

Phosphatvilles

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Territory,
Settlements and
Architecture
in the Moroccan
extraction site
of Ouled Abdoun

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Territory, Settlements and Architecture in the Moroccan extraction site of Ouled Abdoun

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MAMMA
MÉMOIRE DES ARCHITECTES MODERNES MAROCAINS



CASAMÉMOIRE

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New Cities and Residential Neighbourhoods of the 20th Century

New cities of the 20th Century: from Italy to Morocco

In the early 20th Century, during the fascist period, the phenomenon of the foundation towns characterised the Italian context.

A new emblematic city, with a strong symbolic value linked to the will to “mythicise” the Duce’s birthplace, is Predappio, built around the ancient Dovia, where Benito Mussolini was born; but this is not an isolated fact: there are around 150 newly founded towns in Italy.¹

The realisation of the first new cities during the fascist era was motivated by issues related to the wheat battle and agriculture, the rural function and the related aspects of land reclamation; among these, Mussolinia (nowadays Arborea), Littoria (nowadays Latina) and Sabaudia. From the primary sector, attention grew and expanded towards the industrial one, through the realisation of newly founded towns near the workplaces, intended to accommodate the working-class population and the related services; among the so-called company-towns, the “social city” of Valdarno, willed by Gaetano Marzotto, a textile entrepreneur. Connected to this, there was also the phenomenon linked to the mining industry, which led to the emergence of cities such as Carbonia, a company-town too. Moreover, other parallel experiences should not be forgotten, such as that of Tirrenia, a new city with a tourist vocation.

Although widespread in Italy in the period between the two world wars, the phenomenon of the foundation towns is also present abroad. In Morocco, its emergence is linked to the birth and development of the mining industry connected to the phosphorous extraction and the establishment of the OCP (Office Chérifien des Phosphates), an anonymous company founded in 1920 and still active, leader in the worldwide production of phosphate and phosphoric acid and one of the principal operators for fertilisers at global level. At the origin, OCP had the general direction in Rabat, ports in Casablanca and Safi, and mining sites in the territory of Khouribga and in Louis-Gentil (nowadays Youssoufia) the first extraction centre was initiated in 1921 in Boujniba, in the province of Khouribga, and progressively expanded, while the second one was founded between 1931 and 1933.²

For these mining centres, OCP wanted the realisation of new cities with production areas, administrative districts, buildings for services, and residential neighbourhoods for its employed personnel, European and Moroccan. This, in Khouribga, within the chronological fraction between 1924 and 1950, led to the realisation of the Ville des Cadres, with dwellings reserved for the OCP executives and employees (**fig. 1**), and the *Médina du Séchage*, for the OCP Muslim workers, to which was



1
Khouribga, European quarter with the dwellings and their garden. France Diplomatie, Ministère de l'Europe et des Affaires étrangères, Archives Protectorat Maroc, Sélection de la résidence générale, n. 008853, 1955.

1 Cfr. Pennacchi Antonio, *Fascio e martello. Viaggio per le città del Duce*, Laterza, Roma-Bari, 2009. On this topic, see also: Pellegrini Giorgio (ed.), *Città di fondazione italiane 1928-1942*, Novecento, Latina, 2011.

2 Cfr. Office Chérifien des Phosphates, *Office Chérifien des Phosphates. 1921-1946*, Éditions Africaines Perceval, Rabat, 1948; Jest Camille, *Habitat du Personnel Journalier Permanent de l'Office Chérifien des Phosphates*, in “Bulletin Economique et Social du Maroc”, 76, 1957, pp. 435-462.



then added a new medina.³ Located near the drying area, the ancient medina of Khouringa was planned by Edmond Brion, a French architect active in Morocco during the French Protectorate who knew the work of Le Corbusier and who, after the planning in Casablanca of the *Cité Cosumar* or *Cité de la Cosuma* (1932-1937), a *cit  ouvri re* for the Compagnie Sucr re Marocaine, a Moroccan sugar company founded by the Saint Louis company based in Marseille⁴, was commissioned to design the medina of Khouribga, as well as that of Boujniba, both edified between 1938 and 1940 by Moroccan craftsmen (figs. 2-5).⁵

The foundation of these cities led not only to new ways of planning and building in that territories, but also to the importation of innovative techniques, such as the Hennebique patent. As a matter of fact, the entrepreneur Fran ois Hennebique declined the “French conquest” by intending the expansion in African countries as an opportunity to experiment with and improve his process, identifying in it a potential for the economic and organisational system he had begun setting up in Paris in 1896.⁶ Hennebique had licenses in Morocco too but, like for the designing of medinas, adaptations to the local context occurred: constructions, such as the factory in Khouribga, show the employment of reinforced concrete with fossil aggregates, derived from the ancient presence of marine animals (fig. 6).

All these experiences contribute to document the transition from “the city of the past” to “the modern city”.⁷ At the same time, they require to start a reflection on their destiny, in view of their transmission to the future.

A first factor to consider is that “the city is above all an anthropological fact: it is given by the people who live in it, by the relationships that people weave, by their culture, by their shared heritage of histories, memories, myths and rituals that make it, precisely, a *communitas* [...] specific and individual, different from all the others”.⁸ In this regard, to the variations linked to use, which document the bond

2 Edmond Brion, *Cit  Cosumar, Casablanca*. Meffre Gislhaine, *Architecture marocaine du XX  si cle...*, op. cit., p. 173.

3

4

5

Edmond Brion, *Cit  Cosumar in Casablanca, Ancienne M dina du S chage* in Khouribga and the medina of Boujniba: the signs of time and use. Ph. G. Favaretto, 2023-2024.

3 In Khouringa, the so-called *Cit  du S chage* includes the *Ancienne M dina du S chage* and the *Nouvelle M dina du S chage*, the first of the 1930s and the second of the 1950s. Cfr. Jest Camille, *Habitat du Personnel...*, op. cit. See also: Avermate Tom, *Excavating the company town: Small Moroccan mining cities in European archives*, pp. 118-125, in Piaton Claudine, Godoli Ezio, Peycer  David (eds.), *Building Beyond The Mediterranean. Studying The Archives of European Businesses (1860-1970)*, Honor  Clair, Arles, 2012.

4 In Casablanca, Edmond Brion is the architect also of the *Cit  de la Socica (Soci t  Ch rifiennne de la Cit  Ouvri re Indig ne de Casablanca)* (1942). Moreover, after an initial project by Albert Laprade, Brion designed, together with Auguste Cadet, the 20th Century new medina too: the Habous quarter.

5 This is evidenced by wall plaques on the sites. See also: Jest Camille, *Habitat du Personnel...*, op. cit.; Meffre Gislhaine, *Architecture marocaine du xxe si cle. Edmond Brion et Auguste Cadet*, Senso Unico  ditions, Mohammedia, 2009.

6 Cfr. Frapier Christel, Vaillant Simon, *The organization of the Hennebique firm in the countries of the Mediterranean Basin: Establishment and communications strategy*, pp. 35-43, in Piaton Claudine, Godoli Ezio, Peycer  David (eds.), *Building Beyond The Mediterranean...*, op. cit.

7 Cfr. Chiodi Cesare, *La citt  moderna*, Hoepli, Milano, 1945 (1935’).

8 Pennacchi Antonio, *Fascio e martello...*, op. cit., p. 279 (author’s translation).

established over time between architecture and its inhabitants⁹, must be added those linked to the passage of time.

In Italy, entire portions of these newly founded cities result profoundly altered in their material consistency today. In Latina, the Nicolosi neighbourhood, a city fragment of social housing realised between 1934 and 1936, which takes the name from its author, Giuseppe Nicolosi, shows not only transformations due to the changing living requirements, but also phenomena of obsolescence principally linked to construction techniques and the industrially-produced materials decay. These phenomena began to manifest themselves shortly after the inauguration period and led to degradation mechanisms, sometimes very relevant, such as the plasticisation of the bituminous membranes on the flat roofs with consequent infiltration of rainwater, the expulsion of the iron cover of the reinforced concrete structures and artificial stone claddings, the oxidation and corrosion of the smooth reinforcement bars and, more generally, of the iron elements, and the swelling and detachment of plasters and paint layers. In addition to this, there are the phenomena of capillary rising and the deterioration of fixtures, whose inefficiency led to several replacements over time, as well as the anthropic degradation, principally due to the insertion of plant engineering apparatuses, affecting the reading of the façades, and the abandonment of green areas and common spaces (fig. 7).¹⁰

All these issues imply a reflection on the preservation and safeguarding of a widespread and often unprotected heritage, but with a high testimonial and documentary value.

Noteworthy is the experience of Carbonia: on the one hand, its functional structure and urban plan organisation result very similar to those of the abovementioned Moroccan foundation towns; on the other hand, recent operations aimed at protecting and valorising it at different scales.

Carbonia owes its birth to a collective and choral work which constituted the response to the construction of a new town for the workers of the Serbariu mine, discovered as part of the autarchic policies following the sanctions by the League of Nations in 1935. The “coal city” was built immediately after Latina, in less than a year, between 1937 and 1938, for the Azienda Carboni Italiani (A.Ca.I.), although the building activity continued even after its inauguration, until 1942. Guido Segre, the first President of A.Ca.I., was the initiator of the foundation of Carbonia, whose authors of the founding plan are



9 For this topic, see the paragraph *Demonstrative, experimental and residential Modern neighbourhoods* in the present essay.

10 On Littoria and the project and destiny of the Nicolosi neighbourhood, see: Cefaly Pietro, *Littoria 1932-1942. Gli architetti e la città*, Casa dell'Architettura, Latina, 2001; Nicolosi Giuseppe, *Le case popolari di Littoria nel quadro degli attuali orientamenti della edilizia popolare in Italia*, in “Architettura”, 1, January, 1937, pp. 21-35; Di Resta Sara, *Il Quartiere Nicolosi a Latina (1934-1936): storie di integrazione e nuovi orizzonti per la conservazione dell'edilizia popolare del primo Novecento*, pp. 167-177, in Biscontin Guido, Driussi Guido (eds.), *Le nuove frontiere del restauro. Trasferimenti, Contaminazioni, Ibridazioni*, Arcadia Ricerche, Marghera Venezia, 2017. See also the paragraph *Demonstrative, experimental and residential Modern neighbourhoods* in the present essay.

6

Hennebique patent in Morocco. The reinforced concrete structure with fossil aggregates of the *Usine de Séchage* in Khouring. Ph. G. Favaretto, 2024.

7

Giuseppe Nicolosi, Nicolosi neighbourhood, Latina, Italy. Recurring issues: the deterioration of surfaces and alteration of façades, 2016. Di Resta Sara, *Il Quartiere Nicolosi a Latina (1934-1936)...*, op. cit., p. 171.



Gustavo Pulitzer-Finali, a Jewish architect from Trieste who already planned Arsia, another coal city, and the Romans Cesare Valle and Ignazio Guidi. They designed the public spaces of the city and its main architecture together with Eugenio Montuori, who was part of the group of architects who won the competition for Sabaudia and who will be the main author of the expansion phase of Carbonia, for which Pulitzer-Finali will no longer be present due to racial laws. Although the heterogeneity of their contributions, between monumental rhetoric and avant-garde aspiration, which represent an expression of the architectural oscillation that characterised the fascist regime period, the authors gave shape to a unified project, with a sampling of ideas and formal and building solutions providing a significant material proof documenting the autarchic period, the founding towns phenomenon, and the debate not only on the shape of the modern city, but also on the modern living theme. Especially, the city was planned to link the industrial complex, city infrastructures, urban fabric, public architectures, and residential buildings, for the director, managers, workers and miners, including detached

homes, economic housing and collective and intensive houses, precisely located in different quarters of the city (**figs. 8-10**).

Since the post-war period, however, a critical situation emerged for contexts such as Carbonia due to the crisis in the mining industry, which determined the gradual closure of the sector companies. This led to the abandonment of an extensive heritage, and sometimes to the demolition of some buildings and structures, and raises questions about the future of these cities.

In 1991, the Administration of Carbonia decided to launch a programme aimed at safeguarding this widespread, identitarian and documentary built heritage. Within the framework of this programme, also with the involvement of University, it have been carried out the requalification of public spaces, and interventions on architectures such as the Dopolavoro building, a complex designed by Pulitzer-Finali, with a cinema-theatre and a lictoria tower, and the Church of San Ponziano, conceived by Valle and Guidi; a Coal Museum has also been realised in correspondence with the industrial spaces, at the Great Mine of Serbariu, with a project for the preservation and reuse of the existing heritage. In addition, it has been studied and developed CIAM (Carbonia Itineraries of Modern Architecture), a project for a diffuse and open-air museum of the city, made up of a set of places within itineraries that aim to narrate the historical-architectural events of the city (**fig. 11**).¹¹ Nevertheless, such operations represent isolated cases. All these experiences constitute built facts which document the found-

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Carbonia, Italy. Eugenio Montuori, clerical workers' homes, 1938; Technical Office A.Ca.I., workers' homes, 1939; Eugenio Montuori, experimental intensive houses, 1939-1940. Peghin Giorgio, Sanna Antonella, *Carbonia...*, *op. cit.*, pp. 139, 154, 163.

11 On Carbonia, its birth and development, see: Peghin Giorgio, Sanna Antonella, *Carbonia. Città del Novecento*, Skira, Milano, 2009; Peghin Giorgio, *Quartieri e città del Novecento. Da Pessac a Carbonia. La tutela del patrimonio urbano moderno*, Franco Angeli, Milano, 2010; "DOCOMOMO Italia giornale", monographic number, 26, May, 2010.

datation of cities, as well as themes of development and social redemption. Sometimes the authorial component linked to the notoriety of their designers is not predominant, as in the case of the Nicolosi neighbourhood or the Valdagno “social city”, commissioned to the architect Francesco Bonfanti. But they are experiences which contribute to document an architectural and social phenomenon, whose transformations and manifestations of decay involve technical and cultural reasoning to refer not only to individual architectures, but to entire urban sectors, whose destiny encompasses issues related to the conservation and restoration project, as well as requires broader actions for an intervention at not only architectural but also urban scale. At the same time, probably, “we must ask ourselves why we would and should save that heritage or, rather, what and what part of it, given that saving the whole is impossible because of the scale of the problem but, above all, because the culture and society that produced that whole have now disappeared”.¹²

Demonstrative, experimental and residential Modern neighbourhoods

A manifesto-neighbourhood, the Weissenhof estate in Stuttgart constitutes a central experience in dealing with the theme of Modern neighbourhoods; moreover, it is here that, for the first time, the issue of protecting and safeguarding the 20th Century architectural heritage was raised with an unprecedented systematic commitment.

In the mid 1920s, when the city of Stuttgart decided to organise the exhibition *Die Wohnung*, it entrusted the responsibility for it to Ludwig Mies van der Rohe, the then vice president of the *Deutscher Werkbund*. It was he who wanted architects such as Le Corbusier, Walter Gropius or Peter Behrens among the protagonists of this initiative: Mies wanted to select the authors who had most distinguished themselves, among his contemporaries, in theorising and putting into practice the new ways of building and living. But the Weissenhof estate is a neighbourhood rapidly transformed by time and use. A first discrepancy occurred at the moment of the transition from the planned to the constructed phase.¹³ Subsequently, after the buildings realisation and the exhibition opening in 1927 (fig. 12), architectures began to be modified, becoming a place to live and experiment the new proposed principles. In 1938, the inhabitants were driven out of their houses due to the will of demolish the neighbourhood by Nazism; the World War II

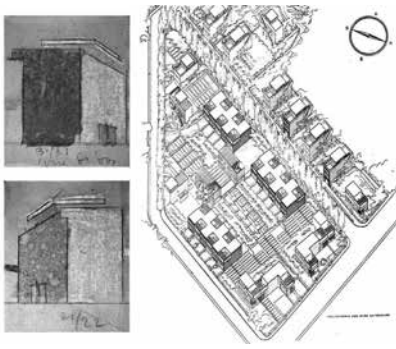


12 Musso Stefano Francesco, *Restauro e “città moderna”*, p. 28, in Peghin Giorgio, Sanna Antonello (eds.), *Il patrimonio urbano moderno. Esperienze e riflessioni per la città del Novecento*, Umberto Allemandi & C., Torino, 2011 (author’s translation).

13 Eloquent are the ironic period postcards about Le Corbusier’s absence on the building site, which he decided to entrust to Alfred Roth, a young collaborator of the Parisian studio, who moved to Stuttgart for the time needed for construction. His contribution was substantial: to him are owed many executive details, the choice of various products such as Linoleum, the plant engineering schemes and the design of the furnishings inspired by those of the *Pavillon de l’Esprit Nouveau*. Cfr. Faccio Paolo (ed.), *Le Corbusier Sette Architetture. Conoscenza e conservazione dell’architettura del XX secolo*, Altralinea, Firenze, 2016.

11 Carbonia, Italy. Gustavo Pulitzer-Finali, former Direction building, today Cinema Factory, at the entrance of the Great Mine of Serbariu with a Coal Museum. Conservation and reuse of the complex with one of the elements designed for different points of the city for the telling of its history and architecture. Ph. G. Favaretto, 2024.

12 Willi Baumeister, poster for the *Die Wohnung* exhibition, Stuttgart, Germany. The new ways of living. Weissenhofmuseum im Haus Le Corbusier. Ph. G. Favaretto, 2017.



brought it to a halt, but bombings hit some of the buildings. In the 1950s, the recognition of the historical-testimonial value of these architectural works led to the imposition of a protective constraint that represents “probably the first case of legal protection of a complex of buildings just over thirty years old”¹⁴, and already in the 1970s, given the state of conservation of the complex, the intervention for its transmission to the future was announced. Nevertheless, carried out between 1981 and 1987 and despite the documentary and economic commitment, the intervention did not translate itself into the effective protection of the existing buildings, but rather into the reproduction of their presumed original image through the restitution of a sort of “life-size model of what no longer exists”.¹⁵

Another “author’s quarter”, almost contemporary with the Weissenhof estate but located in France, is the *Cité Frugès* in Pessac. It is a social housing neighbourhood, built between 1924 and 1926, designed by Le Corbusier and Pierre Jeanneret for the French industrialist Henry Frugès who, enchanted by the new principles that were being theorised and put into practice, commissioned them the design of these housing units for the workers of his sugar factory near Bordeaux, which were to be inexpensive, avant-garde and combine art and social progress.

Therefore, when Le Corbusier designed his houses for the Weissenhof estate, he had already completed many works, including this, and was certainly one of the most important exponents of the Modern Movement. These realisations are true manifestos of his thinking on architecture, based on the achievements made possible by the new building systems and serial production which, as it is evident at the Weissenhof and in Pessac, should not be translated into the production of a single type of house. On the contrary, industrialisation and standardisation could respond in a revolutionary way to different needs and thus, in this sense, they show their flexibility. But of extreme importance is also the use of colour in the façades and interiors of these works, related to Le Corbusier’s painting experience (fig. 13).

In 1984, Fulvio Irace published an article in “Domus” highlighting the risk of succumbing for the buildings at the Weissenhof estate due to the undergoing intervention, and showing some pictures denouncing the state of preservation of the Frugès neighbourhood at that time, together with its transformations (fig. 14). Also in the latter, the degradation phenomena related to the degenerative processes of the existing matter were evident, as well as the readaptation of the housing cells (which remained unoccupied until 1929, when the complex was connected to the water network). But with that article Irace highlighted a further reflection issue: “the destructive action of historical time and material degradation has been quite simply a natural accelera-



13
Le Corbusier, *Cité Frugès*, Pessac, France. Axonometry of the neighbourhood, houses and study of the polychromy. *I clienti di Le Corbusier*, monographic number of “Rassegna”, 3, July, 1980, p. 64.

14
Le Corbusier, *Cité Frugès*, Pessac, France. Degradation and readaptation of some housing cells. Irace Fulvio, *La conservazione del Moderno*, op. cit., p. 4.

14 Boriani Maurizio, *Obsoleto prima ancora che storico. Conservare il “moderno”?*, p. 8, in Boriani Maurizio (ed.), *La sfida del Moderno. L’architettura del xx secolo tra conservazione e innovazione*, Unicopli, Milano, 2003 (author’s translation).

15 Dezzi Bardeschi Marco, *Conservare, non riprodurre il moderno*, in “Domus”, 649, April, 1984, p. 11 (author’s translation).

tion of disintegrative germs already harboured in the material development of those mythic buildings".¹⁶ The fate of these works seems indeed to be quite inherent in the idea of architecture that underlies their construction.¹⁷

This is certainly a fact: these architectures were born to be an expression of the spirit of that time, they were not born with the aim of lasting for a long time. However, it is equally true that these works are a heritage for us today, and identifying operations aimed at their safeguarding does not mean denying the reasons for these architectures, but being aware of them and documenting this aspect as well, with a view to their transmission to the future, by slowing down and governing their ageing.

On the contrary, the intervention carried out at the *Cité Frugès* led to the subtraction of the signs by time and transformations by use documenting the being of these buildings, as well as to the loss, through its reproduction, of the survived material fraction able to document the highly characterising polychromy of the Le Corbusierian site.¹⁸

After these experiences, it is since the 1920s and especially in the 1930s, that Italy saw the edification of foundation towns¹⁹, alongside the realisation of new Modern neighbourhoods. In Latina, the Nicolosi neighbourhood was built – as already mentioned – between 1934 and 1936 and, like the *Cité Frugès*, was a working-class district. The design of the workers' house constituted a privileged theme in those years in Italy, both for its social implications and the ability to reflect the populism of the regime; it is a theme that recovers the already initiated international experimentations, and shows references to the Siedlungen experiences. Located beyond the perimeter of the city structure drawn up by Oriolo Frezzotti in 1932,²⁰ the Nicolosi neighbourhood was realised in three lots for the Istituto Fascista Autonomo per le Case Popolari (IFACP) to provide housing for the workers engaged in the reclamation and construction of the foundation town who did not have the means to build their own houses. A further aim was to keep the edification times down. This did not converge, however, in a limitation for the architec-

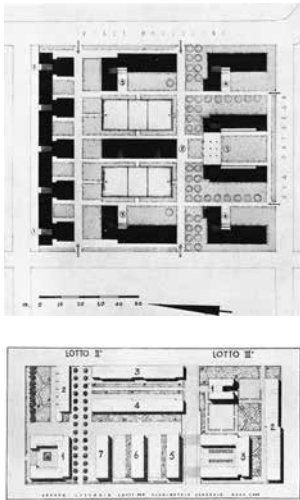
16 Irace Fulvio, *La conservazione del Moderno*, in "Domus", 649, April, 1984, p. 4.

17 Cfr. Le Corbusier, *Architecture, the expression of the materials and methods of our times*, in "The Architectural Record", 66, August, 1929, pp. 123-128.

18 For the *Cité Frugès*, its transformations, and the restoration of Le Corbusier's work, see also: *La conservation de l'œuvre construite de Le Corbusier*, Éditions Fondation Le Corbusier, Paris, 1990; Giambruno Mariacristina, *I quartieri del "moderno" tra trasformazione e conservazione*, pp. 93-100, in Boriani Maurizio (ed.), *La sfida del Moderno...*, op. cit.; Peghin Giorgio, *Quartieri e città del Novecento...*, op. cit.; Caccia Gherardini Susanna, *Le Corbusier dopo Le Corbusier. Retoriche e pratiche nel restauro dell'opera architettonica*, Franco Angeli, Milano, 2014; Di Resta Sara, "Less is (still) more". *Il restauro dell'architettura razionalista: un quadro di insieme*, pp. 78-89, in Delizia Francesco, Di Francesco Carla, Di Resta Sara, Pretelli Marco (eds.), *La Casa del Fascio di Predappio nel panorama del restauro dell'architettura contemporanea. Contributi per aiutare a scegliere*, Bononia University Press, Bologna, 2015.

19 On this topic, see the paragraph *New cities of the 20th Century: from Italy to Morocco* in the present essay.

20 After the expansions envisaged by the PRG (Piano Regolatore Generale) drawn up by Luigi Piccinato, with Valori, Carletti and D'Erme, in 1972, the Nicolosi neighbourhood from periphery has become centre.



tural design: these dwellings had to meet the needs of everyday life and should not propose any discrimination, in an affirmation of architectural and social values (figs. 15-16).²¹ As anticipated, several are the new urban settlements realised in Italy in those years, such as the Tiburtino III neighbourhood in Rome, designed by Giuseppe Nicolosi himself, in this case with Roberto Nicolini, as part of a once again unified and sequential programme, with lots constructed from 1935 to 1942.

These quarters, as it often happens, are not manifesto-neighbourhoods, such as the Weissenhof estate, or districts designed by architects of international renown, such as the *Cité Frugès*. Nevertheless, they are “humble” but not marginal documents of the 20th Century.

Besides, these are precisely the experiences of social housing neighbourhoods that preceded the INA-Casa actions (1949-1963), established under the Fanfani Law through an extended and comprehensive public housing plan implemented in the transition from the postwar reconstruction to the economic boom.²² The previous ones and these, therefore, document respectively significant housing policies and intervention strategies for social housing districts in the early and late 20th Century.

Realised between 1950 and 1955, the Harar neighbourhood in Milan constitutes an emblematic example, which involved well-known 20th Century Italian architects, such as Luigi Figini, Gino Pollini and Gio Ponti who drew up the urban plan, and represents one of the highest achievements of the INA-Casa plan, which played a fundamental role in Italian architectural culture. The Harar neighbourhood was planned in a suburban area at the time of its realisation, following a recurring practice of decentralising the newly built neighbourhoods. It presents green common areas, services and two different building typologies, with experimental housing solutions. The “insulae”, single-family houses designed by Figini and Pollini, are in turn of two types: two-storey, and staggered also to avoid introspection problems, and single-storey, isolated and with single or double sloping roof pitch. Characterised by roof tiles and brick side walls, evoking the local building tradition, and plastered surfaces where loggias and windows with shutters open, they denote a high quality of the domestic spaces and private greenery project; at the same time, they show some following adaptive interventions by residents. Recalling the experience of Le Corbusier’s *Unité d’Habitation* in Marseille (1947-1952) and supported by a reinforced concrete structure, the “horizontal skyscrapers” are instead multi-storey in-line building blocks that synthesise aspects of the research on the theme of the high-density economic house. Among the designers, in addition to

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Giuseppe Nicolosi, Nicolosi neighbourhood, Latina, Italy. Intervention of social housing, plan of the first, second and third lot. Nicolosi Giuseppe, *Le case popolari di Littoria...*, op. cit., pp. 21, 27.

21 Today, it is still a working-class neighbourhood that continues to be a place of housing rights and a proof of the search for a social redemption of both those who leave and those who arrive. For the context and the references to deepen this experience, see the paragraph *New cities of the 20th Century: from Italy to Morocco* in the present essay.

22 On this topic, and some related experiences, see: Capomolla Rinaldo, Vittorini Rosalia (eds.), *L’architettura INA Casa (1949-1963). Aspetti e problemi di conservazione e recupero*, Gangemi, Roma, 2003. See also: Stenti Sergio, *Housing in Italia. Dalle case popolari all’edilizia sociale privata 1903-2015*, CLEAN, Napoli, 2023.

Figini and Pollini: Gio Ponti, together with Gigi Gho' for the "white and yellow house" and Antonio Fornaroli for the "white and red house", and Piero Bottoni, with Mario Morini and Carlo Villa (figs. 17-19).²³

In parallel, if in Milan the BBPR studio, Franco Albini, Gianni Albricci, Ignazio Gardella and Enrico Castiglioni were committed in the edification of the Cesate INA-Casa neighbourhood between 1951 and 1958, in Rome Adalberto Libera was engaged, between 1950 and 1954, in the realisation of the Tuscolano III horizontal housing unit, which constitutes the third sector of the Tuscolano neighbourhood, as part of this larger INA-Casa project carried out in three sequential phases. Bounded by a wall enclosure with tuff cladding, it has a single entrance marked by a double-sloped barrel vault in reinforced concrete, in correspondence with the services spine. Subjected to transformations over time, the quarter shows an articulation of open and built spaces: a horizontal city, with a collective housing unit in a horizontal skyscraper and, around, houses which deals with the theme of the patio, declined in its collective and private function.²⁴ All themes that show an evident reference to Moroccan living. As a matter of fact, this project was defined by Libera precisely in the light of his trip to Morocco in 1951 (fig. 20).

In the following year, while the representative of the CIAM (Congrès Internationaux d'Architecture Moderne) group of the French ASCORAL (Assemblée de Constructeurs pour une Rénovation Architecturale), operating since 1942, was Le Corbusier, and the main delegate for Italy was Enrico Peressutti, the one for Morocco was Michel Écochard.²⁵ In 1953, GAMMA (Groupe d'Architectes Modernes Marocains), the CIAM Moroccan group accepted as a full member of CIAM in 1951 and presided by Michel Écochard and Georges Candilis, who organised it,²⁶ showed the "Habitat for the Greatest Number Grid" at the CIAM 9 in Aix-en-Provence, that dealt with the issue of the shabby built environment of the *bidonvilles* at the Carrières Centrales neighbourhood in Casablanca.²⁷ Following



23 Cfr. *Aspetti del quartiere INA-Casa di via Dessiè a Milano*, in "Domus", 270, May, 1952, pp. 9-15. After the interventions carried out on some of the neighbourhood's architectures, such as the one designed by Bottoni, Morini and Villa, or that by Figini and Pollini with the placement of external lift shafts, the proposal to remake the façades of the latter motivated by the application of the 110% Superbonus led to the request for the protection of this residential unit and the entire neighbourhood.

24 For the Tuscolano neighbourhood and its transformations over time, see: Capomolla Rinaldo, Vittorini Rosalia (eds.), *L'architettura INA Casa (1949-1963)*..., *op. cit.*

25 Cfr. Rogers Ernesto Nathan, Sert José Luis, Tyrwhitt Jaqueline (eds.), *CIAM. Il Cuore della Città: per una vita più umana delle comunità*, Hoepli, Milano, 1954, p. 156.

26 Cfr. Mumford Eric, *The CIAM Discourse on Urbanism, 1928-1960*, The MIT Press, Cambridge (MA), London, 2000.

27 The experience presented was developed by the Service de l'Urbanisme du Maroc based in Rabat, under the leadership of Écochard, appointed as the head of the country's planning department by Eirik Labonne, resident general of Morocco's French Protectorate. For the construction of the Modern Casablanca, see: Ecochard Michel, *Casablanca. Le roman d'une ville*, Éditions de Paris, Paris, 1955; Avermaete Tom, Karakayali Serhat, von Ostern Marion, *Colonial Modern. Aesthetics of the Past - Rebellions for the Future*, Black Dog Publishing, London, 2010; Avermaete Tom, Casciato Maristella, *Casablanca Chandigarh. A Report on Modernization*, Park Books, Zürich, 2014; Dahmani Imad, El Moumni Lahbib, *Modern Casablanca Map*, MAMMA Group, Casablanca, 2019.

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Harar neighbourhood, Milan, Italy. "Insulae" with private garden and "vertical cities" by Luigi Figini, Gino Pollini, Gio Ponti and Gigi Gho'. Ph. G. Favaretto, 2024.

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Adalberto Libera, Tuscolano III horizontal housing unit at Tuscolano neighbourhood, Rome, Italy. Houses with patio and "vertical city". Capomolla Rinaldo, Vittorini Rosalia (eds.), *L'architettura INA Casa (1949-1963)*..., *op. cit.*, p. 434.



the presentation of the Grid introduced for the first time by Le Corbusier at the CIAM 6 in Bridgwater in 1947, a town-planning grid shaped as a matrix of 21×31 cm, the proposal of the GAMMA Grid provided, as the most important planning instrument, *la trame* Écochard, a housing grid of 8×8 m, with large and small public spaces, perimeter walls and a few rooms for each house, around a patio, a very important outdoor living room. This led to the planning of *cités horizontales*, in which it also had to emerge a *citée verticale*, a hub for spatial and social beacon with houses, public spaces, services, centres for education and worship which, at the Carrières Centrales in Casablanca, was designed by Georges Candilis, Shadrach Woods and Vladimir Bodiansky, architects of ATBAT-Afrique, the African branch of the Atelier des Bâtitseurs founded by Le Corbusier in 1947, together with the engineer of the branch Henri Piot (figs. 21-22).

In those years, while in Khouribga the new medina began to be built (fig. 23),²⁸ these architectural principles were affirmed and extended through built realisations which, over time, showed considerable transformations for the subsequent adaptations to the *habitat marocain*:²⁹ a highly evident phenomenon not only in these neighbourhoods of the second half of the 20th Century, but also in those of the newly founded towns.³⁰

But, as seen, this also happened for Le Corbusier, and not only. After all, as Philippe Boudon pointed out about the Frugès neighbourhood in Pessac, “it was natural to suppose that after forty years the neighbourhood would change its aspect [...]. One would say that everyone had turned the ‘machine for living’ into ‘his home’”.³¹ In this sense, this reveals the importance of the quarter not only for the history of modern architecture, but also for understanding the dynamics of modern housing reception and transformation. After all, Le Corbusier himself, precisely speaking of the alterations of “his” houses in Pessac, would agree that, in the end, “it is life that is always right”.³²

This encourages to respect architecture and the life which that architecture has lived, and to raise a parallel question related to the fact that all these are experiences that represent not isolated but widespread cases. They are neighbourhoods that often have been considered as marginal places and that today invite not only to extend the concept of heritage to the large scale, but also to raise the issue of the transmission to the future of material proofs that constitute a heritage made up also of unprotected assets.

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Carrières Centrales, Casablanca, Morocco. *Cité horizontale* and *citée verticale*, with following adaptations. In 1954 in “L’architecture d’aujourd’hui” (n. 57), where the latter was chosen for its cover, this experience is analysed together with other collective dwellings, such as that of the *Cité Radieuse* in Marseille or the *unités d’habitation* at the Harar neighbourhood in Milan. *Habitations Collectives*, in “L’architecture d’aujourd’hui”, 57, December, 1954, p. 5. Ph. G. Favaretto, 2023.

23
Khouribga, Morocco. The entrance of the *Nouvelle Médina du Séchage*. Ph. G. Favaretto, 2023.

28 The construction of the *Nouvelle Médina du Séchage* started in 1954-1955. Cfr. Jest Camille, *Habitat du Personnel...*, *op. cit.*

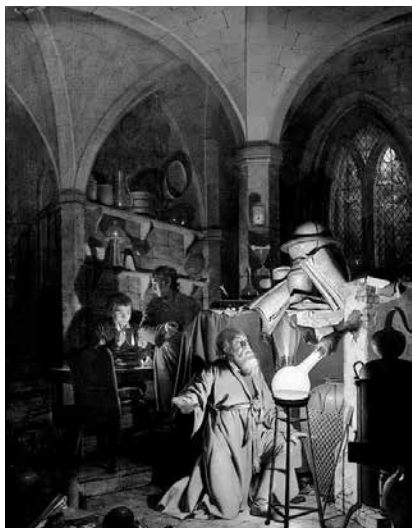
29 On this topic, see: Roesler Sascha (ed.), *Habitat Marocain Documents. Dynamics between Formal and Informal Housing Tensions entre Logement Formel et Informel*, Re-settlement Archives Vol. 1, Park Books, Zurich, 2015.

30 On this topic, see the paragraph *New cities of the 20th Century: from Italy to Morocco* in the present essay.

31 Boudon Philippe, *Pessac di Le Corbusier*, Franco Angeli, Milano, 1983, p. 17 (author’s translation).

32 *Ibidem*.

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Joseph Wright of Derby,
*The Alchemist, in Search of the
Philosopher's Stone, Discovers
Phosphorus, and prays
for the successful Conclusion
of his operation, as was the
custom of the Ancient Chymical
Astrologers*, 1771, oil on canvas,
127×101.6 cm Derby Museum
and Art Gallery, Derby (UK)



Discovered in 1920, the Moroccan phosphate extraction site of Ouled Abdoun is the place where are settled the mining hubs and the new towns of Boujniba, Boulanouare, Hattane, Khouribga and Oued Zem.

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