soul. *Loci* is the plural of *locus* (place) and is a mentally or materially determined spatial entity. From a scientific perspective, however, it is a precise place, identified by longitude and latitude. In a humanistic perspective, however, a place is a precise lived space inhabited by the senses and emotions.

Spirit derives from Latin *spiritus* and from *spirare* which means to expire or exhale, an image that conveys a sense of lightness. For this reason the term came to express any incorporeal substance such as the soul, but also angels, demons, goblins, and even the shadow of a dead person. For the Romans to expire was to emit the last breath that the next of kin receives, because Romans believed that this final breath carried the soul, and not to disperse it, but for the next of kin to receive within himself.

We use a lot of energy, more than necessary, and we waste so much energy because we do not take the time to recognize and value it, whatever its sign, positive or negative. In the Indian culture the life force is called *prāṇa*, energy that manifests itself in the breath, the metabolization of an airy nothingness that becomes inner energy through absorption in the organism. Such is also the case for architecture: it is an organism. The breath is not only that of the animal, but also that of the environment, manifested for example through the breezes that cross the space and the building, enlivening it.

9.6 EXPANDED_TEXT (INSPIRATION): BHARAT

In the second half of the twentieth century, Ahmedabad (and the whole of India) was a laboratory● that produced extraordinary architectural works of the most advanced

research, from the poetic and technical point of view in function of a "new construction". In Europe we measured ourselves with the reconstruction after the destruction of war, while in India we are dedicated to the new foundation, the construction of the bases upon which to build a present understood as a past reinterpreted for the future. Two perfectly set works of foreign hand and universal mind well represent this season: LC's Open Hand and Tower of Shadows in Chandigarh.

The open hand (1952) represents hope in a better future, a discreet but meaningful sign. In a letter to Nehru, LC, after having recalled the successes achieved "in one hundred years of scientific and technical conquests", expresses the hope that "the fission of the atom is about to revolutionize the sources of energy and, consequently, production" and that therefore

"human suffering, famine, can be, in the future, put aside [...] Abundance appears as the sign of our age. The open hand to receive and to give can be chosen as a symbolic materialization of many victories! [...] India will be able to value the opportunity to raise on the Capitol of Chandigarh, currently under construction, in the middle of the buildings hosting institutions and power, the symbolic and evocative sign of the 'Open Hand': open to receive the riches of creation, open to distribute these riches to its people and to other people [...] The open hand will affirm that the second era of the machinist civilization has begun – the era of harmony".^④

On page 10 of his introduction to the volume *Œuvre Complète 1946-1952* Le Corbusier writes: the hand

"turns according to the wind on a ball bearing: the 'hand' will be oriented according to the wind of the day.

A phenomenon that does not symbolize an opportunistic banderole. On the contrary: it is the symbol of the consideration of facts and daily reality [...] the phases of the game played by man with the cosmic elements: man, and nature. A game of numbers, a game of the calendar and the solar day, a game of the sun with its light, its shadow and its heat. This game was precisely my life's work from the beginning" ●.

The tower of shadows is a celebration of light and *prāṇa*, and has deep relationships with the palace of the spinners, a palace permeated by breezes and the modulated relationship with natural elements such as sun, air, water and the earth that rises through the ramp and penetrates the building until it reaches the sky on the terrace. The common thread is emptiness and a configuration that inspires us to reflect on the thin border that both separates and unites the notion of container and contents.

9.7 LOCAL CON_TEXT (EXHALATION): AHMEDABAD

The expanded notion of con_text (physical, geographical, morphological, political, social, economic, cultural...) is indispensable to the understanding of places. Personal and family events, geographical position, economic and social circumstances, and epochal events take place in the city of Ahmed, determining the physiognomy of one of the most industrious and advanced cities in India. It is the commercial capital of Gujarat and an important productive center of post-colonial India, animated by a capitalism of an exquisitely Indian type, the far-sighted promoter of an enlightened patronage that has sought, without prejudice and preclusion, the most useful contributions to economic and social progress. In architecture, the recourse to leading exponents of the international scene, including

Le Corbusier and Louis I. Kahn, was not an end (as it often happens today, even in Italy, with forms of provincialism or cultural neo-colonialism) but was functional to professional training, research, and interaction with the most advanced thinking the international scene proposed. Thus it was the birth of a new liberal and progressive bourgeoisie●.

"Individuals founded industries, which gave birth to and supported institutions, which in turn formed individuals. Hence in Ahmedabad, economic and educational activities, arts and crafts, culture, architecture, and administration have been symbiotic. The reciprocity of their interdependence and sustenance is one of the specificities of the city. [...]

This is the reason why the city cannot be seen in the light of any single dimension. Although it was known as the 'Manchester of the East' it would be wrong to classify the city only as a center of the textile industry. [...] Machines and manual skills can, therefore, coexist. This coexistence of the modern with the traditional is yet another peculiarity of the city where traditional foundations are stable; yet, the experimentation-adaptation of the new comes naturally to the business community. This process of continuous adaptation and intertwining of culture, art, and commerce describes this aspect of citizen initiative and involvement in civic affairs. The city, in various ways, has been for, by, of its people.

Therefore, Ahmedabad cannot be understood with a chronology of its historical events or any other specific structure of references. Even its history has been an ongoing process - an alchemy of the many faces of life. An authentic historical account of the city must, therefore,

take a holistic view that encompasses all aspects - the place, its people, and their ways of life"●.

9.8 TEXT AND CON_TEXT

Let's now take a dip into the architectural text with two examples that once again feature Doshi, and are excellent examples of the literary-narrative component of architecture: the Palace of the Spinners (which he worked on for Le Corbusier) and the Indian Institute of Management (which he designed with Louis Kahn).

Although they are based on the Ville Savoy type, appropriately revised and corrected, the villas and palaces designed by LC on the Indian subcontinent have affinities with the numerous archaeological and architectural "remnants" that time has stripped of every superstructure until they reach the threshold of pure spirit. The palace of the spinners seems to have already been born as an archaeological find, deprived of walls whose collapse it was not necessary to wait for. It is a perfectly finished ruin, ennobled until it becomes a matrix of modernity in an exquisitely poetic process. The building is stripped of its clothing and gives itself for what it is: space and place. The resulting emotional impact is remarkable. Inside the building it is the void that prevails, in a process of subtraction that hosts the volumes with the internal environments closed, autonomous, distinct. The sense of emptiness seems to contrast with the strong and precise perception of the envelope, a volume without decorations but adorned by a structural sign that is paginated (on the plane) and a Cartesian grid (three-dimensional). The simultaneous exaltation of fullness and emptiness is not a contradiction; on the contrary it denotes the unitary ambivalence of the space that is a container of content. The overall perceptive experience is

enriched by the ramp, which forces a slow approach, gradually raising the visitor's point of view and accentuating the experience of space before allowing him to penetrate the wall of shadows and welcoming him inside. Another recurring presence in India is water, a symbol and a precious asset. In the palace of the spinners it is taken into account at a distance, by its placement along the river to enjoy the relief of the breezes that form between land and water. Those who stay in the palace can contemplate the river immediately from a facade that disappears in the perception of those behind it, designed to acquire shape only when observed tangentially, from the sides. The photographs of this façade show a building stripped bare, a vivisection that puts its internal organs on display, but these are photographs: it is impossible to overcome the penumbra in which the building is immersed, except in the morning and with the aid of a zoom lens from the opposite bank or with the naked eye from a boat for a few brief moments as it passes. For the rest, the sun highlights the septa seen from the side and their delicate luminous graphics that stand out against the background of shadow. The baffles of the eastern elevation are orthogonal to the river, making the building totally permeable to breezes. The opposite façade, facing west, is bent in the direction of the prevailing winds, and closed towards the city. On the roof terrace the prevailing winds meet. The sunscreen in reinforced concrete is close to the elevations, eloquently detached from the building thanks to small joints that make it a classic element, the facade of a building that is perfect in form and precisely imperfect in surface, celebrating air and light, the aesthetic expression of a philosophy of nature.

In the case of the Indian Institute of Management, recently the subject of a scandalous affair ●, the agreement between the state client and Kahn called for the employment of engineers and architects from the NID (National Institute of Design) for the design, offering them an

opportunity for top-level professional training. In charge of coordination and interaction with the local reality were B.V. Doshi and Ananth Raje (1929-2009), Indian architects trusted by Kahn and his design associates. The contributions of these Indian Masters of Architecture and engineering ensured quality and control in the on-site work and at the same time offered an original contribution thanks to their knowledge and experience. The results of this involvement are tangible. For example, in the residences, where the forms of Kahnian poetics are organized in such a way as to stimulate the formation of community at multiple levels, thanks to the definition of private and public spaces for relationships. Elements that stand out in this regard: the internal distribution and the veranda of the housing units; the large corridors marked by stairs and tea rooms, opportunities for meeting and social relations; the open spaces for neighbors between buildings; sports fields; the market; the large square. Among the aspects of Indian derivation there is the constant presence in the plans of numerous small dots, part of the design since the first of the various versions of the project, and the existing trees, carefully surveyed to be preserved. Last but not least, the local wisdom is documented by the rotation of the entire complex by 90° towards S-E according to Doshi's indications, in the direction of the prevailing winds, to allow the buildings to be crossed by the breeze. The sections with the staff's residences are also from the same period. These areas made use of vaults and a roof (rainroof) in which we see light wells and devices for ventilation, and water flows to the opposite directions in which there are a basin and a garden, agents of cooling. The breath of life or *prāṇa* is manifested in the environment by the breezes that pass through the building, making it come alive. This is the theme of the dormitories of the Indian Institute of Management. The dialogue with nature that permeates the space reminds those who deal with a subject such as economics, that is likely to be distant and abstract,

arid and greedy, of the natural dimension, the importance of life, emphasizing how the economy must be at the service of life for the achievement of well-being, which is not comfort, but being well. We find the same message in the Indian Institute of Management in Bangalore, where nature creeps into the spaces between the classrooms, a luxuriant and bursting nature, the face of authentic wealth. These are spaces for education not only because they host institutes of higher learning, but also because they convey a strong and clear message, becoming spaces of involuntary teaching, whose experience is deposited in the depths of the learners.

On the subject of breath, Amdavad ni GUFA is an exemplary work, significant and extraordinarily effective in every aspect, which in some ways seems to be generated by subtraction of matter (as were the caves of Ellora, Ajanta, etc.) but in other ways seems to be born from insufflation, somewhat like the master glassmakers who create vases by blowing air into incandescent glass, giving it lightness like air and transparency like water. Well, GUFA is the miracle of a space in which the breath of life dwells, together with the spirit of the artist Maqbool Fida Husain (who envelops the building, inside which dancing spirits and figures of color dwell in the cobra's coils) and of the architect B. V. Doshi, who renounced the use of force in the construction and let the forces cancel each other out, sliding on the surface of the artifact, as is typical of martial arts. The history of this work bears witness to the evolution, or rather the involution, the beginning of the reversal of the trend: Husain died in 2011 in self-exile in Qatar, where he took refuge in 2006 to escape death threats from members of the nationalist right following the controversy over his 1996 exhibition of paintings featuring nudes of deities, offending religious sensibilities. The void left by Husain, exiled together with *satyagraha* (a term that is translated as non-violence or passive resistance but that means "insistence for

the truth", which in Sanskrit is *satya*) is a gap in the contemporary Indian cultural panorama, a void of absence.

9.9 CONCLUSIONS, A NEW BEGINNING

Evaluating the quality of architecture rarely takes into account an assessment of the quality of life of the inhabitants and their perception of architecture. Architects seem to think that if the inhabitants complain it is because they have not understood. In architectural discourse, life remains on the margins, neglecting the fact that it is precisely this element that constitutes the attribute of vitality of architecture itself. In the essays, works and authors are compared, relationships with history and places are investigated, but only on the level of ideas and theory; that is, in a scenario in which the user is considered as a perturbation that corrupts and de-forms what the architect has formed. On the contrary, the experience and its transformative power, with the modifications and adaptations made over time to harmonize space and action, are what allows architecture to reach a complete form, making it a ripe fruit ready to be picked, tasted and appreciated. Even imprecise execution is considered a defect, as if it were not the result of coincidences and vital circumstances: corrosion, encrustation, contamination, transformation of the primal idea humanizes architecture and should be considered its completion: the realization is not the execution but the appropriation by the user/inhabitant that brings architecture from the ideal to the plane of reality, perfectly imperfect, as is life itself.



fig. 1. Ganesh, the sacred in
Doshi's house, Ahmedabad. (©
Giovanni Leone, 2008)



fig. 2. Amdavad Ni Gufa,
Ahmedabad. (© Giovanni Leone,
2006)



fig. 3. Rooftops during the international Kite festival in Ahmedabad in January. (© Giovanni Leone, 2008)



fig. 4. Indian Institute of Management, Ahmedabad. (© Giovanni Leone)

ENDNOTES

①: "In life there are two ways to act: one is to do things and the other is to analyze them. But the best analysis is, for me, to do things". Iannis Xenakis's statement quoted by Stan Radu in program notes for the Hommage à Iannis Xenakis, Radio France 5-8 June 2001, reprinted in Xenakis (2008).

●: Here is some information translated from Italian websites containing offers of Training Courses for the use of the Lecher antenna. "All kinds of energy matter vibrate and radiate. The same is true for the human body whose radiant balance can be measured through the electromagnetic and electric fields that run through it. The natural radiant field is also the basis for the genesis and preservation of life. But today in addition to natural radiations (Atmospherics or Spherics), there are the artificial ones (Technics), which might bring possible negative interferences on living beings. Even beverages and foods, homeopathic, isotherapeutic and allopathic remedies, stones and other substances absorbed or brought into contact with the body give off vibrations that may affect the human body acting positively or negatively on physical and mental level. The Lecher antenna, a manual well perfected radiesthetic instrument, can measure these energetic vibrations. It allows to distinguish the frequency and intensity of the two polarities of an electromagnetic field present in the biosphere or emanating from a living being, plants, stones and so on. The Lecher antenna is used in the bioremediation of a house, in the realization of a diagnosis for the evaluation of the different electromagnetic frequencies that organs emanates, and for testing medicines, food, stones and so on.

●: Cf. Leone (2013, pp. 7-16).

- ④: Le Corbusier. (1959, September 29). [Letter to Nehru]. Fonds Pierre Jeanneret, 156-002-0, Canadian Centre for Architecture, Montréal.
- : Le Corbusier (1954, p. 10).
 - : After the Kutch earthquake in January 2001, local newspapers reported numerous statements from the most fundamentalist Hindus who claimed that the earthquake was a divine punishment due to the excessively loose morals that disrespected traditions.
 - : Doshi (2002).
 - : Leone (2021).

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PART 2.
‘LIVING’ THE
ARCHITECTURAL
PRESERVATION.
MODERN
HOUSES IN THE
CONSERVATION
OF 20TH CENTURY
HERITAGE

PART 2. INTRODUCTION

1 INHABITING THE FRAGILITIES OF MODERN HERITAGE

SARA DI RESTA

Università Iuav di Venezia

"The home must have a personality corresponding to the culture of those who inhabit it: the architect must arrange the services and fixtures, while everything else is the inhabitant's responsibility, and architects must only influence taste, culture and education in living. They must influence the 'production' of furnishings and not create all the furnishings themselves: as regards the exactness of the architect's work, the house must be a 'machine à habiter'; as regards the inhabitant, it must be their home" ^①. (Gio Ponti, 1957)

The relationship between research and protection is a central issue in addressing the conservation of 20th-century architecture. Indeed, it is research that determines and guides protection tools and, even more importantly, identifies the notion of heritage recognized by contemporary society. This process takes place on the basis not only of historical knowledge, but also of the complexity of factors related to change, both physiological of the object and of the society that interprets it.

Underlying the concept of heritage, therefore also of modern heritage, is the construction of a community that recognizes and is recognized in elements of cultural identity, identified and selected as assets that must be safeguarded. As we know, the concept of heritage is not an invariant and static term. On the contrary, the extension of the meaning of the term and the consequent broadening of its scope, also suggested today by the Codice dei Beni Culturali (Code of Cultural and Landscape Heritage), have led, for the last forty years, to questions about the values conveyed by recent architectural production, its destiny and its protection. As Franco and Musso have observed, this approach coincides with a process of knowledge, first and foremost, as well as of selection, based on criteria that are ideally, but not necessarily, shared by the widest possible community of those interested in the subject and directly or indirectly involved in it.

The modern houses that are the focus of conference *Living the Architectural Preservation. Modern Houses in the Conservation of 20-th Century Heritage*, define an investigation framework that links the terms and tools of heritagization, conservation and use of a particular segment of 20th-century architecture. The status of "auteur architecture" accorded to the houses of Le Corbusier, Gio Ponti, Luigi Moretti, Carlo Scarpa and Vittoriano Viganò discussed in this volume is not proving to be a sufficient criterion for guaranteeing effective protection at national

and international level. The factors that make famous buildings, recognized for their cultural value, “endangered heritage” not only relate to – undoubtedly crucial – issues connected to the relevant legislative context, but also concern methods of social reception and use of the works, in which the inhabitant/user plays a central role in the proper management and transmission of this heritage to the future.

Bringing together scholars and professionals involved in the conservation of these buildings, while including the inhabitants/users of the properties in a context of exchange and dialogue, makes it possible to outline a very detailed state of the art on the fragility of this architecture and, above all, to define planning and management strategies for its active conservation.

10 · 2 PROTECTING MODERN ARCHITECTURE

An approach to the protection of 20th-century Italian architecture through current legislative provisions requires us to focus on the role of the declaration of cultural interest issued by the competent Superintendencies as a guarantee of the right to protect these works and, ideally, as a premise for high-quality restoration projects^④.

The regulatory protection tools adopted by a nation also testify to its sensitivity to the significance of architecture built in the recent past. However, as Carughi has observed, 20th-century architectural heritage appears to be progressively less valued and protected by Italian legislation●, in total contrast to trends in the culture of the field, which is investigating this area with increasing intensity. A first critical step was taken in 2011, when the time limitation for the protection of properties under the *Codice dei Beni Culturali e del Paesaggio* (Code of Cultural and Landscape Heritage – Legislative Decree no. 42 of 22 January 2004) became

twofold: while remaining fifty years from the completion of privately owned properties, an extension to seventy years was provided for publicly owned properties. The direct result was that world-renowned architecture, built between the 1940s and 1960s, suddenly found itself without the prospect of protection.

A new amendment to the Code came into force in 2017, extending the seventy-year limit to privately owned movable and immovable property●. With the removal of the reference to the fifty-year limit dating back to the Nasi law (Law no. 185 of 12 June 1902), the entire production of the second half of the 20th century therefore remains excluded from the recognition of cultural interest due to its “intrinsic value”. This time interval, motivated by the need to ensure an adequate perspective for critical judgement, has not proved convincing on a scientific level, since it excludes from protection objects that are already universally recognized for their cultural, architectural and documentary value. Carughi also notes that in the international context the time threshold for the so-called “constraint”, where present, varies from country to country and can be waived in most countries where it is in place.

Only in limited cases has the new time threshold not prevented a building, including very recent ones, from being protected in Italy for its links with aspects of national history or culture. This refers to the so-called “relational interest” attributable to an asset insofar as it is not material●. Modern architecture protected under this regulation includes Ignazio Gardella’s Casa Cicogna in Venice (1953-58), Pier Luigi Nervi’s Palazzo del Lavoro in Turin (1961), Giancarlo De Carlo’s Colonia Marina in Riccione (1961-63) and Sergio Musmeci’s bridge over the Basento in Potenza (1967-75).

In a process undermined by regulatory limits and internal contradictions, Canziani opens up a further possibility for protection:

"recognition of historical value that is independent of the date of construction and of the author, but only applies if a clear relationship with cultural history can be identified, without considering the intrinsic architectural merits of the property, which alone cannot justify this type of protection. A rare, indeed very rare event in Italian heritage, which has occurred in the case of a handful of buildings, not due to a lack of objects that deserve it, but because of the difficulty of establishing such a constraint on the identification of a historical value of modernity" ●.

A final path emerges from the aforementioned issues connected to authorship. As Foucault observed in 1969, while highlighting the limits of the phenomenon, "the notion of 'author' constitutes the cornerstone of the individualization of the history of ideas, knowledge and literature, as well as of the history of philosophy and the history of science" ¹⁰. However, the author, the scholar emphasizes, is only one of the possible specifications of the subject-function. In architecture, recognition of authorship is often confused with that of authenticity or originality of the object, effectively supporting phenomena of restoration reproduction. Even today, we are still witnessing projects guided by a "neo-philologism" that transforms, in the words of Gio Ponti, monotypes into prototypes ¹¹. Authorship is undoubtedly the factor that has fostered and continues to foster the fame of these villas, as well as the dissemination of images and content which, in some cases, have made these cultural documents closely linked to an idea of time, "icons" expressing an indeterminate idea of modernity.

In Italy, the necessary condition for a cultural heritage to be protected by copyright is that it represents a work of a creative nature; it must therefore have such a representative individuality as to distinguish it from previous works. In 2016, Rositani Suckert noted that there were dozens of cases

of architecture protected by the so-called “copyright”¹² procedure in Italy. Among the best known are Gio Ponti’s 1959 Pirelli Tower (1959) and Vittoriano Viganò’s Istituto Marchiondi (1957)¹³.

Although extremely concise, the outlined framework allows to observe that the criteria of *heritagization* of modern and contemporary architecture that emerged from the conducted research effectively anticipate the trends of the relative regulatory context, hopefully leading to future necessary revisions.

10.3 MODERN LIVING OVER TIME

The theme of the single-family house played a key role in the definition of the Modern Movement architecture as a symbolic and functional affirmation of the utopian turning of an idea of future into reality. As pointed out by Tostões, "nowadays, the growing emphasis on wellbeing goes beyond the seminal ideas that modern houses were 'machine a habiter' and is closer to an idealistic vision of stimulating shell for humans, which is shaped by imagination, experimentation, efficiency and knowledge"¹⁴.

As well as reflecting the status of the owners, modern design criteria for the house also document relevant aspects of social change. As noted by Torrent, "the desire to adapt domestic life linked spatial and material ideas with cultural, social and even political meanings that were present in the aims for change of society"¹⁵.

With the exception of Le Corbusier’s houses built in the 1930s, whose conservation experiences are explored in Bénédicte Gandini’s paper, the buildings considered during the conference are *auteur* villas that reflect the culture of the second half of the 20th century: Gio Ponti’s Villa Planchart in Caracas (1953-57), illustrated by Hannia Gomez, Luigi Moretti’s Villa La Saracena in Santa Marinella (1955-57),

the restoration of which is documented by Paolo Verdeschi, Vittoriano Viganò's Casa La Scala (also known as Villa Bloc) in San Felice del Benaco (1956-58), examined by Giovanni Vergani, and Carlo Scarpa's Casa Balboni in Venice (1964-68), investigated by Francesco Magnani and Roberta Martinis.

The modern house that emerges from each contributor's paper is a tailored creation that combines figurative heritage and the designer's idea of living with its owners' style. These buildings, resulting from a constant dialogue with the clients, represent an era. When entering their new house, the inhabitants enter a new life: a new *modern* life, including in the way they relate to the architecture. In many cases, these monuments of modernity are also inserted into a natural and/or cultural environment with which they establish lasting relationships.

Built for a limited number of people, villas also acquire new values through historical perspective. Their formal, compositional and fine material elements span the evolution of technology and living comfort.

Nevertheless, today these well-known buildings with their remarkable figurative power are scarcely adaptable to the idea of living possessed by contemporary owners/users. Documenting the characteristics of the modern house with the aim of outlining prospects for its protection therefore means, first and foremost, addressing the concept of living as a phenomenon of permanent and physiological change: changes in use, material, technological and performance modifications, as well as changes in how these places are perceived by the current inhabitants/users.

All too often Modern architecture has been treated as fragile or non-durable heritage because of its experimental materials and undeveloped building techniques, but this is just one aspect of a much more complex picture. The most incisive modifications over the years have been due to social and cultural changes connected to the idea of living, which

have brought new demands for comfort, safety and accessibility that have led to significant internal and external transformations of houses.

This phenomenon applies more generally to all modern architectural heritage. As highlighted by de Jonge, "increasingly stringent requirements have rendered many buildings from the modern era outdated and obsolete, even if they are still performing well according to their original specifications" ¹⁶.

To recall a few notable cases, cultural and social changes led to the extensive replacement of the windows and doors of the La Tourette priory in Éveux (1956-60) with new, standardized double-glazed elements, as well as to the destruction of the glass walls of Mies van der Rohe's Crown Hall in Chicago (1950-56), which became the symbol of the start of "restoration" in 2005. Similarly, it is the new demands of comfort that today damages the perception of the architectural component of the façades of Le Corbusier's Palace of Assembly in Chandigarh (1951-62), which have been filled with external air conditioning units.

These precedents alert us to a crucial issue: even before material fragility, lack of knowledge is the precursor to its loss. What, therefore, is the correct balance between the justified need to accompany this architecture into the contemporary world and the cultural responsibility of preserving its characteristics?

Central to the debate, once again, are the potential and limits of approaches which, in many cases, link *heritagization* to opening these places to the public. Only a few of the houses examined still have their original function: they have become museums, places of representation and, in some cases, exclusively summer residences in order to avoid the significant alterations that would be required due to their poor thermal performance.

The reception and the processes of appropriation of this heritage by the inhabitants/users emerge from the

insightful reports of Giovanni Vergani and Hannia Gomez, who emphasize how inhabiting Modern heritage also signifies education in beauty and detail for subsequent generations who did not participate in the realization of the house. These issues also emerge from the performance created in the Maison Blanche (villa Jeanneret-Perret) by Cristian Chironi, who uses the tools of contemporary art to raise important questions about the current meaning of the term “domestic”: living has to do with life, with contamination, a process contrary to musealisation.

It is in this regard that the tool of the Conservation Management Plan¹⁷ emerges as the only alternative to emergency restoration. The following studies clearly show that although those houses are an expression of the Twentieth century and its intense season of industrial production, their preservation always needs an artisanal approach. The challenge is to hold these two instances together, through interventions that provide a vision for the project in both the present and the future.



fig. 1. Palace of Assembly in Chandigarh (Le Corbusier, 1951-62), designated as a UNESCO World Heritage Site in 2016. External units of the air conditioning system on the façade. (© Roberto Conte, 2019)



fig. 2. Cité Frugès in Pessac (Le Corbusier, 1926). Housing unit. (© Sara Di Resta, 2017)



fig. 3. Casa Giavi in Cortina (E. Gellner, 1954-55). Wood and concrete decay. (© Sara Di Resta, 2019)



fig. 4. La Cupola, “the Dome”, in
Costa Paradiso (D. Bini, 1969-70).
State of neglect and decay. (©
Giorgia Mellone, 2021)

ENDNOTES

- ①: Ponti (1957, p. 26).
- : Cf. Heinich (2009). See also: Giusti (2019, pp. 100-107).
- : Franco and Musso (2016, pp. 14-25).
- ④: Carughì (2012, pp. 21-52).
- : In tracing an excursus of the modifications of the regulatory framework on the protection of 20th-century architectural heritage, the author cites, among others, the draft law concerning regulations for the protection and enhancement of cultural and environmental heritage of 30 July 1984, which heralded a significant turning point for this heritage: "Contemporary art produced less than fifty years ago may be subject to the provisions on the declaration of cultural heritage, in accordance with the same procedures as those set out in Article 4, provided that they are works of deceased authors recognized for their intrinsic value and merit or as particularly significant". The initiative ceased after 1985 due to the end of Legislature IX. Cf. Carughì (2018, pp. 57-63). See also: Tamiozzo (2004, pp. 15-16) and Picchione (2004, pp. 44-46).
- : Law no. 124 of 4 August 2017, Art. 1, paragraph 175, published in Official Gazette no. 65 of 29 August 2017 amending Legislative Decree no. 42 of 22 January 2004, Art. 10, paragraph 5.
- : Legislative Decree no. 42 of 22 January 2004, Art. 10, paragraph 3, letter d). Law 4 August 2017, Art. 1, paragraph 175 introduced an additional provision, d) bis that could open new protection prospects for modern and contemporary architectural heritage.
- : Paragraph 3, letter d) of Art. 10 of Legislative Decree no. 42 of 22 January 2004 reads: "The following shall also be considered cultural assets, where the declaration provided

for in Article 13 is applicable: [...] d) immovable or movable objects, belonging to whomever they belong, which are of particular interest because of their connection with political or military history, literature, art, science, technology, industry and culture in general, or as evidence of the identity and history of public, collective or religious institutions".

●: Canziani (2016, pp. 45-51).

⑩: Foucault, 1969, published in Foucault (2004, pp. 1-21). Carlo Olmo, among others, returned to the definition of authorship and the fame of the work in relation to its author, drawing on the writings of Roland Barthes and Michel Foucault. Cf. Olmo (2019, pp. 146-151).

⑪: "Engineering creates prototypes and architecture monotypes. It is laughable to think of a car that cannot be reproduced or a bridge with arches that cannot be repeated or lengthened. It is equally laughable to think that 'Fallingwater' or the Rotonda are 'for reproduction'. [...] This does not signify any subordination of values, it simply signifies a differentiation of values between Engineering and Architecture, both of which I regard with great honour and love" (Ponti, 1957, pp. 61-62).

⑫: Pursuant to Art. 2 paragraph 5 of Law no. 633 of 22 April 1941 and subsequent provisions.

⑬: Cf. Rositani Suckert (2019, pp. 176-183). In opposition to the above-mentioned approach, there are recent striking examples of the removal of monumental protection for modern architecture. Such is the case of Quartiere QT8, an experimental housing district built as part of the Milan Triennial VIII starting in 1947, for which the municipality's appeal, contesting excessively onerous bureaucracy and costs for work on the houses and gardens, was upheld in late 2021.

⑭: Tostões (2021, p. 3).

⑮: Noelle and Torrent (2021, pp. 4-9).

⑯: De Jonge (2017, pp. 62-105).

⁽¹⁷⁾: Cf. Heritage in danger. Conservation Plans between protection and emergency in Villa Planchart case, International Research Project, Università Iuav di Venezia, co-founded by Docomomo Venezuela. In collaboration with Fundación Anala y Armando Planchart and Docomomo International ISC Education + Training, AA 2019-20. Scientific responsible: S. Di Resta.

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VENICE, 4-5TH MAY 2021

11 INNOVATIVE CONSERVATION POLICIES FOR 20TH-CENTURY ARCHITECTURAL HERITAGE

UGO CARUGHI
Former President of Docomomo Italia

The forms of protection of 20th-century architecture provided for by Italian Legislative Decree no. 42/2004 are part of the more general regulatory conditions concerning the listing of assets that can be defined as *cultural*.

In article 10 of the Code of Cultural Heritage and Landscape, the diverse list of very specific categories interposed with more general categories (almost as if they were only examples), with various adjectives of cultural interest, is confusing, misleading or incomprehensible, particularly for users, who must comply with regulations regarding assets that pertain to them or are their property; it is also limiting, since it is always the case that in specifying too much one risks forgetting something.

Simple *interest* is attributable to immovable and movable property belonging to public entities or non-profit private legal entities; to villas, parks and gardens; to public squares, streets, roads and other urban open spaces; to rural architecture. *Particularly important interest* can, on the other hand, be attributed to privately owned immovable and movable property, paradoxically relating the absolute value of cultural interest to the contingent market mechanisms of the property system. Finally, *exceptional interest* has always been limited to book collections belonging to private individuals

and to collections or series of objects. However, the law of 4 August 2017, paragraph no. 175, introduced in article 10 of the Code the new paragraph 3 d-bis, inserting among cultural assets "those things, no matter to whom they belong, that have an exceptional artistic, historical, archaeological or ethno-anthropological interest for the integrity and completeness of the Nation's cultural heritage". Unlike most of the other categories, for which the seventy-year rule applies, fifty years are specified as the protection limit for these assets.

These different classifications would suggest different ways or degrees of protection and enhancement, which are not, however, contemplated. To these are added, increasing the confusion, the *particular artistic value* introduced by article 37 of the same Code and the *important artistic character* contemplated by Italian law no. 633/1941.

11.2 THE PROBLEMATIC REGULATIONS CONCERNING THE PROTECTION OF 20TH-CENTURY HERITAGE

Within this general framework, the protection of 20th-century works suffers from three additional limitations.

The first limit lies in the threshold of historicization for the so-called "intrinsic" restriction, set at 50 years by the Nasi law in 1902 and restated by the Rosati law in 1909 and the Bottai law in 1939. This was increased to 70 years only for publicly owned works from 2011 and extended to privately owned works in 2017 by Italian law 04.08.2017 no. 24, article 1, paragraph 175. This limit is accompanied by another concerning the author of the work who, if still alive, renders the 'intrinsic' restriction inapplicable. This last regulation, which is understandable for movable works associated with commercialization and, therefore, with the author's rights, does not hold true for immovable works, whose author is generally not the owner, but, while alive and not

dead, can be very helpful in guiding new interventions on the work. Consider, for example, the Sydney Opera House, commissioned to Jørn Oberg Utzon in 1956, started in 1966 and completed in 1973. In 1993, the NSWG commissioned Australian architect James Semple Kerr to carry out a restoration project. In 1996, the Conservation Council of the Sydney Opera House was established. However, the master plan prepared in 1997 would have irreparably altered the work. In 1998, following the dissolution of the Conservation Council, the renovation plan was entrusted to architect Richard Johnson, who brought in Utzon in 1999. In 2002, two documents were drafted, a short-term plan by Johnson, *Venue Improvement Plan*, and a long-term plan by Utzon and Johnson, *Utzon Design Principles*. Another example is Walter Gropius' house, built in Massachusetts in 1938 and inhabited by Gropius until his death (1969), by his wife Ise and his sister until 1983, the year of Ise's death. Ise transferred ownership to the *Preservation of New England Antiquities* in 1974, while continuing to live there. Her contribution, which can also be attributed to her husband's legacy of ideas, was fundamental in adapting to the new function ①.

The second limit consists of the narrow and limited, as well as often improper, application of the restriction – also direct – referred to as ‘external relational’ (article 10, paragraph 3, letter d), in which neither the time nor the name of the author counts (e.g. the balcony from which Garibaldi spoke, or the Greco bar, in Rome, frequented for a certain period by important artists). Law tends to consider the work eligible for restriction when it is connected to a specific historical episode or figure rather than to a particular cultural climate, or to a school of expression, or to a construction technology, as the regulation would more directly suggest. In this regard, think of Nervi’s works for the 17th Summer Olympics in Rome, which are connected to this historic event.

But even this is not always the case. Often the work is listed in relation to architectural culture, as the regulation dictates. However, these are almost always cases that would have merited the restriction because of inherent interest, which was not applied due to the time limit. Consider, for example, the bridge over the Basento river in Potenza by Sergio Musmeci, built at the end of the 1960s and listed by the Ministry of Culture on 2 December 2003, a little more than thirty years after its construction (fig. 1). The restriction report states: "The uniqueness of the work is evident ... and it can certainly be considered one of the most representative works of Italian architecture". Uniqueness pertains to an "intrinsic" restriction which, however, was not applicable because of the time threshold of 50 years that was in force at the time, while the second pertains to a 'relational' restriction, the only one possible.

A similar case is that of the *Casa alle Zattere*, built in Venice from 1953 to 1958 by Ignazio Gardella (fig. 2). After an attempt to obtain a restriction between 1993 and 1995 under the copyright law, a protective measure was finally granted on 14 March 2001, forty-three years after its completion, *due to its value as a testimony to contemporary architectural culture*. This value did not prevent the addition of two openings on the top floor of the façade.

Similar considerations apply to Giancarlo De Carlo's former Colonia Marina (summer camp complex), built in Riccione between 1961 and 1963 (fig. 3), which was restricted in June 2009, after forty-six years. The detailed restriction report comprehensively highlights the work's connection with the history of Italian architecture, framing it within the most significant period of De Carlo's career, with "references to Franco Albini's precision, Ignazio Gardella's compositional elements, Carlo Scarpa's volumes freely arranged in relation to the outside world, etc" ●.

The third limit is article 20 of Italian law no. 633 of 1941 on "Copyright". It is now settled case law that the author,

during his/her lifetime, is entitled to review the integrity of the work. However, the heirs can only claim authorship without being able to make any changes. Nevertheless, this is a law that protects the rights of the author and only indirectly those of the work, which, by extension, is given temporary protection while the author is alive.

Finally, a fourth limit relates to the Code. Recently, article 55 bis of Italian Legislative Decree no. 76/2020 converted into law 11.09.2020 no. 120 has been enacted, which makes it possible to proceed by way of exception to articles 10, 12, 13, 136 and 140 for the sole category, it should be noted, of sports facilities. This provision was the premise for introducing, for this type of work, an exception to the already adopted declarations of cultural or public interest.

By decreeing that "the need to preserve the testimonial value... takes precedence over the ... functionality ... for the purposes of public safety, health and security", article 55 bis establishes, by way of legislation, a hierarchy between constitutionally protected values such as, on the one hand, *public health* (article 32 of the Italian Constitution) and, on the other, *cultural interest* (article 9 of the Italian Constitution). Balancing public interests is however a primary concern of the Public Administration and must be resolved in the specifics of individual cases, not in a legal text. Considering, moreover, the precedence of cultural interests over other public interests, sanctioned by countless judgments of the Council of State.

The Ministry is limited to specifying the parts of the work that should be preserved or reproduced, including "in shapes and sizes that differ from the original": an implicit form of self-conditioning of the Public Administration, which should be entitled to express its opinion with total autonomy.

11.3 SOME POSSIBLE SOLUTIONS

I. ‘Serial assets’. The term ‘serial assets’, which appeared in the 1970s in official UNESCO documents, but remained absent from national legislation, was consciously formulated in 1980 when the guidelines of the *Intergovernmental Committee for the Protection of the World Cultural and Natural Heritage* were drawn up following the creation of the World Heritage List in 1978: “serial assets may include interconnected [...] elements [...] provided that the complete series – and not necessarily the individual parts of it – has exceptional universal value”. After the creation of the DOCOMOMO association in 1988, the 1992 inventory promoted a list of 20th-century architecture and in 1997 a proposal was submitted to the *UNESCO World Heritage Center* containing assets that were not individual, but grouped into the works of F. Ll. Wright, Le Corbusier, Alvar Aalto and L. Mies Van Der Rohe. Thus, at a time when the number of requests for the inclusion of groups of assets was increasing, rising to around one-third of the number for individual assets, at the 2006 conference in Ankara, DOCOMO-MO International proposed the criterion of organizing a series no longer from a geographical (route) or typological standpoint but, more generally, from a thematic approach. Among others, ten works by F. Ll. Wright and seventeen by Le Corbusier, most recently Italian architecture in Asmara, etc., have been included as UNESCO heritage. ●. ‘Intrinsic’ interest and ‘relational’ interest directly refer to the three principles of Historiography: ‘Uniqueness’, which relates to the first; ‘Causality’ and ‘Selectivity’, which relate to the second. ④. ‘Causality’ can establish a work’s connection with related external circumstances, including other works that can be linked to it. ‘Selectivity’ determines the selection of those external circumstances and works. It is often possible to attribute

cultural interest not to individual works of architecture, but to groups of them, which, since they are comparable in terms of common features and the fact that they are no longer being built, form closed ‘series’ in the sense intended by G. Kubler●. Consider, for example, Riccardo Morandi’s standardized cable-stayed viaducts. Or Nervi’s works for the Olympics (fig. 4); or those of the same engineer from Sondrio with their vaulted or domed roofs; or the museum installations of the 1950s and 1960s by Scarpa, Michelucci, Albini, etc.; or the residential architecture of Ponti, Albini, Gardella, and so on. Each work can be linked to others in a kind of ‘network’ in which recognition of the interest of each one can recall that of all the others, reverberating through a ‘protection of the whole’, rather than of a specific work. The ability to consider the reciprocal relationship between several works would allow their contemporary historicization, excluding abstract time barriers. A number of advantages could be gained from this. The regional offices of the Italian Ministry of Culture, for example, when issuing measures on works that have been recognized as having common values, even though they were built in distant places and under different circumstances, could refer to criteria for conservative intervention or renovation that have already been adopted and tested for some of them. It would thus be possible to ensure a consistent approach that mitigates the inevitable discretionary nature of opinions expressed on a ‘case-by-case’ basis and of self-referential recovery and/or restoration projects. A kind of evolving technical/administrative literature would be gradually developed, closely linked to critical/historical aspects, which are essential references for institutional action. Heritage would also be perceived by public opinion as being more aware of the relationships between different expressions of the same cultural identity.

2. **The Conservation Plan.** With respect to Italian legislation, as well as that of other countries, the conservation plan should be considered an intermediate step between the *declaration of cultural interest*, which is limited to indicating why the property should be protected without generally giving operational guidance, and the recovery and restoration project, which, in the absence of preliminary guidelines, is subject to conditions arising from the specific circumstances and the discretion of the institutional bodies. For many stadiums, it appears that the time has come to either pull the plug or make an irreversible transformation in the face of the economic and management pressures that now dominate the sector. From an economic standpoint, which can have a significant impact on their fate, “three attributes characterize cultural assets [...] in a comprehensive manner: I) materiality; II) the fact they constitute historical evidence; III) non-reproducibility ... relates to the uniqueness of the asset” ●. From this standpoint, the public interest of an asset does not derive from its ownership status, but from its *non-rivalry* and *non-excludability* from consumption; the former meaning that public assets can be consumed by several individuals at the same time; the latter meaning that it is not possible to limit their benefits to just a few people. The case of stadiums, as with theaters, museums, etc., has its own distinctive aspects: *non-rivalry* and *non-excludability* ●, which would determine their purely public character, are limited by the capacity of these facilities. However, ‘exteriors’, which are often the most representative part in the relationship with the city, can indeed be considered entirely public because they can be appreciated by everyone without exception, such as the façade of a monumental building, a statue, an obelisk, etc. Formulating the Conservation Plan requires, first and foremost, knowledge of the work

and its history by assessing the original design and execution, the work actually carried out and all subsequent alterations, as well as a survey of its current condition. Guidelines for the correct restoration and adaptation of the structures can then be defined. It would therefore be highly desirable for the conservation plan to be included in the national protection regulations as an indispensable reference point for a coherent policy of intervention and management of cultural assets, balancing out the *community values* that can be attributed to these structures.

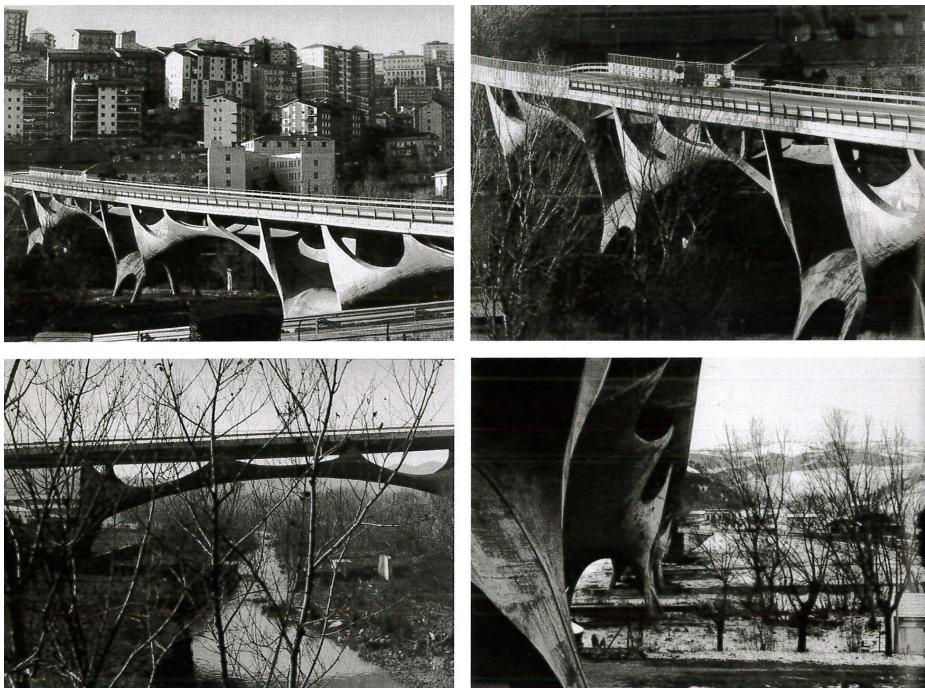


fig. 1. S. Musmeci, Bridge over the Basento, Potenza. Late 1960s



fig. 2. I. Gardella, Cicogna
Condominium (Casa alle Zattere),
Venice, 1953-58



fig. 3. G. De Carlo, former Enel
summer camp complex, Riccione,
1961-63



fig. 4. Pier Luigi Nervi's works for the 1960 Rome Olympics

ENDNOTES

- ①: Carughi (2017, p. 28).
- : See Carughi (2012, pp. 53-92).
- : d'Orgeix (2012, pp. 27-36).
- ④: De Fusco (1970).
- : Kubler (1972, pp. 67-76).
- : Di Maio (2019, pp. 16 ff.).
- : Di Maio (2019, pp. 99 ff.).

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VENICE, 4-5TH MAY 2021

PART 2. RESEARCH STUDIES AND RESTORATION WORKS

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12 RESTORING THE INTERIORS OF LE CORBUSIER'S APARTMENT-STU- DIO: CONSERVING INTIMACY

BÉNÉDICTE GANDINI
Fondation Le Corbusier

"Le ciel est radieux et nous vivons depuis quinze jours dans des nouvelles conditions miraculeuses: un logis qui est céleste, car tout y est ciel et lumière, espace et simplicité" ^①.

"L'appartement de Molitor est devenu un paradis. Quand ce sera meublé, alors..." ●.

Le Corbusier moved to the apartment-studio on rue Nungesser et Coli in 1934 with his wife Yvonne on the top two floors of the Immeuble Molitor, designed and built with Pierre Jeanneret, between Paris and Boulogne-Billancourt (fig. 1). Le Corbusier lived and worked there until his death in 1965: he arranged and modified its spaces over time, as testified by the photos of different periods (by Salaün, Willi, Rizzo, Burri) ●.

In his apartment, Le Corbusier associated some of the furniture he designed at the end of the 1920s with P. Jeanneret and C. Perriand, with fixed and mobile furniture purposely created for these spaces, and with serial objects, such as Thonet armchairs (fig. 2). In his studio, on the other hand, we also find furniture from La Chaux-de-Fonds. Some elements disappeared after the architect's death, and many changes have been made since, to solve various degradations.

The Fondation Le Corbusier, universal legatee of the architect, and therefore owner of the apartment-studio, initiated numerous studies that have allowed to retrace the history of this place and its transformations in view of

its restoration ④. This latest restoration work, carried out between 2014 and 2018, also had as its objective the restoration of its interiors and furniture. This work has given rise to numerous publications, and also a documentary film. But rarely has the question of the restoration of furniture of this Corbusian interior, a place of life and creation, been the subject of an in-depth study. As if the furniture, fixed and mobile, had a different status in relation to the architectural work that contains it, without being part of it.

12.2 INTERIORS MODIFICATIONS AND FURNITURE INVENTORY

On the top two floors of the building at the Porte Molitor, Le Corbusier designed an apartment and a painting studio ●. These interiors, created for his couple and for his personal work after "seventeen years in the Rue Jacob in the old" ● have not been the subject of specific research and are no longer in the state left by the architect. Indeed, if his art collection and his *private collection* ● are now in the reserves of the Fondation Le Corbusier, many elements of the furniture have disappeared (carpets, lamps, the many rattan chairs, garden chairs, Indian chairs, Strafor shelves, for example) since the architect's death.

During the last restoration undertaken by the Fondation Le Corbusier ● to resolve numerous degradations, it was necessary to identify the transformations of these interiors, open to the public since 1991. This project for the restoration of this intimate space of the architect has been the opportunity to deepen the material knowledge of the modern Corbusian interior, thanks to studies commissioned to many specialists ●.

If the works of art, in particular his paintings, are moved between the spaces, the furniture, and also the "personal" objects ⑩, do not seem to change place (fig. 3). Important

modifications can be noted from the archives, and in particular the author's photographs, at the level of the interior façades, the floor remaining unchanged. Indeed, the walls and ceilings are partly covered with oak plywood from 1939 in the living room, his bureau and the high ceiling of the studio and the guest room¹¹. But also at the level of the polychromies, which are not identifiable in the black and white photos, but which are partly documented by the archives and whose changes have been revealed by the soundings carried out by Marie-Odile Hubert, painting restorer. More than three hundred soundings carried out, cross-checked with archive documents and laboratory analyses, have in fact made it possible to identify the pictorial layers carried out during the architect's lifetime and afterwards, highlighting in particular a first layer made up of Salubra wallpapers, then covered by three other repaintings (with a change of color only for certain walls) desired by Le Corbusier (1939, 1948-50, 1960-1965).

Among the furniture installed in 1934 in the living room¹² the Grand Confort armchair, large model (which changes place as soon as the sofa arrives), was designed in 1928 with Pierre Jeanneret and Charlotte Perriand¹³. The researches concerning the origin of the conception by Le Corbusier of a program "casiers, tables, chairs", followed by the "Studies on the different ways of sitting, to which our seats should adapt" in April 1927, and its development by the three co-authors in the "Interior equipment of a house" presented to the Salon in the Autumn of Paris of 1929, were largely developed by E. Koering¹⁴. The latest studies commissioned by the Foundation have made it possible, on the other hand, to clarify the material history of this work, making it possible, for example, to document the original two-tone polychromy: a glossy lacquer in the color of *terre d'ombre* for the seat (L-shaped profile, latticework and springs), and green for the tubes.

The dining room table also appears in early photos, and is a variant of the curved living room table in the Swiss Pavilion, also designed by Le Corbusier, Pierre Jeanneret and Charlotte Perriand¹⁵.

The painted tube sofa¹⁶, a unique example made by Le Corbusier for his salon (fig. 4), arrived in November 1934, accompanied by a small table that has now disappeared. The search for polychromy for the sofa allowed us to identify the original glossy cream-gray lacquer covered by the current gray.

Later, Le Corbusier will add the table *trunk of tree*¹⁷, made in the 1940s, and in 1952, a reissue of the chaise longue made by Whonbedarf¹⁸.

The fixed wood and metal furniture created for her apartment (in the bedroom: the bed fixed to the wall and the storage spaces, wardrobe - lockers - revolving door as well as Yvonne's *coiffeuse* and in the kitchen the storage cupboards) and in the workshop (at the level of the office: table and various shelves) have not evolved. It has also been the subject of polychromy surveys to identify colors and varnishes. All the metal elements have been identified¹⁹.

In his atelier, we find older furniture already at 20 rue Jacob, coming from the move of his parents from the Maison Blanche (La Chaux-de-Fonds) (fig. 5):

*"I repeat here the list of furniture to be sent to us (as far as I am concerned, a list that I had given when I left: a white layette; another layette, a diploma frame of expo, a galley, a lectern, an oval table yellow room, a chest of drawers yellow room, table workshop Edouard, an armchair workshop Edouard, [...] a spinet, a Greco photo, two Byzantine panels (of the lingerie). All the frames with their glasses, a few quinquets (as many as possible)"*²⁰.

It is about the oval table and the two pieces of furniture of watchmakers (*layettes*), which arrive in Paris on February 8, 1918.

12.3 THE CONSERVATION OF A CORBUSIAN INTERIOR, A GLOBAL APPROACH FROM THE FAÇADES TO THE FURNITURE

The restoration of this Corbusian interior, certainly among the most intimate, which preserves the last arrangements wanted by the architect and part of the furniture *in situ*, came to complete the intervention on the facades and roofs (vaults and terrace)²¹. For the interiors, very degraded by years of infiltrations and use, the opening to the public was also an important part of the project, requiring for example the implementation of safety lighting.

The reference state wanted by the experts of the Fondation Le Corbusier and accepted by the Regional Conservation of Historic Monuments, being that of 1965, the conservation of all the existing works and the changes made by the architect was envisaged. However, some restitutions were identified as necessary, in particular those of the polychromies of the 1960s and the carpet of the dining room, which has now disappeared but is documented by the archives and by color photos. In addition, some restitutions already made in previous years have been preserved. No other restitution has been proposed, privileging the presence of the authentic furniture – but also the works of locksmiths, as the windows, as well as all the elements in metal as door handles, and also the personal objects, as the Vase Savoy²² – always existed in this place (fig. 6).

If the walls were effectively repainted, as well as the fixed furniture considered as a continuity of the interior facades (revolving doors, cupboards, openings) with oil emulsions, the whole of the soundings remained visible so as to testify

to the evolution in time of the Corbusian choices as regards color and to show the approach adopted for the restitution of the polychromies of the apartment. The superimposition of the layers of paint is also a testimony of the thickness in time of the occupation of the place, which it materializes the stratification²³.

The oak plywood paneling and other fixed wood furniture were simply cleaned, refixed if necessary and treated. The floor was cleaned, no replacement being desired, also concerning repairs made after the death of the architect. The same choice was made for the stone wall of the atelier, which was left untouched – result the intervention made in the 1980s - to avoid any further deterioration of the stones, instead of attempting a return to the original facing and joints.

Concerning the furniture (old furniture, furniture created by Le Corbusier, industrial furniture²⁴), it was decided to preserve it in its original state without any repainting or removal of the original layers. For these unique works, a simple cleaning was preferred, completed by a treatment of the oxidized elements and in certain cases a refixing of the layers of paint or plywood by preserving the degraded material or the lacunar paint. The polychromatic surveys carried out on the tube furniture also remain visible, as on the walls, in order to show the original color.

This approach seems very different from other interventions that privilege the restitution of the original state of "iconic interiors". Several well-known examples can be cited as the Villa Cavrois²⁵ by Mallet-Stevens and more recently the Villa E-1027²⁶ by Eileen Gray and Jean Badovici in Roquebrune Cap-Martin.

These interventions can require the removal of part of the history of works and successive contributions, without reason related to the strict conservation. Moreover, the restitutions made from the iconography, privileging the old photographs, most often in black and white, without plans

nor details of construction, can lead to errors of interpretation. Often the project of restitution, for the history of the building itself, can be completed by the purchase of "original" furniture or by the setting up of new reissues, creating objects with a hybrid status. Rich in partial restitutions or complete replacements, these projects are driven by the search for coherence linked to a reference state or a certain "authenticity" without really taking it into account. The economic investment necessary for this kind of intervention also seems to be linked to the interest aroused.

The decisions taken for Le Corbusier's apartment-atelier have privileged the authenticity of this unique place among his works. This choice guides today the future restoration of the building's façades²⁷. The conservation of all the windows implemented under the supervision of Le Corbusier between 1956 and 1965, was preferred to replacement. This makes possible to safeguard the building restored by Le Corbusier and in part in the state desired at the time of his request for protection among the Historic Monuments in 1962 because "in full danger in front of the vandals of the condominium"²⁸.



fig. 1. Façade of the Immeuble
Molitor (FLC L2-10-5. (©
Fondation Le Corbusier / SIAE)



fig. 2. Photos of the bedroom
after restoration

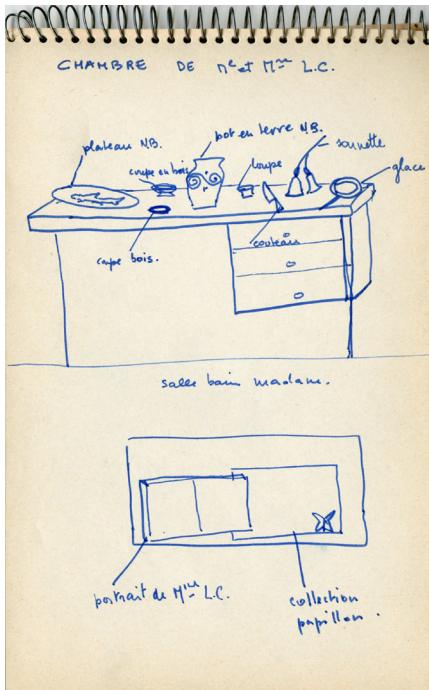


fig. 3. Carnet De Francieu 1-015.
(© Fondation Le Corbusier / SIAE)



fig. 4. Le Corbusier on the sofa
(FLC L4-9-17). (© Fondation Le
Corbusier / SIAE)



fig. 5. Atelier furniture



fig. 6. The vase Savoy, by Alvar Aalto, since 1937 on the table of the apartment of Le Corbusier (FLC L2-10-106). (© Fondation Le Corbusier / ph. Peter Willi, 1965 / SIAE)

ENDNOTES

①: Le Corbusier. (1934, Mai 28). [Letter to Mme Jeanneret]. R2-1-203, Archives Fondation Le Corbusier (from now on FLC), Paris, France.

●: Le Corbusier (1934, April 9). [Letter to his mother]. R2-1-257, FLC, Paris, France. "Ma chère petite maman. Rude semaine. Déménagé tous les tableaux, tous les papiers. Dix-sept années de papier ! [...] Partie morale gagnée avec Yvonne. L'appartement lui a été présenté fini, rideaux, la plupart des meubles (nouveaux) [...] L'appartement est bien. C'était un péril pour moi d'aller habiter ma propre architecture. Au vrai, c'est magnifique. C'est une vue pleine de campagne avec aucune notion d'être perché au septième et huitième étage, grâce à des stratagèmes architecturaux. Pas de vertige ainsi": Le Corbusier (1934, April 29). [Letter to his mother]. R2-1-258, FLC, Paris, France.

●: Gandini and Mengin (2018); Desmoulins (2018).

④: This article does not address the question of windows, strictly related to the interiors, developed in the study commissioned by the Fondation Le Corbusier Graf and Marino (2014); Graf and Marino (2017); Gandini, Mengin and Richard (2017).

●: Sbriglio (1996).

●: Le Corbusier. (1934, April 29). [Letter to his mother]. R2-1-258, FLC, Paris, France.

●: "Il y a ce que j'appelle ma collection privée : ce sont des bouts de bois, ce sont des éclats de pierre, des épines, une pigne de pin. Ce sont des briques de bâtiments qui servent de socle à des statuettes. Ce sont des coquillages entiers ou cassés par la mer qui sont très intéressants et même, je vous signale, des os de boucherie pour ceux qui aiment ça, des os de boucherie que la mer renvoie devant les pensions

de famille devant les au bord des océans. Ce sont des outils extraordinaires de méditation physique, de résistance des matériaux, d'harmonie et de beauté de forme. Je ne vous cacherai pas que j'appelle ça ma CP, c'est-à-dire ma collection particulière et j'en ai une véritable délectation". Le Corbusier. (1951, January 26). [Radio interview]. FLC, Paris, France.

●: This restoration followed by François Chatillon, Architecte en chef des monuments historiques, between 2014 and 2018, received the DOCOMOMO Rehabilitation Award in 2021 as "Open House".

●: Hubert, Hall and Schroeter (2015).

⑩: Within the framework of the research for this restoration, we have rediscovered the inventory carnets of the objects which were in the apartment in 1965 carried out by Françoise de Franclieu, curator who had made the first inventory of the drawings and paintings of Le Corbusier during the life of the master (FLC, Paris, France).

⑪: "Ma chère petite maman. Nous voici 'hors d'ouvriers'. Les peintres sont partis. Nous avons réaménagé et ça va ! Ça va fort bien et maintenant mon appartement a l'air d'être fini. Le problème c'était la noirceur due aux suies de Boulogne : le plafond tout bardé de noir, les murs vert pâle idem. J'ai fait plaquer au plafond des lambris de chêne naturel. Idem sur le mur vert. Idem sur la cage d'ascenseur. Le mur jusqu'ici gris où était la petite cheminée est maintenant d'un rouge vermillon un peu assommé. La salle à manger a été repeinte en blanc (murs et voûte)": Le Corbusier (1934, April 8). [Letter to his mother]. R2-1-253. FLC, Paris, France.

⑫: "Ce que vousappelez pompeusement mon salon et qui n'est qu'une toute petite chose": Le Corbusier (1951, January 26). [Radio interview]. FLC, Paris, France.

⑬: On the work of the three co-authors and the notion of team, Charlotte Perriand testifies: "[...] justement ces meubles je ne les ai pas conçus seule, je les ai conçus avec

Le Corbusier et Pierre Jeanneret. Et chez eux j'ai découvert que le travail d'équipé était enrichissant" (*Du côté de chez Fred, Charlotte Perriand*, 1989). FLC, Paris, France.

¹⁴: Koering (2010); Koering (2020); Koering (2015).

¹⁵: Ruegg (2012).

¹⁶: "Grand évènement ce matin : on a monté, non sans combine, le grand divan du coin de feu. Et tout a pris un air pépère, 'comme chez les gens'. Yvonne est ravie. Enfin, nous aussi pourrons offrir le café sur un canapé. Comme quoi il faut acquérir par une longue route, ses droits à entrer dans la société bourgeoise !!!". Le Corbusier. (1934, November 26). [Letter to his mother]. R2-1, FLC, Paris, France.

¹⁷: "La table est assez drôle [...] c'est un guéridon dont la hauteur est de [...] 54 centimètres [...]. Le tablier sur un trépied de fer est fait d'un tronc d'arbre d'Afrique que j'ai choisi dans ce que j'appelle l'écurie des éléphants que l'on trouve rue de Charonne et dans le quartier des meubles. [...] C'est chez certains marchands de bois, ces troncs gigantesques [...] qui occupent des hangars en bois.[...] Un de ces marchands m'a dit : 'je vous en offre, coupez une rondelle pour vous', comme il m'aurait offert un rond de saucisson. [...] J'ai pris un tout petit mais ce petit est coupé je lui ai laissé la forme arrondie par accident du tronc [...] Il a une épaisseur qui rempli la main d'un honnête homme [...] 10 cm d'épaisseur. L'angle arrondi a été fait non pas par un architecte mais par un artisan qui a donné le coup de râpe nécessaire. Pour que ce soit sensible, que ce soit un outil que la main recherche, auquel elle offre ses caresses": Le Corbusier. (1951, January 26). [Radio interview]. FLC, Paris, France.

¹⁸: Wohnbedarf. (1952, September 12). [Letter to Le Corbusier]. F1-3-244-001, FLC, Paris, France.

¹⁹: Annick Texier, Aurélia Azema "Analyse et identification du mobilier métallique" Rapport provisoire, pôle métal du LRMH, 2017 (FLC, Paris, France).

(20): Le Corbusier. (1919, October 8). [Letter to his father]. R1-6-72, FLC, Paris, France. "Meubles arrivés en gare mais non encore livrés": Le Corbusier. (1919, November 16). [Letter to his father]. R1-6-77, FLC, Paris, France.

(21): It should be remembered for the roofs, the repair of a waterproofing was carried out in order to resolve the numerous degradations and the insertion of an insulator following the realization of a thermal study; and on the façades all the locks have been preserved and restored. Only the non-original glass brick sections have been returned.

(22): Le Corbusier owned a Savoy vase by Alvar and Aino Aalto, which he saw when he visited the Finland Pavilion at the 1937 International Exhibition of Arts and Techniques in Modern Life in Paris: "Hier en passant au Pavillon, j'ai demandé le prix d'un vase [...] Mon ambition serait d'avoir pour hommage un de ces vases [...]. Ce vase placé chez moi pourrait être d'une publicité éventuelle pour vous": Le Corbusier. (1937, October 12). [Letter to Mister Harl, architecte c/o Pavillon de Finland]. E1-4-7-001, FLC, Paris, France. The Artek company, founded by Alvar and Aino Aalto in order to publish their own creations, furniture, lighting, responds to Le Corbusier: "avec votre permission ce serait un plaisir pour la société Artek et pour Aalto de pouvoir vous offrir gratuitement le vase en question, seulement les frais de douane seraient à votre charge". ARTEK. (1937, October 22). [Letter to Le Corbusier]. E1-4-6-001, FLC, Paris, France. This vase will never leave the dining room table.

(23): The work on the choice of the colors and restitution of the oil emulsion paintings is accessible in the documentary film: Lemaire (2018).

(24): Among the series furniture, it is necessary to quote the Thonet armchairs in curved wood: the old ones which are with the right of the dressing table of Yvonne and the office, and the more recent ones around the table of the dining room.

⁽²⁵⁾: "La première phase de travaux, livrée en septembre 2013, portait sur le corps central qui comprenait, notamment, le vestibule, le hall-salon, la salle à manger des parents et l'escalier d'honneur. Nous devions répondre à deux principaux objectifs : restituer et restaurer le décor en s'attachant aux vestiges existants, et ce, pour éviter de réaliser un pastiche, et intégrer au mieux les adaptations liées aux réglementations d'une établissement recevant du public (ERP), afin que le visiteur ait la sensation de rentrer dans une habitation plutôt que dans un espace patrimonial" (Goutal 2014).

⁽²⁶⁾: Arthur Ruegg: "Pour E 1027, après les premiers tâtonnements, c'est le principe d'une reconstruction à l'identique qui a été retenue et cela débouche sur une scénographie totalement convaincante pour les visiteurs" (2012). See also the article with the inventory by Renaud Barrès allowing to identify the elements of furniture and of second-oeuvre completely or partially restored (2021, p. 255 and 228).

⁽²⁷⁾: Studies for the restoration of the Immeuble Molitor's façades are in progress and the work should begin in 2022, under the control of Pierre-Antoine Gatier, architecte en chef des Monuments historiques.

⁽²⁸⁾: "en plein danger devant les vandales de la co-propriété": Le Corbusier. (1962, October 25). [Letter to André Malraux]. E2 14. FLC, Paris, France. The apartment-studio was protected in 1972 and the Molitor building since 1990, and since 2016 it is on the WHL with sixteen other architectural works of Le Corbusier.

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VENICE, 4-5TH MAY 2021

13 CARLO SCARPA, THE HOUSE FOR LOREDANA BALBONI IN VENICE

ROBERTA MARTINIS

Scuola Universitaria Professionale della Svizzera Italiana

FRANCESCO MAGNANI

architect

The house Carlo Scarpa worked on in 1964 to a commission from Loredana Balboni is set in one of the buildings owned by the Balboni family, Ca' Marioni-Mainella^①.

The neo-Renaissance palazzo designed by Ludovico Cadorin (1858) stands on the Grand Canal at the corner of the Rio di San Trovaso.

Loredana Balboni (1920-2013), collector and art dealer, was active in cultural circles in Italy in the sixties. For her Venetian home in the family's palazzo, an apartment on two levels with an independent entrance on the ground floor, Loredana Balboni initially chose the Venetian architect Paolo De Marzi. In 1962 he drafted a first project, obtaining the necessary building permits for the work, which envisioned a large spiral staircase connecting the ground and first floors.

Balboni wanted a home that would represent her appropriately in the social circles she moved in, and showcase her collection of artworks. In 1964, Loredana Balboni turned to the most illustrious Venetian architect and the one most qualified to take over the commission: Carlo Scarpa, at the peak of his career.

The work involved tackling an irregular area traversing the building, measuring some 9.5 meters wide with a depth of more than 18 meters, extending between a private garden

giving access to the house, and the view to the east over the Grand Canal, while taking advantage of the pre-existing structures and the provisions of De Marzi's project.

From the first drawings Scarpa focused on the principal axis connecting the two extremities of the house. He conceived it as a freely and plastically configured spatial sequence. It was immediately clear that he intended to create a perspective vista pointing towards the water, anticipating for the visitor the shimmering glow that fills the living room (fig. 1).

In Venice, as a rule, the ground floors are not inhabited.

During the years when Scarpa was designing the Balboni apartment, the *acqua granda*, the floodwaters that rose 194 cm high and devastated the city in 1966, still lay in the future. And the possibility of being able to live at water level and enjoy all its most surprising effects must have seemed a rare opportunity to be explored and grasped.

The new project is announced by a composite avant-corps, in which two short wings frame the entrance to the house in a negative recess. From here, all the service rooms are arranged on the left, which in turn have an independent entrance, and on the right the dining room: a space enclosed in itself, initially conceived as an elongated octagonal form, and overlooking the garden with a bow window, which is nevertheless responded to by the lateral erosion of the mixtilinear window according to a tension between opposites - rough and smooth, heavy and light, dark and bright - which suggests the strategy governing the interior. The theme is making broad what is cramped, and Scarpa's approach to the design of Casa Balboni focuses on this need.

On the ground floor, Scarpa studied an access sequence through a vestibule squeezed in between the wing of the service rooms and the dining room and leading to a richly designed longitudinal passage. After this dark and compressed space, Scarpa inserted, as a counterpoint, a

short interval at double height to mark the start of a *promenade architecturale*, which models the movements, forming the prelude to the experience of the upper floor. In this way, the height of the low corridor below this interval, with a surprise move, was extended to 5.20 meters, so making it possible to channel quantities of natural light into the most shadowy part of the house. And there is more to it than this because, while the gaze from the entrance is drawn towards the Grand Canal, the device introduces a counterpoint to the dynamics of vision (fig. 2).

The removal of matter entered into a dialogue, always in a mutual resonance of soft forms, with the device connecting the floors themselves: the monumental circular staircase, already ideally prepared, but studied by Scarpa as a plastic and dynamic object in Lasa marble, modeled as a classical sculpture and resting on a circular stylobate, in which the countercurrent steps fan out around a massive cylindrical post. Midway in the longitudinal passage, the helical staircase, introduces a spatial comment transversal to the direction indicated (fig. 3). But, what should remain firm - the post of the staircase - appears split, and from the top of this a rotating sculpture emerges (from the Zanon workshop), while at the base the revolution is paradoxically accentuated by the thin slabs of the treads of the steps, from which the risers are eliminated, curving and continuing to scroll towards nothingness. In this way, by corroding its figurative sense and tectonic quality, the extremely fluid path of the staircase, in its perfectly regular progress within a circular perimeter, appears unequivocally undermined at both ends.

In a continuous dialogue between different scales during the design, the space on the first floor is defined as a single organism between the garden and the Grand Canal, rich in events at the center, which expands and compresses in height and depth, with the sloping planes and uprights of the floor, and extends towards the two large, luminous

extremities. Taut mobile panels with multiple apertures, like scenic backdrops, define different intervals and different fields of vision; probing the fleeting boundary between form and its possibilities adding further mutability to a space of movement (fig. 4).

The walkway appears as a slender cutout element, its outline replicating the form of the lobed canopy in the Sculpture Garden of the Biennale (1952), though here the play of gravity is made emphatic and gradually more mobile by the large spiral staircase.

In the many drawings of the internal lightwells at Casa Balboni, which are investigated both separately and together with the other presences that interact with them – the circular staircase, the shape of the steps leading to the rooms – we see sculpture, modeling prevail in an attempt to literally give form to the movement in space, enveloping and accompanying it.

Initially Scarpa explored the possibility of dividing the long arch in two, within a single continuous perimeter, until each of the two “voids” was endowed with its own form, in the quest for the “right lines”, for a three-dimensional device, one capable of accompanying the compressions and dilations of the gaze and movements towards the two extremities of the route. The space is in this respect conceived as a solid body, therefore modelled, with its sculptural compendium in the use of refined polished surfaces through the use of marmorino and smoothed plaster.

In his lecture *Arredare*, which was held while he was designing the Balboni house (1964), Scarpa openly raised the question of the relationship between mass and space.

“The sense of space is not conveyed by a pictorial order but always by physical phenomena, meaning by matter, by the sense of heaviness, by the weight of the wall. For

this reason I affirm that it is openings, gaps and transitions that create the spatial relations” ●.

Ten years later the reasoning remained equally taut.

“Within a physical space one enters a spatial world, one that is tactile, harmonic. To begin with, one could imagine that that space is a solid parallelepiped and we are going to hollow out its inner parts to take advantage of its mass” ●.

Ludovico Quaroni recalled how Scarpa:

“measured thicknesses and caressed surfaces with his eyes and hand, to get to know their roughness and grain intimately, even tactilely, with the palm of his hand open placed on curved surfaces, to be accompanied in their convex turns, or with the back of the fingers when the surfaces were concave” ④.

On the ground floor, the tension in the sequence of spatial compressions and expansions dissolves into the void of the living room towards the canal. A single interior, open for the entire width of the front, it receives light reflected from the water before it. The space of the living room, elegant and reflective, is extended outside, almost duplicated, in the large terrace on the canal, provided with the same kind of floor as the interior of the house. The Grand Canal is also the space of the project, replacing with an infinite quantity, naturally sonorous, those pools of water that Scarpa usually placed at the foot of his private houses.

And it is with the water and its reflections that the whole ground floor of the house has its most intimate relationship. Loredana Balboni described the house as “vibrant with light and gold”, a glorious space, dematerialized through light and in constant change. The materials and their installation

contribute to this quality of the space: the stucco lustro on the walls and ceilings, ivory white, velvety and translucent, described by Scarpa "as shiny as silk". In this way empty space was signified by a vibrant chromatic modulation with the variations in time and light, with iridescent and mysterious tones, until it became soft and tremulous (fig. 5).

The clear, very smooth material of the masonry and ceiling is set off by the stone paving, rough and colored. Slabs of Prun stone are arranged in courses parallel to the Grand Canal and with the joints staggered to mark the central axis of the corridor, with a broken line that creates an intermittent rhythm. They form a series of "carpets" encrusted within shaped profiles in Lasa marble that graphically organize the space of movement.

In the place where the vertical planes of the walls meet the horizontal planes of the floor, where the modeling and carving join, a skillful pause is inserted: a horizontal groove in the form of a scotia molding hollowed out of the border in Lasa marble. The discontinuity introduced by the scotia molding in Casa Balboni speaks of Scarpa's ability, "a master of the Byzantine age, who accidentally lived in the twentieth century", to be "anciently modern".

In 1968, with the construction work begun and after the episode of high water in November 1966, which certainly flooded the house, damaging what had been done up to that moment, an intense ideological discussion arose on Scarpa's project, following the severe judgments of the client's Roman friends. This created a situation that saw on one side a group of politically engaged artists, on the other a *Byzantine master*, and in the middle a client who was perceptive but perhaps not sufficiently prepared.

The slackening of Scarpa's interest in this commission, as witnessed by the correspondence preserved, led to Loredana Balboni's decision to commission the young Giovanni Soccò, a recent graduate of the IUAV where he presented his thesis with Scarpa, to finish the house that the latter

had abandoned, and which he would never again visit. It is quite likely that Scarpa in his heart needed to feel like the architect of the Katsura Imperial Villa, Kobori Enshu, who, according to the legend: "accepted the commission on three conditions: no budget limit, no deadline and no interference until the building was completed" ●.

Towards the end of 2017, it was possible to carry out the first surveys to start defining the project for the restoration of Casa Balboni.

The state of preservation of Carlo Scarpa's intervention was unfortunately very bad at the time.

All the walls and ceilings of the house, apart from those of the cloakroom, the service areas on the ground floor and the toilets, were originally finished with ivory-white Venetian-style stucco lucido (smooth and shiny stucco), made to the special recipes developed on several occasions by Carlo Scarpa with the Eugenio De Luigi workshop. The result was a setting that it was not difficult to imagine as magically bright, reflecting the light from the Grand Canal to create a continuously varying effect at different times of the day.

Unfortunately, over time the surfaces had undergone an inexorable yellowing, due to the nature of the components of the recipe used to make them, and the presence of constant tobacco smoke, so much so that the original color was actually appreciable only in a few limited areas. Added to this was irreparable damage to the internal surfaces of the living room, due to consolidation work on the condominium facade of the building on the Grand Canal, carried out with little attention and respect for the uniqueness of Casa Balboni.

Once overcame the astonishment at the precarious state of preservation of the building, which nevertheless retained its fascination and extraordinary quality intact, was possible to begin a study in depth of the extent of the original work, to organize the project of renovation and restoration as

correctly as possible. Carlo Scarpa had designed the house using building techniques and technologies typical of the mid-sixties. The preliminary investigations made it possible to identify their characteristics. A complex reinforced concrete structure supports the distributive mezzanine level, characterized by two large irregular openings (fig. 6). In correspondence with the cloakroom and the dining room, the decking rests on point-to-point supports on the load-bearing brick walls of the whole building; these are consolidated at the base, above the foundational system, by a series of reinforced concrete bond beams. On the side opposite the entrance corridor, since the service area belonging to the kitchen is defined by a simple screen of closet walls and partitions of flimsy masonry, the structure is taken all the way to the facade of the building, with slender beams concealed by the false ceilings. The impost level of the ground floor is set 1.53 meters above mean sea level, and was created by superimposing a layer of pebbles on the existing floor system of the cellars, which originally occupied the ground floor of the building. Smoothed lean concrete was poured over it, then it was waterproofed with several layers of bitumen, over which was laid a bedding screed for the Prun stone slabs and the strips of Lasa marble used for the floor. The upper level concrete and masonry floors were made using prefabricated joists laid, as it was possible to verify with a cover meter, with a center distance of about 60 cm, and reinforced with longitudinal bars of 8–10 mm with a concrete cover 30–50 mm thick. The floors rest on the load-bearing walls, with the exception of the living area on the ground floor, where the original masonry spine was removed to create a large single room. Instead of this masonry, a system of four paired steel beams, probably IPE 140, was used as intermediate support for the joists, revealed by the presence of the coupled steel columns close to the facade towards the Grand Canal on the ground floor. The completion casting brought the load-bearing package

of the floor to about 21 cm, and then a layer of about 4 cm of loose sand was laid on it to accommodate the piping of the utilities, as well as a completion screed in sand and cement of the same height. Given the limits of the analysis with the cover meter in tracing all the structural components, and since it was obviously impossible to carry out invasive investigations to gather more information, it was considered appropriate to carry out load tests to verify the state of conservation of the system's performance, given that it was more than fifty years old. Testing on the two floors with the largest span in the living area consisted of filling two tanks with water to a height of 30 cm (with the total overload equal to 300 kg/sqm divided into load phases of 100 kg/sqm) and monitoring the degree of displacement with transducers located on the ground floor. The load tests gave positive results, but suggested it would be advisable to lighten the finishing package on the upper level, to reduce its weight and comply with the parameters required by current regulations, given the operating overloads. These assessments, together with the need to reinstall from scratch a large part of the utilities which were irreparably deteriorated, meant rebuilding the floors on the upper level. (The original solution, however, was apparently not completely resolved and was the source of some disagreement between Carlo Scarpa and Loredana Balboni). The finishing screed was laid a few millimeters from the edge of the shaped skirting boards in Lasa marble and forced the owner, when Scarpa abandoned the work without leaving any instructions, to lay carpeting, later replaced on the garden side only by a modest linoleum covering. The mediocre quality and state of preservation of these fittings led to examine the need to rethink the floors of the bedrooms, sitting rooms and closet on the first floor. After numerous exploratory studies, the design solution involved the use of a handcrafted parquet in solid oiled pear wood, with planks 10 cm wide, interspersed with 6 x 6 mm pure silver rods, refined inserts that mark their variable

length in accordance with the installation, while they receive and reflect the light coming from the Grand Canal and the garden, which shimmers on their surfaces. In addition, on the restored shaped skirting boards in Lasa marble, a silver sealing strip defines a joint between the new floors and the original elements. In the closets this solution is embodied in a more highly articulated way, since these are transitional spaces with a reduced surface area, by using geometric elements specially designed, also in handcrafted parquet of oiled solid pear wood, combined with the use of smaller linear rods. The recomposition of the new flooring, now consisting of a "dry" substrate made from a layer of expanded clay and a double Sialite and OSB paneling, made it possible to reduce the permanent loads by about a hundred kilograms per square meter. Upgrading the system of utilities serving the home was also one of the most complex problems. The original construction technology left little margin for movement and interaction to create a new backbone cable routing. This made it necessary to reuse the existing routes, limiting the areas of intervention to a minimum, using some ducts made over time in the walls – whose original finishes had been damaged – to make good serious deficiencies in circuits no longer accessible. Fortunately, the house had been equipped with state-of-the-art systems for the day: in addition to a gas boiler serving a hot water winter heating system with cast iron terminals, housed in a low niche in the kitchen, a true equipment room had been designed near the cloakroom, which contained an air conditioning system ducted within the walls and serving the ground and first floors. The renewal of the system was therefore based on the decision to associate a refrigeration plant with a water heat pump with a new air exchange and treatment system, with the twofold objective of improving the comfort and preservation of the building's structures, furnishings and art objects and controlling humidity. During construction, this strategy of updating the systems

was combined with the necessary replacement of all the piping for the water supply and sanitation, which had reached the end of their life cycle. This entailed the careful dismantling of whole portions of the toilets, faced with Lasa marble on the floors and partly on the walls. All the slabs made and laid to a special design, as well as the edge moldings towards the surfaces finished with marmorino, were surveyed and numbered to restore them to their original positions after the work was completed. Some that were beyond recovery were necessarily replaced to the original design, also thanks to a careful search conducted by the craftsmen who worked on the stone, to find a suitable block of marble and provide slabs with the right shade of color and veining. The non-original bathroom fixtures were replaced, except for the three large pentagonal ceramic bathtubs on the first floor, and the hexagonal one in cast iron in the service bathroom on the ground floor, which are no longer available on the market. In the bathroom of the master bedroom on the first floor, accessible both from the rear closet and the bedroom, a prefabricated fiberglass cell with an assisted shower was installed in the place of the original bathtub. In this case it was considered appropriate to remove an artifact that is no longer necessary and create a specially designed new full-height shower, equipping it with a linear service niche on the rear wall, with built-in lighting and metal containers. This restored the original contrast between the part of the room lined with pear wood, with wooden boards and grating panels incorporating the shielded light sources, and the part completely faced with Lasa marble in continuity with the floor. The most extensive part of the work in terms of surfaces and the most complex, given the variety of types, was the recovery of the wall finishes. In addition to the ivory white stucco lucido (smooth and shiny stucco) that characterizes most of the rooms in the house, a dark stucco lucido finish was used on the walls, ceilings and cabinets of the cloakroom, applied to

wooden panels instead of masonry; calce rasata (smoothed lime-plaster) was used in the kitchen and laundry, while marmorino was used in the toilets. With the exception of the 30 x 30 mm ceramic tiles lining the walls of the kitchen, fittingly restored and integrated, unfortunately it was impossible to preserve the original finish in any of these cases. In the sitting rooms, bedrooms and the living areas on the first floor, the stucco lucido finish was irreparably compromised; in some parts it was damaged and the color was permanently lost, in others it had been damaged by the mold produced by surface condensation. However, the small surviving portions were useful to verify the original color of the surfaces, though all the attempts at cleaning were useless. Keeping the modest portions of the original finishes as isolated patches would have contradicted the character and continuity of the walls, conceived to make the interiors glimmer with an inexhaustible play of reflections. Even the marmorino finishes in the bathrooms re-sisted attempts to clean them and so they had to be completely relaid. Small additions were made to mend fragmented situations, or to restore the surfaces in Prun stone on the ground floor, worn by recurrent episodes of tidal flooding, now prevented by adopting discreet removable stainless steel barriers. The recovery of the stone slabs made it possible not to lose the irregular scored finish on the surfaces and the polished banded edges of the Prun stone which, together with the linear inserts in Lasa marble, are among the most distinctive features in the main rooms on the ground floor. It was necessary to listen carefully to the "voices" of the house itself to attain an adequate awareness of the appropriate design strategies. When was possible to dismantle the cladding, sketches made rapidly by Carlo Scarpa during his visits were found on the walls behind or on the backs of the panels, to suggest some constructional solutions or explain the sequence of the assembly to the craftworkers present on site. An architecture of exceptional quality like Casa

Balboni, when it risks being permanently lost raises endless questions. This challenge is implicit in the profession of the architect, but it becomes even more evident and pressing when it involves working in a wonderful city like Venice, the setting of Casa Balboni, and what is more, guided by Carlo Scarpa, one of the most gifted contemporary interpreters of this city.



fig. 1. Casa Balboni, view of the facade towards the garden after restoration. (© Claudia Rossini)



fig. 2. Casa Balboni, view from the living room towards the entrance from the garden. (© Claudia Rossini)



fig. 3. Casa Balboni, the helical staircase after restoration. (© Claudia Rossini)



fig. 4. Casa Balboni, first floor.
View of the passage to the sitting room after restoration. (© Claudia Rossini)



fig. 5. Casa Balboni, view from the living room towards the entrance from the garden. (© Claudia Rossini)



fig. 6. Casa Balboni, ground and first floor plans. (© MAP studio)

ENDNOTES

- ①: For a more comprehensive version of this study refer to Martinis, Magnani, Pelzel, 2021. In this paper Roberta Martinis is the author of pages 243-249 and Francesco Magnani of pages 249-255.
- : Scarpa (1984, p. 282).
- : Scarpa (2010, p. 65).
- ④: Quaroni (1984, p. 254).
- : Sottsass (2017, p. 158).

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VENICE, 4-5TH MAY 2021

14 THE RESTORATION OF VILLA LA SARACENA

PAOLO VERDESCHI

Architect

“Since it will be necessary to discuss how to remedy the defects of the buildings, it is essential to clarify which and of what nature are the anomalies that the hands of men can correct; just as the efficacy of the remedies indicated by doctors mainly depends on their knowledge of the disease”. (L. B. Alberti, *De Re Aedificatoria*, Book X - Restoration of the buildings)

Between the 1930s and the late 1970s, in Italy the theme of housing played a leading role in architectural debate and produced diverse articulations and highly original characteristics with respect to Rationalism and other European movements. This is the milieu of villa La Saracena, considered one of the masterpieces by the architect Luigi Moretti (1906-1973). Built between 1955 and 1957, the villa is situated in Capo Lino along the Tyrrhenian Coast, at the end of the town of Santa Marinella, a summer holiday destination for the Roman bourgeoisie during the 1950s thanks to its position only a few kilometers from the capital. In

1954, the journalist from the *Corriere della Sera* newspaper Francesco Malgieri asked Luigi Moretti to design and build a villa in Santa Marinella for his daughter, Luciana Pignatelli Cortes D'Aragona, “as if it were his own home”^①. The villa was intended to be a vacation home for the entire family, which moved there in 1958. That same year, the villa hosted the baptism of Diego Pignatelli Cortes D'Aragona who, as we will see later, together with his sister Fabrizia, would provide very important information during the restoration of the villa. Moretti imagined the Saracena as a building fully immersed in its surroundings, closed toward the street and open toward the sea. The house is “soft, at times bare, dry, with cuts and fractures instead of openings”●. The design of the villa marked the beginnings of the final, expressionist phase of Moretti's work. Leaving Rationalism behind, his studies of the Baroque took shape; geometric regularity gave way to open forms as the modulation of curvilinear surfaces announced new spatialities. The Saracena, a “jealous house”, “a house that speaks of a desire for a different life”●, was among the projects dearest to Moretti but, as he himself lamented, it failed to be understood once complete. Letters from this period demonstrate how it was certainly the project he sponsored over all others in architectural publications and reviews.

Throughout the 1970s, the villa was owned by only two other families, aside from Francesco Malgieri who, in the meantime, also commissioned Moretti to design villa La Califfa. While the owners maintained the original conditions of the house and its furnishings, the few interventions they carried out were poorly executed, including the demolition of deteriorated elements, such as the final part of the *veletta* (a solid horizontal band above the strip windows) and the canopy on the seaside elevation, reintegrated with damaging negligence. Fortunately, all were easily reversible.

The study of a building and its author are propaedeutic to the restoration of Modern architecture. During this process,

the architect-restorer becomes a historian, intent on tracking down all technical and formal information in order to develop a project and begin restoration works, returning to the role of a design architect and supervisor of works. At the Saracena, the architect was also a *detective* and, at the end of the restoration, as I will explain later, the study was returned to a historian, in this specific case Professor Annalisa Viatì Navone, author of the volume *La Saracena di Luigi Moretti fra suggestioni mediterranee, barocche e informali* (2012) one of the most important texts for this restoration.

The year was 1979, and I was a recent graduate working with Alessandro Anselmi on the publication of a selection of his projects. At this time, we drafted with *Rapidograph* technical pens, with which I maintained a conflictual relationship, when CAD still belonged to the future. Alessandro was working on the international competition for *Les Halles* and, as I watched him tracing his first sketches of the spiral of this project inspired by the *Encyclopedie*, I asked him about his method. He hastily answered: “You gotta think in architecture, it’s like translating into English, those who speak English well already think in English, they don’t translate”.

In reality, to design an architect requires an initial stimulus, a theme born from a set of information, from the memory of other projects and from automatisms of the mind. While they may even be illogical but creative and, when elaborated, synthesized and considered globally and without a hierarchy, they allow for everything to be translated into architecture.

I believe this process can be compared to what Rilke writes about the birth of a verse. All of this, together with the identification of an idea that generates multiple compositions, materializes in drawing. Almost forty years later, while confronting the restoration of the Villa La Saracena designed by Luigi Moretti, these words came back to me. As it has evolved culturally over the course of time, the concept

of restoration has developed and varied in its theories, techniques and legislative references. However, one thing has remained fixed in this complex system of interactions: the architect continues to represent the synthesis between culture and technique required by a restoration work.

The restoration of Modern architecture means thinking architecturally – in its broadest meaning – about the work of architecture we are about to care for. Restoring to maintain its efficiency, to make it once again legible and usable as intended by its designer, to rediscover the language expressed in its forms of spaces – be they interior or exterior – its materials, its colors, its furnishings. The awareness and interest of the State and Associations (for example, Docomomo) in our recent architectural heritage grows day by day, and there is a consequent increase in the need for architects who are prepared for this work, together with more streamlined procedures and financing.

The method for approaching the restoration of modern architecture lies in the direct wake of conservative restoration. Thus, there is a fundamental relationship among the archive, the building and the process of restoration that unfolds through the examination of original drawings and technical-building solutions retraced among these documents. The study of drawings is the first tool of reasoning in an investigation of composition and technique on multiple levels. I think of Mario Ridolfi, of Carlo Scarpa, and obviously of Luigi Moretti, who lived at the same time. The latter, in an interview in *Didattica del disegno*, in 1970, stated: “To the young architect we must teach drawing as the faculty of representing something real, imagining the world of transformation of computers, opening up new windows”^④. By reading graphic texts we can comprehend the development of the hypotheses and paths of design, and manage to visualize – today we would refer to *work in progress* – the choices leading up to the final one. Notes on materials and indications about building were often added to drawings

confirming a solution or explaining the need for a variation. Original project drawings can now often be found in archival funds, some consultable online. Writings, technical reports, correspondence to the trade to comprehend in detail the drawing of a project at various scales, are a precious support when *reasoning* about the final form of a project. There are many other tools of investigation, technologically trustworthy, such as chemical analyses, stratigraphic studies of materials and systems of structural investigation. However, the greatest assistance in understanding a project is offered by photography. Fundamental contributions include those of Cartoni, Casali, Galliano, Valabrega and others. As a drawing is complete when it cancels the idea, photography cancels the drawing but returns to the initial idea (fig.1). Photographs of architecture, captured during and at the end of construction, freeze it in its original time and transmit it as a real and indelible image to collective memory, pulling it out of the dimension of drawing that still remains a precious operating manual for the finished work. This image, transmitted by publications, by archival research or even some chance photographs in a family album, is perhaps the most important aspect to be recovered in a restoration work. The architect Arrigo Rudi claimed that the photographer needed to capture the mental image he had, as well as his own way of observing.

In the field of restoration of modern architecture – in the acquisition of data – it is also very important to interview people who may have been involved in a specific project. Comparing what they have to say can often reveal certainties about decisions taken. The restoration of villa La Saracena began in 2016. The perception I had was that of standing before a beautiful vintage sailboat, fixed in the history of hundreds of regattas, though missing a few pieces, from the masts to the shell plating of the parts above water, to details such as the rubbing strakes or the bollards

(fig. 2). To get her seaworthy again, they needed to be substituted.

Works began with corrections to the waterproofing layer on all of the roofs, at the time near collapse. After the survey of the decay phenomena, works progressed according to a program of intervention: distinguishability, minimum intervention, potential reversibility, respect for authenticity and original materials, physical-chemical compatibility of added elements and the aesthetic and historical recognition of the work. In the case of villa La Saracena these principles were adopted by associating the type of intervention with the various parts of the building to be restored.

Conservation works

- ◊ Detached external plaster;
- ◊ external windows and shutters;
- ◊ consolidation of the internal paving;
- ◊ restoration of the kitchen furnishings.

Restoration of destroyed elements in accordance with the original project

- ◊ Substitution of the bearing structure of the windows and the valance boxes of the living room-promenade;
- ◊ reconstruction of the valance boxes (cfr. original project and historical photographs by A. Cartoni, ACS);
- ◊ replacement of all living room windows (cfr. original project and historical photographs by A. Cartoni, ACS);
- ◊ reconstruction of the pergola on the seaside (cfr. original project and historical photographs by A. Cartoni, ACS);
- ◊ reintegration of the original colors (source: former owners and historical photographs by G. Canali, AP).
- ◊ restoration of lost elements in accordance with the principle of *verisimilitude*.

I would like to speak briefly about the reconstruction of the canopy positioned at the end of the living room. This

very important architectural element, perhaps a reference to the rigging of a ship, poetically terminated and completed the villa by projecting it toward the sea. This construction collapsed after only a few years as it had not been built to withstand the aggressiveness of the elements and, more significantly, the wind that blows across Capo Linaro. The in-depth researches did not find out any construction drawings or photographs that could offer information about the connection of the beams to the structure, nor the detail of the cables used to suspend them.

In original drawings, this canopy-pergola appears in the fourth version on the ground floor. In section it is present in three sketches lacking any dimensions or indications about materials. Furthermore, what remained of the fixing points offered no reliable indications of the original anchoring detail. In this case, restoration was based on the criteria of *verisimilitude* gleaned from existing photographs. The beams were dimensioned after a series of comparisons and overlaps of scaled historical photographs. The connection to the structure and the cables were redesigned, once again based on *verisimilitude*, supported by historical photographs and by structural requirements.

One interesting aspect of the restoration works was the discovery of the total lack of any building permit for the final project – the fifth designed by Luigi Moretti – which led to a complicated bureaucratic process to regularize the building and obtain various authorizations and a proper permit. However, the most important surprise sparked by this restoration, given the existence of only black and white photographs by Vasari and Cartoni, was the discovery of the original colors beneath the layers of paint applied over the years. In the half basement we discovered that walls, ceilings and even the exterior wall containing the entry door had been painted pink, a color found in minimum traces also on the column at the start of the ramp to the garage. On the ground floor we identified two other hues of pink. The

first, more tenuous, covered the entire inner wall below the windows, while the exterior part was painted a more intense pink; the same color was also found on the wall at the entrance, which I would define a hinge with the promenade. The handrail of the stair revealed a coral color. The last color discovered was a light green, on the supports of the hinges of the gate-sculpture designed by Claire Falkenstein at the entrance to the large seaside cave. The desire for color present in the villa is evident, and the perception that the use of white was not the result of a reconsideration was strong, given the colors designed and found in the villa.

The furnishings were designed by Moretti specifically for La Saracena: the blue kitchen cabinets made by *formica*, the pink, sage green, orange and mustard yellow sofas, the red velvet decorations around the doors, the clothes hangers and the round windows in colored glass, the light yellow paving in various hues in the living room with floral decorations by Grisotti and intensely colored ceramic tiles.

Moreover, in 1950 Moretti wrote an essay in the review *Spazio* on colors in Venice ●, and many of his previous and later works use strong colors. Red is a recurring color: the highlights on the mixed-use building in Corso Italia 13 in Milan and on the two BNL (Banca Nazionale del Lavoro) buildings in Piazzale Flaminio in Rome.

During the renovation works carried out in an apartment in Casa del Girasole, I noted an orange color on a column, below the paint layer, while the marble paving and some of the bathroom tiles tended to be pink. The handrail of the stairs at the former GIL in Piacenza was red, while the handrail of the stairs and the doors at villa La Califfa were orange. Despite having no certain proof, and with a certain reluctance, I was forced to cover these colors with a new white layer. Then, after almost four years of work, I received the first confirmation of my beliefs. Prince Diego Pignatelli Cortes D'Aragona, the son of the first owners I had unsuccessfully searched for, while he was passing through Rome

and stimulated by publications on the restoration of the villa La Saracena, came to visit me. He confirmed all of the colors that had been discovered. His sister, Fabrizia Pignatelli, later confirmed the *aqua* green of Falkenstein's gate and the coral red of the handrail. The study of the colors was complicated by the second owner of the villa, who, tracked down after the visit by Diego Pignatelli, confirmed everything except the pink color on the external wall. I remembered a black and white photograph, the outcome of an online research by my colleague and collaborator, the architect Valerio Mancini, in the Iuav Archivio Progetti - Fund Giorgio Casali, in which he noted a small difference in the coloring between the valance boxes and the wall below. This was followed by a patient research that found four-color photographs taken by Giorgio Canali in 1964 at villa La Saracena for *Domus* n. 419 ●, never published and forgotten by all. The result was that the external walls under the valance boxes were pink.

Following these discoveries, Annalisa Viaty Navone wrote a very interesting essay, almost a continuation of the aforementioned volume, titled *Qualche riflessione sul rapporto fra Storia e Restauro Architettura a rischio in Italia e in Francia* (being printed, 2022), from which I quote:

“A restoration work is thus a master class in the history of the construction, as well as the design, of a building, and often a starting point for a historical-critical reading and interpretation, and reconsiderations of the original restoration project [...] as we question whether Moretti imagined a polychrome color scheme for the internal and external elevations of the gallery? What spatial and visual effects did he wish to provoke? And whether he adopted this color scheme in dialogue (or perhaps in opposition?) to the use of white? [...] Most importantly: what was Moretti's position on the use of color in architecture?”

At this point I could claim that the architect-restorer is not responsible for studying the reasons for the use of color, but simply to restore them, when their presence is certain. However, here the osmosis between the historian and the architect-restorer continues. The owner of the villa La Saracena, convinced of the necessity to restore the original colors, authorized a series of stratigraphic tests (fig. 3) to better understand the succession of colors over time. The results of these studies arrived after the essay by Annalisa Viatì Navone had been written. The most plausible hypothesis, in my opinion, is that the original color was perhaps a pale pink, and that the two successive layers are a result of maintenance work by later owners, who failed to replicate the original color. Nevertheless, the hypothesis by Viatì Navone according to which different colors were utilized inside and outside the villa, due to the refraction of the bright sun, remains valid. Further stratigraphic samples and archival studies are required to answer this question. It is now ascertained that villa La Saracena, always imagined completely white, it had actually colored surfaces in different shades of pink, both in the internal and the external facades of the *promenade*.

Living the architectural restoration means carrying out the restoration work according the original use of the building; it is the best way to preserve a private home. It also means the daily monitoring of the state of the building, its regular maintenance and the avoidance of expensive interventions.

Today villa La Saracena, as well as being the summer residence of the owner's large family, is open to the public with organized visits and often used for events (fig. 4).

Post Scriptum: An unexpected photo of yesterday, at sunset, where a soft pink penetrates through the windows in the villa La Saracena, is my irrational and emotional explanation of that unusual color (fig. 5). Architecture is also made up of poetic elements that are transformed into matter. Few people have this gift and I would like to imagine that I do.



fig. 1. Villa La Saracena, picture by
A. Cartoni, 1962-63. (© Moretti-
Magnifico Archive)



fig. 2. Fig. 2 Villa La Saracena
before the restoration works,
2016. (© Paolo Verdeschi)

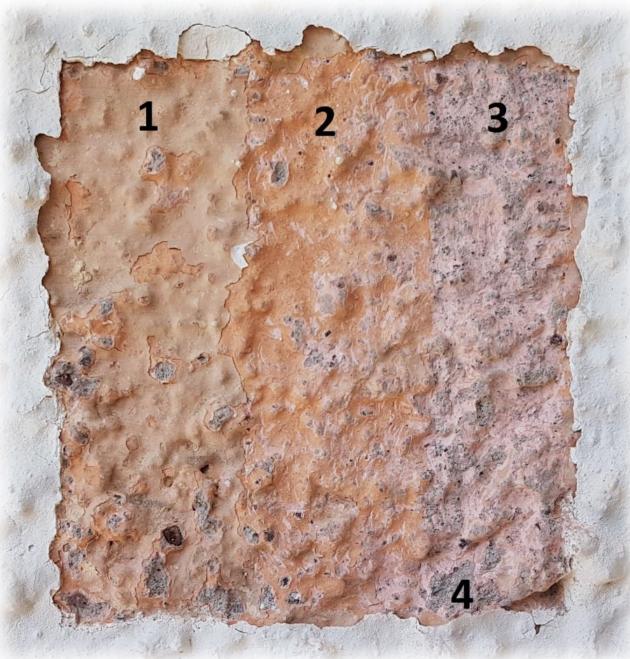


fig. 3. Stratigraphic analysis
of external coatings. (© Paolo
Verdeschi)



fig. 4. Villa La Saracena after the restoration works, 2020. (© Paolo Verdeschi)



fig. 5. Sunset from the villa, 2022.

(© Paolo Verdeschi)

ENDNOTES

- ①: Ponti (1964, p. 14).
- : Moretti, L. [Presentation text of the project, unpublished typescript]. Archivio Moretti-Magnifico (from now on AMM), Rome, Italy.
- : Moretti, L. [Presentation text of the project, unpublished typescript]. AMM, Rome, Italy.
- ④: De Fiore (1970, p. 60).
- : Moretti (1950, p. 33).
- : Ponti (1964, pp. 14-19). See also: Fund G. Casali, Iuav Archivio Progetti, Venice, Italy.

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PART 2. INHABITANTS

15 CONSERVATION VS MUSEALIZATION. NOTES FOR AN ANTHROPOLOGY OF INHABITING THE MODERN HERITAGE

ANDREA CANZIANI

Ministero della Cultura - Docomomo ISC E+T

The examples and reflections collected here are dedicated to inhabiting domestic space when it is a monument, or to restore the possibilities of living in a monument.

They add to the themes we have long been confronting in the disciplinary debate – technique, theory, cure – other themes that open up new spaces of thought that need our attention: heritagization and sociology of architecture.

15 · 2 BEYOND THE TECHNIQUE

Retracing the histories of the restorations presented and placing them into the broader panorama of the restoration of modern architecture completed in recent years^①, it clearly emerges that conservation is no longer just a challenge to a technical problem which we could summarize in the questions: how do I restore that experimental material? and where do I find a similar one?

This challenge is not completely over but has focused on very specific cases such as passivation or self-healing technologies for reinforced concrete or challenges related to a precise feature that defines the identity of a building. It is the case of the recent intervention on the Neue Nationalgalerie by Mies in Berlin, where to re-propose the original appearance of the windows it was necessary to reopen an entire production cycle and certify the products.

This was because the large glass panes of the upper part of the envelope were no longer available with those dimensions. The challenge was huge, but even in this case the narrative focused more on the motivations and the method rather than on the difficulty of finding technical solutions.

The technical problem, which was undoubtedly preeminent in past decades because we did not have enough knowledge of the real built body of Momo architecture, seems to have been solved or at least taken into the background to the point that it seems to have almost been a false problem^④. However, we must record the construction of a whole mythology of the so-called "restoration of the Modern".

This most likely happened for two reasons. On the one hand, because we have faced the fragility of the Modern for decades and there can no longer be astonishment in discovering that new materials require new conservation techniques. On the other hand, because media and designers focus on the final image of the restoration which is closely linked to the cultural expectations of the intervention.

The experiences presented here also confirm this analysis. There is no major technological challenge and there are no experiments on materials or application techniques that are being tested for the first time. If there is an experimentation emerging - or lacking - it is methodological and consequently cultural.

Therefore, awareness of need and method have been reached but limits persist on the cultural horizon of the intervention. We see many restorations that demonstrate a lot of research, a lot of study and many discoveries. As we know the luck of the Modern is often to have full archives and abundant documentation. Sometimes this luck becomes a curse because plentiful documentation becomes the justification for hypothetical restorations that erase the real traces of a constructed history.

Perhaps there is still some difficulty in learning how to approach the buildings through their material consistency and not just through their paper projects. Perhaps because that substance, with all the signs of time and history, is not yet evaluated as such, and those signs are interpreted as an intrusion in the perception of the monument. Among *neo-philologists* and *conservators*, according to Sara Di Resta's definitions, there is still a serious problem represented by the return to the origins which becomes more complicated when the life of inhabitants becomes another further story to be addressed.

But why are we so obsessed with origin? And above all, which origin? What to go back to? To the designed house? To the market-published house, since architecture is a mass medium ●, is that equivalent to the built one? To the built house modified by builders' tacit know-how? To the origin represented by the first inhabitants, or to the stratified one of the different generations that have followed one another? Which original can be claimed for Le Corbusier's apartment in Porte Molitor which he changed continuously from 1934 to 1965? The problem of origin is an obsessive one that calls into question the philosophical and anthropological disciplines and for us is inextricably intertwined with the concept of authenticity.

On the necessary change we could try a parallel with what happened to our discipline in the nineties, when in the proposals of Amedeo Bellini and Marco Dezzi Bardeschi we resume talking about conservation as opposed to restoration ●. It was a proposal looking at greater complexity, different relationship with time and awareness of the contemporary philosophical debate, that proposed an important conceptual leap. Today we are facing a leap of that type, on the possible interventions and on the applicable preservation.

15 · 3 THE CARE

In anthropology, the issue of care has to do with a dichotomy between adaptation of self and adaptation of the home. The care lies in the balance between these two poles and can tell us how life has transformed the architecture and how much the inhabitants are eager to preserve or adapt them.

At the moment, adaptation and adjustment are fashionable words in our field and I think of the particular fortune of the term "adaptive reuse" where there is, perhaps instrumentally, a misunderstanding of who should adapt: whether the building to the project or the project to the building. Again, the history of the restoration would have already given a precise answer: it is the building that suggests its possible function, even if it has lost its original one.

There are two types of care: that of the architect and that of the inhabitant. Living is transforming. It is no coincidence that architects' photos are normally without inhabitants, because their presence would transform the architecture. These images subtract life of those buildings to the point of presenting us with the corpse of architecture. Care can be transformative or just aimed at maintenance. It is no coincidence that the iconic places captured through the people who take care of them, by Ila Bêka and Louise Lemoine in their anthropological research on the ordinary, first amazed and then set the standard ●. Living involves an exuberance of changes to be faced, not necessarily to prevent them (impossible) or cancel it. In the words of Michel Foucault:

"the architect has no power over me. If I want to tear down or change a house he built for me, put up new partitions, add a chimney, the architect has no control.

... I would say that one must take him – his mentality, his attitude – into account as well as his projects, in

order to understand a certain number of the techniques of power that are invested in architecture, but he is not comparable to a doctor, a priest, a psychiatrist, or a prison warden”¹⁰.

On the other hand, if the architect who has power over the building proposes a return to the origin, he deprives us of this exuberance, of the right to aging and of a whole series of stratifications. And this is the life that is passed within those spaces and which perhaps may even have contradicted, reread or enriched the initial idea.

When we do not accept that objects age, the problem from my point of view is not architectural at all but anthropological: we do not accept that these objects age, while they, regardless of our will, age anyway.

The Modern is past and has the right to inhabit history and time, preserving the transformations of life manifested in spaces and surfaces. If, as in the well-known motto attributed to Le Corbusier, life is always right and architecture is wrong¹¹, one wonders why and with what right these reasons are removed.

Yet there is room for this in the care as well. It would be hypocritical to deny the sense of necessity we feel in correcting interventions that insensibly erase finely thought out spaces. Perhaps because the idea that "the verbalized and conscientious wishes of the inhabitants - who do not have the appropriate 'culture' - may not correspond to the 'real' needs¹² do not belong only to the Enlightenment idea of the Modern Movement.

The architect's care is subtly different from that of the inhabitant because the temporal perspective and the proximity to the object are different. To live is to stay with, to take care of people and objects and it is an intermediate step between building and thinking¹³. To restore, on the other hand, is to reactivate that all-encompassing

relationship between thinking and building, and creator and work, which involves a detachment and not a frequentation¹⁴.

Only recently we have started to think of restoration as an intervention over time and not as a cyclical correction of problems. An example is the planned conservation theory and the conservation plans in which the time of care and maintenance is reintroduced in an effort to deny the restoration as a return to the origin¹⁵.

15.4 INHABITING THE MONUMENT

Inhabiting the monument confronts us with heritagization issues and special performance of dwelling connected to living in such a special place where cultural performance and comfort converge.

Living is a theme that overlaps two patrimonial communities that are distinguished by their way of using architecture. As Walter Benjamin wrote:

“Buildings are appropriated in a twofold manner: by use and by perception - or rather, by touch and sight. Such appropriation cannot be understood in terms of the attentive concentration of a tourist before a famous building. On the tactile side there is no counterpart to contemplation on the optical side. Tactile appropriation is accomplished not so much by attention as by habit. As regards architecture, habit determines to a large extent even optical reception”¹⁶.

A community is represented by experts - connoisseurs, historians, architects - who do not necessarily inhabit the monument, but who privilege perception and expect to see an architecture that bears witness to a moment in history or resembles a well-known icon. For them the cultural

performance is a priority and they should not clash with the difficulties of living in the monument. The other community is that of the inhabitants, who favor use and thus have a tactile appropriation which is mainly achieved by habit. They expect to be able to live before and above observation. The two communities do not necessarily have opposite purposes. For example, the inhabitants are divided into unaware and much more informed than one would think. For some of them, having purchased a monument is a choice that involves a social positioning and the consequent aim of preserving and increasing its authenticity and exceptional value. These among other are the inhabitants of Villa Bloch, of the Balboni house, of the Unité of Marseille but also those of Pessac who are angered by the state of neglect of one of the buildings in the neighborhood, which they perceive as degradation of the collective value. For others there is no consequentiality: the architecture is known, so is the author and its purposes. However, no obligation arises from this, and any modification is allowed because it does not betray the function, that is living. The examples could be innumerable. Two visions that are found even in the use of the Italian language, in two idioms: the satisfying *vivere in una reggia* [living in a royal palace] versus the limiting *vivere in un mausoleo* [living in a mausoleum]. They are two ways of experiencing the cultural performance linked to heritagization.

Both these types of inhabitants - some who enjoy the possibility of experiencing a monument, the others who suffer its limitations - feel two needs to belong to a whole and that this belonging is recognized as such. Beyond the forms and methods used, each of them consistently behaves according to their respective conditions. Anthropology, in the relationship between architecture and inhabitants, reminds us that a dialogue must consider at least two aspects. The first is what it means to live in places that entail advantages but also inevitable restrictions and

obligations¹⁷ while the second is that "home is the relationship between public and private in three dimensions, a symbol of the self and of the relationship with others"¹⁸. Therefore, its symbolic importance requires an identification and customization that appears inevitable: each inhabitant will always tend to personalize his own home.

A main related issue is that of recognition, here in its social and legal dimension as defined by the philosopher Axel Honneth¹⁹. Socially, recognition is equivalent to esteem where the other is considered by virtue of the value of his or her contribution to social life, to common goods, and it is linked to sharing a relational context of reference, such as one's contribution as a caretaker of a cultural heritage site. Legally, the recognition provides that in recognizing the rights of others, the subject also recognizes as legitimate his own claim that others respect his rights. Therefore, conservators and inhabitants must respect each other. As far as our disciplines are concerned, the connection with the heritage communities as defined by the Faro Convention of 2005 is evident²⁰. Therefore, recognizing what the inhabitants do to inhabit a monument cannot be separated from guiding the transformation, so that this does not conflict with the conservation objectives that are important for other heritage communities who recognize themselves in that architecture. The character of heritage conservation is increasingly political and social²¹.

To build this dialogue, the topic of heritage alone cannot suffice. Living is not museumizing, as Giovanni Vergani says for his villa Bloch, it is about "listening to the house, being educated, without museumizing". Even if museumization is fairly common and sometimes unconscious, the parlor used only for representation is an example but it is also an example that is disappearing from our way of life.

At the same time, the proposals of modern architecture are still often an avant-garde that has not been reflected in the lifestyle of the majority of the population. "An

example to illustrate this position may be Le Corbusier, who, in delivering his 'machines for living' to the Socialist Mayor of Marseille, warned him of the need, at that point, to 'instruct' the inhabitants to use them²². Without this instruction manual it seems that architecture no longer works and face a strange inverse obsolescence. It is perceived as inadequate because it is too projected into the future. Obviously there are also cases in which life conforms to the architectural proposal, but the introduction of new functional/technical requirements and new standards, combined with today's expectations of what we could define *homo comfort* – according to an appropriate definition by the sociologist Stefano Boni²³ – has made many modern buildings obsolete although they still guarantee their fair original performance²⁴.

The Modern therefore seems to need mediators because it is not always understandable in the ways of use and in the patterns of living it proposes, or it is not acceptable because the cultural performance offered by the historical monument – in which I would also like to include exclusivity – is not discussed together with other environmental performances and cannot help in balancing other perceived deficiencies. Again a Corbusian experience, such as the conservation of windows in Immeuble Molitor, tells us of an awareness extended to all the inhabitants who have understood the meaning of the conservation of aluminum frames from the sixties which were validated by Le Corbusier himself.

In this context, the preservation architect – perhaps supported by the anthropologist and not only by the historian – acts as a mediator and an educator who has a great responsibility: to make people understand the meaning of the modern project and to propose interventions consistent with that meaning. It is no coincidence that one of the forms of protection that the Fondation Le Corbusier carries

out with educational and obviously recognition purpose is the network of inhabitants.

In conclusion, any project will always have to deal with the progressive graduation of the presence of the inhabitants; from constant to occasional and only for some compatible functions or periods, to completely absent when the inhabitant is replaced by the spectator. All are valid, but the story of houses that are no longer houses is perhaps another story.

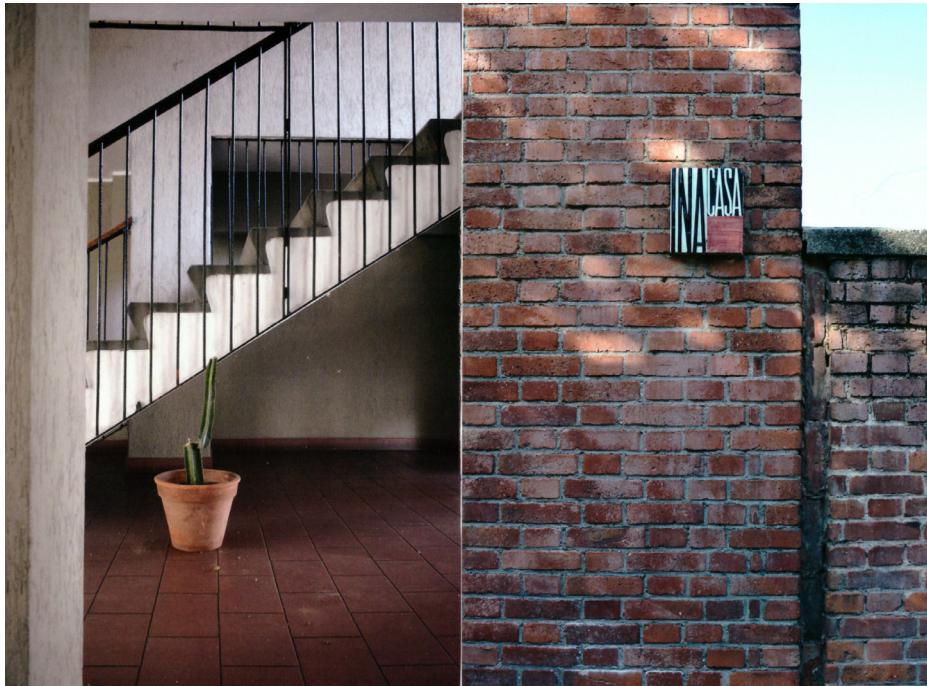


fig. 1. INA-Casa Neighborhood
Harar-Dessiè, Milan, 1951-
1955. Building via Dessiè
15, M. Tevarotto, G. Reggio:
staircase / Insulae Via Varenna,
L. Fignini, G. Pollini: external
wall. Photo sequence from
the photoworkshop Everyday
Architectural Heritage, ©
Architectural Preservation Studio
– A. Canziani (2017), AUIC School,
Politecnico di Milano



fig. 2. INA-Casa Neighborhood
Harar-Dessiè, Milan, 1951-1955.
Building Via Harar 3, G. Ponti,
L. Ghò: staircase/distribution
balcony. Photo sequence from
the photoworkshop Everyday
Architectural Heritage, ©
Architectural Preservation Studio
– A. Canziani (2017), AUIC School,
Politecnico di Milano



fig. 3. INA-Casa Neighborhood
Harar-Dessiè, Milan, 1951-1955.
Building Via Harar 3, G. Ponti, L.
Ghò: entrance from the balcony
/ Insulae Via Val Pantena 7, L.
Figini, G. Pollini. (Photo sequence
from the photoworkshop
Everyday Architectural Heritage,
© Architectural Preservation
Studio – A. Canziani 2017, AUIC
School, Politecnico di Milano)



fig. 4. INA-Casa Neighborhood
Harar-Dessiè, Milan, 1951-
1955. Building Via Harar 3,
G. Ponti, L. Ghò: balcony/
interior. (Photo sequence from
the photoworkshop Everyday
Architectural Heritage, ©
Architectural Preservation Studio
– A. Canziani, 2017, AUIC School,
Politecnico di Milano)



fig. 5. INA-Casa Neighborhood
Harar-Dessiè, Milan, 1951-
1955. Building Via Dessiè
15, M. Tevarotto, G. Reggio:
elevation south toward the park
/ interior. (Photo sequence from
the photoworkshop Everyday
Architectural Heritage, ©
Architectural Preservation Studio
– A. Canziani, 2017, AUIC School,
Politecnico di Milano)



fig. 6. INA-Casa Neighborhood
Harar-Dessiè, Milan, 1951-
1955. Building Via Dessiè 15, M.
Tavarotto, G. Reggio: interior /
interior. (Photo sequence from
the photoworkshop Everyday
Architectural Heritage, ©
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– A. Canziani, 2017, AUIC School,
Politecnico di Milano)

ENDNOTES

- ①: Cf. the proceedings of latest DOCOMOMO International Conferences (Conferences – Docomomo International, s.d.).
- : Canziani and Di Resta (2020, pp. 226-232).
- : Jaspers (2018, pp. 79-85). “It is not the image, but the substance of the construction that is to be put first” (p.84).
- ④: Already in Casciato, Mornati and Poretti (1999) and then in Boriani (2003) the topic was secondary to the methodological problem.
- : The expression [restauro del moderno] typically belongs to the Italian disciplinary context.
- : Among others Cupelloni (2017); Di Resta, Favaretto and Pretelli (2021).
- : Cf. De Fusco (1967) and Colomina (1994).
- : Bellini (1986) and Dezzi Bardeschi (1991).
- : Video-artists, filmmakers, producers and publishers, Ila Bêka and Louise Lemoine have been focusing their interest mainly on how the built environment shapes and influences our daily life. They define this approach, in reference to French writer Georges Perec, as an "anthropology of the ordinary".
- ⑩: Foucault (1982).
- ⑪: Cf. Boudon (1969).
- ⑫: Amendola (1984, p. 28).
- ⑬: Cf. Heidegger (1954).
- ⑭: Cf. Moneo (1999, p. 159).
- ⑮: Cf. Della Torre (1999), Della Torre (2010), on the modern heritage in particular Canziani (2009). The reference to the recent conservation plans is to the Keeping it Modern project by the Getty Foundation.
- ⑯: Benjamin (1969, p. 18).

⁽¹⁷⁾: Cf. the research project: Habiter Frugès. Anthropologie d'un site patrimonial, directed by Alessia de Biase, Laboratoire Architecture Anthropologie, ENSA Paris la Villette, 2019-2020 (De Biase et al, s.d.) and Sotgia and Wacogne (2019), De Pieri and Zanfi (2019).

⁽¹⁸⁾: Amendola (1984, p. 18).

⁽¹⁹⁾: See Honneth (1995), Camozzi (2012), and cf. Ricoeur (2004).

⁽²⁰⁾: The Faro Convention (Council of Europe, 2005) recognizes that objects and places are not, in themselves, what is important about cultural heritage. They are important because of the meanings and uses that people attach to them and the values they represent. A heritage community consists of people who value specific aspects of cultural heritage which they wish, within the framework of public action, to sustain and transmit to future generations.

⁽²¹⁾: Cf. Boni and Piaggio (2011, cap. 3) and Koolhaas (2014).

⁽²²⁾: Amendola (1984, p. 28).

⁽²³⁾: Boni (2014).

⁽²⁴⁾: De Jonge (2017) and Canziani (2019).

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16 DIALOGUE AS AN ACTION OF PRESERVATION

GIORGIO DANESI
Università Iuav di Venezia

The term *dialogue* (from Latin: *diálogus*, made of *dià*, “through”, and *logos*, “speech”) suggests a “formal discussion between two groups of people, especially when they are trying to solve a problem”^①.

At the center of the dialogues between inhabitants and architects on the conservation of Modern houses there is the quest for solutions to all those issues that both parts recognize in these buildings nowadays.

We can identify two categories of communication: firstly, the dialogue between the inhabitants and the technicians in charge of preserving their manors; secondly, the imaginary interaction between the inhabitants and the architecture itself. This non-verbal contact is crucial to understand the tenants’ idea of *Living the Architectural Preservation* and, consequently, to suppose the potential future of the place in which they are living. The maintenance of a building may heavily depend on the connection that the owners establish with the piece of architecture they manage. On one side, the architect feels the responsibility of the conservation from the technical point of view. On the other hand, the owner should subscribe to the preservation strategies and act to support them. The protagonists of this dialogue should act together to guarantee protection to the architectural heritage that is under their own responsibility. The recognition

of tangible and intangible values strongly depends on the active role played by the current owners and inhabitants.

The interaction between man and architecture has to be interpreted as a listening process, constantly evolving over time. Therefore, the first approach between designers and clients can be searched in the past, studying the design proceedings of those houses recognized as architectural heritage nowadays. Most of the times, the legacy of the first owner embodies the bases on which the contemporary preservation practices have to be set.

In 20th-century, several times the cooperation between customer and designers gave life to heartfelt projects through shared design processes. In the heterogeneous tales of Modern houses, we can identify a privileged kinship between the wealthy clientele and the architects. The common cultural environment and interests in arts often fostered a cultured and proactive dialogue for the mansions' realization paths. For example: the strong friendship between Le Corbusier and the art collector Raul La Roche, owner of the house that *they built* ● in Paris, shows a communion of thought, intentions, and spirituality (*Maison La Roche-Jeanneret*, Paris, 1923–1925). Following, the controversial dynamic between Mies van der Rohe and his client Edith Farnsworth, woman of science and arts ● (Farnsworth House, Plano, 1945–51), which started as a strong relationship characterized by a sympathetic feeling ④, to result in a lawsuit against the architect just for economic reasons. Or, giving another example, the American businessman and philanthropist Edgar J. Kaufmann, who promoted the construction of the iconic Fallingwater House (Pennsylvania, 1935–37), giving Frank Lloyd Wright the opportunity to realize his far-sighted idea of building a manor over a waterfall ●.

Among these examples, there are the case studies that we selected with the purpose to interview ● the actual owners of two significant 20th-century houses: casa La Scala (or

villa Bloc) by Vittoriano Viganò in S. Felice del Benaco (1956-58) and villa Planchart by Gio Ponti in Caracas (1953-57) (fig. 1). The story of the first building well represents the cultured relation established between the architect and the original client ●: his friend André Bloc, who was the editor of some important art and architecture magazines highly appreciated by Viganò ● (*L'Architecture d'Aujourd'hui*, *Art d'aujourd'hui*, and *Aujourd'hui: art et architecture*). The second case study embodies one of the most interesting tales of *human connection* in Modern Architecture history: the long friendship between Gio Ponti and the couple Armando and Anala Planchart, the original owners of villa Planchart in Caracas. A particular aspect of its *construction story* lies in the conspicuous contribution that the clients made to defining the project design ●. They influenced the genesis of the idea, as well as the executive drafts ^⑩. Their contribution extended into the construction phase, thus establishing a respectful and proactive dialogue with Ponti:

“Vitruvius says that in architecture the client is the father, while the architect is the mother. The clients in Caracas have been exemplary parents. Not only due to the large amount of funding they decided to dedicate to their house, but also for the human sympathy, the rare discretion, the understanding, and the trust with which they accompanied the work of the architect, by multiplying his enthusiasm” ^⑪.

The importance of the inhabitant's role is also clearly visible in the way Gio Ponti characterizes his first sketches of villa Planchart: in the famous plan published in *Domus* in 1955 ^⑫, the designer emphasizes the connection between humans and architecture by drawing silhouettes that populate the ground floor of his project, giving life to the interiors even before they were built ^⑬ (fig. 2).

The double interview reported in this volume establishes a proactive dialogue with the current owners of the two well-known houses by Vittoriano Viganò and Gio Ponti (figs. 3-4). Giovanni Vergani gives us his point of view as private owner of casa La Scala, his family's holiday home since he was younger, when his father bought it from André Bloc. Hannia Gomez, president of Docomomo Venezuela, testifies her experience as curator of villa Planchart, fulfilling the role of overseeing the property. The interviews give us two different perspectives, carrying out a valuable discussion on many aspects of *living the Architectural Preservation*. The aim is to understand how these houses are currently used, what factors changed the original conditions, and, in particular, the difficulties to take care of these icons of the 20th century in a society that has quickly changed.

A considerable topic is the *change of use*. None of the actual owner lives the buildings continuously: Giovanni Vergani still uses casa La Scala with his family, but they stay there only for short holiday periods. On the other side, Hannia Gomez does not live in villa Planchart, even though she often visits it, as it is the headquarter of the Planchart Foundation^⑭.

These residences were designed observing certain standard, such as the number of inhabitants and the type of family hosted. If conditions change, the building's capability to adapt is not obvious. There are some limits to possible modifications, in order not to overturn excessively the original project. We cannot expect the building to adapt easily to new needs, without renouncing some of its characteristics. Lord Peter Palumbo, who lived in Farnsworth House for 24 years (1972-1996), declared: "People ask me how practical is to live in. As a home for a single person, it performs extremely well. It was never intended for anything else"^⑮. Giovanni Vergani clarifies us which was his family's paradoxical solution in order to live in casa La Scala without drastically changing the main features of the house: "going

somewhere else”¹⁶, using the farmhouse for the keeper in the same property as sleeping area. He also describes the technical problems he found about heat systems, thermic assets, and fixtures frames. Should we change our contemporary expectations to adapt to the house, or is the house that should somehow adapt its characteristics to *the new modernity* that we face today? What do we ask to these buildings in terms of comfort and security? They were built in an age of experimentation, and some technical issues were not foreseen even by the original designers: Philip Johnson, who built his own residence surrounded by glass in Connecticut (Glass House, 1948-49), used the building to sleep just for a short period, in which he realized that its big window frames had insulation problems¹⁷. Later, he designed new service buildings in the garden, and he began using a brick house as a ‘bedroom’, recognizing how problematic could be the light passing through the full-wall windows¹⁸.

As evidenced, casa La Scala has maintained a private use over the years, except for episodic temporary occasions (as fashion photo sets¹⁹), whereas villa Planchart hosts many cultural events, and no one lives in the house anymore. Guests reach the place to enjoy concerts, temporary art exhibitions, or to visit the building itself, with its valuable collection of furniture, precious orchids, and works of art. Hannia Gomez reminds us how challenging is to offer these events to the public: it represents a challenge not only for the obvious management difficulties in order to ensure respect and protection for the piece of architecture, but also for the lack of funds. This is the reason why the private foundation is always looking for international collaborations, giving life to another kind of exchange: the dialogue between institutions with the common purpose to preserve cultural heritage. A recent example is the agreement undertaken by Fondazione Planchart with Docomomo Venezuela

and Università Iuav di Venezia, aimed at drawing up the *Conservation Management Plan* of villa Planchart²⁰.

The following interviews with the current owners show that these buildings' needs are constantly evolving, in line with the changes of contemporary society. The role of inhabitants is to accept these conditions and manage the physical modifications over the years, without losing the tangible and intangible legacy received by the previous owners. The hope is that, in future, transformations will be wisely managed through cultural projects concerning the evolution of human needs, instead of being completely rejected. In this perspective, Modern houses should be interpreted as objects in continuous transformation: using the words of Vittoriano Viganò, "A piece of architecture is nothing more than a dialogue, or a support for endless dialogues. In this sense, [the building] is always an unfinished thing, not a concluded one"²¹.

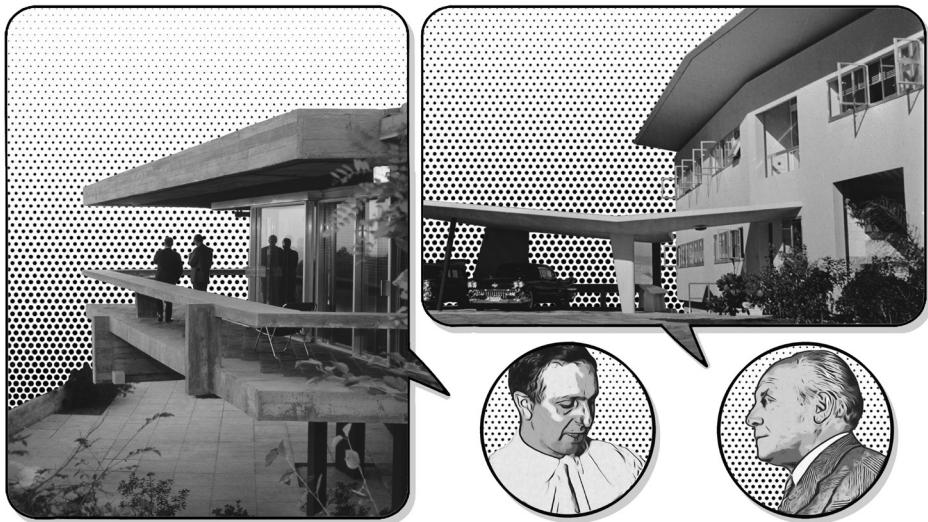


fig. 1. In the speech balloons: on the left, casa La Scala, San Felice del Benaco (IT), and a picture of the architect Vittoriano Viganò. On the right, villa Planchart, Caracas (VEN), and a picture of the designer Gio Ponti. (Image editing by © G. Danesi. Original documents: © Iuav Archivio Progetti, Fondo Giorgio Casali)

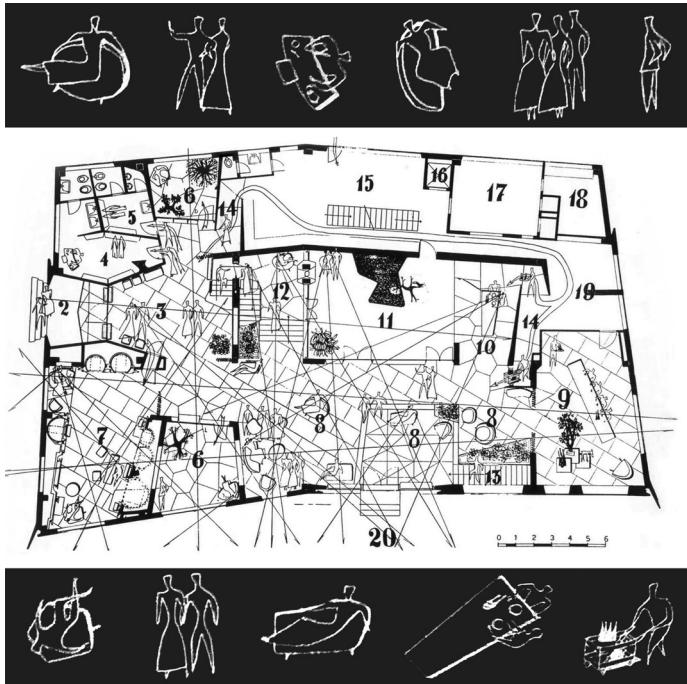


fig. 2. Gio Ponti, Villa Planchart,
Caracas, plan of the ground floor,
published in Domus 303, 1955.
(Image editing by © G. Danesi)



fig. 3. Casa La Scala, living room,
S. Felice sul Benaco, n.d. (© Iuav
Archivio Progetti, Fondo Giorgio
Casali)



fig. 4. Fig. 4 Villa Planchart, living room, Caracas, 1954. (© Iuav Archivio Progetti, Fondo Giorgio Casali)

ENDNOTES

①: Definition of the word “Dialogue”, Oxfordlearnersdictionaries.com.

●: “Dear Raul La Roche, this is the house that we built 37 years ago...”. Le Corbusier. (1960). [Dedication to the friend Raul La Roche on a copy of the book L’Atelier de la Recherche Patiente], E-2-7 (12). Fondation Le Corbusier (from now on FLC), Paris, France. Trans. by the author. The document is mentioned in: Di Resta (2016, p. 21).

●: Vandenberg (2003, p. 15).

④: National Trust for Historic Preservation, Edithfarnsworthhouse.org, 2022.

●: “Mr. Wright and Mr. Kaufmann had great rapport from the start, each with genuine admiration for each other” (Hoffmann, 1993, p. 12).

●: The interviews are reported further on in this volume, in the chapter: “Learning from the inhabitants. A conversation with Giovanni Vergani and Hannia Gomez on casa La Scala (villa Bloc) and villa Planchart”.

●: Piva and Cao (2008, pp. 36-37).

●: Many of these magazines are conserved by the Archivio del Moderno in Mendrisio, where the main Viganò archival collection is (archiviodelmoderno.org).

●: Cf. Danesi (2021, pp. 116-131).

⑩: Cf. Gomez (2009, pp. 114-134).

⑪: Ponti (1961, p. 2). Trans. by the author.

⑫: Ponti (1955, pp. 8-14).

⑬: Cf. Porcu and Stocchi (2003, p. 9).

⑭: Villa Planchart is not used as private home since 2004, when Anala Planchart died. The woman had already created the Planchart Foundation in 1970, with the purpose to

preserve the building in its original conditions. After her death, it became the headquarter of the private Institution.

¹⁵: Palumbo (2003, p. 5).

¹⁶: Conversation with Giovanni Vergani, further on in this volume.

¹⁷: Frampton (2002, p. 106).

¹⁸: Mason (2007).

¹⁹: During Summer 2021, outdoor spaces of casa La Scala have been used as a fashion photo set for Woolrich Spring/summer 2022 collection. Cf. Felicori (2021).

²⁰: Cf. Canziani and Di Resta (2020, pp. 195-210). See also: Heritage in danger. Conservation Plans between protection and emergency in Villa Planchart case, International Research Project, Università Iuav di Venezia, co-founded by Docomomo Venezuela. In collaboration with Fundación Anala y Armando Planchart and Docomomo International ISC Education + Training, AA 2019-20. Scientific responsible: S. Di Resta. Research fellow: G. Danesi.

²¹: Viganò (1994, p. 29). Trans. by the author.

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VENICE, 4-5TH MAY 2021

17 LEARNING FROM THE INHABITANTS. A CONVERSATION WITH GIOVANNI VERGANI AND HANNIA GOMEZ ON CASA LA SCALA (VILLA BLOC) AND VILLA PLANCHART

SARA DI RESTA, HANNIA GOMEZ, GIOVANNI VERGANI

Sara Di Resta in conversation with Giovanni Vergani, the current owner of casa La Scala (villa Bloc) by Vittoriano Viganò in S. Felice del Benaco (1956-58) and Hannia Gomez, president of Docomomo Venezuela, on villa Planchart by Gio Ponti in Caracas (1953-57).

Sara Di Resta: Giovanni Vergani is owner and inhabitant of casa La Scala, also known as villa Bloc. An exceptional building, heritage of the late twentieth century, which was built between 1956 and 1958 according to Vittoriano Viganò's project for his friend Andrè Bloc, sculptor, and architect. Two massive reinforced concrete plates supported by steel pillars and beams. Moreover, a perimeter almost entirely made of glass.

Giovanni Vergani has been asked to show us some images representative of the private sphere, the familiar sense of living at house La Scala: unusual and personal photographs, and not pictures from magazines, that can witness a long-time permanence in the house, dating back to his father.

At a late time, we will ask him to reply to three questions in order to support us in understanding the meaning

of to live and to preserve an object of the recent past which is already heritage of the twentieth century. Thank you, Giovanni Vergani, and welcome.

Giovanni Vergani: Thank you for the kind invitation. I have to admit the effort made in looking for such non-iconic images, not focused directly on the members composing my family. Then, I tried to identify two photographs that can illustrate how the house interior had been realized by Viganò and how it transformed through time, as you can have an alpha and omega vision, at least until nowadays. In this first image (fig. 01) you can observe the original furniture of the interiors. The colorings themselves are authentic on both walls and ceilings. In this image you can observe approximately the fifty per cent of the whole volume of the house. On the background of the photograph, behind the corner, there is the bedroom. Behind the wall on the left, restrooms and another bedroom were located. This is the condition in which my father bought the house in 1969, when I was a child.

With the following image I am conversely showing you the actual status of the house (fig. 02). The angle is different, as the previous photograph was taken on the opposite side, while now we stand where the bedroom was originally placed. As you can notice, a fireplace made of stone of Verona has been built, with a big extractor hood. The space dedicated to the consumption of lunch is now on the opposite place.

SDR: I would like to begin with a first question related to the active role of owners and inhabitants in preserving the building: how much time do you spend in the house? Which is the perception of responsibility your family is being having towards the conservation of the house?

GV: I think all this was a big journey. We must try to visualize a person arriving to this house with a whole family, coming across the situation I showed you in the first image. The former owners, the Blocs, were elderly when the

house was built. We were six people. For this reason, it was important to reimagine space and understand how to live in this house. It is like a journey. And in this journey, which is still lasting, the object somehow communicates and historically positions itself. So you are, as a member of the family, educated to live and consider it with this approach. I am not an architect, so this is not my professional sphere. Our fortune was that we were able to make this place liveable thanks to the presence of a farmhouse for the keeper. We opted for an ‘outsource’ keeper, as it is labelled today, providing some modifications on that building, with no architectural value, that could let us comfortably host. With this approach, we were able to keep unchanged the space of house Bloc. A space that, even if almost preserved, has its limits: not liveable on winter season. In the image, you can detect in the ceiling all the heating vents that, according to Vigano, would work with warm air produced by a gas-oil system. Moreover, as you can imagine, the windows are single-glazed. Because of a still immature technology and a lack of a hermetic seal, there are draughts of one or two centimeters. For all these reasons, this house welcomes you only on summer, if you need to live in it.

In this itinerary of paying attention to the object, nowadays we are wondering if we need to ‘restore’ something. We may need to re-establish the colors. The fireplace is very complicated to remove. We should restore some objects that belonged here in the past, as only some of them are present. Maybe we should take it back as close as possible to its original condition, without transforming it into a musealization.

SDR: Some aspects are strictly bounded to new necessities of contemporary living. You have already discussed some of them: heat systems, thermic assets, fixtures frames. I would like to ask you to further analyze those aspects: which are the terms of comfort and security you demand to this house? How the chance to live in a “monument of modernity” do balance your small and big inconveniences?

GV: I have already spoken about some of these un-comforts. I have also told you which was our solution in order to live in the house: going somewhere else. I think this was the best possible compromise: in this way, we can benefit from this place also on a natural beauty point of view, beyond the house itself. In these images you are not able to see the landscape, which is something astonishing. Still today, the view continues to amaze us. So, living elsewhere, we were not forced to adopt this compromise.

SDR: You are underlining one of the biggest contradictions that the safeguard of an asset imposes us: in order to carry out the conservation of an object, sometimes, paradoxically, we give up in using it with the original function for which it was created.

GV: I have to admit that some intervention was made. We repurposed the space. As already stated, we no longer need the bedroom, instead of which we established a dining room.

We extended the living room to the original dining room area. We also sharpened the kitchen and the small bedroom located in the backside. Despite this, I think the spirit of this house remained intact, or that is what we state in order to convince ourselves. In addition, we took advantage of a further historical juncture: the architect Viganò was our neighbor. He owned a property nearby where he came on holidays. He also used to join us for dinner. So, a sort of formal monitoring helped us to follow a precise binary. Viganò, even though the modification interventions were not conceived by him, never condemned them, on the contrary, he accepted them. He also blessed those intervention, somehow, and this comforts us. Maybe today he would agree with me. I do not know, but conflicts never took place. This is what I remember.

SDR: My next question would have been if Viganò ever wondered about time passing in this house, and how architecture would have aged. Nevertheless, finding out that the

architect himself witnessed the transformation leads me to another question: why do we have to give up the fireplace? After all, it is forming part of the itinerary this object is living. This is a question I am posing to you as well.

GV: I think nowadays there is another big aspect regarding this house. My brother, who is an architect, always states “bring back the colors, do try to contain the abundance of modification on the past years”. However, I think the main topic about this house is the restoration of the structures. Today that’s what is worrying us and keeping us involved. We realized that, even though the house is an expression of Modernism, it requires an artisanal approach. It is not only about wondering how today we can build, rebuild, or restore a house. This special case needs the competence to cure the reinforced concrete bars, to clean them, to upholster with protective materials and to rebuild a handmade concrete layer. You can all imagine what this means, on both terms of competences and costs. I think it would be easier to recreate a Venetian stucco, as it is already proclaimed. Restoring reinforced concrete is not that affirmed. It is also interpreted as a maybe poorer approach, if compared to other treasures that Italy proposes.

SDR: this is a topic that also recurs on other interventions. We noticed it also in house Balboni: an artisanal approach dedicated to materials and techniques that usually we associate to industrial production. Nevertheless, once they enter the restoration process, they require attentions and operations that differ from the ones strictly bounded to industrial production where they partially come from. Thank you so much for your contribution, you have been so helpful in highlighting themes and topics that will enrich the final discussion and debate. We do hope to keep in contact with your family, both to know how the adventure in the house evolves, and for the draft of the acts, as also the inhabitants will be part of the polyphony of this day

bounded to the relationship between the modern living and the time. Thank you again.

SDR: I'll now hand the floor over to our friend and colleague Hannia Gomez. We've been working a lot together in the last year and we also have to thank, apart from her, Docomomo Venezuela and Foundation Planchart which allowed us to apply our research in the precise place you are standing right now. As maybe the Gio Ponti's aficionados have understood, Hannia is located at Villa Planchart in Caracas. Thanks to the study co-financed by Iuav and Docomomo Venezuela, this collaboration allowed us to start the process of knowledge that will lead to the elaboration of the Conservation Plan dedicated to Gio Ponti's creation. Hannia Gomez is President of Docomomo Venezuela, architect, architecture critic and strong academic of Gio Ponti's works of architecture. She's been curator of Villa Planchart and author, among the many publications, of the important volume "El Cerrito. La obra maestra de Gio Ponti a Caracas" (2008).

Today she is here with us with a particular role, as Hannia is daily overseeing the care and protection of this building, which she studied for so long. For this reason, we asked her a testament of the villa as a place inhabited by a special couple: Anala and Armando Planchart. Later, we asked her to describe us the transition from dwelling house to contemporary monument open to public activities: what does this represent on a protection point of view?

Hannia Gomez: Thank you so much for hosting me today. I am going to tell you a story, a path we are taking together and that we want it to end with the restoration of villa Planchart: it is like a dream we want to come true one day. In this moment I am inside the house, in the main living room. Today the house is the headquarter of the Planchart Foundation, a private organization that owns the house as well as another beautiful building, a house for the elders here in Caracas, capital city of Venezuela.

This house is not only very important in terms of being a Gio Ponti's masterwork, but it is also a place for cultural events of this Country. This is a condition that does put the road to its restoration under the spotlight. Everything we do here, everything we have done and everything the Planchart did from the beginning becomes a historical lesson for the region, for the Country. This building is not only a house, but also a monument of Modernity, that works within a cultural environment. It can be considered equal in importance to the University City of Carlos Raúl Villanueva, which is a World Monument of the UNESCO list since 2002. Villa Planchart is, in a certain way, under the necessity of being acknowledged as a world site too, because of its importance. This is why the restoration of the house needs to become a lesson for the region, for teaching how to approach such a delicate, elegant, and complicated project of architecture, considered a masterpiece, as Gio Ponti described it.

In the narration of villa Planchart there is a beautiful relationship with conservation practice. Living together with the restoration works has been a theme since the beginning. In 1957, when the Plancharts arrived in front of the glass door on the first day of the house after its construction, their life changed completely. They came here only with their luggage, nothing else. When they entered their new house, they entered into a whole new life: a new modern life, that absolutely changed them since that moment, also in their relationship with architecture. They were fans of architecture since always, but this appreciation increased when they started living in a house which was a Gio Ponti's work. This building took seven years to be completed. It was such a long path through the projects, the preliminary drawings, all the letters and all the exchanges and trips that Gio Ponti did to come here in Caracas from Milan: such a long distance to achieve this big house.

For the couple, it was a gradual learning of all the details, not only the building itself, but also a collection of furniture, objects of art, and many elements that are in the garden and everywhere in the house. This condition makes the house a very sensational and different object compared to many other projects in the world and makes the house such an outstanding example of modern living.

SDR: Hannia, you brought some photos to share with us. Would you please make some comments about them?

HG: The one you see is a very casual picture taken by Anala from the second floor (fig. 03). You can see Mr. Planchart sitting in the living room, where I am standing now. He is reading the newspapers in a very casual way, sitting on a lounge chair designed by Ponti. That is an image of domestic life for the Plancharts, one day in the 1960s when the house was already almost completed with all its decorations and works of art and also with the plans. This second photograph is from the 1960s too (fig. 04). In this image we can see Mr. Planchart in the studio-library. You can notice that there are many books, works of art, and pieces of design. In the third and fourth photo you can see his wife (figgs. 05-06). In one of the two pictures, she is sitting on a sofa in a room of the house while in the other one she is standing in the dressing room. As you can see the wooden doors are full of pics. Anala didn't like to have pictures of the family all around the house, so she decided to print and put all of them on the dressing room doors.

The Plancharts were a couple that soon learnt that the only way to continue living in their modern house was to make continuous conservation works. So, they learnt to do conservation and restoration works by themselves. They did that for many years after Ponti left the house for the last time. He came back here in 1967, ten years after his previous journey to Venezuela, and he found that his house, which opened in December 1957, was absolutely the same as he left

it. He was amazed to see how this dream house was absolutely conserved by the inhabitants.

In those ten years, in which these photographs were taken, the Plancharts were already carrying out their path to restoration. Their restoration works, indeed, were undertaken by themselves, so they cannot be considered a cultural action, like it is nowadays. In the previous presentations we met a lot of beautiful projects of restoration, focused on technical issues and conservation of Modern architecture. For the Plancharts it was different: it was a natural action by modern inhabitants, who knew that the only way to pay a tribute to Gio Ponti was to make the conservation of the house a reality.

When Anala Planchart was old, she wanted to leave a legacy for the future, so in 1975 she created the Foundation, which owns the house today. She had the idea to write a testament in which all the pieces of the architecture, the garden, and every single object of the collection had to become part of the conservation practices of the Institution. A will for the future, in which every object couldn't be separated from the other parts. This is the reason why today we still have the house with all the collections intact and treasured. I think that in the world there are very few houses of this quality, size, and importance that are conserved like this.

SDR: Your words reveal on one side the important role of Foundation Planchart as place of care, conservation, and management of the house but, on the other side, they underline aspect of Villa Planchart as 'heritage at risk'. A risk not connected to violent actions but to daily choices of access. Nowadays, in fact, the house is open to the public for different activities.

HG: Yes, but do not forget that we are not in Venezuela, which is today a high-risk country that you cannot fully understand. It is not only about pandemic: the country suffers from a terrible political and social crisis. This house

is continuously in danger, as it represents a culture of usage and a way of life that doesn't match the political system of Venezuela today. During these years of Chavismo, the Foundation has done a very impressive job of taking care of this treasure of Venezuela. A treasure that is filled with works of art of absolute importance. I can show you with the camera, here we have the biggest Fausto Melotti's work of art in the world. It is a very fragile work of art, and it is located here. All the collection is important, besides the architecture. The Foundation kept its activities and kept the house open through these years (fig. 07). This has preserved the house alive and safe. But it doesn't mean that this is enough. As I said before, this house should be listed as a World Heritage. The problem is that we need the help of a government that, actually, doesn't do anything to save its heritage.

SDR: Thank you so much Hannia for your contribution, may it be a good wish for the continuation of our work and dialogue with Caracas.



fig. 1. Casa La Scala by Vittoriano
Viganò, S. Felice del Benaco
1960s. (© Giovanni Vergani)



fig. 2. Casa La Scala by Vittoriano Viganò, S. Felice del Benaco 2021.
(© Giovanni Vergani)



fig. 3. Armando Planchart in the main living room of Villa Planchart, Caracas 1960s. (© Planchart Foundation Archive)



fig. 4. Armando Planchart in the Library-Studio of Villa Planchart, Caracas, 1960s. (© Planchart Foundation Archive)



fig. 5. Anala Planchart in the main living room of Villa Planchart, Caracas, 1960s. (© Planchart Foundation Archive)



fig. 6. Anala Planchart in her dressing room in Villa Planchart, Caracas, 1960s. (© Planchart Foundation Archive)



fig. 7. Piano concert in the main living room of Villa Planchart, Caracas, 2021. (© Hannia Gomez)

PART 2. ART AND VISIONS

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VENICE, 4-5TH MAY 2021

18 MY HOUSE IS A LE CORBUSIER

CRISTIAN CHIRONI

Artist

My House is a Le Corbusier is a project featuring the numerous domestic structures around the world designed by Le Corbusier, in which the artist resides for a period.

Both a work in progress and a crucible of ideas, research and exhibition – not to mention a living experience – *My house is a Le Corbusier* is intended to evolve over the long term and culminate in the totality of all the experiences that Cristian Chironi will undergo while actually living for variable periods of time in the many homes designed by Le Corbusier around the world.

The long-term project (which will unfold over the potential arc of 30 habitable homes by Corbusier in 12 countries) is a performance, stretched out over time, house after house. “Pilgrim houses”, inextricably tied to the movement and the intersection of diverse geographies and cultures.

The point of departure is a real historical episode: in the late 1960s, the Sardinian artist Costantino Nivola, who enjoyed a great friendship and collaboration with Le Corbusier, stopping by his hometown of Orani (also Chironi’s birthplace), entrusted his brother’s family with the construction of “Chischeddu” on a design by the great architect, with the hope that he and his sons, masons all of them, would scrupulously follow the plans. But they failed to understand the importance of this. Sometime later, returning from Long Island, Nivola discovered that the house they had built did not correspond at all to the

specifications which, as the entire family protested, “had neither doors nor windows and looked more like a shack than a house”. Nivola reacted by seizing the plans, which have since been lost. The house, which still stands today in Orani, built with a preference for low-brow functionality over the modernist vision of the architect, reflects only the ‘mood’, if that, of the original concept.

Taking inspiration from this episode, Chironi identifies the narrative potential for an analysis of a series of relationships in the contemporary, tied to the concepts of communication, reading and interpretation, with the consequent linguistic and socio-political implications. Falling, in this historical period of precarious economic stability, in the impossibility of owning one’s own home, bartering the freedom to live in the houses designed by Le Corbusier around the world.

Chironi turns these houses into “privileged vantage points” to better understand how the legacy of Le Corbusier is perceived today, and in what condition the “home of man” currently finds itself. A reading of architecture through storytelling and the direct experience of its spatio-temporal dimension, where one can discuss and see the artist at work, partake in events, consult the assembled material or simply drink a coffee.

Chironi lived in the Esprit Nouveau Pavilion in Bologna, in the Studio-Apartment in Rue Nungesser et Coli in Paris, with two passages in the city to the Swiss Pavilion and La Cité de Refuge, in Apartment 50 at the Unité d’Habitation in Marseille, Curutchet House in La Plata, in Chandigarh in one of the rooms of Pierre Jeanneret’s house, now converted into a museum, in apartment 258 of the Unité d’Habitation in Berlin, at Villa Perret-Jeanneret in La Chaux de Fonds.

For Chironi, living the architecture of Le Corbusier is like living in a work of art. It is through living that a benefit is brought to the house, restoring its right climate. The

inhabitant is the thermometer that protects the house by living it.



figs. 1-2. My House is a Le Corbusier (Esprit Nouveau), 2015. The first stop in this geography of habitation is the Esprit Nouveau Pavilion in Bologna. In the image the first phase of the residency with the creation of works of art and live events within the architecture. (© Cristian Chironi and FLC for the work of Le Corbusier)

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VENICE, 4-5TH MAY 2021

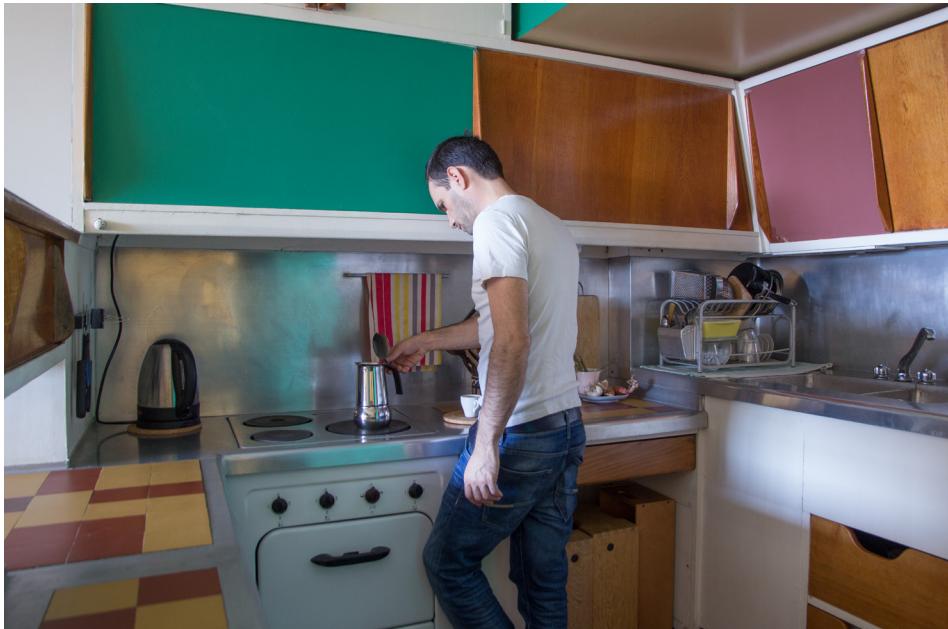




fig. 3. My House is a Le Corbusier (Studio-Apartment), 2015. The second stage of this geography of habitat settles in Le Corbusier's apartment-workshop which occupies the top two floors of the Molitor building. Chironi tried to get in touch with the living conditions and individual stories of the neighbors of the apartment, discovering how they adapted the dwelling to their way of life and raising the question of living together. (© Cristian Chironi and FLC for the work of Le Corbusier)



fig. 4. My House is a Le Corbusier (Cité de Refuges), 2014. Series of photographs taken by the artist during the demolition and restoration of the Cité de Refuges. (© Cristian Chironi and FLC for the work of Le Corbusier)



figs. 5-6. My House is a Le Corbusier (Appartement 50 - Unité d'Habitation), 2015. Appartement 50 is the third stage of Chironi's geography of inhabitation. Looked at through the present time, the Unité d'Habitation acquires further significance. Today there is a sense of detachment between architecture and society, the tendency is to invest in spectacle rather than essential living necessities. Living in the Unité d'Habitation in a time of forced migrations and asylum seeking, becomes even more valuable to the artist. He calls

for architecture and politics of construction to take an active role and think about new and affordable housing solutions. (© Cristian Chironi and FLC for the work of Le Corbusier)





fig. 7. My House is a Le Corbusier (Casa Curutchet), 2016. The design of Casa Curutchet is contemporary and in continuity with the ideas developed with the Unité d'Habitation in Marseille. Chironi adopted the same approach used in the previous events by focusing on the relationship between house and visitor, on the confrontation between different languages, on the impact of direct experience on the artist's work acting thus as a measure and thermostat of the present. By repeatedly redefining

his lifestyle, challenging the linguistic and cultural codes he is used to, exceeding the distinction of static and mobile living, Chironi research will start from the notions of hospitality of and interaction with the audience, and aim at finding a way to live the world. (© Cristian Chironi and FLC for the work of Le Corbusier)



fig. 8. My House is a Le Corbusier (Pierre Jeanneret Museum) 2017. The house is located in the fifth sector of the city of Chandigarh and was designed by Pierre Jeannette, cousin of Le Corbusier. It is now converted into a museum. Chandigarh blends all of the architectural studies carried out by Le Corbusier in his travels and is considered his masterpiece, an environment in which the primacy of the public upon the private space is eliminated in the construction of a work of art on an urban scale. The residence in Chandigarh aims to overcome that last remnant of the frontier

that separates permanence from mobility. House and city, corridor and street, interior and exterior are all on the same level. Walking about the city therefore creates an entrance into a new context, an adaptation to the culture and to the environment, absorbing it, transforming it and re-recreating it. A vision of the house in the form of a city and vice versa, to which corresponds the daily creation of documents, artifacts, actions, and interventions.

Chandigarh's future is in the hands of its inhabitants, and in their ability to fathom living in a space that offers no further possibility for development without risking its disfigurement.
(© Cristian Chironi and FLC for the work of Le Corbusier)



fig. 9. My House is a le Corbusier (Apartment 258 – Unité d'Habitation type Berlin), 2019. Apartment 258, now owned by Henrik and Natalia Svedlund, is the result of some changes made by the architect Philipp Mohr between 2016-18, with the intention of respecting the original plans of Le Corbusier. The building and its rooms were repainted by combining the architectural polychromy proposed by Le Corbusier in 1931, a range of colors composed of 43 "architectural colors" in 12 atmospheres. The same palette was used by Chironi to customize

his Chameleon, Fiat 127 Special car so called because of its ability to change color according to the building in front of which it stops. The work accompanies the artist in his movements. He was invited by the owners to live with them for a specific time, wanted to include the spouses Svedlund in the work-project giving him an active role and transforming them, Henrik artist-musician and Natalia brewing engineer, as real instruments, inspired by them for the realization of his works. (© Cristian Chironi and FLC for the work of Le Corbusier)



figs. 10-11. My House is in Le Corbusier (Villa Jeanneret-Perret), 2021. The Villa Jeanneret-Perret is Le Corbusier's first independent project. Built in 1912 in La Chaux-de-Fonds for his parents, clock face enameller father and pianist mother, who lived there for five years until 1917. Chironi has chosen to live in the attic of the house where he will have a simple bed and a work table, for a deliberately humble stay and as a return to the sources of the project. The musical performance My sound is a Le Corbusier was born from a sound laboratory which involves

three musicians, Diane Frutschi, Capucine Seuret, and Francesco Brasini. The first two musicians proposed a piece played on the piano which belonged to the architect's mother. An unpublished score was written by converting the measures of the villa into frequencies, and then into music. At the same time, Francesco Brasini created a collection of sound samples of clock sounds with which he plays and interacts live with the pianists. (© Cristian Chironi and FLC for the work of Le Corbusier)



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