



Paul Nelson, France-usa, Memorial Hospital in Saint-Lô, Normandy, France, 1948-1965, "*Clausstra*" façade detail. © Photographed by Donato Severo.

Architecture at the service of care: France-USA Memorial Hospital of Saint-Lô

BY DONATO SEVERO

The France-USA Memorial Hospital in Saint-Lô, Normandy (1948-1965), is known as one of the most relevant French Reconstruction projects. It is the first important work crafted by the French-American architect, Paul Nelson (1895-1979). His humanist approach inspired a series of unprecedented, meaningful and technical architectural innovations. The organization of the new hospital, based on functionality and modernity; polychromic and artistic inclusion; extended high-quality work, notably the "*claustra*" *façade*; ovoid surgical rooms and technical equipment are testimonies to the major quality and innovation pursued in the Memorial Hospital project. Paul Nelson's work brings into focus the rich and comprehensive relationship between architecture, arts and care.

One third of all Americans is ill-fed, ill-clothed, ill-housed and receives insufficient medical care.¹

Connections between architecture, arts and healthcare deeply marked the 20th century, one of tragedy and destruction without equal due to two World Wars. The richness and fruitfulness of these ethical, scientific and cultural connections between architecture and healthcare defined the century. To this day, health remains a political priority in Europe, as well as in the United States and around the world, and one of the most debated and most controversial issues in our society.

Our health reflects our surroundings, our habitat.

How to assure satisfactory quality of life for our future generations that is truly respectful of human health and environment whilst offering access to housing?

How to build a balance between humans, their habitat and its surrounding wildlife?

What health and environmental factors established and/or influenced our contemporary condition? How can architecture and arts contribute to our health?

Those reflections call for a renewal of project methodology, towards a new understanding of "healthcare" and a new balance between material and immaterial, functional value and architecture significance.

The connection between architecture and health affects the clinical sphere and hospitals, but also other facilities in the realm of public spaces. This sector of intervention is increasingly developing in our society. Evolution and obsolescence of architectural solutions, technical aspects and devices in the healthcare field are moving fast. Historical knowledge allows us to reflect on key features, consistencies and fractures as well as failures in this sector whose central problem is extremely sensitive and complex: Mankind's health.

The France-USA Memorial Hospital in Saint Lô (Saint Lô Hospital), Normandy – and Paul Nelson's work (1948-1965) – bring the relationship between architecture, arts and care into focus.

A historical analysis of this architectural object renders the essence of its double nature: testimony of the past and active protagonist of the present.

A Reconstruction masterpiece

The Saint-Lô Hospital is known as one of the most relevant French Reconstruction projects. Belatedly classified as a *Monument Historique*,² the construction was envisioned as a combination of structure, shape and function. The project of this hospital is based on human needs, with a constant concern for rationality as well as economical construction and exploitation.

The Saint-Lô Hospital is the first important work crafted by the French-American architect, Paul Nelson,³ in cooperation with Roger Gilbert, Marcel Mersier (1910-1974) and Charles Sébillote. Nelson's great desire was to assure the utmost well-being of those admitted to the health center. His humanist approach inspired a series of unprecedented, meaningful and technical architectural innovations. The organization of the new hospital, based on functionality and modernity; polychromic and artistic inclusion; extended high-quality work, notably the "*claustra*" *façade*; ovoid surgical rooms and technical equipment are testimonies of the major quality and innovation pursued in this project.

Two aspects of the 20th century

The Saint-Lô Hospital exemplifies two distinct and convergent narratives with its innovative and meaningful work.

The first is one of modern hospital architecture, as a main public health facility, focused on physical and psychological comfort for the patients as well as for the hospital staff,

prevention, space organization and technical hospital facilities. The second one articulates modern space, art integration and construction innovation, inspired by both Parisian artistic and architectural avant-garde and American culture.

Those two 20th century narratives reveal themselves in Nelson's tireless research work and his methodical genius that profoundly and irrevocably marked the history of reconstruction architecture. Nelson started the Saint-Lô Hospital project at 53 years old, in 1948.

During the 1930s, he conducted numerous studies and research, particularly in the hospital field.⁴ After WWII, Nelson enjoyed tremendous prestige: "Modern architecture prestige, as an intellectual property, combines itself with the more traditional artistic prestige of an architectural formation completed in Paris, and both are fueled by studies linked with the work of the Lille hospital complex."⁵ Nelson gained this recognition because of his dual commitment in 1940-1944 to culture and science as a counsel of the American Federal Administration, and political involvement as leader in the France for ever Movement, a national organization close to the France *Combattante* Movement. In America, Nelson dedicated his work to hospital studies, housing, urbanism and other, more detailed issues as the therapeutic effects of colors and standardization. In the aftermath of the WWII, his experimental work in 1940-1944 made him the most qualified to upgrade French architects' knowledge of American construction technics.⁶

After Nelson's death, Anatole Kopp (1915-1990) wrote an essential article⁷ which clearly revealed Nelson's work themes: social concerns, intransigent values, logic and rationality in the method, all of which contributed to bring architecture out of Beaux-Arts pseudo-artistic subjectivism. Nelson built only a few projects, but his work, with its rational methods and capacity to dialog with other disciplines and other sources of knowledge, was the start of a true revolution which gave 20th century architecture its cultural value.

The Saint-Lô Hospital is the result of Nelson's architectural studies in the 1930s and his further research on the "control of the form" in the 1940s. Nelson puts human needs at the center of: "the whole man, gut, sex, head, dreams included";⁸ he was also a utopian who causes us to reflect on the notions of well-being, colors therapeutic effects, the role of the health center in our society and its future, the "useless space", the "art to move from one volume to another, one form to another",⁹ and the concept of flexible envelopment.

The French-American architect knew how to bring life to a space. Nelson articulated: "...an architecture that frees the individual of the empiric sensation that life is imposed, by offering alternatives and allowing flexibility to his constructions, and to his future transformations; an architecture that stimulates human sensibility by using contrast in its volumes and forms."¹⁰ He later added: "And I think that is the foundation of all art: the art of living in the sense of enjoying, perceiving differences and appreciating those differences."¹¹ In creating the Saint-Lô Hospital, Nelson established several innovations, now considered as significant technical and

architectural fixtures. The surgical ovoid rooms, the lighting and the "*claustra*" façade are perfect examples. Those innovations are subject to an architectural, construction and technical detailed analysis, supported by archives, documents and other research materials.

Analytic approach and form control

Nelson conceived a building not only as a system of basic objects grouped together but more as a system of functions: programing, distribution, circulation, thermal, acoustical, structural (supported or supporting), and flexibility. Nelson's innovation touches on the general conception of the modern hospital, synthesized in the concept of *hôpital pour la vie* [hospital for life] – a hospital intended equally for the sick and the healthy. It also influenced the improvement and creation of several architectural, technical and functional facilities.

This kind of typology is the result of shaping, of using functionalism and plastic construction work in the modern space. Nelson used Modernism as a renewal and a call to reason. He never, however, overlooked esthetic and spatial structure.

Nelson described the hospital – using a tree as an analogy: the trunk represents vertical circulation; branches are the various floors; roots, the ground floor and basements. The construction plan is made so different medical services form a whole. The upstairs care services where patients are hospitalized are linked to the diagnostic and treatment services (radiology, laboratory, pharmacy, etc.). The radiology center, where social and preventive medicine consultants are located, is directly connected to the medical services.

The "*claustra*" façade

The South façade measures 107 meters in length, 32 meters in height and is composed of 6,180 "*claustra*" panels. In order to better benefit sunshine and daylight, the rooms' south wall is entirely made of glass panels – composed by 60 x 60 centimeter elements – allowing the patient to be in permanent connection with the outdoors. The idea of psychological conditioning is applied to the construction. The patient, even lying down, can enjoy the calm and relaxing landscape, as a distraction from suffering. The patient benefited from the light's bright ambience. The metallic grid dimensions avoided any aggressive external intrusion that may ruin intimacy or sense of security.

The "*claustra*" façade system allowed unrestricted ways to establish natural lighting.

As Nelson explained:

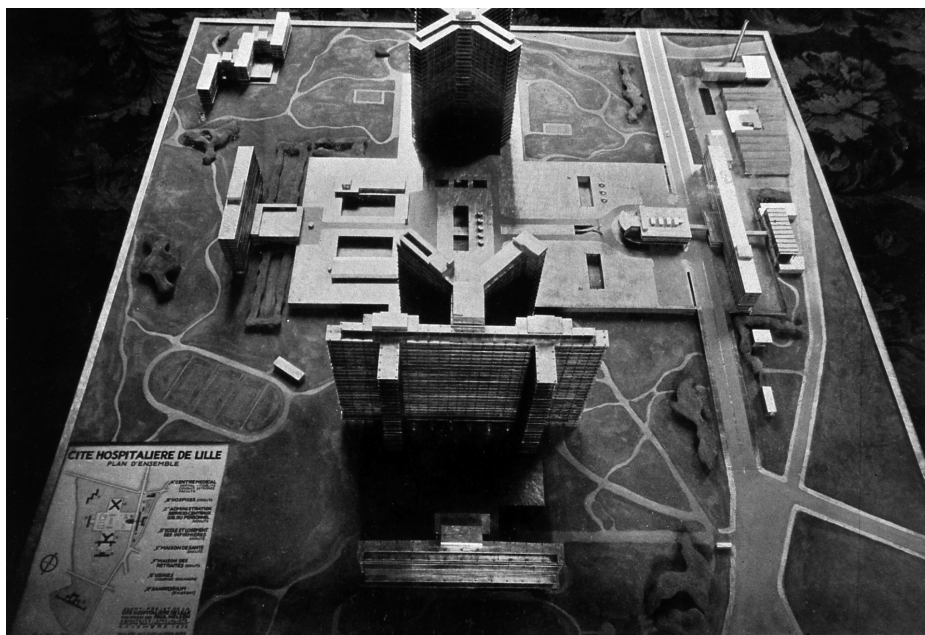
...to have everything open or everything closed, to adopt any solution, to fill those squares with transparent, translucent or opaque materials that is to find the unique mosaic corresponding to the lighting needs or corresponding to the residents liking.¹²

The colors of the metallic grid were chosen by Fernand Léger (1881-1955): the west side, close to the nurses' quarters, is blue; the remote east block is red; the ground floor, a continuous element with a different function than the hospital buildings, lemon yellow. The fixed or push-out

01 Paul Nelson, France-USA, Memorial Hospital in Saint-Lô, Normandy, France, 1948-1965, south *façade*. © Photographed by Donato Severo.



02 The site of the Memorial Hospital, in May 1951. © Saint-Lô Hospital archives.



03 Lille Hospital complex, model. © Photographed by Man Ray.

“*claustras*” are made with molded aluminum and retainers to maintain them open, half-open or closed. The “*claustra*” chassis are nested in one another around a U-shaped iron framework. This creates a streamlined form on the outside face. Its projection creates different perceptions and a different scenery depending on the viewpoint. At the foot of the *façade*, a walk in the park offers kinetic sequences, like the dimension Nelson discusses in the commentary on Pierre Chareau’s (1883–1950) Dr. Dalsace House. In 1933,¹³ Nelson wrote a published article wherein he mentioned: “Today’s man knows about space and moreover, about moving in the space. Simple plans and sections won’t satisfy architectural expectations but the fourth dimension, where time intervenes, can. It is necessary to create spaces crossable in a relative timeframe. We need to feel the fourth dimension.”¹⁴ For Nelson, the fourth dimension is the contrast between *dynamism* and *stasis*: “In architecture, the framework is static and carries what is or what should be eternal, immobile. Dynamism is completely independent from it, and is expressed by vertical and horizontal distribution, by thin and mobile partitions walls...”¹⁵ Later, Nelson stated about the Saint-Lô Hospital *façade*: “These outside columns are great modulation, music’s great *tempo*, and behind it, we find flute and violin playing, free forms, that is.”¹⁶

The “*claustra*” *façade* is a great example of synergetic redistribution of functions: the envelope is in synergy with the carrier and other sub-systems of lighting, isolation, ventilation etc. It is not basic functionalism where the object is specialized only “function by function”.

Modern polychrome

One of the most remarkable features of the Saint-Lô Hospital is undoubtedly the use of polychrome. Saint-Lô Hospital breaks away from traditionally flat and morose health center colors. Each building is distinguishable by its color, its volume and all are combined in an artistic whole.

The use of colors as a therapeutic tool originates from ancient Egypt and Greece and is deeply rooted in Chinese and Indian medicine. It is also a core part of ayurvedic medicine. In Europe and in the United-States, the interest around a therapeutic use of colors developed during the second half of 19th century.

In 1878, Dr. Edwin Babbitt (1828–1905) published *Light and color principle*, a writing wherein he advised of different ways to use colors in healing. In 1933, *The Spectro Chrometry Encyclopaedia* by Dinshah Ghadiali (1873–1966), an Indian scientist, is the foundation of most of modern research. Around the same time, a form of color therapy, known as “Syntonics”, was developed in the United-States, by Dr. Harry Riley Spitler (1889–1961) who discovered the possibility of creating deep psychologic and physiognomic changes by modifying the light’s color. Since then, the interest in color therapy has gradually grown. In the Modern Movement, its use was continuously debated between those who preferred a “pure, white” architecture, purists, and those who claimed the use of polychrome as an essential modern aspect.¹⁷ On this matter, Barbara Klinkhammer criticized the superficial historiographic approach:

Henri-Russell Hitchcock has identified three distinct uses of color, since the beginning of the Modern Movement: white omnipresence at first; then an increased interest in colors onto architectural buildings; finally, in 1930, the restricted use of raw materials colors only. This vision is too simplistic. The use of color has in reality known two different schools of thoughts: it is true that purist proponents were dominant. Yet, architects coming from the art world quickly adopted a polychrome modernity, where color supported artistic expression, actually anti-decorative, and was the tool of spatial expression and three-dimensional purism.¹⁸

It was also the case of Nelson who, like Van Doesburg (1883–1931), Taut (1880–1938), Le Corbusier (1887–1965) etc., was

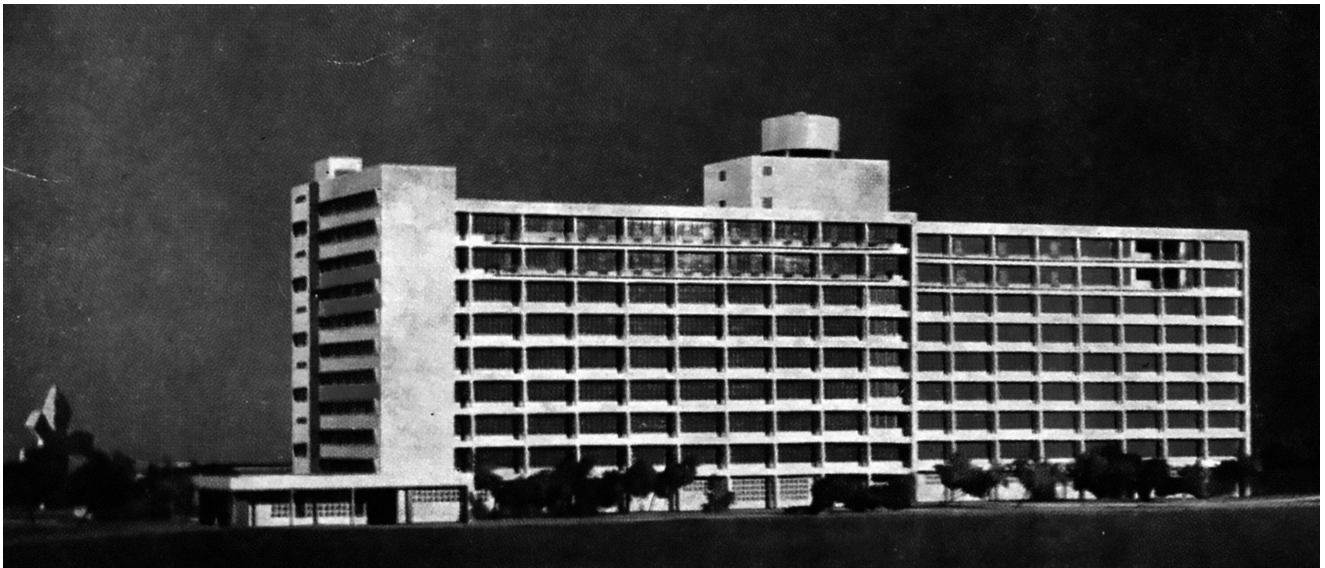


04 Paul Nelson, *le jour de l'inauguration*. © Saint-Lô Hospital archives.



05 Bedroom with a bright red wall. © Photographed by Etienne Weill. Published in *Cabiers du Centre Scientifique et Technique du Bâtiment*.

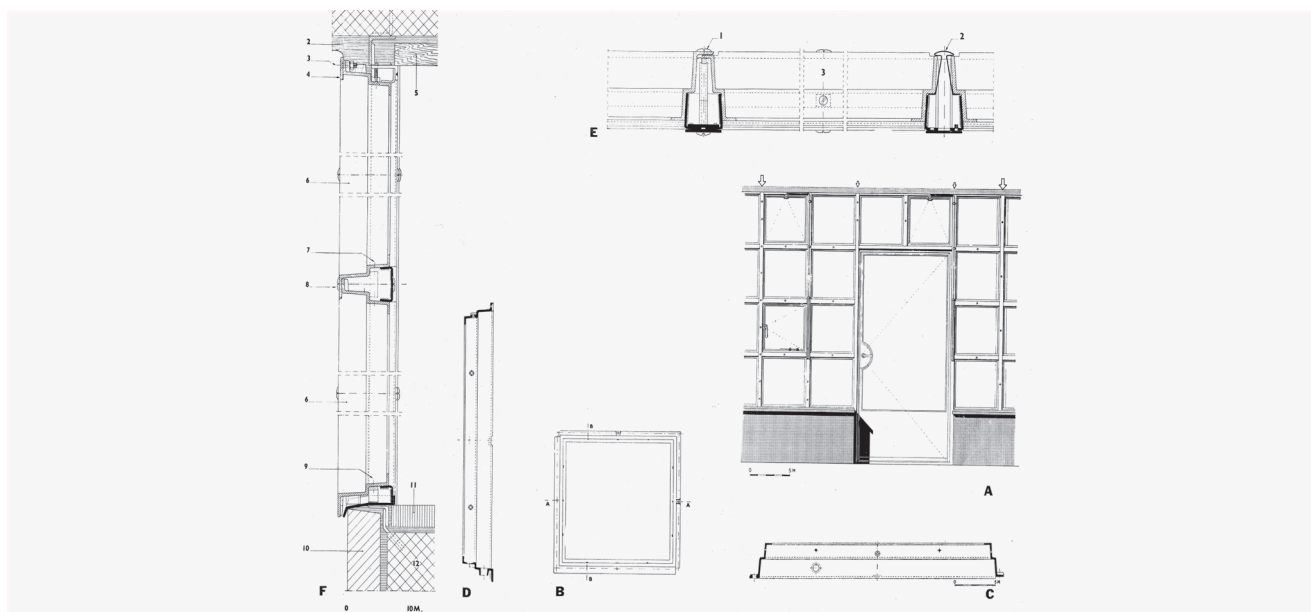
06 South *façade* polychrome project by Fernand Léger. © Postal card, private collection.



07 Paul Nelson, France-USA, Memorial Hospital in Saint-Lô, Normandy, France, 1948-1965, *la salle ovoïde*. © Photographed by Etienne Weill, Saint-Lô Hospital archives.



08 Paul Nelson, France-USA, Memorial Hospital in Saint-Lô, Normandy, France, 1948-1965, gate of Saint-Lô hospital, mosaic by Fernand Léger, detail. © Photographed by Donato Severo.



09 Paul Nelson, France-USA, Memorial Hospital in Saint-Lô, Normandy, France, 1948-1965, "Claustra" façade construction details. © Published in *L'Architecture d'aujourd'hui*, No. 70.

looking to connect artistic avant-garde research, particularly Cubism, and architecture.

Saint-Lô Hospital is not a simple transition from paint to architecture, under the influence of Cubism. The polychrome project of Saint-Lô is defined by three major characteristics.

Firstly, the application of polychrome is systematic onto large scale buildings. Secondly, the color is part of, and at the service of, the treatment. The therapeutic use of color, the "built-in color therapy", is – for Nelson – an integral element in the modern hospital conceptualization. The Saint-Lô Hospital is the first hospital in Europe that welcomed polychromy. Lastly, the polychrome is a kind of synthesis between Fernand Léger's (1881-1955) spatialization approach and Nelson's search for *an architecture that touches human's sensitivity*. The collaboration between the artist and the architect produced a continuity of research and joint projects that are the direct expression of an art synthesis.

The polychrome interior

To realize the polychromic composition of the Saint-Lô Hospital, Nelson relied on the enthusiastic collaboration of his close friend, Léger. From this resulted an enjoyable and joyful polychromy. The polychrome project of Léger, who worked on the Saint-Lô project from 1953 to 1955, right before his death, was applied to communal spaces, care services, several bedroom or corridors walls, depending on the space's function.

The color tones are warm and cheerful – lemon yellow, bright red, *veronese* green, *charron* blue – creating an exceptional atmosphere of life inside the health center.

The wall behind the headboard in the patients' rooms is bright red, while other walls are often in a lighter color. The rooms' floors are painted in vibrant colors. We can find colors on doors, hallway walls, on the aluminum framework

of the south façade's immense canopies. To further enrich this joyful polychromy, Léger created, at the hospital gate, under a peristyle, a 40 meters square mosaic. The pattern evoked the years 1939 to 1945, crucial in regards to France and the United-States' history. Bridgman (1865-1943) wrote about it:

This piece is the only work of decoration in the hospital. We could search hours for a superficial detail, a decorative appliqué, a molding or a useless plinth, in vain. This hospital would be the most austere health center if its sizing and its colors didn't make it a "euphoria-inducing" space. This characteristic is to the architect's merit, who took risks.¹⁹

The polychromy, as defined by Nelson, is an element that is fully part of the therapy: its purpose is not to decorate but to create a relaxing atmosphere, full of hope, that the patient can instinctively feel without having to analyze it or forcefully adapt to it.

Transient and authentic

The Hospital by its very nature is subject to continuous transformations: equipment miniaturization, profitability, acceleration of procedures and treatments, future discoveries, all of which can complicate the building's conservation.

The Saint-Lô Hospital has two main qualities: it is, simultaneously, one of the most significant modern works of 20th century architecture and also one of today's high-performing medical structures. This double purpose creates complex situations, concerning the site's heritage over time, and the implications for modifying, restoring, and keeping the building's authenticity. Modifications, alterations, metamorphoses endured by a large number of 20th century edifices attest to the vulnerability of those works.

This observation is directly linked to the evolution of our conception of durability, now different from when those earlier 20th century constructions were made.

The idea of a “transient, fugitive and contingent” [Baudelaire (1821-1867)] modernity and the short timeframe conception have impregnated architectural creation since the end of the 20th century. 20th century architecture, via continuous experiments of new construction technics and new materials, favored technical innovation more than durability and resistance to the test of time. Hence, to assure the sustainability of the perishable is the paradox of modern construction conservation. The conservation issue is directly linked to the edifice’s sustainability. To consider buildings as consumption goods to use and to throw away and to replace with new, more advanced versions, is understanding life as a short cycle. On the contrary, conceptualizing the building as an extension of the site, part of the geographic context, takes into consideration a longer life cycle. The Saint-Lô Hospital protective measures offer a new perspective, allowing for consideration of and planning for the conservation and restoration of some of the meaningful elements Nelson’s masterpiece.

Humanism

Architecture historiography has allowed a better understanding Nelson’s personality and architecture. The architect’s work is increasingly recognized as one of the most sophisticated modern results of research and as a major contribution to care and well-being in architecture. Of course, different issues remain to be addressed. If effectiveness and hygiene are two main objectives in modern health, the search for humanism in architecture is the main aim of the Saint-Lô Hospital project.

Humanization is, perhaps, Paul Nelson’s most significant theoretical and practical addition to 20th century history; a century of conflicts and unprecedented violence. Amidst these tragic stories, the Saint-Lô Hospital is a beacon of light, rationality, and generosity and the representation of humanism of 20th century architecture.

Notes

- 1 Franklin D. Roosevelt, 1937. Citation from Paul Nelson, “La transformation de l’architecture aux Etats-Unis”, in *Arts de France*, No. 5, 1946, 36.
- 2 The 24th September 2008, after a lengthy procedure, the Minister of Culture and Communication signed the decree No. 32, classifying the France-USA Memorial Hospital of Saint-Lô as a historical monument.
- 3 Chicago 1895 – Marseille 1979.
- 4 In 1948, Nelson, Beaux-Arts 1927 graduate, only built the Parisian Maison Brooks (1928), and the film set of “What a widow!” (1929). Between 1930 and 1938, he studied eight different projects, unrealised: Audio-visual Room in 1930, in Bronxville; Maison de Santé – Type minimum pour climat tempéré, 1930-1932; Cité hospitalière 1932-1933, in Lille; Pavillon chirurgical, 1934, Ismailia; National centre CBS in 1936, in New York; Suspended House in 1936-1938; Palais de la Découverte, 1938, in Paris, with Oscar Nitzschke and Frantz Jourdain; Theatre W.G.N., 1937-1938, in Chicago, with Fernand Léger. After 1948, fourteen other projects and major creations followed.
- 5 Gérard Monnier, *L’architecture en France, une histoire critique*, 1918-1950, op.cit, 334.
- 6 Ibidem.
- 7 Anatole Kopp, “About Paul Nelson”, in *L’Architecture aujourd’hui*, No. 205, Octobre 1979, 9.

- 8 Jean Hélion, “Terme de vie, terme d’espace”, in *Cabiers d’Arts*, Paris, Decembre 1935, 269.
- 9 Paul Nelson, “Un américain à Paris, interview de Paul Nelson” gathered by Charles Galpérine, in *Nôtre République*, 3rd February 1967.
- 10 “La Maison suspendue, Recherche de Paul Nelson” published by *L’Architecture vivante*, Paris, Editions Morancé, 1937, n.p.
- 11 Paul Nelson, “Un américain à Paris, interview de Paul Nelson”, op.cit.
- 12 Paul Nelson, “Un américain à Paris, interview de Paul Nelson” gathered by Charles Galpérine, in *Nôtre République*, 3rd February 1967, No. 250, 5.
- 13 Paul Nelson, “La maison de la rue Saint-Guillaume”, in *L’Architecture d’aujourd’hui*, Paris 1933, No. 3-4, 36.
- 14 Ibidem.
- 15 Ibidem.
- 16 “Un américain à Paris, interview de Paul Nelson”, op.cit., 5.
- 17 Furthermore, in 1925, Fernand Léger to Le Corbusier argued against generalised architectural purism: “(...) by imposing art purism on workers, we destroy fantasy, life’s charm: to do them good, we make them unhappy; this doesn’t make sense.” F. Léger, “L’esthétique de la machine”, in *Fonctions de la peinture*, Paris Gonthier, 1965.
- 18 Barbara Klinkhammer (Associate professor, University of Tennessee, Knoxville, USA, “White Modernism? One of the major misunderstandings in the reception of the Modern Movement”, in *The Reception of Architecture of the Modern Movement: Image, Usage, Heritage*, Jean-Yves Andrieux and Fabienne Chevalier, University of Saint Etienne, 2005, 245.
- 19 R. F. Bridgman, “Description de l’Hôpital Mémorial”, in *Techniques Hospitalières*, No. 131 and 132, August-September 1956, 75.

References

- NELSON, Paul, “Hôpital Mémorial France-Etats-Unis de Saint-Lô”, *Techniques Hospitalières*, No. 33, Paris, June 1948, 25.
- NELSON, Paul, “Collaboration artistes architectes”, interview à Paul Nelson, *Melpomène*, Paris, 16 December 1964.
- RILEY, Terence, ABRAM, Joseph, *The filter of Reason. Work of Paul Nelson*, New York, Columbia Books of architecture, Rizzoli, 1990, 152.
- SEVERO, Donato, “L’imaginaire de la lucidité. L’hôpital Mémorial France – Etats-Unis de Saint-Lô (1948-1956) Architecte: Paul Nelson”, *Faces*, automne 2000, No. 48, Genève, 2000, 56-63.
- SEVERO, Donato, “L’hôpital mémorial France-Etats-Unis de Saint-Lô. Une opération exemplaire de la Reconstruction”, *De la ville perdue à la ville reconstruite*, acte du Colloque de Saint-Lô, Caen, Presse Universitaire de Caen, 29, 30 September–1 October 2004, Université de Caen, 2008, 52-72.
- SEVERO, Donato, *Paul Nelson. Edition du Patrimoine*, Centre des Monuments Historiques, 2013, Paris, 192.
- SEVERO, Donato, *Paul Nelson et l’Hôpital de Saint-Lô. Humanisme, art et architecture*, Paris, Picard Editions, 2015, 256.
- SEVERO, Donato, “Architecture, art et santé. Le Centre hospitalier d’Arles par Paul Nelson”, *Monumental: Revue scientifique et technique des monuments historiques*, No. 2, Paris, Editions du Patrimoine, 2015, 32-35.
- SEVERO, Donato, “Polychromie thérapeutique et architecture. La collaboration entre Fernand Léger et Paul Nelson”, *Fernand Léger. Malerei im Raum*, Catalogue de l’exposition, Cologne, Hirmer Verlag, 2016, 130-160.
- SEVERO, Donato, “Fernand Léger et Paul Nelson. La Couleur, l’architecture et la santé”, *L’été 1954 à Biot. Architecture, formes, couleur*, catalogue de l’exposition, Paris, Réunion des Musées nationaux – Grand Palais, Biot 25 June–26 September 2016, 108-114.

Donato Severo

Architect and historian, Doctor in History of architecture - University of Paris I Panthéon-Sorbonne. He is an HDR (research supervising) professor, at the *École Nationale Supérieure d’Architecture Paris Val de Seine*. He is member of the EVCAU Laboratory and ICT – Université de Paris Research Laboratory.