

4 unités LC

FRAGMENTS OF A RADIANT DREAM

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cover image:
The 'Modulor Man' imprinted
onto the concrete facade of
the 'Unité d'habitation' in
Firminy-Vert.



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Abstract

The ‘Unité d’habitation’ of Le Corbusier in Marseille was considered by many to have been at the head of the new wave of monstrous modern social housing blocks that swept the country following the war. A significant number of these blocks, or *grandes barres*, as the French call them, have since been destroyed, and are *still* being destroyed, for the breeding grounds of poverty and corruption they had become.

And yet today, the ‘Unité’ is a revered historical monument, adored by its residents, and preserved with utmost care. It would be easy to say that it is simply a case of fashion, fame, and a transition from government to private ownership that have saved it. But there are three other ‘Unités’ in France that would contradict such a claim.

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The stories of these three other ‘Unités’, that have consistently been ignored, are recorded here, and examined. Their histories, contexts, demographics and conditions assessed. And what is revealed, almost half a century since their construction, is that the dream of a ‘Radiant City’ – of which these buildings are the only true constructed fragments – has seen them through many adversities, and lives on through the people that have chosen them as their homes.

Observations and Visitations

The subject of this thesis came about from an external study and research year in France, which took place from March 2000 to March 2001. Upon my arrival in the country, I began my search for a topic, which I had already decided would relate to the issue of social housing in France. The importance of this issue had become apparent to me during previous visits to the country, as well as through the many years that I had spent studying the language and culture. Not only have issues of Social Housing (known as HLM or HBM in France)¹ long been points of discussion for the national media due to the ‘ghetto-like’ situations many of them were found to be in,² but the mere impressive physical presence of these developments suggests a certain significance in itself.

One of the oldest, and definitely the most famous HLM construction in France, was the ‘Unité d’habitation’ in Marseille, and although this later became privately owned, it’s origins of an HLM classification drew my interest. Knowing its age, I began to wonder what the situation and state this building was today, and whether or not it had suffered from the same problems as other more generic HLM developments in France. Through readings in various periodicals and books in search of related information and history, it came to my attention, that although a great deal had been written on the ‘Unité’ of Marseille, little had in fact been written regarding the other three constructed ‘Unités’ of Le Corbusier in France. And so began the long journey of researching, tracing, locating and visiting each of these four ‘Unités d’habitation’, filling in the missing gaps that books and journals had failed to provide.

For each of the ‘Unités’ visited, at least a day was spent documenting the buildings in words, sketches and photographs, and whenever possible, the project was revisited at a different time of the year. The projects were generally visited on a weekday, when

businesses and schools were in activity, and if revisited, on a weekend, to note the possible differences in use by the residents. The buildings were considered not only in relation to their sites, whose states were equally studied and recorded, but also in relation to the whole surrounding area and district. Public transport was taken to each of the sites, so as to gain an understanding of the connections between each project with its surrounding district and services.

The interaction between residents of the buildings with each other, as well as with residents of the surrounding area, were observed, and interviews were conducted with a variety of people. Those interviewed were of a range of professions, backgrounds, age and socio-economic standings, depending on the ‘Unité’ and its present demographic.³ Interviews were conducted in person, on an informal basis, with each of the interviewees being addressed in their living (or working) environments. Notes from the interviews were recorded by hand.

Other housing and housing related projects of Le Corbusier in France and the surrounding region were also visited with the hope of gaining a greater personal understanding for the progressive development of Le Corbusier’s ideas that eventually culminated in the ‘Unité d’habitation’ designs. The other Le Corbusier projects visited were: the *Couvent Sainte-Marie-de-la-Tourette*, Éveux-sur-l’Arbresle (near Lyon), Rhône; the *Pavillon Suisse* and the *Pavillon du Brésil*, both in the Cité Universitaire, Paris; the *Cité de Refuge* for the Salvation Army, Paris; *Immeuble Locatif à la Molitor*, Paris; and *Immeuble Clarté*, Geneva, Switzerland. Additional projects were unfortunately unable to be visited due to time and financial constraints.⁴

Information gained in these visits was equally supplemented by research carried out in various libraries around France, as well as

libraries in Australia, upon my return. The majority of researched information was taken from the library at the Le Corbusier Foundation in Paris⁵. Other libraries from which information was gathered in France were the Municipal Library in Lyon, Part-Dieu, and the Beaubourg Library in the Pompidou Centre, Paris. Internet sites were equally scoured through out the year so as to gain, to some extent, an idea of other research on Le Corbusier projects carried out, or being carried out, on an international scale.

The writing of this thesis subsequently took place in the four months following my return to Sydney this year.

¹ HLM stands for *Habitation à Loyer Modéré* ('Low Rent Housing') and HBM for *Habitation Bon Marché* ('Low Cost Housing'/ literally 'Cheap housing'). These are both classifications of Government funded social housing.

¹ Awareness of this fact was greatly increased by the anonymously written book (author now referred to as 'Chimo'), entitled *Lila dit ça*, (Plon, France, 1996; also in English as *Lila Says*, Fourth Estate, London, 1998). The book was widely acclaimed for its honesty and frankness, revealing the depraved and deprived lifestyles suffered by many of the inhabitants of these HLM developments in France.

³ Those interviewed at the 'Unité' in Marseille, were: M. Charles Durand (a retired architect and member of the committee for the maintenance of the building) and his wife, and members of the building co-operative (*Association des Habitants de l'Unité d'habitation*) or employees of their office located on the commercial mid-level.

In the 'Unité' of Rezé: Mme Delassu (a member of the building co-operative and volunteer guide of the 'Unité'), Mattieu Borderie (a 17 year old student, who had lived with his sister, brother and parents in the 'Unité' since he was born), and Isabelle Termeau (a teacher of the roof top pre-school, *Ecole Maternelle Le Corbusier*).

In the 'Unité' of Briey-en-Forêt: Steven Vitale (an architect and graphic designer originally from the USA, working in a studio of the International Artists Association of *La Première Rue*), and Jacques Magali (a photographer and resident of the building, also working in a studio of *La Première Rue*). In the 'Unité' of Firminy-Vert: Christophe Bory (an architect, teacher of art and design at the local technical school in Firminy, and member of the building co-operative), Christiane Chatelain (a resident, co-operative member and employee of the Firminy Tourist Association), and several children aged from 4 - 8 of various families living in the 'Unité'.

The number of interviews unfortunately depended mainly on the amount of time it was possible to spend at each 'Unité', and the amount of time that people were willing to spend being interviewed. Time and finances, unfortunately limited my own ability to spend an extended period of time at each place, and transport to some of the 'Unités' was particularly difficult and restrictive.

⁴ The other housing projects of Le Corbusier in Europe that were unable to be visited were: the *Quartier Modernes Frugès* in Pessac, Bordeaux; the house and housing block in Weissenhof, Stuttgart; and the *CorbusierHaus* (/ 'Unité d'habitation) in Charlottenburg, Berlin.

⁵ *Le Fondation Le Corbusier* (the Le Corbusier Foundation) is located at 8-10, square du Docteur Blanche, 75016, Paris, in Le Corbusier's own Villas Jeanneret and La Roche. The foundation was established in 1968 by the architect himself, with the aim of ensuring the preservation of his original works, documents and manuscripts.

Singular / Plural

The *Unité d'habitation* of Le Corbusier in Marseille is the most renowned post-war housing development in the world. Any book regarding Modern architecture or the history of housing and urban design would never fail to mention this project. But although so much has been written and re-written about this particular building over the years, the existence of three other such 'Unité d'habitation' buildings in France is consistently skimmed over, or even completely overlooked¹ – an odd occurrence seeing as the multiple construction of these blocks was one of the main principles of their design concept.²

In response to these two issues, this thesis draws together all four 'Unités' in France and addresses them with equal importance. The 'Unité d'habitation' of Marseille was indeed the prototype for all other subsequently constructed 'Unités', it was the first and the original 'Unité d'habitation', but that is not to say that its history is any richer than any of the others. Each 'Unité' was constructed under its own unique circumstances, in towns of highly varied origins and locations around France. The four 'Unités' have experienced their own histories and stories, of which the documentation has proved to provide interesting points of contrast and correlation.

Past / Present

Varied accounts of the 'Unité' (again, mainly of Marseille, as the presence of the others is consistently overlooked) may be found over the years. Robert Hughes, for example, would have us believe that the building once found itself in a depressing and desolate state, full of pathos for the grand and 'radiant' vision it fell so evidently short of –

*"Today the pool [on the roof] is cracked, the gymnasium closed (some optimist tried to resurrect it as a disco, which naturally failed), and the [running] track littered with broken concrete and tangles of rusty scaffolding. ...In the raking light of an early Mediterranean morning, it has a heroic sadness..."*³ (published 1980)

William J R Curtis, however, paints a much more romantic picture of the 'Unité' as place offering its residents an appealingly idle Mediterranean lifestyle –

*"It is interesting to visit the Unité ...in the evening in the autumn... People flood in from work and school, leaving their cars under the trees; they dawdle by the banks of cypresses, or play tennis, or shop in the upper street. On the roof terrace old men chat, catching the last afternoon sun while their grandchildren splash in the pool... The Unité takes a patiently worked out urban theorem and renders it in the terminology of a Mediterranean dream."*⁴ (published 1986)

So what is the current state of the 'Unité d'habitation', not only in Marseille, but equally of the other three in France? How have their lives developed over the years, and what changes have they and the towns in which they are sited undergone? For it is now nearly half a century since their construction, and not only are there variations to be noted between each 'Unité', but equally with in their own past and present.

For as Le Corbusier said in his *Poème de l'angle droit*, *"To make architecture is to make a creature,"*⁵ as architecture too has a life. Once it is brought into existence, it changes and evolves, as does the environment surrounding it. Architecture is in a continual state of transition and flux. It can only be considered 'finished' when it no longer exists.

Dreams / Adaptations

The significance of these buildings is particularly pertinent in France, where HLM and HBM housing developments, classifications under which the ‘Unités d’habitation’ were constructed, have more recently come back into the national limelight. Last year, the French government announced its plan to destroy many of these *grands barres* that have become suburban ghettos of social and ethnic segregation, riddled with poverty, illness and violence.⁶ Size and isolation are the two issues most at blame for the current situation of these social housing blocks, issues that are not (or were not) dissimilar for the ‘Unités’ of Le Corbusier, their design even being marked by some as the prototype for such monstrosities.⁷ And yet today (as it has not always been the case for one in particular)⁸, the ‘Unités’ of Le Corbusier are well looked after by their inhabitants, and are revered in France as national historical monuments.

But the story of the ‘Unités d’habitation’ is full of irony. The celebration of the ‘Unité’ has always been a highly controversial matter. At the time of its construction in Marseille, the building was widely criticised for its size and brutal aesthetic, not to mention its potential negative psychological effects.⁹ Nicknamed by the Marseillais *La Maison du Fada* (‘The Loony Bin’), the ‘Unité’ of Marseille is now one of the city’s largest tourist attractions.¹⁰ Its national heritage listing and notable tourist industry has ensured the renovation of the building, more in the sense of preservation, however, rather than of reform.¹¹ As a result, the place in which the inhabitants live and breathe has in fact become a stagnant monument to a past movement that encouraged the use of current technologies. The building is unable to be altered, even with a view to improvement, as this would be disrespectful to the design created by a man who professed that architecture ought to “respond to the demands of the new age”.¹²

The design of the ‘Unité’ was considered a failure by many critics – on one hand, for Le Corbusier himself, as he had envisaged much grander urban schemes to surround them¹³, and on the other, for the greater society it intended to address, as they failed to provide the social reform he had promised.¹⁴ But perhaps, in the end, these failures have been his greatest success. For in maintaining the larger urban schemes as mere theoretical works¹⁵, his ideologies have held a greater and wider appeal. For theoretical architecture is free of material constraints, it is far more flexible and open to interpretation.

Le Corbusier ideals as expressed in many theoretical works are discussed in the beginning of this thesis, establishing the foundation for what was to become the ‘Unités d’habitation’. The ideas that culminated in the ‘Unités’, and provide the basis of their design, are described in the second chapter of the thesis. Whilst the main body of the work is dedicated to the reporting and recording of their current states and situations, comparing these in each case – from one to the other, and from past to present – examining how these fragments of Le Corbusier’s dreams have adapted to the reality of life, and how life has in fact adapted to the dream.



1. Dynamiting a *grand barre* on the outskirts of Paris last year - superficial similarities to the 'Unités', but certainly no dreams.

¹ Many books that mention the 'Unité d'habitation' of Le Corbusier fail to recognise the fact that it was not a singularly realised design, but rather a concept that was constructed in plural.

See Hughes, Robert, *The Shock of the New – Art and the Century of Change*, Thames and Hudson Ltd., London, 1992, pp. 188- 190, in which Hughes discusses the 'Unité' of Marseille as Le Corbusier's "*only one chance to build high-rise mass housing in France*", showing complete ignorance of even the presence of the other three 'Unités' in France.

Also, in Curtis, William J R., *Le Corbusier: Ideas and Forms*, Phaidon Press Ltd., London, (2nd Ed.), 1992, Curtis fails to mention any of the other 'Unité' projects realised by Le Corbusier aside from the one in Marseille, despite the many references he makes and the extensive discussion he provides on the idea of the 'Unité' (pp. 13, 46, 89, 106, 163, 167, 169-74, 175, 186, 219).

Again, in Jencks, Charles, *Le Corbusier and the Tragic View of Architecture*, Penguin Books Ltd., London, 1973, the discussion of the 'Unité' refers exclusively to the block in Marseille (pp. 138-147). And the same applies throughout for Jencks, Charles, *Modern Movements in Architecture*, Penguin Books Ltd., England, (2nd Ed.), 1985, (pp. 14-20, 24, 25-27, 86, 152, 259). In Brooks, H. Allen (Ed.), *Le Corbusier*, Princeton University Press, New Jersey, 1987, André Wogensky discusses '*The Unité d'Habitation at Marseille*'

(the title of the essay), in which none of the other 'Unités' are even mentioned, despite the fact that Wogensky himself had worked on each of those that were subsequently realised. (pp.117- 125).

In the periodical *Oppositions*, Winter/Spring 1980: 19/20, The MIT Press, USA, article written by Kenneth Frampton, *The Rise and Fall of the Radiant City: Le Corbusier 1928-1960*, the 'Unité' is discussed as a concept, and only mentioned the realised form in Marseille (p. 15).

Some other critiques do mention the existence of additional constructed 'Unité' buildings, but only in passing. See again Brooks, H. Allen (Ed.), *Le Corbusier*, Princeton University Press, New Jersey, 1987, essay by Reyner Banham entitled '*La Maison des hommes and La Misère des villes: Le Corbusier and the Architecture of Mass Housing*'. Banham states, "*The subsequent 'unités', at Nantes-lès-Rezé, Strasbourg, Briey-en-Forêt, Berlin, and so forth,*" (p. 114) – a singular paragraph that mentions the other 'Unités' only briefly, also referring to the *unrealised* plans for Strasbourg over the 'Unité' of Firminy-Vert (presumably classified in the "and so forth").

Also, Pardo, Vittorio Franchetti, *Le Corbusier: The life and work of the artist*, (trans. Pearl Sanders), Thames and Hudson, London, 1971, only discusses and displays images of the 'Unités' of Marseille and Berlin, mentioning only briefly the 'Unités' Rezé and Briey-en-Forêt in the discussion of the 'Unité' in Berlin. There is no mention at all of the one in Firminy-Vert.

In Besset, Maurice, *Qui était Le Corbusier?*, Editions d'Art Albert Skira, Geneva, Switzerland, 1968, p. 159, the three other 'Unités' are pictured, but are never actually discussed.

And in Monnier, Gérard *Le Corbusier*, La Renaissance du Livre, (Collection Signatures), Belgium, 1999, p. 99, Monnier drops the names of the other three 'Unités' at the very end of his discussion on the 'Unité d'habitation, saying nothing other than their dates of construction.

The only found books to discuss each 'Unité' in greater detail, and as individual and separate buildings, (aside from the *Œuvre Complète* books arranged by Le Corbusier's own studio discussing the works at their time of design and construction), were two guides (as opposed to critiques) of *all* existing Le Corbusier buildings internationally or simply in France: Gans, Deborah, *The Le Corbusier Guide*, (Revised Ed.), Princeton Architectural Press, New York, 2000 (despite the recent revised edition, accounts of the true *present* state have not been added); and Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Projets et Réalisations*, Collection Architextes, Le Moniteur, Paris, 1st Ed., 1987 + 2nd Ed., 1997 (in which accounts are in fact

more up to date than in Gans' book, but still only brief due to the nature of the book).

² Le Corbusier had long been interested in the idea of producing housing on mass on two levels: firstly, as multiple units with in an apartment block, and secondly, the multiple construction of these blocks. Le Corbusier in proposed many 'Unités d'habitation' projects over the years, generally as a series of several 'Unités' with in the one area, that would constitute a whole new residential quarter for that region. But not only did he suggest that they could be mass produced with in that region, he suggested that they could be mass-produced any where in the world. These ideas were demonstrated in his plans for Nemours, Nth Africa (1934), Saint-Dié (1945), La Rochelle-Pallice (1946), Meaux (1955-60), Bogota, Colombia (1950). (See Boesiger, W., text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1946 – 1952*, Volume 5, Les Editions d'Architectures, Zurich, Switzerland, 1946, p. 191; and Boesiger, W., Girsbirger, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, pp. 338, 342, 343 + 347). He also proposed other 'Unités', either singular or as residential quarters, for Saint-Gaudens (1945), Porte de Saint-Cloud, Paris (1949), Strasbourg (1951), Roubaix (1956-58), Villacoublay, Brétigny, Boé, Tours (all 1960-61), and Roussillon (1960-63). (See Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Projets et Réalisations*, Collection Architectes, Le Moniteur, Paris, 2nd Ed., 1997, projects 157, 165, 179, 182, 183 + 184; also Boesiger, W., Girsbirger, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, pp. 134-35.)

³ Hughes, Robert, *The Shock of the New – Art and the Century of Change*, Thames and Hudson Ltd., London, 1992, (first published 1980), p. 188. Hughes goes on to criticise the doomed 'shopping mall' (in a country where the people "like to shop in their street markets") which later "was turned into" (he obviously hadn't his done research on the design, as the hotel was always included on the shopping level, and the shops still remain) "a spartan and equally empty hotel"(p. 190). Hughes also criticises "the extreme monasticism of the Unité", the lack of privacy, and the cramped 'cupboard-sized' children's bedroom space, and states that "none of the Marseillais who lived there could stand Corbusier's plain, morally elevating interiors"(p. 190).

⁴ Curtis, William J R., *Le Corbusier: Ideas and Forms*, Phaidon Press Ltd., London, (2nd Ed.), 1992, (first published 1986), p. 174. Here Curtis also acknowledges the common criticisms of the building (as described by Hughes

in the previous note), but at the same time remarks that "the present inhabitants of the building seem to have surmounted these problems, and are in the building by choice, because they find it a pleasant place to live." And again, contrary to Hughes' view, he states that "the inhabitants ...express a certain pride in living in a building by Le Corbusier" (p. 174).

⁵ Le Corbusier, *Poème de l'angle droit*, Edition Tériade, Paris, 1955.

⁶ The destruction of two *grands barres* last year in France received a huge amount of national publicity. One social housing block was demolished in Saint-Etienne, and the other in La Courneuve, Seine-Saint-Denis, on the outskirts of Paris. The present government plan proposes to destroy around 15000 dwellings a year, the inhabitants of these buildings being redistributed amongst smaller housing developments in their region. The recent government policy and the problems experienced by residents of these HLM 'ghettos' is discussed in the weekly French current affairs magazine *Télérama*, No. 2632, June 21, 2000, article by François Granon entitled "*HLM, Casser les ghettos: Une loi pour reconstruire la ville*" ('HLM, Break down the ghettos: A Law for reconstructing the town'), pp. 11-15.

⁷ In Curtis, William J R., *Le Corbusier: Ideas and Forms*, Phaidon Press Ltd., London, (2nd Ed.), 1992, p. 173, Curtis tells the story of the 'bastardisation' of the design of the 'Unité' where "All over the world blocks popped up which could boast density and little else: no communal areas, no greenery, no terraces, no scale and no architecture." – apparent 'imitations on the prototypes'. He does, however, note that there were some more 'competent imitations' and similar resulting strategies such as those of *Team X* that took over the CIAM (*Congrès International d'Architecture Moderne*), to which Le Corbusier had belonged, in the 1950s as a group of theorists and practitioners. *Team X* guarded the basic ideals of the 'Unités' as well as some of their design principles and devices, whilst also acknowledging local typologies and contexts.

It is also noted in Jencks, Charles, *Modern Movements in Architecture*, Penguin Books Ltd., England, 1986, p. 372, that the principles upon which the 'Unités d'habitation' were based, were the very same principles that were applied to the Pruitt-Igoe housing estate in St Louis, USA, dynamited in 1972. The design of this housing development was claimed to have been based on the theories of Le Corbusier and the CIAM (*Congrès International d'Architecture Moderne*). The destruction of this building was widely reported all over the world, and the event led to the subsequent explosion of several

and the CIAM (*Congrès International d'Architecture Modern*). The destruction of this building was widely reported all over the world, and the event led to the subsequent explosion of several other similar housing developments.

Also, in Coleman, Alice, *Utopia on Trial, Vision and Reality in Planned Housing*, Hilary Shipman Ltd., London, 1985, pp. 7-8, the influence of Le Corbusier's housing designs (albeit purely superficial) on council housing blocks in the United Kingdom is discussed. Coleman refers to "the tenement block with its disastrous record in places such as the Gorbals, the most notorious slum in Glasgow. "...decked up in the language of Radiant City – 'the tower block glittering above the greenery'".

⁸ The 'Unité' in Briey did in fact suffer from a period comparable to that of these other HLMs, "– no better, in fact than any immigrant's ghetto" (Von Moos, Stanislaus, *Le Corbusier: Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, (English Ed.) 1980, p. 163). This period is recorded in greater detail in pp. 163-69 of this thesis.

⁹ See pp. 103-04 of this thesis, where the reactions of the media and various French organisations are noted. See also, Von Moos, Stanislaus, *Le Corbusier: Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, (English Ed.) 1980, p. 158, "Opposition to this project was violent." – Von Moos stating the protests during the building's construction, notably from the SADG (*Société des Architectes Diplômés par le Gouvernement*), the *Conseil supérieur de l'hygiène*, and the *Société pour l'Esthétique de France*; also Boesiger, W. text by Le Corbusier, *Le Corbusier: Les Dernières Œuvres*, Artemis, Zurich, 3rd Ed., 1977, p. 173, where Le Corbusier quotes reactions of others to his Unité in Marseille as "'Hovels where people can bang their heads against walls...' And... 'A hatchery for mental disease'".

¹⁰ In Jencks, Charles, *Modern Movements in Architecture*, Penguin Books Ltd., England, 1986, p. 14, Jencks notes that the 'Unité' in Marseille "remains a prime object of architectural pilgrimage whether by students or practising architects". But the 'Unité' in Marseille also attracts a wider audience, featuring in the Dorling Kindersley Travel Guides: France, Dorling Kindersley Ltd., London, (Ed. Rosemary Bailey), 7th Ed., 2000, p. 502, as one of the city's most notable landmarks.

¹¹ The lower status of the other 'Unités' as far as tourism is concerned, has meant greater restrictions on finance for renovation, but a certain amount of

national money has provided some restoration work, and the preservation of the buildings is carefully guarded over by their regional tourist associations.

¹² *Le Corbusier et Pierre Jeanneret: Œuvre Complète de 1929 – 1934*, Volume 2, compiled by W. Boesiger, text by Le Corbusier, Les Editions d'Architectures (Edition Girsberger), Zurich, Switzerland, 7th Ed., 1964, p.18.

¹³ See Brooks, H. Allen (Ed.), *Le Corbusier*, Princeton University Press, New Jersey, 1987, essay by Reyner Banham entitled 'La Maison des hommes and La Misère des villes: Le Corbusier and the Architecture of Mass Housing', in which Reyner states that the 'Unité' in Marseille was "an urbanistic and social disappointment because the rest of the cluster was not built" (p. 114.). In another chapter of this book, 'Machine et mémoire: The City in the Work of Le Corbusier', Manfredo Tafuri (trans. Stephen Sartarelli) states that the 'Unité' of Marseille is "a fragment, a slice, isolated, of the linear system that once confronted nature and brought it back to itself in Le Corbusier's urban dreams for Algiers and South America." (p. 212).

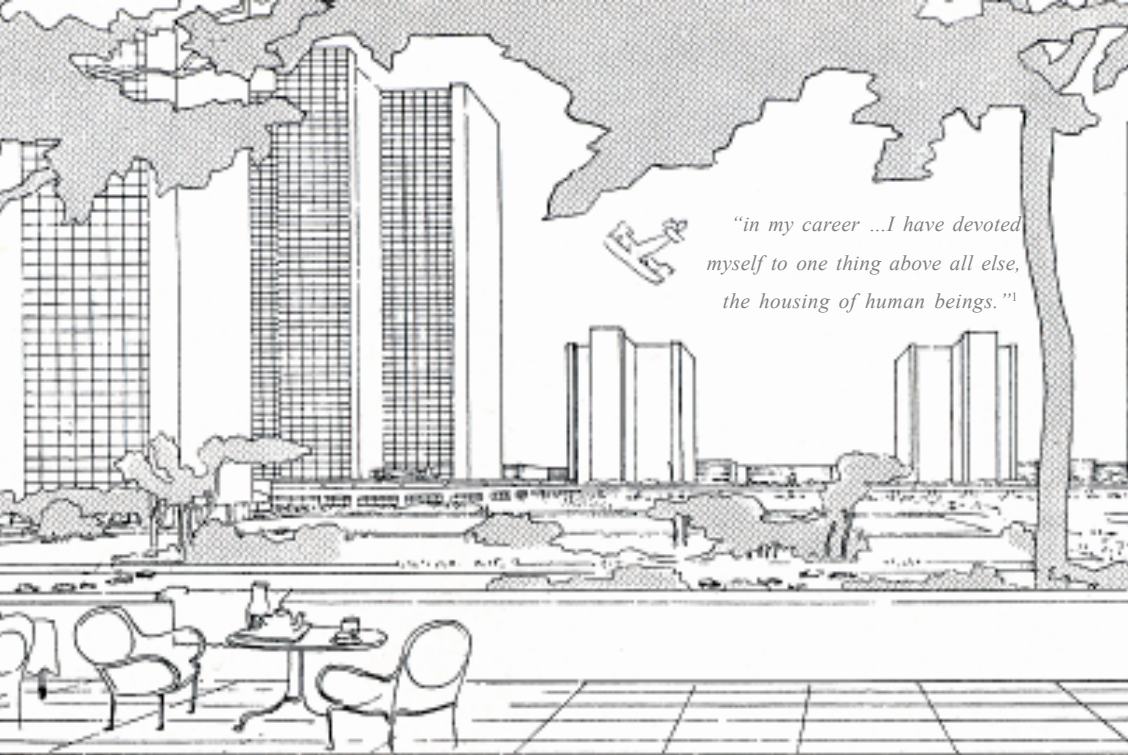
¹⁴ See again Brooks, H. Allen (Ed.), *Le Corbusier*, Princeton University Press, New Jersey, 1987, essay by Reyner Banham entitled 'La Maison des hommes and La Misère des villes: Le Corbusier and the Architecture of Mass Housing', Reyner refers to present state of the 'Unité' in Marseille as being a "mess" (p. 114). He also quotes the response of André Lurçat to Le Corbusier's claim that the 'Unité' was a building that he had "wanted to build for 25 years," – "So you insult the people by offering them a dwelling which is a quarter-century out of date" (p. 113).

Also in this book, in the essay 'Le Corbusier, 1922-1965', by Vincent Scully, the 'Unité' in Nantes is described (from the view of a photograph) as "The giant, harsh, savagely painted vessel plunges into, wipes out, the town." (p. 53).

Von Moos, Stanislaus, *Le Corbusier: Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, (English Ed.) 1980, p. 162, notes that "so many visitors to Marseille speak of failure" (although he himself disagrees with their views to a certain extent).

In Hughes, Robert, *The Shock of the New – Art and the Century of Change*, Thames and Hudson Ltd., London, 1992, pp. 188-190, Hughes offers a highly critical view of the 'Unité' in Marseille, describing it as isolated in its location, decrepit and neglected in its state, and cramped in its individual apartment size. Also consequently stating that "Le Corbusier failed as a sociological architect" (p. 190). Hughes view of the 'Unité' backs up Von Moos' claim.

¹⁵ The 'Unités d'habitation' widely recognised as housing blocks of the residential quarters described in Le Corbusier's most famous theoretical work, *La Ville Radieuse* (The Radiant City) after which most of the 'Unités' have developed other, more commonly known names of 'La Cité Radieuse' for the ones in Marseille, and Briey-en-Forêt, and 'La Maison Radieuse' for Rezé-les-Nantes. Descriptions of the 'Ville Radieuse' as an extended theoretical work were published in Le Corbusier, *The Radiant City: Elements of a Doctrine of Urbanism to be used as the Basis of our Machine-Age Civilization*, Faber and Faber Ltd., London, 1933. A condensed version later appeared in *L'Architecture d'Aujourd'hui*, 1935, giving his ideas wider publicity. (See also Boesiger, W. + Girsberger, H., text by Le Corbusier, *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, pp. 332-35.) The 'Ville Radieuse' is discussed in pp. 32-33 of this thesis.



The Radiant City and Other Dreams

2. (Previous page)
A vision of life in 'A
Contemporary City', 1922.

“The theme of the Unité d’habitation first came to mind during my first visit to the Chartreuse of Ema in Tuscany in 1907. It appeared in my plans at the Salon d’Automne in 1922: a contemporary town for 3 million inhabitants, ‘les Immeubles Villas’ and again at the Pavillon de l’Esprit Nouveau in 1925. It did not cease to haunt me throughout all the projects on which I worked so indefatigably during the next 30 years...”²

To understand the concept of the ‘Unité d’habitation’, and its importance in Le Corbusier’s career, one must first trace the long history of its development. For the ‘Unités’ may well be considered the most important constructed works of Le Corbusier, simply because they bring together in the one unified design, the greatest sum of the social and architectural ideologies he had developed through out the course of his career.

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But this history was not only important to the architect’s personal development, for it is also the many years that Le Corbusier spent publicising his ideas that allowed him to gain such an astoundingly religious following through out the world. For with out the thirty or so years³ that he spent sounding out his ideas with the public before hand, it is highly unlikely that the ‘Unités’ would have survived and gone on to hold such a strong and passionate group of supporters as they do today.

This Chapter says nothing new, and nor does it attempt to. It’s purpose in this thesis is simply to provide the reader with a base for understanding the development of the ‘Unité d’habitation’ design, and the ideologies that Le Corbiser attempted to express through it.

It would be impossible, however, to include *all* of the projects, writings and influences that lead up to the design of the ‘Unités’, as this would provide a whole new thesis in itself.⁴ This chapter is instead to be considered more as a brief history of Le Corbusier’s ideas that culminated in the ‘Unités’, drawing from a variety of sources (as credited in the notes). It divides Le Corbusier’s ideas into the three levels upon which he considered the human habitat – firstly, as the city, secondly as the apartment /housing block, and thirdly as the individual home. For it is from each of these three levels that the ‘Unité d’habitation’ was ultimately derived.

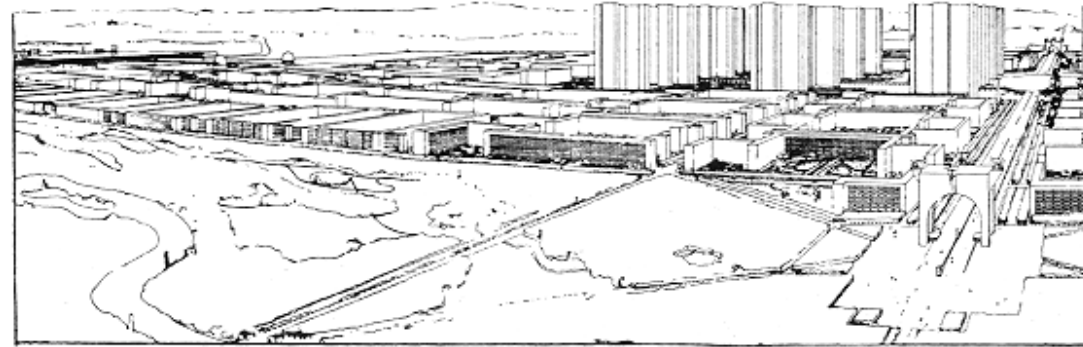
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The City

Although during his formative years, Le Corbusier's urban theories began with an interest in the picturesque town-planning of Austrian Camillo Sitte⁵ and the English garden city movement lead by Ebenezer Howard,⁶ his move to Paris⁷ and the creation of *L'Esprit Nouveau*⁸ saw a major evolution in his ideas. By this stage, Le Corbusier had been exposed to a wider range of more radical and avant-garde theories, and in November 1922, at the Salon d'Automne in Paris, *Une Ville Contemporaine de 3 millions d'habitants* (A Contemporary City of 3 Million Inhabitants) was exhibited.

In 'Une Ville Contemporaine', Le Corbusier had transformed the horizontal garden city into the vertical garden city. An idea, exhibited as an enormous diorama, that proposed a series of 24 cruciform skyscrapers, sixty storeys high, and regularly spaced in a rigid grid formation.⁹ The visual effect was somewhat futuristic, although not unrealistic considering the construction feats of the time,¹⁰ for the project was not intended to be for the distant future, it was, as the name states, a *contemporary* solution. For as Le Corbusier said, "*It is this that confers boldness to our dreams: the fact that they can be realized.*"¹¹

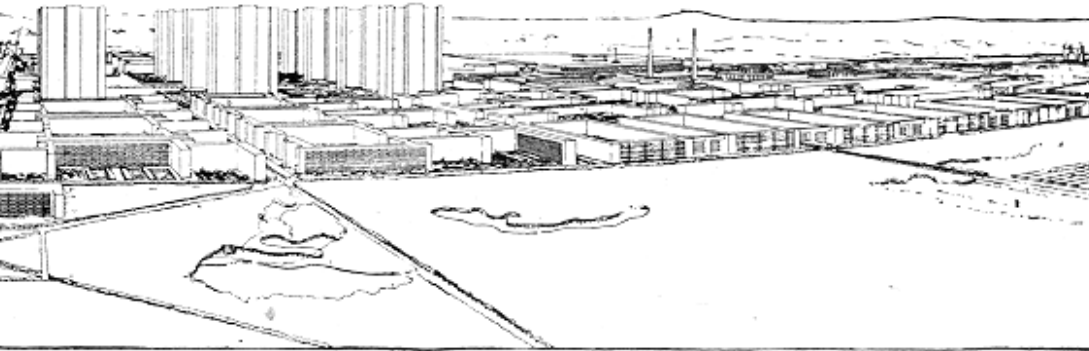
The fundamental principles on which 'Une Ville Contemporaine' was based were: 1. Decongestion of the city centre, 2. Increase [housing] density, 3. Increase the means of transport, 4. Increase vegetated areas.¹² The scheme proposed a hierarchical and segregated arrangement of activities, the city centre being marked by the formation of skyscrapers in which offices and hotels would be situated, residential buildings would intermingle at a lower height, and commercial activity would take place around these buildings at ground level.



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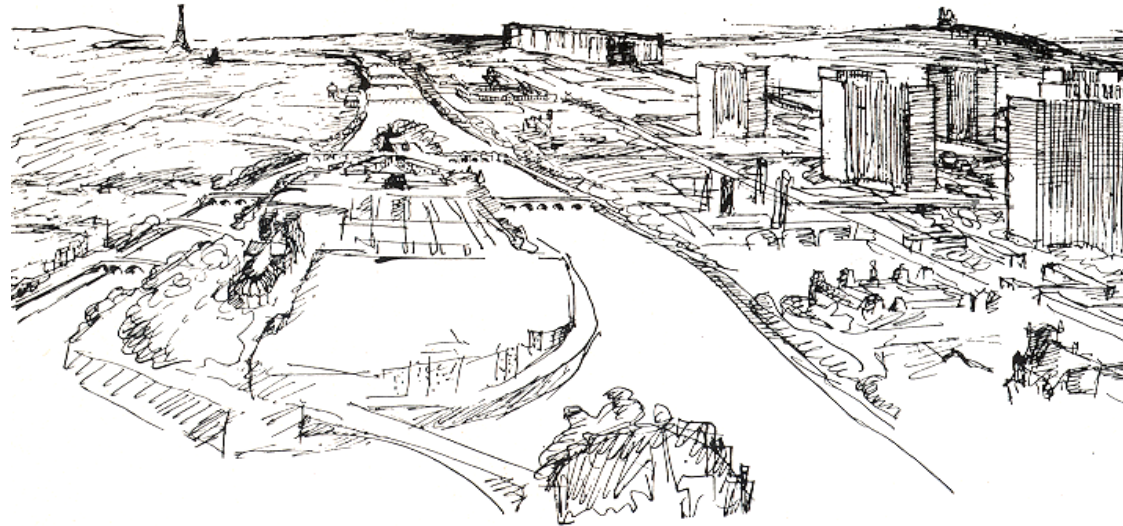
*"It was greeted with astonishment; then surprise lead to anger or enthusiasm"*¹³ Le Corbusier said of the mixed reaction his exhibit received. And it was these antithetical opinions he aroused that provided him with such wide exposure and consequently renown. For the visions Le Corbusier displayed were not entirely new, nor were they entirely his own. He borrowed heavily from Tony Garnier's *Cité Industrielle*¹⁴ and Eugène Hénard's *Etudes sur les transformations de Paris*.¹⁵



3. A panoramic view, 27m long, displayed 'Une Ville Contemporaine de 3 million d'habitants' at the Salon d'Automne, Paris, 1922.

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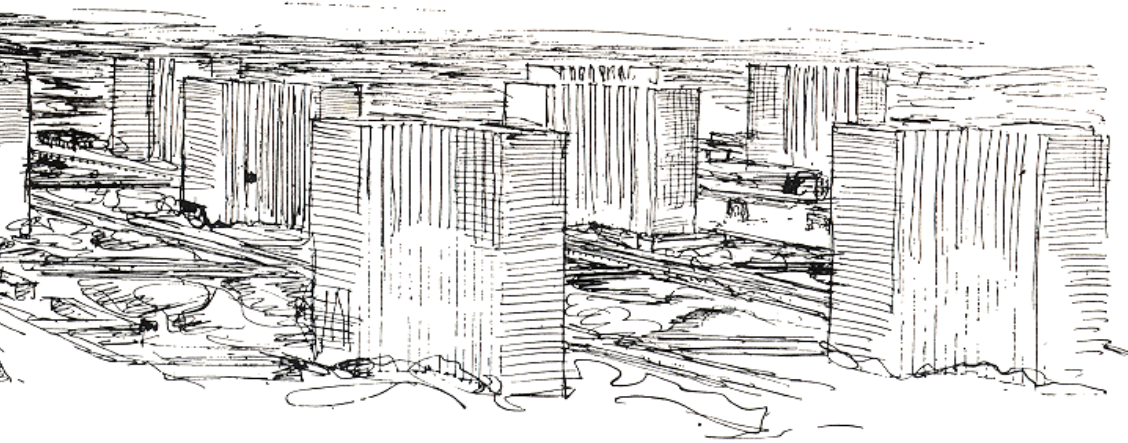
But it was not so much the ideas that brought Le Corbusier fame, it was the conviction and boldness with which he proposed them, the manner in which he expressed them, the striking visual images he used to support them, and the relentlessness with which he continued to propose them.



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In 1925, Le Corbusier displayed the *Plan Voisin de Paris*¹⁶ in the *Pavillon de l'Esprit Nouveau* at the Paris *Exposition des Arts Décoratifs*. The 'Plan Voisin' was effectively 'Une Ville Contemporaine', but this time applied specifically to the city centre of Paris. Although 'Une Ville Contemporaine' had proposed a realistic model for city planning, it had not been considered as such. And so, to emphasise "*the fact that they can be realized*", the plans were now given an exact and existing context. Here, to make way for the sixty storey skyscrapers, the high density housing blocks and the surrounding park space of the scheme, the whole of Paris would have to be completely reworked, and only the significant historical edifices considered for preservation.¹⁷

4. A sketch of the centre of Paris, transformed in the 'Plan Voisin'.



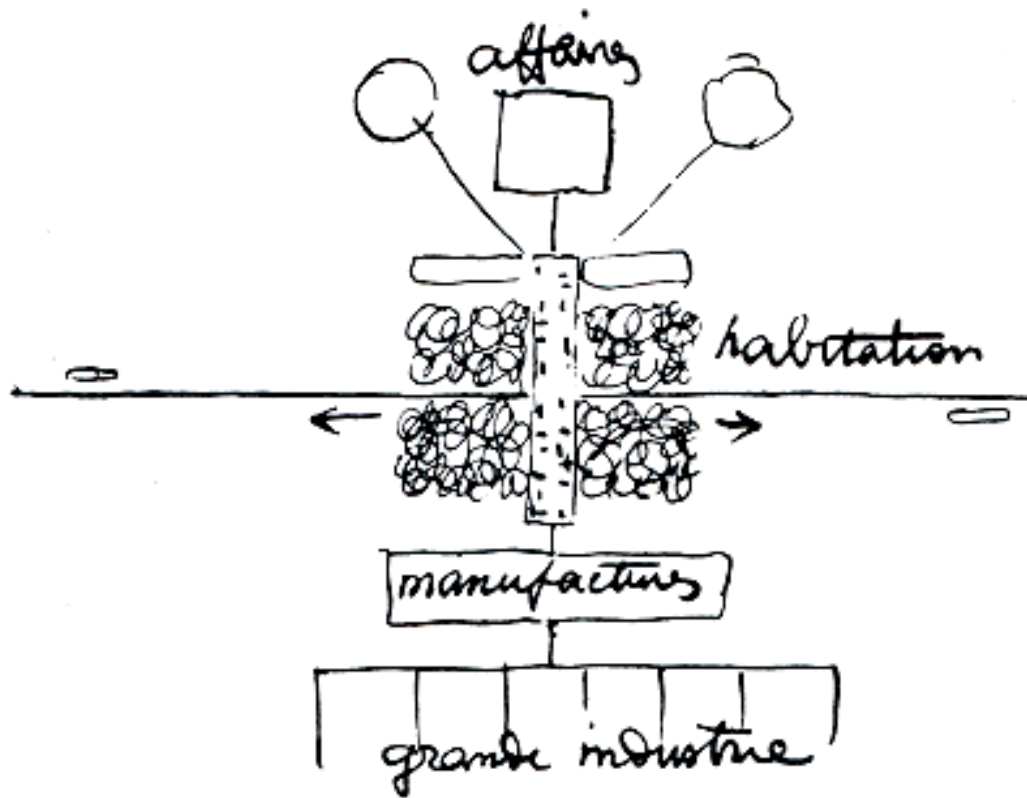
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Needless to say, the idea was abhorrent to the Parisians who had remained perfectly content (as they still do to this day) with their ancient six storey Haussmannian blocks of integrated commerce, offices and residences. The plans were looked upon as either “*an amusing utopia*” or “*an extended study in bad taste.*”¹⁸ But this lack of approval and even ridicule did not, however, quell Le Corbusier’s passion for change.

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In 1935, Le Corbusier published *La Ville Radieuse* in the French architectural magazine *L’Architecture d’Aujourd’hui*. ‘La Ville Radieuse’ (The Radiant City) simply elaborated on the theories of ‘Une Ville Contemporaine’, although here the city took on a linear form of growth. The skyscrapers of the business district were situated at the top edge of the city, with the residential quarters of housing ‘superblocks’ surrounding a central civic axis. An industrial zone would be situated on the lower edge, separated from the residential quarter by a band of parkland.¹⁹

‘The Radiant City’ was Le Corbusier’s interpretation of the “*Liberté, Equality, Fraternity*” that France claimed to stand for²⁰, acclaimed by some as a work of “*dazzling clarity, simplicity, and harmony*”²¹, or highly criticised by others for being totally unrealistic or even just plain foolish²². But regardless of any of these widely ranging opinions, or even perhaps because of them, ‘The Radiant City’ became Le Corbusier’s most famous, influential and controversial vision. And the ‘Unités d’habitation’, as the constructed housing blocks that were drawn directly from this vision, have achieved the greatest part of their fame and notoriety because of this.



5. A diagrammatic sketch of the 'Radiant City', as presented at the CIAM conference in Brussels, 1930.

6. Perspective of the 'Immeubles-Villas', Paris, 1922.



The Housing Block

Whilst 'Une Ville Contemporaine' and the 'Plan Voisin' envisaged entire urban schemes in which the human home would be set, *Immeubles-Villas* (or 'Apartment block-Villas'²³) exhibited by Le Corbusier along side the two urban schemes,²⁴ considered the design of the home itself, both as an independent apartment and a collective 'block'.

The concept was based on a utopic dream of socialist theories with philanthropic intentions, ideas with Fourierist origins²⁵ providing an historical base, but equally mixing them with modern progressive ideas that responded to the birth of the machine-age.

The idea of the 'Immeubles-Villas' was apparently conceived in a moment of inspiration, on the back of a restaurant menu one-day, while Le Corbusier was dining with his cousin and professional partner Pierre Jeanneret.²⁶ Although the design as such was new, the concepts it drew upon had in fact been with Le Corbusier for some time.

Le Corbusier attributed certain features of ‘Immeubles-Villas’ to the *Chartreuse d’Ema* in Tuscany, which he had first visited back in 1907 as a student.²⁷ The monastic lifestyle of the charterhouse had held a lasting effect on him, introducing him to the virtues of collective living.

But it was not just the concept of a ‘collective life’ that had inspired Le Corbusier during this visit, it was also the organisation and separation of two very different aspects of daily life – one side private, reflective and self contained, and the other side communal and social. In the *Chartreuse d’Ema*, the collective spaces were organised and separated from the private living spaces of the monks. The individual rooms were secluded and totally isolated from each other, each being equipped with their own garden space and a view out to hills²⁸ – the idea that was adapted to the ‘Immeubles-Villas’ (and utilised later, in the ‘Unités d’habitation’):

*“The ‘Immeubles-Villas’ proposes a formula for a brand new lifestyle in the big city. Each apartment is, in actual fact, a small house with a garden, situated at any height above the road level. But the road itself is modified; it is set away from the houses, trees overrun the city...”*²⁹

But it was not just the collective monastic lifestyle that had inspired Le Corbusier’s design of mass-housing blocks. For also during the 1920’s, when the ‘Immeuble-Villas’ came about, the idea of the ‘communal-house’ was being widely explored throughout Russia and Germany, where working-class housing was considered very much a public matter³⁰ (a situation that would only arise in France after the war). The combining of private and collective lives was simply a pragmatic approach for the architects of the Russian Avant-Garde movement, tackling the problem of housing shortage experienced in Russia following the revolution. These socialist Soviet solutions evidently impressed Le Corbusier, who later employed some of their ideas to his own designs.³¹

A housing shortage was equally being experienced in the industrial cities of Germany, where architects of the Bauhaus such as Walter Gropius and Bruno Taut were promoting the ideas similar to the soviet ‘social condensers’. The housing blocks they proposed promoted a minimisation of services and thus of energy consumption through localised collective use. Economy and expediency in the construction of the buildings was equally considered, with the integration of industry and factory produced elements in buildings.³²

These industrialised methods of construction were similarly suggested by Le Corbusier for the ‘Immeubles-Villas’, where it was proposed that the standardised building elements be prefabricated in a factory then transported to and assembled on site.³³ Such techniques were experimented in some of Le Corbusier’s constructed housing projects, thanks to private developers with faith in his ideas. These projects were the ‘Quartier Moderne Frugès’ (1925-28)³⁴, ‘Pavillon Suisse’ (1930-32)³⁵ and ‘Immeuble Clarté’ (1930-32)³⁶ – each of which display certain elements that were later brought together in one design of the ‘Unité d’habitation’.³⁷



7.Immeuble Clarté, Geneva
Switzerland (April, 2000).

8. Pavillon Suisse, Cité
Universitaire, Paris (June,
2000).



From the design of ‘Immeubles-Villas’, Le Corbusier formulated his proposals for the Paris Exhibition of 1937 – ‘Projects A + B’. These were for *real* projects, as opposed to the more classically temporal projects of Exhibitions, proposing the construction of housing blocks in the style of ‘Immeubles-Villas’ on a site in Paris, marking the starting point for the ‘Plan Voisin’.³⁸ Le Corbusier had great difficulty convincing the exhibition organisers of the merit of his ideas, however, and his eventual contribution to the Paris Exhibition of 1937 was the *Pavillon des Temps Nouveaux* – a structure that, in reaction to his initially rejected ideas, emphasised its temporal nature through its materials and construction.³⁹

The ‘Pavillon des Temps Nouveaux’ was a vehicle for propaganda. It was used by Le Corbusier as an exhibition space to display to the public the various urban and housing design schemes produced by his studio over the years, and demonstrated how they fitted in to the history of Urban design and addressed the problems experienced in cities today. The Pavilion displayed in particular, the plans for *Paris 37*⁴⁰, based on the conclusions reached at the CIAM (*Congrès International d’Architecture Moderne*)⁴¹ conference in Athens, 1933.⁴²



9. The Ilot Insalubre n° 6, Paris, 1937.

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The first step in creation of ‘Paris 37’, was the reconstruction of the *Ilot Insalubre No. 6*, in demonstration of Le Corbusier’s dedication to social reform.⁴³ Le Corbusier claimed that the problems of the ‘îlots insalubres’ lay in the fact that too much land had been built on. The results of this he saw as being: limited natural light, limited fresh air, few green spaces, high humidity, lack of hygiene, and proliferation of illness.⁴⁴ To counteract these problems he proposed higher density housing blocks surrounded by ‘*soleil, espace, verdure*’, the design being adapted from the housing blocks that had featured in the ‘Ville Radieuse’, and were developed in greater detail as the ‘Ville Radieuse’ housing block.

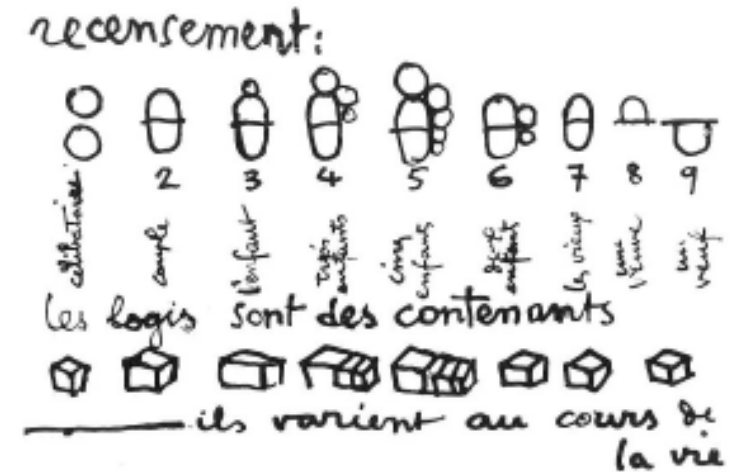


10. Views of the model for the 'Ville Radieuse' Block, described by Le Corbusier as "fragments of a residential quarter" in the 'Radiant City'.

The 'Ville Radieuse' housing block took the form of a continuous zigzag building of somewhat monumental proportions. It was elevated above the ground on 'pilotis', providing an additional artificial ground space underneath the building as well as open terrace space on the roof, providing a liberated surface area, entirely dedicated to the pedestrian, of (as Le Corbusier claimed) 112%.⁴⁵ Cars were set away from the housing blocks, separated by sunken or elevated 'autostradas'. Sports fields were placed at the base of the building, and common services such as a crèche, pre-school, primary school and medical centre were also considered. It was from these blocks, that the 'Unités' were directly derived – segments of the zigzagging blocks, and fragments of the 'Ville Radieuse'.

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11. "Dwellings are containers – they vary through out the course of life".
A sketch by Le Corbusier showing the evolution of a home.

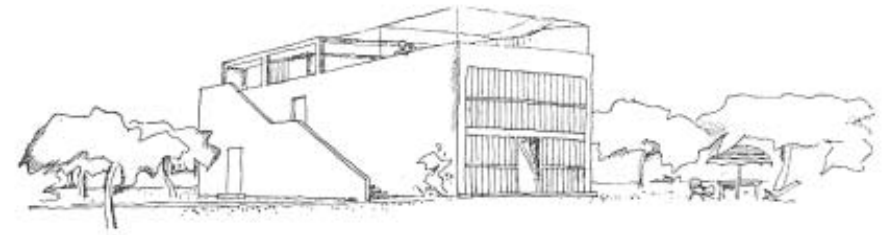
The Individual Home

The designs of Le Corbusier's housing schemes, from 'Immeubles-Villas' to the 'Ville Radieuse' block, were all based on ideas of standardisation and industrialisation – each individual apartment with in the complex being of a set design, to be repeated with in the block as a 'mass-produced home'.

Le Corbusier's interest in standardised and industrialised methods of construction in fact began with a system he termed *Dom-ino*, developed as far back as 1914 (when he was still working in his home town of La Chaux-de-Fonds).⁴⁶ The 'Dom-ino' construction system was later employed in the design of *Maison Citrohan* (1920-27), and in the construction of *Immeuble Locatif à la Molitor* (1931-33)⁴⁷.

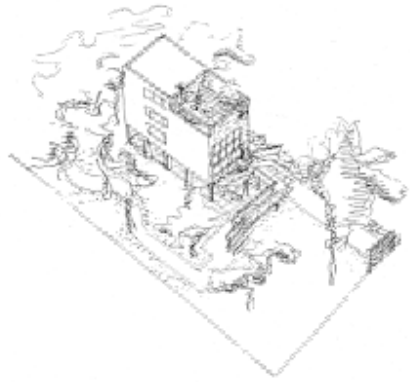


12. Immeuble Locatif à la Molitor, Paris (June, 2000).

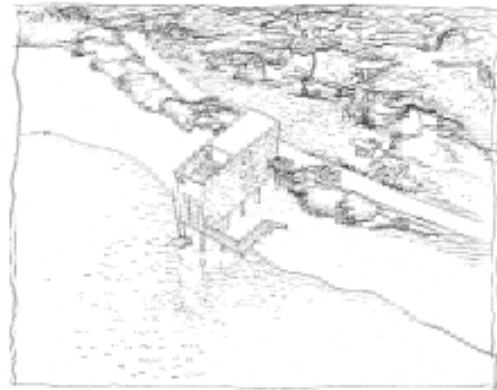


13. 'Citrohan 1' – a mass-produced home.

The 'Maison Citrohan' (named with an intended reference to the Citroën car), was a standardised mass-produced entity, like the car. It was the concept of standard dwelling that could be adapted to any site or setting.⁴⁸ The 'Citrohan 1' (1920) was essentially a three storey rectangular box with an outdoor terrace on the upper level and an almost entirely glazed front providing natural light to the interior.



14. 'Citrohan 2' – adaptable to any setting – a suburban home in Paris...



15. ...or a villa by the sea in along the côte d'Azur.

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'Citrohan 2' (1922)⁴⁹, was much the same as 'Citrohan 1', but this time was elevated on *pilotis*, and displayed a double height living space with a projected bedroom overlooking the dining space below.⁵⁰ These elements of their designs later became characteristic of the 'Unités d'habitation' apartments.



16. The double height living area of the 'Pavillon de l'Esprit Nouveau' exhibited in Paris, 1925.

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But it was not just the mass production of the building as a dwelling that Le Corbusier considered, for he equally proposed the mass production of everything with in it. At the International Exhibition for Decorative Arts in Paris, 1925, Le Corbusier's introduced the idea of 'equipment', as opposed to 'furniture', in the *Pavillon de l'Esprit Nouveau*.⁵¹ Here, standardised practical elements that were useful in everyday life were incorporated into the interior design, with wardrobes, cupboards and shelves built in factories and fitted into the space upon construction. Le Corbusier insisted that furniture become an object of utility rather than decoration – "*a practical machine for living*"⁵², creating greater domestic organisation and a more efficient use of space. The apartments of the 'Unités d'habitation' all incorporated this 'equipment'.

¹ Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 45.

² Extract taken from the translation of the address Le Corbusier gave to M. Claudius Petit, Minister of Reconstruction and Urbanism at the time, upon the handing over of the 'Unité d'habitation' of Marseilles in 1952. Boesiger, W., *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1946 – 1952*, Volume 5, (text by Le Corbusier), Les Editions d'Architectures, Zurich, 1946, p. 191.

³ Le Corbusier himself actually states that he had spent "forty-three years of experiment" leading up to the construction of the 'Unité' in Marseille (Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 45), giving this period of time as 1907-1950. This, however, is the period of time he himself spent considering the ideas leading up to the 'Unité', whereas his first publicly presented works were not the 1920s, with *La Maison Citrohan* (1919) and *Une Ville Contemporaine* (1922).

⁴ Le Corbusier provides his own version of such a history leading up to the first constructed 'Unité d'habitation' in *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 45, entitling his list of events, projects, writings and revelations: *The Long Trek 1907-1950*. But this too misses out on many of the projects and influences that other writers have since noted, such as in Besset, Maurice, *Qui était Le Corbusier?*, Editions d'Art Albert Skira, Geneva, Switzerland, 1968; Von Moos, Stanislaus, *Le Corbusier, Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, 2nd Ed., 1980; Evenson, Norma, *Le Corbusier: The Machine and The Grand Design*, George Braziller, New York, 1969; essays such as Scully, Vincent, *Le Corbusier, 1922-1965*, Tafuri, Manfredo, "Machine et mémoire": *The City in the Work of Le Corbusier*, Von Moos, Stanislaus, *Urbanism and Transcultural Exchanges, 1910-1935: A survey*, Evenson, Norma, *Yesterday's City of Tomorrow Today*, all compiled in Brooks, H. Allen (Ed.), *Le Corbusier*, Princeton University Press, New Jersey, 1987; also Benton, Tim, *Urbanism*, published in the exhibition catalogue, *Le Corbusier Architect of the Century*, Arts Council of Great Britain, London, 1987; and Frampton, Kenneth, *The Rise and Fall of the Radiant City: Le Corbusier 1928-1960*, published in *Oppositions (A Journal for Ideas and Criticism in Architecture)*, Winter/Spring 1980: 19/20, MIT Press, USA.

⁵ Le Corbusier displayed this interest in Sitte in an early essay written in 1910 entitled *La Construction des Villes*. Although he later criticised Sitte for his picturesque style, comparing it to the path of a donkey that "zigzags and dawdles, absent-mindedly" (Le Corbusier, *Urbanisme*, 1925), he was originally impressed, however, by Sitte's approach to a city as a whole architectural landscape and his perceptive analyses of historic cities. See Besset, Maurice, *Qui était Le Corbusier?*, Editions d'Art Albert Skira, Geneva, Switzerland, 1968, p. 151; and Benton, Tim, *Urbanism*, Chapter 4 of exhibition catalogue, *Le Corbusier Architect of the Century*, Arts Council of Great Britain, London, 1987, pp. 200-201.

⁶ Although Le Corbusier strongly disapproved of the 'de-urbanisation' represented in the 'garden-cities', he was, however, inspired by the 'essential joys' that Howard promoted through sunlight, open space and greenery. Le Corbusier's solution that used these ideas of integrated housing with parks and gardens avoided problems of isolation in the horizontal sprawl of the 'garden cities' by introducing the vertical 'garden city'. See Besset, Maurice, *Qui était Le Corbusier?*, Editions d'Art Albert Skira, Geneva, Switzerland, 1968, p. 152; and Benton, Tim, *Urbanism*, Chapter 4 of exhibition catalogue, *Le Corbusier Architect of the Century*, Arts Council of Great Britain, London, 1987, pp. 200-201.

⁷ Le Corbusier was born in Switzerland, in the small town of La Chaux-de-Fonds in the Swiss Jura. Although he traveled and worked briefly in Vienna, Paris and Berlin during his years of study, he did not in fact settle in Paris until 1917, at the age of thirty. (Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, 1993, p. 33)

⁸ *L'Esprit Nouveau* (meaning 'The New Mind') was a review founded by Le Corbusier himself, along with the painter Amédée Ozenfant and poet Paul Dermée. Twenty-eight issues of the review were published between 1920 and 1925. (Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, 1993, p. 41)

⁹ Boesiger, W. + Stonorov, O., *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1 of l'Œuvre Complète, (text by Le Corbusier), Girsberger, Zurich, 2nd Ed., 1974, pp. 34-39.

¹⁰ The twenty-two storey Tacoma building in Chicago by Holabird and Roche had been built in 1887-88 following the development of the steel framed

structure. In 1913, Cass Gilbert's Woolworth building in New York was already around 45 stories or 241m high, not to mention Paris' own Eiffel Tower built for the Paris Exhibition (*Exposition Universelle*) in 1889, at a height of 300m. The Chrysler and Empire State Buildings in New York (1930 and 1930-32 respectively) soon reached heights of 319m high and 381m, the Empire State Building being 102 storeys high.

(Dupre, Judith, *Skyscrapers – A history of the world's most famous and important skyscrapers*, Black Dog & Leventhal Publishers, Inc., New York, 1996, pp. 17 + 28-29, and Fleming, J., Honour, H., Pevsner, N., *The Penguin Dictionary of Architecture*, Fourth Edition, Penguin Books Ltd., London, 1991, p. 407.)

¹¹ Le Corbusier, *Urbanisme*, Crès, Paris, 1925, p.135.

¹² Boesiger, W. + Stonorow, O., text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1 of l'Œuvre Complète, Girsberger, Zurich, 2nd Ed., 1974, p. 38, (trans. I Toland).

¹³ Ibid.

¹⁴ Tony Garnier's 'Cité Industrielle' was exhibited in 1904 and published in 1917. The plans rejected the classical academic approach taught by the *Ecole de Beaux Arts* of symmetry and monumentality and instead proposed a 'new approach' to town planning. Here, Garnier considered the location of industry, rail transport, a defined city centre, and housing, as well as determining how they would relate most rationally to each other. (Garnier, Tony, *Une Cité Industrielle: Etude pour la Construction des Villes*, Princeton Architectural Press, New York, 1989; see also Fleming, John, Honour, Hugh + Pevsner, Nikolaus, *The Penguin Dictionary of Architecture*, Penguin Books Ltd., England, 4th Ed., 1991, pp. 174-75) Le Corbusier in fact met with Garnier on one of his first trips to France around 1907. (Jenger, Jean, *Le Corbusier: L'Architecture pour l'Emouvior*, Gallimard, Evreux, September 1993, p. 17)

¹⁵ In Eugène Hénard's work, the solutions to traffic management and planning theories expressed are similar to those employed by Le Corbusier, although his stylistic approach was quite the opposite (Hénard employing the decorative fin-de-siècle architectural imagery that Le Corbusier clearly rejected). See Benton, Tim, *Urbanism*, Chapter 4 of exhibition catalogue, *Le*

Corbusier Architect of the Century, Arts Council of Great Britain, London, 1987, p.204; and Von Moos, Stanislaus, *Le Corbusier, Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, 2nd Ed., 1980, p. 189.

¹⁶ The name for the 'Plan Voisin' was taken from that of Gabriel Voisin, the constructor of automobiles and aeroplanes. The name intended to link the scheme with these complex and ingenious products of large industry, a phenomenon considered by Le Corbusier to be a symbol of 'modernity and rational efficiency'. See Boesiger, W., Girsberger, H., (text by Le Corbusier), *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 320; also Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Projets et Réalisations*, Collection Architextes, Le Moniteur, Paris, 2nd Ed., 1997, p. 38.

¹⁷ Boesiger, W. + Stonorov, O., *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1 of l'Œuvre Complète, (text by Le Corbusier), Girsberger, Zurich, 2nd Ed., 1974, pp. 110-121.

¹⁸ Boesiger, W., Girsberger, H., (text Le Corbusier), *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 320.

¹⁹ See Le Corbusier's expanded work of *The Radiant City: Elements of a Doctrine of Urbanism to be used as the Basis of our Machine-Age Civilization*, Faber and Faber Ltd., London, 1933.

²⁰ As professed in *The Radiant City: Elements of a Doctrine of Urbanism to be used as the Basis of our Machine-Age Civilization*, Faber and Faber Ltd., London, 1933, p.11.

²¹ Jacobs, Jane, *The Death and Life of Great American Cities*, Penguin Books Ltd., England, 1965, p. 33.

²² Critical opinions of 'The Radiant City' are expressed in Hughes, Robert, *The Shock of the New – Art and the Century of Change*, Thames and Hudson Ltd., London, 1992, p. 187. Also in Jacobs, Jane, *The Death and Life of Great American Cities*, Penguin Books Ltd., England, 1965, pp. 32-35, criticisms of "institutionalization, mechanization, depersonalization" by some are noted. And Jacobs herself is also quite critical of Le Corbusier's vision, considering how his ideas would in fact appear in reality – "His vision of skyscrapers in the park degenerates in real life into skyscrapers in parking lots." (p. 356).

²³ The translation given in Boesiger, W., Girsberger, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 26, for the 'Immeubles-Villas' is 'Villas-apartments', however, 'Apartment block-Villas' is actually more accurate.

²⁴ 'Immeubles-Villas' was first exhibited with 'Une Ville Contemporaine' at the Salon d'Automne, 1922, and later with the 'Plan Voisin' for Paris in the *Pavillon de l'Esprit Nouveau*, 1925.

²⁵ Le Corbusier drew much inspiration for his collective housing schemes from Charles Fourier's *Phalanstère* – a Utopian theory of the early nineteenth century that described a profit sharing commune based on monastic collective living (as described in its title, the contraction of 'phalanx' and 'monastère'). He himself refers to Fourier's theories in Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953. (See also Von Moos, Stanislaus *Le Corbusier; Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, 2nd Ed., 1980, p. 160; and Hughes, Robert *The Shock of the New – Art and the Century of Change*, Thames and Hudson Ltd., London, 1992, p. 190)

²⁶ Pierre Jeanneret was Le Corbusier's cousin. He too had studied as an architect, and in 1922, the two cousins opened a studio together at 35, rue de Sèvres, Paris. The collaboration lasted until 1940, when Pierre Jeanneret decided to separate, although they did rejoin and work together again in 1951 for Le Corbusier's largest project in Chandigarh, India. The anecdote of the idea for 'Immeubles-Villas' is retold in Boesiger, W. + Stonorov, O., *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1, (text by Le Corbusier), Girsberger, Zurich, 2nd Ed., 1974, pp. 40-41.

²⁷ Boesiger, W., Girsberger, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 26, "The Villas apartment-blocks originated in an after-dinner remembrance of an Italian Charterhouse and sketched on the back of a restaurant menu." See also, Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvoir*, Gallimard, Evreux, September 1993, p.77; Von Moos, Stanislaus, *Le Corbusier, Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, 2nd Ed., 1980, p. 146; and Curtis, William J. R., *Le Corbusier: Ideas and Forms*, Phaidon Press Ltd., London, 2nd Ed., 1992, p. 22.

²⁸ Von Moos, Stanislaus, *Le Corbusier, Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, 2nd Ed., 1980, p. 146.

²⁹ Boesiger, W. + Stonorov, O., text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1, Girsberger, Zurich, 2nd Ed., 1974, p. 41 (trans. I. Toland).

³⁰ Von Moos, Stanislaus, *Le Corbusier; Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, 2nd Ed., 1980, p. 143.

³¹ The influence of Soviet Avant-garde theories on Le Corbusier's architecture is discussed in detail in Cohen, Jean-Louis, *Le Corbusier and the Mystique of the USSR: Theories and Projects for Moscow, 1928-1936*, Princeton University Press, New Jersey, 1992. But not only was Le Corbusier influenced by their theories, for certain design elements they employed also later appeared in his work, one example in particular being Le Corbusier's two-story split-level dwelling units interlocking over an 'internal street' – the very same arrangement later employed in the 'Unité d'habitation' design. (See Von Moos, Stanislaus, *Le Corbusier; Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, 2nd Ed., 1980, p. 143).

³² Von Moos, Stanislaus, *Le Corbusier; Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, 2nd Ed., 1980, p. 144.

³³ Boesiger, W. + Stonorow, O. text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1 of l'Œuvre Complète, Girsberger, Zurich, 2nd Ed., 1974, pp. 92-95. See also *Vers une architecture* ('Towards a New Architecture'), first published in 1923, where Le Corbusier equally proposed this integration of industry and architecture proclaiming that: "Industry on the grand scale must occupy itself with building and establish the elements of the house on a mass-production basis" (Le Corbusier, *Towards a New Architecture*, trans. Frederick Etchells, The Architectural Press, London, 2nd Ed., 1946, p. 12.).

³⁴ The 'Quartier Moderne Frugès' /Frugès Modern Quarter (1925-28) in Pessac, Bordeaux, were designed by Le Corbusier for Henri Frugès, the owner of a sugar refinery in the region. The project was for a whole new quarter of factory workers' housing utilising principles of Taylorization and industrial production. This was also the first project in which Le Corbusier used the idea of 'polychromy' (See Boesiger, W. + Stonorow, O., text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1 of l'Œuvre Complète, Girsberger, Zurich, 2nd Ed., 1974, pp. 78-86). The project experienced a great many difficulties both bureaucratic and technical,

and never actually achieved the true intentions of design (in either an economic or social sense). These facts display that neither the government, public nor industry was quite ready for Le Corbusier's ideas, and it would take many more years of explanations, proposals, presentations, and in particular two world wars, for people to give such ideas a greater level of acceptance. When the buildings were finally occupied, it was by middle-class bourgeois families, and later by some tenant workers. The inhabitants progressively changed their houses to suit their own personal styles, adding pitched roofs and decorative features. The transformations of the houses are discussed in Boudon, Philippe, *Lived-in Architecture: Le Corbusier's Pessac Revisited*, The MIT Press, Cambridge Massachusetts, 1979. See also Gans, Deborah *The Le Corbusier Guide*, Princeton Architectural Press, New York, Revised Ed., 2000, pp. 129-33; and Taylor, Brian Brace, *Quartier Moderne Frugès, Pessac*, FLC, Paris, 1972.

³⁵ 'La Pavillon Suisse' (1930-32) was a student housing block constructed in the 'Cité Universitaire' in Paris. It was Le Corbusier's first major project to be elevated on *pilotis*, benefiting from the building's garden setting, and provided the view from each room to the natural surrounding, as proposed in 'Immeubles-Villas'. The 'Pavillon Suisse' also provided collective facilities for the individual student rooms, with the rooms considered as a standard module of fixed design and dimensions (an idea again of *Immeubles-Villas*). The building's structure was made of a 'dry' assembly, with the steel components produced in a factory before transportation to the site. See Boesiger, W., text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète de 1929 – 1934*, Volume 2 of l'Œuvre Complète, Girsberger, Zurich, 7th Ed., 1964, pp. 74-89; Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, pp. 50-51; and Gans, Deborah, *The Le Corbusier Guide*, Princeton Architectural Press, New York, Revised Ed., 2000, pp. 49-52.

³⁶ 'L'Immeuble Clarté (1930-32), in Geneva, Switzerland, was a privately developed apartment building of 45 dwellings. These were Le Corbusier's first apartments to use the double height living space, duplex form and individual balcony spaces proposed in 'Immeubles-Villas', and later appearing in the 'Unité' design. The structure of the building was in steel, using ideas of standardisation and prefabrication and the 'dry' construction technique (as encouraged by the building's developer, a metal manufacturer, Edmond Wanner). Although aimed at a more bourgeois elite, 'Immeuble Clarté'

allowed Le Corbusier to experiment with ideas of economy and standardisation that he had theorised over for their social advantages in 'La Ville Radieuse'. See Boesiger, W., text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète de 1929 – 1934*, Volume 2 of l'Œuvre Complète, Girsberger, Zurich, 7th Ed., 1964, pp. 66-71; Gans, Deborah, *The Le Corbusier Guide*, Princeton Architectural Press, New York, Revised Ed., 2000; and Sumi, Christian, *The Immeuble Clarté / Il Progetto Wanner?*

³⁷ Refer to the notes above for each project.

³⁸ Bill, Max, (text by Le Corbusier), *Le Corbusier & P. Jeanneret: Œuvre Complète, 1934 – 1938*, Volume 3, Trans. A.J.Dakin, Les Editions d'Architectures (Edition Girsberger), Zurich, Switzerland, 9th Ed., 1975, pp. 140-52.

³⁹ The 'Pavillon des Temps Nouveaux' (1937) was very simply a canvas structure tied with ropes to a light steel frame. See BILL, Max, (text by Le Corbusier), *Le Corbusier & P. Jeanneret: Œuvre Complète, 1934 – 1938*, Volume 3, Girsberger, Zurich, 9th Ed., 1975, pp. 158-71.

⁴⁰ 'Paris 37' provided an extension of the ideas Le Corbusier had expressed in 'Une Ville Contemporaine' and 'Plan Voisin'. But whilst the 'Plan Voisin' had represented "the ideal concept of a modern city" (Bill, Max, text by Le Corbusier, *Le Corbusier & P. Jeanneret: Œuvre Complète, 1934 – 1938*, Volume 3, Girsberger, Zurich, 9th Ed., 1975, p. 11.), 'Paris 37' was seen rather as the modification of these plans to build on the existing Paris, *re-organising* it, rather than demolishing it.

⁴¹ The CIAM (*Congrès International d'Architecture Moderne* / 'International Congress for Modern Architecture') was a group of selected International avant-garde architects and theorists that met and discussed ideas on architecture and urbanism. The group became the principle instrument for the dissemination of Modernist ideas, and ran over a period of 31 years. Founded in 1928 by a group of architects, of which Le Corbusier was one, the CIAM promoted functionalism and rational planning and focused mainly on theories of urbanism and housing. (See Jenger, Jean, *Le Corbusier: L'Architecture pour l'Emouvior*, Gallimard, Evreux, 1993, pp. 70-71; also Fleming, John, Honour, Hugh + Pevsner, Nikolaus, *The Penguin Dictionary of Architecture*, Penguin Books Ltd., England, 4th Ed., 1991, p. 95)

⁴² The findings of the CIAM at this conference in Athens was later published by Le Corbusier in *La Charte d'Athènes*, 1943. (The later edition being: Le Corbusier, *La Charte d'Athènes + Entretien avec les étudiants des écoles d'Architecture*, Editions de Minuit, France, 1957.)

⁴³ At the time, Paris recognised the existence of 17 'îlots insalubres' (unhealthy /insalubrious housing blocks), accommodating in total around 200 000 people. Demographic statistics in Paris at the time showed an elevated mortality rate, and Le Corbusier saw the existence of the 'hovels' of the 'îlots insalubres' as the origins of this unfortunate fact. (Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Projets et Réalisations*, Collection Architectes, Le Moniteur, Paris, 2nd Ed., 1997, p. 67.) Le Corbusier made all possible efforts to bring about the construction of 'Îlot Insalubre No. 6', liaising with many politicians and government officials, but the French Government continued to refuse his work. His first constructed Government project would only occurring fifteen years later with the 'Unité' of Marseille.

⁴⁴ Le Corbusier, *Note descriptive des immeubles de l'îlot insalubre No. 6*, December 18, 1937, Fondation Le Corbusier, Paris, Box H³ (10); also Boesiger, W., Girsberger, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 322.

⁴⁵ Bill, Max, (text by Le Corbusier), *Le Corbusier & P. Jeanneret: Œuvre Complète, 1934 – 1938*, Volume 3, Trans. A.J.Dakin, Les Editions d'Architectures (Edition Girsberger), Zurich, Switzerland, 9th Ed., 1975, p. 31.

⁴⁶ The 'Dom-ino' system was a structural system that provided the framework for a house and was totally independent of the floor plan. The system supported the floor slabs and stairs, and was constructed from standardised elements in reinforced concrete. The 'Dom-ino' project was in a sense Le Corbusier's constructional prototype for the individual human dwelling. See Boesiger, W., Girsberger, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 24; also Besset, Maurice, *Qui était Le Corbusier?*, Editions d'Art Albert Skira, Geneva, Switzerland, 1968, pp. 69-71.

⁴⁷ 'L'Immeuble Locatif à la Molitor' (1931-33), on rue Nungesser-et-Coli, of the 16th arrondissement in Paris, was developed by the *Société Immobilière* of the Parc de Princes in Paris, over which the building would look. The

building was of a concrete frame with horizontal slabs along for an open and flexible apartment plan, as developed in the 'Dom-ino' theory. The building was designed according to the agreement that Le Corbusier himself would be a shareholder and owner-occupant of the top duplex apartment and roof garden in which he would live until his death in 1965. See Boesiger, W., text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète de 1929 – 1934*, Volume 2 of l'Œuvre Complète, Girsberger, Zurich, 7th Ed., 1964, pp. 144-53; Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Eleclia Moniteur, Paris, 1st Ed., 1987, pp. 90-91; Gans, Deborah, *The Le Corbusier Guide*, Princeton Architectural Press, New York, Revised Ed., 2000, pp. 60-63; and Sbriglio, Jacques (trans. Parsons, Sarah), *Immeuble 24 N.C. et Appartement Le Corbusier /Apartment Block 24 N.C. and Le Corbusier's Home*, FLC, Germany, 1996.

⁴⁸ The 'Maison Citrohan' was adapted to the apartment design of 'Immeubles-Villas', simply employed on mass, like a series of cells, connected by common services. The integration of the two ideas is noted in Boesiger, W. + Stonorow, O. text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1 of l'Œuvre Complète, Girsberger, Zurich, 2nd Ed., 1974, p. 92.

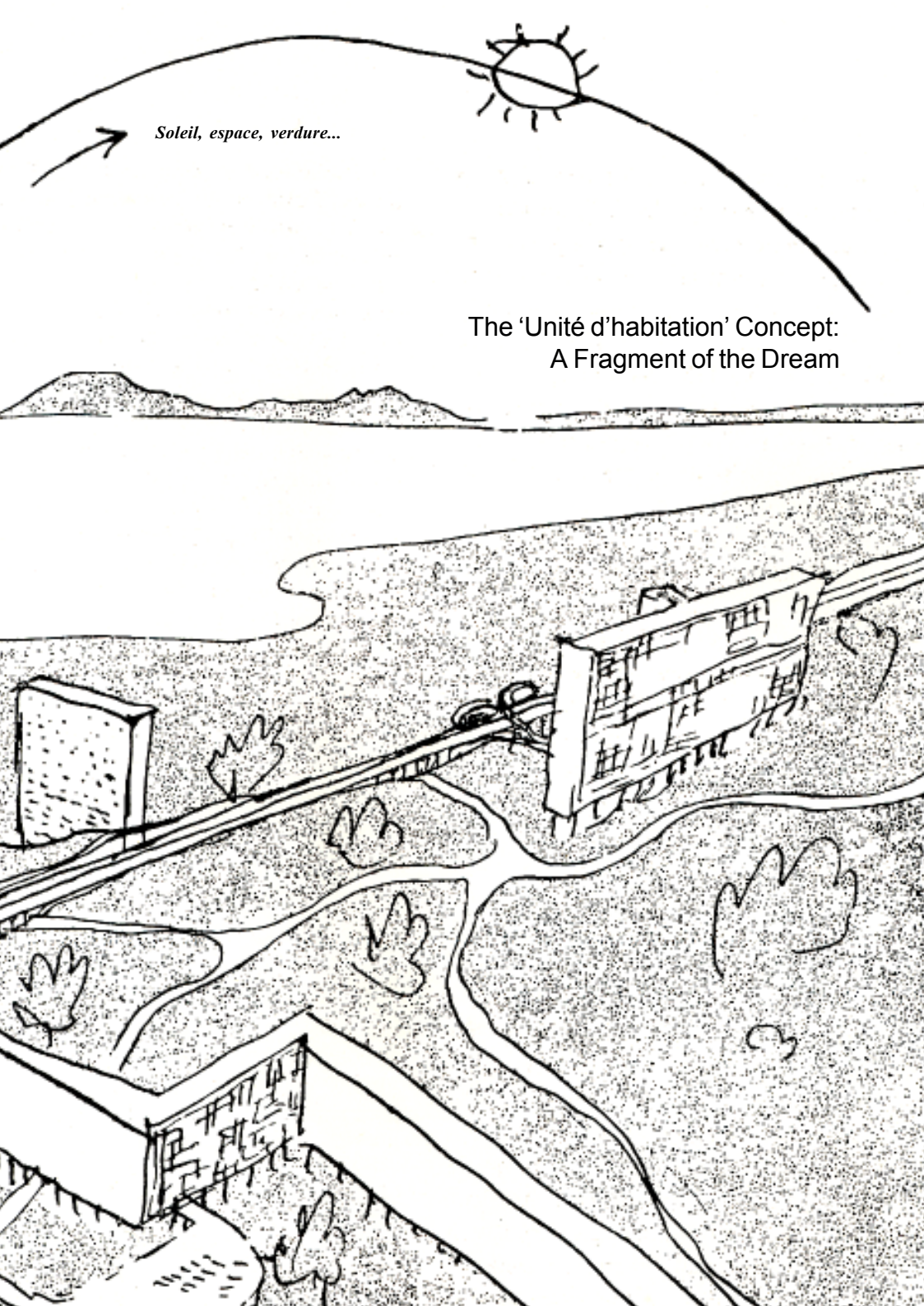
⁴⁹ Although the 'Maisons Citrohan' remained more of a theoretical concept than a reality, 'Citrohan 2' was in fact constructed in 1927 as Le Corbusier contribution to the WeissenhofSiedlung, a model estate of low-cost housing built in the suburbs of Stuttgart. As only one house was built, however, the theories of industrial production upon which it was based could not actually be put into use. Ironically, the house had to be custom-built for the occasion and was consequently far more expensive than any other house on the estate. See Benton, Tim, *Urbanism*, Chapter 4 of exhibition catalogue, *Le Corbusier Architect of the Century*, Arts Council of Great Britain, London, 1987, p. 207-08; also Boesiger, W. + Stonorov, O., text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1, Girsberger, Zurich, 2nd Ed., 1974, pp. 150-56.

⁵⁰ It is thought that this design of a double height living space with overlooking gallery bedroom was inspired by the Parisian artist's studios of the late nineteenth and early twentieth centuries. Le Corbusier himself, however, claims that his inspiration came from a small restaurant he used to frequent in the centre of Paris, where the dining space was divided in two

levels by a gallery, and the front opened out completely to the street. See Benton, Tim, *Urbanism*, Chapter 4 of exhibition catalogue, *Le Corbusier Architect of the Century*, Arts Council of Great Britain, London, 1987, p. 207-08.

⁵¹ The 'Pavillon de l'Esprit Nouveau' enabled Le Corbusier to provide a full-scale impression of the proposed internal living spaces of the 'Immeubles-villas' design – the plans for which were exhibited along with the pavilion. The pavilion demonstrated 'a modern dwelling' built to 'new construction techniques' and aesthetic principles. Le Corbusier's clear rejection for the decorative arts thoroughly displeased the Committee of the exhibition, who consequently erected a large barrier around the Pavilion, obstructing it from public view. It was only thanks to the then minister of Fine Arts, Monsieur de Monzie, who inaugurated the exhibition, that the barrier was reluctantly removed. A pavilion using the same plans was later constructed in Bologna in 1977. (See Boesiger, W. + Stonorov, O., text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1 of l'Œuvre Complète, Girsberger, Zurich, 2nd Ed., 1974, pp. 98-104).

⁵² Boesiger, W. + Stonorov, O., text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1, Girsberger, Zurich, 2nd Ed., 1974, p. 104.



17. (Previous page)
The sketch for an 'Unité
d'habitation' proposal in Algiers,
1942.

“A pupil’s voice says softly: ‘If you want to raise your family in seclusion, in silence, in the conditions of nature... place yourself amongst 2,000 persons, take yourself by the hand; pass by a single door accompanied by four elevators of twenty persons’ capacity each... You will enjoy solitude, silence and the rapidity of “outside-inside” contacts. You will have an elevator in motion (rising or descending) every 40 ft., that is to say, in a few seconds. Surrounding the house will be parks for the games of children, for adolescents and for adults. The city will be green. And on the roof you will have amazing kindergartens.’”¹

The *Unité d’habitation de grandeur conforme* (‘Standard Sized Dwelling Unity’) was the full name Le Corbusier gave to the housing design that was the eventual culmination of the many ideas he had developed regarding the architecture of the human habitat.

The ‘Unité d’habitation’ compressed Le Corbusier’s urban philosophies, construction theories, and functional and aesthetic ideas into one compact unit: a Dwelling Unity, that could be produced and reproduced according to a general set of design principles.

This *general* set of principles (for each of the ‘Unités had certain specific differences depending on the circumstances), are described in this chapter, as a supplement to the discussion of present states of the four ‘Unités’ in France.



18-19. Parkland surrounding the ‘Unité d’habitation’ in Marseille.

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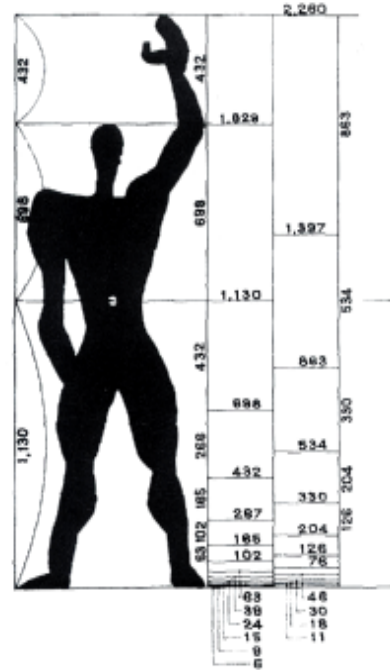
62

A Peaceful Setting

The building of the ‘Unité d’habitation’ is set in the midst of vegetation and parkland – the idea of the green setting that Le Corbusier had promoted in his theoretical studies since ‘Une Ville Contemporaine’ (1922) and reiterated in the ‘Ville Radieuse’ (1935), where a *ville-verte* (‘green city’) is created.² In compliance with these studies, the ‘Unité’ building is a taller compact unit, reducing the building footprint so as to provide a greater area of ‘green space’ around it.

The basic height of the ‘Unité’ had in fact already been determined in the ‘Ville Radieuse’, set at around 50m,³ with the mass of the building raised on *pilotis*⁴ providing an additional ‘artificial ground’ space beneath it.⁵ A visual continuation through the base of the building is also made possible by the *pilotis*, giving a greater appreciation of the expanse of green space surrounding it.

20. The 'Modulor Man' of Le Corbusier's own system of measurement.



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21. Le Corbusier and his 'Modulor' scale.

Building Blocks

A Universal Scale

The 'Unité d'habitation' was Le Corbusier's first chance to try out the new system of measurement that he had been working on – a proportional system he named the *Modulor*. The 'Unité d'habitation' was considered by Le Corbusier to be "*the principle work which exemplifies the use of the Modulor [and] bears witness to the harmony inherent in this range of dimensions.*"⁶ According to him, the use of this scale aided in the 'humanisation' of the 'Unité': "*an immense building ...appears familiar and intimate.*"⁷

The 'Modulor' scale was based on the 'human scale', an idea derived from Classical architectural teachings that the proportions of the human body were 'harmonious' thus the application of these

proportions to architecture resulted in an equal sense of harmony. The scale utilised a six-foot man with a raised arm placed in a square that was subsequently divided according to a mathematical series derived from natural laws (the Golden Section and the Fibonacci series).⁸

Le Corbusier claimed that the scale was "*universally applicable to architecture and mechanics*".⁹ It intended to facilitate the work of the architect by providing a singular system from which the dimensions of *anything* in architecture (no matter how big or how small) could be determined. "*It is a language of proportions that makes it difficult to do things badly, but easy to do them well*"¹⁰ Le Corbusier liked to say, as an apparent quote from Albert

22. A cut-out of the 'Modulor Man' along the commercial level in the 'Unité d'habitation' of Marseille



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Einstein, creating an association that aided significantly in establishing his reputation as a man of a certain scientific and mathematical intellect.

But although the 'Modulor' received much attention as an intellectual theory,¹¹ it did not have the practical success that Le Corbusier had hoped for. Architects and engineers outside of his studio were reluctant to use it, and it never took off as the 'universal tool' he thought it would become. Instead, the 'Modulor' may be considered more as a symbol of Le Corbusier's philosophical ideals – an emblem of his attempts to translate the beauty of nature into architecture through seemingly rational and mathematical means.



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23. Imprints of the 'Modulor Man' on the concrete facade of the 'Unité d'habitation' in Marseille.

However, the 'Modular Man' not only represented Le Corbusier's rational mathematical side, as it in fact became equally representative of his emotional artistic side. For the 'Modulor Man' was a signature of himself as the architect, imprinted or painted on the surface of his works for more superficial and decorative purposes. The 'Modular Man' features in each of the 'Unités' (as the works that 'exemplify this scale' the most), from small painted glass works, to full scale murals, timber cut-outs and concrete impressions.

Industrial Production

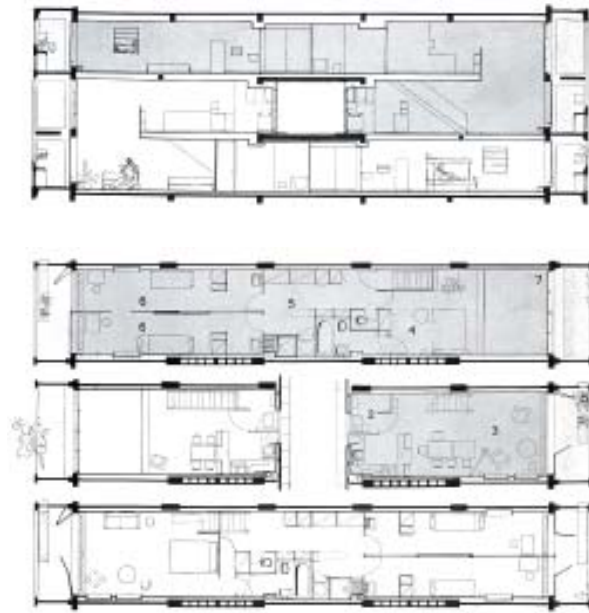
The use of ‘big industry’ in the construction of buildings was an idea that Le Corbusier had pontificated about for years. He proposed that standard elements be fixed, and fabricated on mass, to be created and recreated with machine precision – repeated elements that could be pieced together to form a singular whole.¹²

The design of the ‘Unité d’habitation’ follows this theory, with the building broken down into prefabricated elements produced in factories then transported to the site.¹³ Each of the apartments of the ‘Unité’ in fact consists of a combination of mass produced ‘cells’. The three basic ‘cells’ described by Le Corbusier are: 1. the kitchen cell (which includes the bathroom, toilet and storage units), 2. the parents’ bedroom cell, 3. the children’s bedroom cell.¹⁴

Each ‘cell’ is of a fixed design and dimensions, precisely for the purposes of industrial production. They contain within each of them the built-in ‘equipment’ that Le Corbusier had demonstrated at the *Pavillon de Temps Nouveau* in 1937, with cupboards, draws, benches and wardrobes all designed in accordance with function and spatial economy.¹⁵

The ‘cells’ of each apartment may be organised in a variety of arrangements, multiplied or suppressed to create different apartment ‘types’. A room, for example, may be ‘borrowed’ from one apartment to be used in the one next to it, adding a ‘cell’ to one, whilst suppressing it from the other. In this way, the varied apartment ‘types’ accommodate a range of occupants from multiple child families to single people.¹⁶

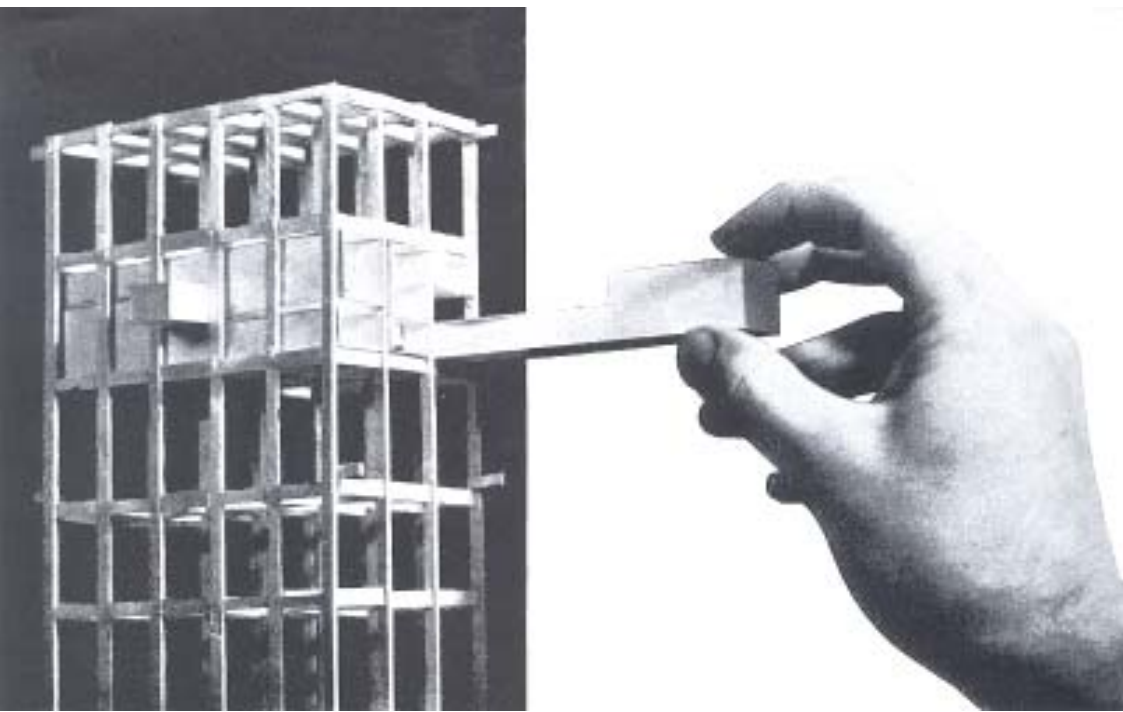
Variety within each apartment is also created by their duplex nature. As the apartments are split over two levels in an ‘L’ type



24. Plans and section showing interlocking apartments of the ‘Unité d’habitation’ design.

section, some may be entered at the top level, whilst others are entered at the bottom.¹⁷ This ‘L’ section also allows for the interlocking of one apartment over the other – an effective arrangement in terms of spatial efficiency.

Once the arrangement of the ‘cells’ is determined to create each individual apartment, the apartments are then slotted into a reinforced concrete frame supporting the entire structure of the building. Le Corbusier referred to this arrangement as the *Caisier à bouteilles* (bottle rack) principle¹⁸ – an expression that describes the way in which each apartment is a singular entity in itself (like a bottle), inserted into the supporting ‘rack’ that provides the framework for the unified whole.



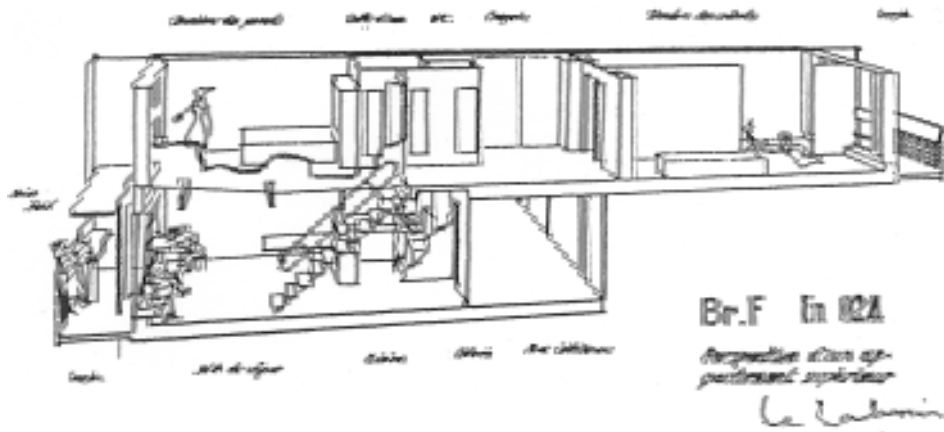
25. Model demonstrating the 'bottle-rack' principle in the construction of the 'Unité d'habitation'.

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26. The eastern facade of the 'Unité d'habitation' in Marseille. The 'loggias' indicating the divisions between each apartment.



27. A perspective drawing of an individual apartment for the 'Unité d'habitation' in Briey-en-Forêt.

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An Individual Home

Independence

As each apartment is an independent element, not one partition enclosing the unit is shared. This independence limits the sound transmission between adjoining units¹⁹, and a greater sense of privacy is obtained. The increased level of sonic isolation also creates a greater sense of autonomy for the family, despite being situated in the midst of a large collective group.

Visual privacy between each apartment balcony (or *loggia*) is also created by its complete enclosure on each side, leaving only the side looking out to the view open. This extension of privacy to the external areas of each apartment reinforces their independence as single dwellings within a complex whole.



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28. The double height living space of an apartment opening out onto the 'loggia' in the 'Unité d'habitation' of Marseille.

The *loggias* of each apartment are sited on the east, west and south facades of the building²⁰ – the private individual terrace spaces proposed in 'Immeubles-Villas (1922 /25). As the building is a rectangular block, sited such that its length stretches from north to south²¹, the majority of apartments are orientated east-west²², with a *loggia* on either side. The *loggias* may equally be opened out onto to provide an extension of the internal living space.



29. The bright red side wall of a 'loggia' in the 'Unité d'habitation' of Marseille.

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Identity

The sides of the *loggias* are painted in pure flat colours of either red, blue, white, yellow, brown or jade green²³ – the application of 'polychromy', an effect that Le Corbusier had originally developed for the 'Quartier Modernes Frugès' (1924-26).²⁴

The polychromatic painting of the *loggias* in the 'Unités' is used to add interest and vibrancy to the exterior of the building, the variation of colours emphasising the projected *loggias* that indicated the presence of different individual dwellings within the building. This indication provides a greater means of identity for the residents, as their dwelling is differentiated from those next to it, marked by a certain colour combination they can determine as their own.



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30. The brightly painted doors of each apartment along an internal 'street' of the 'Unité d'habitation' in Firminy-Vert.

A differentiation of adjacent apartments is also created along the internal 'streets' from which each apartment is entered – the entry doors along the 'streets' being painted in alternating colours of red, blue, black, yellow and green. This use of colour also adds life to the otherwise long and sombre corridors.

The identity of the building as a whole, is equally created by Le Corbusier's unique sense of aesthetics. A style that is not only characterised by the bright-coloured polychromatic painted surfaces, but equally by the boldness and impressive size of the forms, right down to the detail of the rough wood texture imprinted on the concrete.²⁵



31. The 'Unité d'habitation' in Marseille – characteristic concrete 'pilotis' and polychromatic 'loggias'.



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32. The 'pilotis' underneath the 'Unité d'habitation' in Marseille – timber imprints on the concrete of the 'béton brut' style.



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33. The sliding partition (doubling as a blackboard) between the two children's bedrooms of an apartment in the 'Unité d'habitation' of Rezé-les-Nantes.



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34. The double height living space with open front allowing natural light into an apartment of the 'Unité d'habitation' in Marseille.

A Sense of Space

Each apartment is set at a width of around 3.6m,²⁶ a double height at the front of around 4.5m, and thus a single height of around 2.2m.²⁷ The two children's bedrooms, in the back section, are simply formed by the division of the apartment width, making them each only around 1.7m (although the division is operable)²⁸ – their dimensions being comparable to cabins in an ocean liner.²⁹

The level of natural light entering each apartment, however, increased by the double height living space and full height glazing, creates a greater feeling of spaciousness, despite their compact standard dimensions. The open planning of the living, dining and kitchen areas equally allows for a greater sense of space, as the natural light from the front is allowed to penetrate deeper into the apartment.



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35. A 'brise-soleil' on the facade of the 'Unité d'habitation' in Marseille.

The level of sunlight entering the apartment is controlled by the *brise-soleil* (sun-breaker)³⁰ – in fact the dual function of the *loggia*. The *brise-soleil* shades the internal space of the apartment from extended hours of solar penetration, allowing for longer hours in winter and shorter hours in summer, simply due to the varied angles of the sun to the earth during different times of the year.³¹



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36. The open plan kitchen, living and dining area of an apartment in the 'Unité d'habitation' of Marseille.

Family Life

The kitchen, dining and living spaces of each apartment are clustered together at the front providing an open space for familial congregation. The most important room in the apartment is considered the kitchen – the place of food preparation and thus “THE FIRE, THE HEARTH”³², the very core of family life. In opening up the kitchen to the living areas around it, Le Corbusier aimed to draw all family members together to create a sense of intimacy.³³



37. The entry foyer of the 'Unité d'habitation' in Marseille.

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Collective Living

Social Space

Whilst communication within the family group is promoted, communication amongst all of the building's inhabitants is equally considered. Certain communal spaces are provided throughout the building to allow residents to socialise with each other.

Firstly, there is the park space that surrounds the building forming a communal recreational space, then the single entry foyer and lift core for the building allowing for all of the inhabitants to come in contact with each other during the process of their everyday lives. Communal group activity rooms are also provided between each level, on the northern end,³⁴ allowing people of similar interests to gather and form friendships. Whilst an additional communal recreation space is located on the roof terrace.



38. Children playing on the roof terrace of the 'Unité d'habitation' in Marseille.

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Communal Services

Le Corbusier provided a series of communal facilities that he referred to as 'extensions of the home'³⁵ – supplementing daily life, and in convenient proximity for the building's inhabitants. The 'Unité' boasts a series of communal services, added or subtracted in each constructed 'Unité' depending on the case (as discussed in the following chapter of this thesis).

The main facilities *proposed* to be provided in each, were a commercial 'street' on the mid-level of the building providing shops for the residents' everyday needs³⁶, a hotel for guests of the



39. A classroom of the rooftop pre-school in the 'Unité d'habitation' of Rezé-les-Nantes.

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residents³⁷, with restaurant/café attached, and school and childcare facilities on the rooftop.³⁸ Recreational space and sporting facilities would also be located on the rooftop (such as a running track and gymnasium)³⁹, whilst other facilities (such as playing fields or courts) were provided at the bottom of the building in the open parkland, surrounding it.⁴⁰

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¹ Boesiger, W., (Ed.), text by Le Corbusier, *Le Corbusier et son atelier rue de Sèvres 35: Œuvre Complète 1957 – 1965*, Volume 7 of l'Œuvre Complète, Girsberger, Zurich, 3rd Ed., 1977, p. 208.

² Le Corbusier, *The Radiant City: Elements of a Doctrine of Urbanism to be used as the Basis of our Machine-Age Civilization*, Faber and Faber Ltd., London, 1933, p. 107; also Bill, Max, text by Le Corbusier, *Le Corbusier & P. Jeanneret: Œuvre Complète, 1934 – 1938*, Volume 3 of l'Œuvre Complète, (trans. A.J.Dakin, England), Girsberger, Zurich, 9th Ed., 1975, p. 33.

³ Bill, Max, text by Le Corbusier, *Le Corbusier & P. Jeanneret: Œuvre Complète, 1934 – 1938*, Volume 3 of l'Œuvre Complète, Girsberger, Zurich, 9th Ed., 1975, p. 143.

⁴ The *pilotis* was type of reinforced concrete strut or support that elevated the bulk of the building off the ground in order to 'liberate the ground' beneath it. The *pilotis* had in fact been developed much earlier by Le Corbusier, stated as the first point of *Les 5 points d'une architecture nouvelle* (The 5 Points of a New Architecture), published in Boesiger, W. + Stonorov, O., text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1, Girsberger, Zurich, 2nd Ed., 1974, p. 128. Having originally only used it in his domestic designs, the first large building project in which Le Corbusier applied this idea of *pilotis* was the 'Pavillon Suisse' (1930-32). It was also an idea applied to the design of the 'Ville Radieuse' type blocks.

⁵ The advantages of the use of *pilotis* in liberating greater ground space are described by Le Corbusier (for the 'Ville Radieuse' type block) in Bill, Max, text by Le Corbusier, *Le Corbusier & P. Jeanneret: Œuvre Complète, 1934 – 1938*, Volume 3 of l'Œuvre Complète, Girsberger, Zurich, 9th Ed., 1975, p. 31.

⁶ Boesiger, W., Girsberger, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 291.

⁷ Ibid.

⁸ Le Corbusier, *The Modulor: A Harmonious Measure to the Human Scale Universally applicable to Architecture and Mechanics*, (trans. Peter de Francia + Anna Bostock), Faber and Faber Ltd., London, 1973; also Curtis, William J. R., *Le Corbusier: Ideas and Forms*, Phaidon Press Ltd., London, 2nd Ed., 1992, p. 164.

⁹ As stated in the title of his published book (see above note).

¹⁰ Boesiger, W., *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1938 – 1946*, Volume 4, (text by Le Corbusier), Les Editions d'Architectures, Zurich, Switzerland, 1946, p. 170. A quote that Professor Einstein (Princeton, New York) is claimed to have said in 1945 regarding Le Corbusier's 'Modulor' system. But although Le Corbusier quoted this, evidently for self promotional purposes, he must have himself discovered it to be untrue, when some members of his studio began to produce apparently atrocious work claiming it to have been designed according to the 'Modulor'. He even banned the use of the system in his studio for some months as a result. (See Curtis, William J. R., *Le Corbusier: Ideas and Forms*, Phaidon Press Ltd., London, 1986, p. 164.)

¹¹ Le Corbusier was awarded an honorary degree of Doctor Honoris Causa in Mathematical Philosophy at the University of Zurich, Switzerland in recognition of the many years he had spent researching and developing the *Modulor* system. He produced two publications on the system: *Le Modulor* (Editions de l'Architecture d'Aujourd'hui, Boulogne-sur-Seine, 1950), and *Modulor 2: La Parole est aux usagers* / 'Modulor 2: The decision lies now with those who will use it' (Editions de l'Architecture d'Aujourd'hui, Boulogne-sur-Seine, 1955).

Le Corbusier was also made president of the Provisional International Committee for the Study of Proportion in Art and Modern Life following a conference on "Divine Proportion" held in Milan in 1951. (A conference that had discussed proportional systems such as those of Vitruvius and da Vinci.)

¹² Le Corbusier had also hoped that the creation of the 'Modulor' scale would facilitate the mass production of building elements on a global scale by providing standard measurements that avoided the differences between the metric and imperial systems. This did not, however, become the case, although the idea of mass-produced building elements has proliferated to a certain extent, all the same.

¹³ Boesiger, W., *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1938 – 1946*, Volume 4, (text by Le Corbusier), Les Editions d'Architectures, Zurich, 1946, p. 186.

¹⁴ Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 54.

¹⁵ This 'equipment' was in fact designed by Charlotte Perriand who was working in Le Corbusier's studio at the time. The open-tread timber staircase, also a fixed element in each of the duplex apartments was designed by Jean Prouvé. (Information from notes of *La Première Rue*).

¹⁶ Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 52

¹⁷ Ibid., p. 54-59.

¹⁸ Boesiger, W., *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1946 – 1952*, Volume 5, (text by Le Corbusier), Les Editions d'Architectures, Zurich, Switzerland, 1946, p. 186.

¹⁹ The walls of the apartments are also separated from the structural frame of the building by lead pads, which provide a buffer between the two elements, equally preventing the transmission of sound through the frame. The resulting level of sonic isolation for each apartment in the 'Unités' is considered much greater than that of the average apartment building. (See Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 36.)

²⁰ The north facade is completely closed "due to cold winds from that side", (Boesiger, W., *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1946 – 1952*, Volume 5, (text by Le Corbusier), Les Editions d'Architectures, Zurich, Switzerland, 1946, p. 194.), as well as it not receiving any sun. The *loggias* also form a type of honeycomb effect on the exterior of the building, visually breaking up its mass.

²¹ Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 56.

²² As the majority of apartments stretch the width of the building on one level, this east-west orientation also facilitates natural ventilation. This ventilation, however, is equally supplemented by a communal mechanical ventilation system extracting vapours from the kitchen and bathrooms of each apartment. The exhaust tower for the system forms one of the most recognisable sculptural features on the roof terrace. (See image, p. ? of this thesis.) A diagram and description of the system appears in Boesiger, W. text by Le Corbusier, *Le Corbusier: 1938 – 1946*, Volume 4 of l'Œuvre Complète, Girsberger, Zurich, 1946, p. 191.

²³ Only the *Unité d'habitation* in Firminy-Vert varied in the use of these colours, where the *loggias* were painted using a combination of only red, blue and white. This colour scheme had been selected after Le Corbusier's death.

²⁴ Le Corbusier's original theory of 'polychromy', as used in the 'Quartiers Modernes Frugès', claimed that the painting of external surfaces in different colours would break down the mass of the building due to the nature of certain colours to either blend into or jump out from their setting. (Boesiger, W. + Stonorow, O., (Ed.), text by Le Corbusier, *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1910 – 1929*, Volume 1 of l'Œuvre Complète, Girsberger, Zurich, 2nd Ed., 1974, p. 85) Here, however, in the case of the 'Unités', its use is more as a means of adding variety and life to the otherwise dull grey facades, and, as Le Corbusier himself even admitted, to hide certain faults in the concrete. (Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p.158.)

²⁵ The wood texture imprinted onto the concrete surfaces of the building was a result of the rough timber formwork that was used to cast the concrete elements. Le Corbusier described this bare textured nature as 'the skin' of the building, aging and weathering as human skin does – concrete being "the most faithful of materials" (Boesiger, W., text by Le Corbusier, *Le Corbusier: Œuvre Complète 1946 – 1952*, Volume 5 of l'Œuvre Complète, Girsberger, Zurich, 7th Ed., 1976, p. 184).

²⁶ Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 52; also *La cité radieuse de Briey-en-Forêt*, Regional Conservation of Historical Monuments, Direction of Cultural Affairs, Lorraine, Metz, 1994; and Bory, Christophe, *Le Site Le Corbusier, Firminy*, Syndicat d'Initiative de Firminy et Environs, Firminy, 1995, p. 21.

²⁷ Bory, Christophe, *Le Site Le Corbusier, Firminy*, Syndicat d'Initiative de Firminy et Environs, Firminy, 1995, p. 21. These apartment dimensions were in fact determined by Le Corbusier well before the design of the 'Unité d'habitation', described in an essay entitled *A new classification of town building, a new dwelling unity* (Boesiger, W., *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1929 – 1934*, Volume 2, text by Le Corbusier, Les Editions d'Architectures, Zurich, Switzerland, 7th ed., 1964, p. 121).

²⁸ A sliding partition (that actually doubles as a blackboard) separates the two children's bedrooms. The partition may be slid back to open half the length of the dividing wall allowing greater flexibility of space. Despite this flexibility, however, the true narrowness of the bedrooms cannot be ignored, described by some as "hardly more than cupboards" (Hughes, Robert, *The Shock of the New – Art and the Century of Change*, Thames and Hudson Ltd., London, 1992, p. 190).

²⁹ Le Corbusier in fact used the comparison of the 'Unité' to an ocean liner to illustrate his ideas of collective living (see Curtis, William J. R., *Le Corbusier: Ideas and Forms*, Phaidon Press Ltd., London, 2nd Ed., 1992, p.173). Interestingly, the comparison is also suggested in certain aesthetic qualities such as the timber paneling and raised curved-edge doors to the toilet and bathroom. Although these associations seems appropriate in the context of the first 'Unité' set in the port city of Marseille, in the cases of the other 'Unités', however, set very much in in-land towns with no relation to the ocean whatsoever, the association does seem rather incongruous.

³⁰ The *brise-soleil* was first developed by Le Corbusier in 1933 to protect the south and west facades of a housing project in Algiers from extended hours of solar penetration. See Boesiger, W., text by Le Corbusier, *Le Corbusier: 1938 – 1946*, Volume 4 of l'Œuvre Complète, Girsberger, Zurich, 1946, p. 108; also Boesiger, W., *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1929 – 1934*, Volume 2, (text by Le Corbusier), Les Editions d'Architectures, Zurich, Switzerland, 7th ed., 1964, p. 171.

³¹ Although the dimensions of the *brise-soleil* were intended to be directly related to these solar angles, calculated according to the latitude of the location and the resulting angles of the sun at different times of the year (Boesiger, W., text by Le Corbusier, *Le Corbusier: 1938 – 1946*, Volume 4 of l'Œuvre Complète, Girsberger, Zurich, 1946, p. 65), their depth in the case of

the 'Unités' was actually set at around 2.4m, accommodating its dual use as a *loggia*. (Bory, Christophe, *Le Site Le Corbusier, Firminy*, Syndicat d'Initiative de Firminy et Environs, France, June 1995, p. 21).

³² Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 19.

³³ Ibid.

³⁴ These 'club rooms', as Le Corbusier called them, may be used for a range of activities – "*social, cultural, artistic and recreational*" as designated and organised by the residents themselves. (Boesiger, W., *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1946 – 1952*, Volume 5, text by Le Corbusier, Les Editions d'Architectures, Zurich, Switzerland, 1946, p. 191.)

³⁵ Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 58.

³⁶ Boesiger, W., text by Le Corbusier, *Le Corbusier: Œuvre Complète 1946 – 1952*, Volume 5 of l'Œuvre Complète, Girsberger, Zurich, 7th Ed., 1976, p. 191.

³⁷ The hotel was intended to provide 'the spare rooms' for guests that were not included in each apartment due to the strict economy of space. It was originally to be run by a co-operative of the building's inhabitants, however, when constructed in the 'Unité' of Marseille (the only 'Unité' to include the hotel), it was soon revealed that this was not feasible, and the hotel became privately owned.

³⁸ Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 19.

³⁹ Suggestions for facilities on the roof terrace ranged over the years for each housing project Le Corbusier proposed. Some, such as the 'Project A'(1932) for the 1937 Paris Exhibition, even proposed beaches of sand with solariums and scenic walks on the terrace! (Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 54).

⁴⁰ The location of playing fields at the base of the building were suggested in the plans for the 'Ville Radieuse' (Bill, Max, text by Le Corbusier, *Le Corbusier & P. Jeanneret: Œuvre Complète, 1934 – 1938*, Volume 3 of l'Œuvre Complète, Girsberger, Zurich, 9th Ed., 1975, p. 33), although such an idea did appear as early as 'Une Ville Contemporaine' (appearing in the perspectives for the presentation).

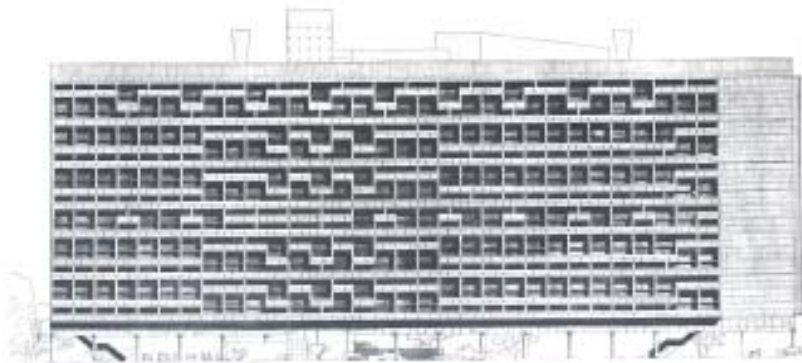
Although these facilities were not constructed around the 'Unité' in Marseille, they were in fact included in earlier proposals, and did eventually appear in the 'Unités' of Rezé-les-Nantes and Firmy-Vert.



4 Unités in France / 4 Dreams + Reality

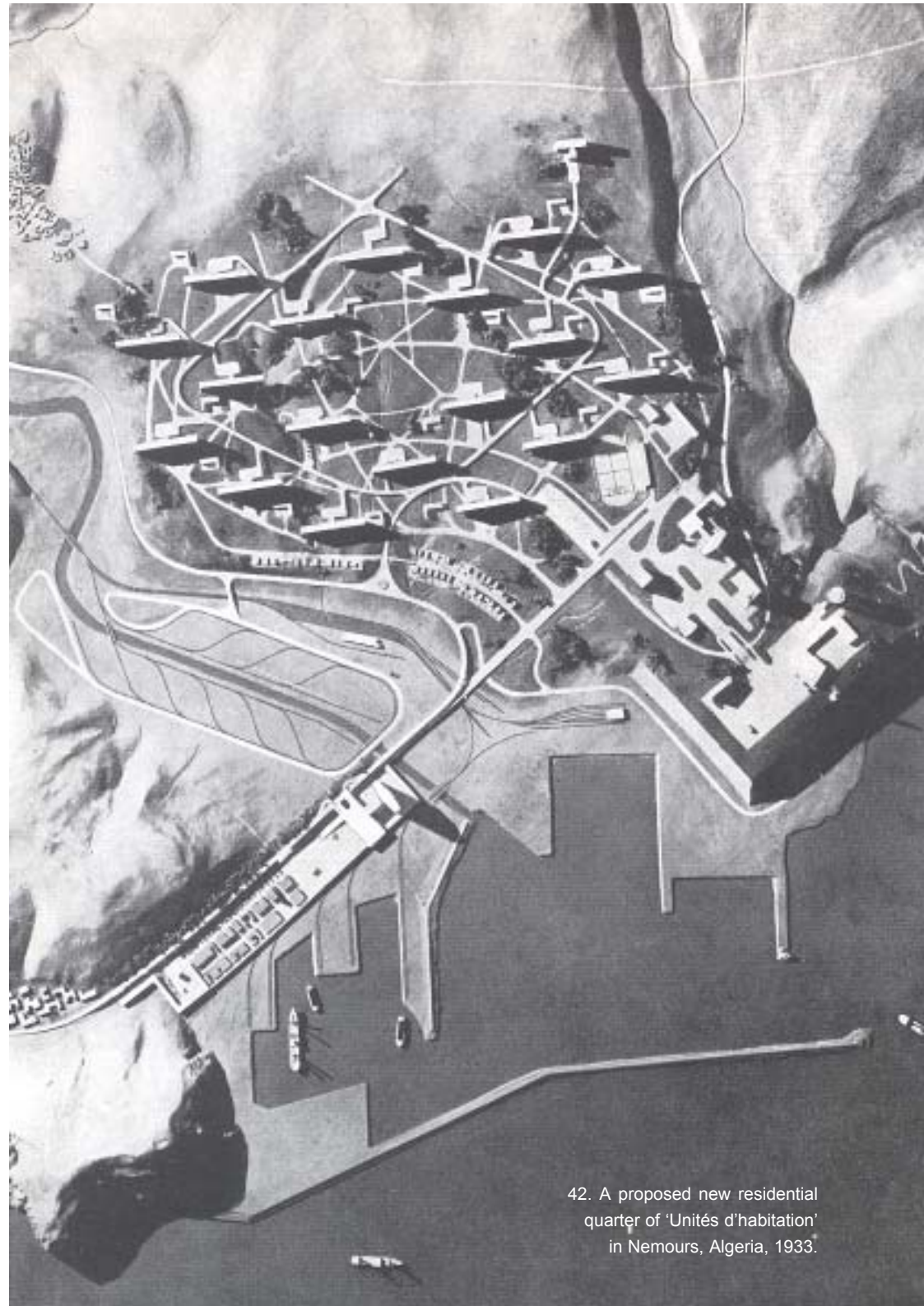
40. (Previous page)
Children of the 'Unité
d'habitation' in Firminy-Vert
playing soccer between the
'pilotis'.

41. The proposal for an 'Unité d'habitation' of 800 apartments in Strasbourg, 1951.



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Over twenty 'Unités d'habitation' projects were in fact proposed by Le Corbusier over the years, generally as a series of multiple 'Unité' housing blocks to be constructed in stages, that would constitute a whole new residential quarter.¹ He proposed such plans for towns all over France, and even some for sites in other countries around the world.² Out of all this great multitude of proposals, however, only five singular 'Unité' buildings, were ever actually brought into reality – the first in Marseille, followed by Rezé-les-Nantes, Berlin-Charlottenburg³, Briey-en-Forêt and Firminy-Vert.



42. A proposed new residential quarter of 'Unités d'habitation' in Nemours, Algeria, 1933.



43. Location of the 4 'Unités' in France.

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Projets (Editions 1 + 2), and often from information published or compiled by related associations of the 'Unité' visited. (Other sources are credited in the notes.)

It is emphasised, however, that the most integral parts of this chapter – being the current state and condition of each 'Unité', and its inhabitants' views this as their home – come entirely from the interviews and observations carried out in person at each place. It is these views that are recorded and contrasted with the past views, and equally compared with other more current views, if found.

This chapter clarifies the actual state of the 'Unités' in France, not only from the viewpoint of the observer, but also, and more importantly, from the viewpoint of its inhabitants.

The four 'Unités' constructed in France are discussed in this chapter, with each building considered as a separate case, appearing in the form of a report, and divided into sections of – I. History, II. Ownership, III. Context and IV. Facilities. These divisions are established as comparative points between each 'Unité', raising certain issues that are later discussed and analysed in the conclusion.

In the case of each 'Unité', some texts (wherever possible) were drawn from for their histories, past contexts and previous states. These were mainly Le Corbusier's *Œuvre Complète* series, Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et*

¹ Generally the 'Unités' formed part of much larger urban schemes, examples of these being the plans for St-Dié (1945), and La Rochelle-Pallice (1946). The plans for St-Dié contained eight 'Unités' to meet the needs of the 20 000 people whose houses had been destroyed in the area during the war. The plans for La Rochelle-Pallice was for ten 'Unités' in a new residential quarter, again for 20 000 people. At first the plans for St-Dié were warmly welcomed by the Town Council and local population, but the Ministers later changed their minds and definitively rejected the proposal. The plans for La Rochelle-Pallice were never actually rejected, but nor were they ever approved, and although Le Corbusier remained their official chief Town-Planner for several years following the proposal, he was never again consulted for the urban development of area. (BOESIGER, W., (text by Le Corbusier), *Le Corbusier et Pierre Jeanneret: Œuvre Complète 1946 – 1952*, Volume 5, Les Editions d'Architectures, Zurich, Switzerland, 1946, p. 191; and BOESIGER, W., GIRSBERGER, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, pp. 338 + 343.) See also the plans for Meaux (1956 + 1960), where the first design proposed 5 'Unités', and the later one 15 (Boesiger, W., Girsberger, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 347); and plans for Bogota, Colombia (1950), where the model for the project suggests the construction of at least 8 'Unités' (Boesiger, W., Girsberger, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 342).

² Le Corbusier's other proposed 'Unités' were in Nemours, Algeria (1933), two others in Marseille, Saint-Dié, La Rochelle-Pallice and Saint-Gaudens (all 1945), Porte de Saint-Cloud, Paris (1949), Bogota, Colombia (1950), Strasbourg (1951), Meaux (1955-60), Roubaix (1956-58), Villacoublay, Brétigny, Boé, Tours (1960-61), and Roussillon (1960-63).

³ The 'Unité' of Berlin-Charlottenburg is not discussed in this chapter, as the focus of the thesis lies more on the 'Unités' as concepts of social housing in the context of France. See Appendix 1, The 'Unité d'habitation', Berlin-Charlottenburg, Germany (1956-58), p. 219-222.



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I. M.MI – Unité Marseille

The 'Unité d'habitation' of Marseille (1945 – 1952)
280, boulevard Michelet, 13000 Marseille, Bouches-du-Rhône.

Also known as the *Maison du Fada* and the *Cité Radieuse*, Le Corbusier's first 'Unité d'habitation' was designed with the help of André Wogensky.¹ The building accommodates a population of 1 500 – 1 700 inhabitants.² It is 135m long by 24m wide and 56m high, and consists of 330 apartments of 23 different types.³

“After twenty years of untiring preparation, the occasion arrived to put in practice what had been resolved theoretically.”⁴

I.1 History

It was not until the desperate situation following the mass destruction of dwellings during the War, and the Reconstruction period in France, that Le Corbusier received his first offer from the French government of a site on which to construct a social housing project for France. Four million dwellings were to be constructed over ten years⁵ and all possible help was required. Finally, the once severe seeming housing proposals of Le Corbusier seemed on par with the severity of the situation.

Since his various controversial writings and proposals regarding urban reform and housing, Le Corbusier had, as he said, been “in bad odour”⁶ with the French Government. Architects all over the country had been approached to aid in the reconstruction, but they had neglected to ask him for his services.

Finally, in 1945, the Minister for Reconstruction and Urbanism in France at the time, Raoul Dautry, decided to offer Le Corbusier a site for a housing project in Marseilles. And after many years of rejected housing proposals intended for the French government, Le Corbusier was finally given the chance to realise his ideas.

The original site for the ‘Unité d’habitation’ in Marseille was at La Madrague, to the north of the city. This first proposal in fact consisted of 3 building units⁷ – a complex of smaller blocks containing almost the same total number of apartments that was eventually constructed in the single ‘Unité’ block.⁸ Limited access to the site at La Madrague, however, hindered the transportation of the prefabricated elements that were essential to Le Corbusier’s construction theories, and so the site was abandoned in favour of another site on boulevard Michelet in Saint-Giniez.⁹

The second design, for the second site, proposed just one single ‘Unité’ as the first stage for a whole new residential quarter that would eventually contain around 10 ‘Unités’.¹⁰ This building consisted of 300 apartments¹¹ (a capacity closer to that of the final design), and featured much larger educational facilities than the first proposal, including a crèche, pre-school, primary school and youth centre at ground level.¹² Although the government actually approved this proposal, the municipal council refused to relinquish the site that they had already dedicated to a waste purification station.¹³

Following this discovery, Le Corbusier began to reconsider a site in Saint-Barnabe that he had originally rejected when first offered the project.¹⁴ But finally another site on boulevard Michelet was discovered in October 1946¹⁵ that was more to Le Corbusier’s approval. The details for the project on this site, were yet again reworked, redrawn and eventually approved of by all parties. And finally, the construction of the ‘Unité d’habitation de grandeur conforme’ began a year later, in October 1947.¹⁶

The building was to be constructed in just one year, however, technical problems experienced during its construction, elongated this period to five years, and augmented the cost enormously. The original estimated cost for the ‘Unité’ had been for 358 million francs (evaluated in 1947). The eventual cost, however, calculated following the completion of the building (evaluated in 1953), was in fact 2 800 million francs!¹⁷ Le Corbusier had truly benefited from the most exceptional circumstances. As the ‘Unité’ in Marseille had been classified as ‘experimental’, huge concessions in the building’s budget were made possible, and the plans were equally exempt from the requirements of a construction permit.¹⁸ The building was opened in October 1952 by the then Minister of Reconstruction and Urbanism, Eugène Claudius-Petit.¹⁹

Even before the completion of its construction, the ‘Unité’ in Marseille was already highly controversial simply due to the nature of its unconventional design. This fact, added to the extended construction period and the growing cost of the building, evidently heightened contention for the project, leading to an incredibly passionate and inflammatory debate.

The *Unité d’habitation* in Marseilles became instantly infamous, word of *le monstre*²⁰ was spread by the national media and people flocked from all over the country to see it. Some praised it for its order and logic, and the “new way of life” that it proposed –

*“Le Corbusier’s Unité d’habitation ...holds the greatest sum of experiences: of construction, of plasticity, in the use of different surfaces, the sunny aspect, the climatic control, and the habitability. ...an undeniable architectural success. ...But it is not simply a question of architecture. It is the experience of a new way of life that is offered to mankind.”*²¹

Whilst others criticised it for being insalubrious and inhumane –

*“Here you will find, brought together, all of the greatest causes of insalubrity, ...the directors of the departments of Health and the advisors of the departments of hygiene are fighting, with out cease, to prohibit the habitation of the building.”*²²

The polemical nature of the building lay, not only in its aesthetics, but also in the ethics of the principles upon which it was built. Le Corbusier’s had already been highly criticised for his socialistic ideals, expressed through his theories of functionalism and standardisation²³ (the very theories that formed the basis of the ‘Unité’ design). And even fellow architects that credited Le Corbusier for his innovation and ideas, began to question his

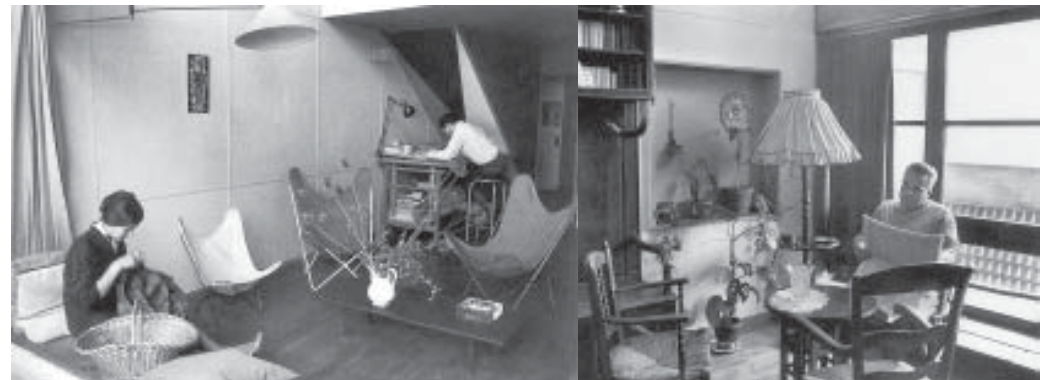
judgement in this case: *“Il est des choses qui ne se font pas. Tout n’est pas possible [...]”* (‘Some things are just not done. Not everything is possible [...]’), said R. Rouzeau in *La Journée du bâtiment* (January 25-26, 1948), with regards to the construction of the ‘Unité’ in Marseille.²⁴

On paper, Le Corbusier’s ideas were controversial enough, so when these ideas achieved a physical reality, the reaction of many was no less than outrage. But for each of the passionate objectors, there were an equal amount of admirers.²⁵ Le Corbusier had managed to hold a consistent following over the years, and those drawn by the lifestyle and design of the building, many of whom were architects and designers, were quick to move in.

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45-46. Middle-class residents that were quick to move in to the ‘Unité d’habitation’ of Marseille, 1959.



1.2 Ownership

The 'Unité d'habitation' of Marseille was a fashionable address for the artistic and architectural community, and has been so ever since its construction. But although this popularity with certain people aided in establishing its reputation as "*one of the classics of modern architecture*"²⁶, it did, however mean that the 'Unité' in Marseille had failed to achieve its social ideals.

Originally intended as a building of HLM (social housing) status, the government began to sell off apartments soon after construction in an attempt to recuperate funds, and by 1954, the building was under multiple ownership²⁷ making it, in fact, of a mainly middle-class bourgeois population. This resulting demographic of the 'Unité' was completely contrary to Le Corbusier's intentions, and although this may be seen as a failure on his behalf, it can not be ignored that the fact has aided significantly in its preservation.

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47-48. Views of an apartment in the 'Unité d'habitation' of Marseille today (August, 2000).



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49. A view of the kitchen in the same apartment - the original 'equipment' of Le Corbusier's design has been maintained. (August, 2000).

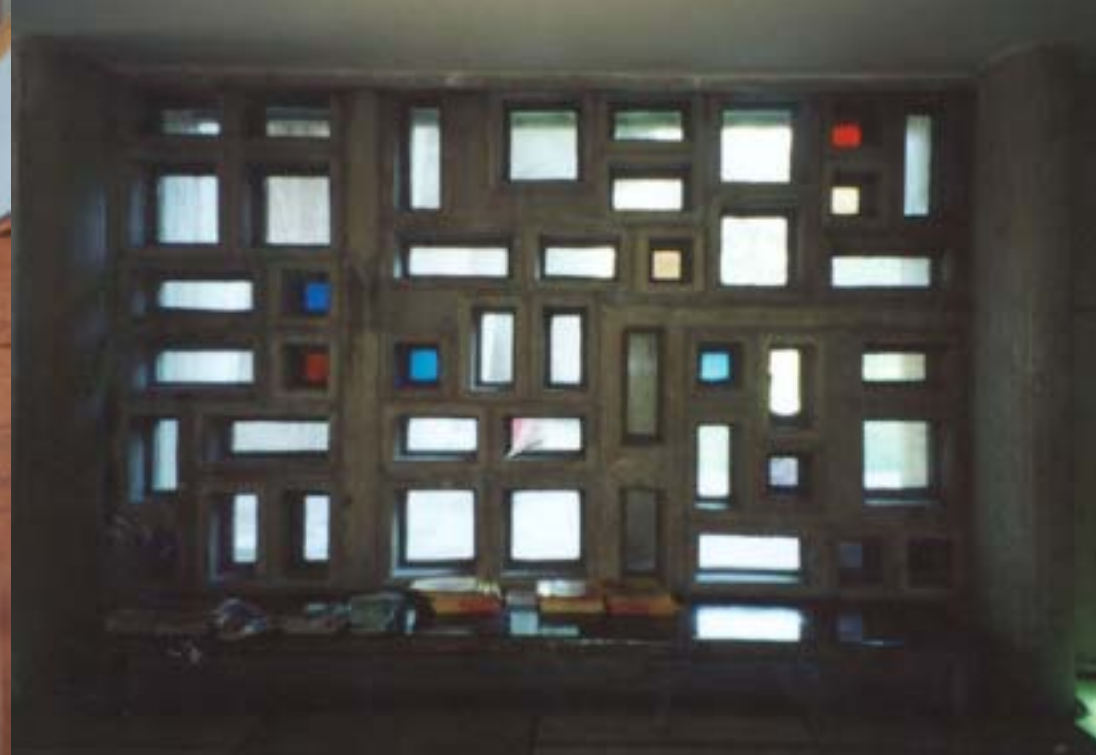
The present residents of the 'Unité' in Marseille have all chosen to live there. They have much respect for their place of dwelling, and several of the residents have formed a very active committee that oversees all renovation work done to the building, as well as ensuring its continued structural integrity.²⁸

Renovations on the building in Marseilles began around twenty years ago. They have slowly, but progressively seen the reparation of various concrete faults, the resurfacing and almost complete renovation of the roof terrace, and the repainting of the polychromatic *loggias*²⁹ – work that has maintained a fresh and vibrant appearance to the building despite its substantial age.³⁰



50. Looking down a section of the commercial 'street' in the 'Unité d'habitation', Marseille. (August, 2000).

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51. Coloured glass windows in the entry foyer of the building. (August, 2000).



52. Looking out to Blvd Michelet
from the lift foyer, Marseille .



53-54. View of the 'Unité
d'habitation' from Blvd Michelet,
and view from the carpark of
the commercial centre behind.

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I.3 Context

Marseille is France's second largest city, and also one of its oldest.³¹ Its proximity to the Middle East and Northern Africa has leant to its diverse population and culture. It is a vibrant city with a relaxed atmosphere, and its warm southern climate has established it as a popular holiday destination.

But it is not just the climate and atmosphere that have brought the tourists to Marseille. Many visitors to the city, both national and international have been drawn to it almost entirely because of Le Corbusier's famous 'Unité d'habitation'.³² The building, now classified as an historical monument, is by far the city's most well known edifice – sign posted with directions, from just about every point around the area.

Whether liked, or disliked, the 'Unité' has become Marseille's most identifying feature. It is now almost fifty years old, and being the first and most famous of all the 'Unité d'habitation' buildings, its construction has become one of the most important events in the history of the city.



55. View from the balcony of an apartment in the 'Unité d'habitation' looking out to the surrounding area today.



56. The 'Unité d'habitation' in its original Marseille setting (the image Hughes used to illustrate his points).



57. Parkland at the base of the 'Unité d'habitation' in Marseille.

Marseille is France's major port, and as a result, the city and its surrounding region are highly industrialised. The city has grown rapidly around the area in which the 'Unité' was constructed, and Boulevard Michelet, on which the building is located, is now one of the city's main arterial roads leading into the port and centre. The site of the building may have once been considered distanced from the city centre³³, but today, the buzzing metropolis has spread, engulfing Le Corbusier's 'Unité' with in it. The 'Unité' in Marseille is now in fact quite centrally located. And as an indication of the building's local status in history, it even has its very own designated bus stop, sited directly in front, and entitled "*Ville Radieuse*".

Le Corbusier's lack of consideration for scale in terms of its surrounding environment, that he was accused of during its period of construction, can no longer be considered an issue. The 'Unité' now blends into the area, the buildings around it being either taller or similarly proportioned.



58. View onto the park and children's playground from an apartment of the 'Unité d'habitation' in Marseille.

The building is surrounded by landscaped parkland of 3.5 hectares³⁴, sitting back from the busy boulevard Michelet. The edge of the site is boarded by a series of tall trees, providing a buffer to the noise of the passing traffic. The 'Unité' in Marseilles still appears to have a tranquil setting despite its now busy location.

A large shopping centre is now situated in the block behind the 'Unité' and opposite, on the other side of boulevard Michelet, local street food markets (a large part of daily French life and culture) are held on a weekly basis.³⁵ The proximity of this commercial activity adds to the convenience of the building's location for its inhabitants.

The local bus route also passes directly in front of the building providing frequent and efficient transport to and from the city centre.

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59. The small supermarket on the commercial mid-level of the 'Unité d'habitation' in Marseille, 1959.

I.4 Facilities

The 'Unité' in Marseille provides a variety of commercial and recreational facilities, in compliance with Le Corbusier's ideas of communal services. The main facilities are located on the commercial mid-level and the roof terrace.

The Commercial Mid-level

When the building first opened, it contained a large co-operative general store, a fish shop, a butcher, a bakery, a laundry, a post office, a newsagent, a bookshop, a pharmacy, and various boutique stores, all located at building's mid-level.³⁶ Today, commercial activity has been reduced significantly to only a small supermarket operated by a large French company, and a privately owned bakery adjacent.

The location of this commerce, in the very middle of the building, invisible to the wider passing community, has restricted their market solely to residents of the building. It was also found that it provoked a feeling of isolation for the inhabitants, as the less interaction required with the outside community, the more insular one is made to feel. Despite the convenient location of the internal shops for the residents, shopping outside of the building became more preferable. For shopping may in part be a necessity, but for many it is also a recreational and, especially in France, a social activity.

But not only is the commercial 'street' isolated from a wider public, it is also quite unpleasant – the internal 'street' is dark and illuminated only by pallid fluorescent lights, providing an environment that is most unappealing as a social space.



60. Outside the supermarket today (a space kept in good condition, but rarely frequently by the inhabitants).

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And yet today, despite all this, the level is still in operation, even it is not the bustling commercial street Le Corbusier had thought it would be. The residents, particularly the more elderly ones, do actually appreciate its convenience on the odd occasion. And, besides, the novelty of a supermarket in the very middle of ones apartment building has simply become one of the characteristic features of this 'Unité' that established its fame.



61-62. The café and reception area of the hotel on the building's mid-level.

The Hotel

The other novelty of this level, is the hotel of the building, of which the reception is located along side the shops. Originally intended to accommodate exclusively for guests of building's residents, it has since become privately owned and is now run as a normal two star hotel.

The hotel has not been renovated since construction, and although in decent condition, the reception area, in which there is also a bar and café, does seem rather shabby and dated. Due to the building's fame, however, the hotel continues to receive a fairly consistent stream of visitors. And with the aid of renovations to the renowned roof terrace and colourful facades, '*L'Hôtel Le Corbusier*' has recently featured in a book of France's most fashionable 'designer' hotels³⁷ – an impressive feat really, considering the age of the building and the state of the actual hotel.

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63. A foyer area on the commercial mid-level.

The Offices

Also situated on the mid-level of the building, are various offices occupied mainly by professionals such as architects, designers, lawyers and doctors. These spaces are located on one side of the mid-level (the other side being used for the eighteen hotel rooms).

The presence of these offices has equally added to the social range within the building, and the integration of small businesses and habitats appears a harmonic one.

64. The upper 'street' of offices on the mid-level.

65. The lower section of the mid-level onto which half of the offices look.

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66. View under the crèche to the paddling pool on the rooftop of the 'Unité d'habitation' in Marseille.

The Roof Terrace

The roof terrace of the 'Unité' in Marseille has become one of its most famous features. It includes a kindergarten and crèche for children of the inhabitants, along with various sports and recreational facilities.³⁸ But although the terrace is often praised for its dramatic sculptural architecture – often compared in its beauty to an ancient Greek temple, or a 'Homeric' landscape³⁹ – it is not without its problems.

The facilities of the terrace are small and separated from the surrounding population – isolating, in particular, the children of the school, rarely allowing them to interact with the outside world and the natural environment. This lack of interaction with nature seems especially contradictory of Le Corbusier's principles in which 'verdure' is one of the three factors he states as being integral to the design of the human habitat.⁴⁰ It's all very well to have a view onto green space (intended to be provided from terrace), but what about physically experiencing it? To truly appreciate nature one must interact with it.

But even the view is beside the point in the case of the children, as they are much too short to see above the tall perimeter wall of the terrace, only the very tops of the distant mountains (if that) are just perceivable from this level. The children of the rooftop school are left to play in a concrete jungle, totally cut off from the natural surrounding environment.

The building co-operative have since arranged for a *slightly* more extensive planted area of small shrubs, running along certain sections of the roof terrace perimeter.⁴¹ The committee were cautious, however, not to add a more significant amount of vegetation, as this would have altered the most renowned and acclaimed part of the building.



67-70. The roof terrace of the 'Unité d'habitation' in Marseille today.

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Other facilities provided on the roof of the building are a 300m running track circling the perimeter of the terrace, a small child's paddling pool around 500mm deep, a small gymnasium⁴² and an outdoor theatre space. These features are unfortunately more novel than useful – facilities the building description can boast of, despite the fact that they are rarely used.

This lack of use may be attributed to the fact that the roof terrace is highly exposed to the harsh Mediterranean sun. The only shade provided on the terrace (which is incidental, rather than considered), is that which is provided by the structures of the gym, the ventilation tower and the elevated room of the crèche. Outside of these areas, one is left out, unprotected from the harsh rays of the sun, and blinded by the extreme glare reflected off the surrounding light grey concrete surfaces.



71. The roof terrace of the 'Unité d'habitation' in Marseille as pictured in Hughes' book (date of photograph not given).

The pool, which had been left cracked and drained for several years until it was repaired during the building's renovations, is considered more as a decorative feature than the enjoyable and refreshing paddling pool it has the potential to be. The use of the outdoor theatre also relies on the initiative of building's community to organise performances for the space – a facility of great potential that they seem yet to acknowledge.

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But although the renovations have restored the aesthetic of the terrace, safety is a matter still in need of consideration (especially where children are involved). A simple chain across an opening to a great fall will not necessarily prevent it, and stairs with out balustrades may be aesthetically pleasing, but where safety is concerned they are not, perhaps, the best idea.

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In comparison to the two completely contrasting views of the roof terrace quoted in the introduction of this thesis – one of Robert Hughes seeing it as decrepit and totally unused, and the other of William J. R. Curits seeing it as often used and appreciated by the residents (refer to p. ?), it would appear that its current state is in fact somewhere in between. For the roof terrace, although now restored to full dramatic glory, is really considered more of a tourist attraction than a facility for the residents of the building. People now tend to *observe* it, as though it were a work of art, rather than actually *using* it.



72. A communal seating area on the roof terrace as pictured today.



73. The same seating area as captured in 1959.



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74. Monumental forms: the gymnasium, lift tower and ventilation 'chimney' on the roof terrace, pictured today.

As the 'Unité' in Marseille is now considered an historical monument, its faithful preservation has evidently overridden any consideration of addition or alteration that might improve it in terms of the residents' enjoyment. It would seem that, in this case, a balance is yet to be found between the concepts of 'the monument' and 'the home'.



75. The roof terrace overrun
by children in its previously
more lively state
(pictured 1959).

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¹ André Wogensky (b. 1916) co-designed with Le Corbusier, all four existing *Unité d'habitation* buildings in France. He worked in collaboration with Le Corbusier from 1934-1944, after which he became a manager of the Le Corbusier Studio from 1945-1956. Wogensky eventually started his own practice, which later took over Le Corbusier's own private studio space on the top floor of the *Immeuble Locatif à la Molitor* in Paris, following Le Corbusier's death in 1965. Some of Wogensky's most notable works have been the *Maison de Culture* in Grenoble (1966-67), and the *Hôpital St-Antoine* in Paris (1963). An exhibition of his work was shown in *La Galerie Blanche* of *La Première Rue* at the 'Unité' in Briey last year (May 13 – June 20, 2000).

² Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 154.

³ Ibid.

⁴ Boesiger, W., Girsberger, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 138.

⁵ Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 7.

⁶ Ibid.

⁷ Boesiger, W., (Ed.), text by Le Corbusier, *Le Corbusier: 1938 – 1946*, Volume 4 of l'Œuvre Complète, Girsberger, Zurich, 1946, pp. 162-65; also RAGOT, Gilles + DION, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 155.

⁸ This design proposed a total of 358 apartments with in three buildings. Another major difference was that the roof top featured a healthcare centre rather than the sports facilities and crèche in the final design. And school and sports fields were situated at the base of the building, in compliance with the original 'Ville Radieuse' concept from which the 'Unités' were derived. (Elements of this first design are described in Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 155).

⁹ Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 155.

¹⁰ Boesiger, W., text by Le Corbusier, *Le Corbusier: 1938 – 1946*, Volume 4 of l'Œuvre Complète, Girsberger, Zurich, 1946, pp. 166-69.

¹¹ Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 155.

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, pp. 154 + 156.

¹⁸ The budget for the *Unité d'habitation* in Marseilles was over one and a half times that of the normal government housing project. (Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 156.)

¹⁹ Le Corbusier was fortunate enough to gain the support of the seven consecutive Ministers for Reconsconstruction and Urbanism – from Raoul Dautry to Eugène Claudius-Petit – who each oversaw parts of the building's extended construction period.

²⁰ In *Le Parisien libéré*, August 25, 1952, it is reported that M. Henri Texier, a spokesperson for the Society for the Aesthetics of France, referred to the 'Unité' in Marseilles as "*le monstre*" (the monster). He considered the building to be ill proportioned and visually offensive (Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, September 1993, pp. 143-144.); also, R. Rouzeau in *La Journée du bâtiment* (January 25-26, 1948), refers to the fact that some believed Le Corbusier "had given birth to a monster". (Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, September 1993, p. 142.)

²¹ Gille-Delafon, S., *Arts*, December 9, 1949, (trans. I. Toland.), see Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, September 1993, p. 147.

²² The Highest Institute of Hygiene in France held two sittings devoted to the discussion of Le Corbusier's *Unité d'habitation* building in Marseille. This quote is taken from the report made by Maurice Puteaux that was published, along with the minutes of the proceedings, in a special suppliment of *L'Architecture Française*. A copy of this article appears in Le Corbusier, *The Marseilles Block*, The Harvill Press, London, 1953, p. 9 (trans. I. Toland).

²³ In an extract from Louis Hauteccœur's book *De l'architecture*, 1938, Hauteccœur criticises Le Corbusier's social and aesthetic principles, accusing him of having 'socialo-communist' theories in his use of standard elements and in the elimination of local or national architectural 'styles'. (Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, September 1993, p. 147.)

²⁴ Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, September 1993, p. 142.

²⁵ The most important admirer of the building was evidently M. Claudius-Petit, with out whom the completion of the project would have undoubtedly been impossible. A glowing and highly complimentary account of the building's features, along with a letter written to Le Corbusier's mother and praising her son's work (both of which were written just after the building's construction) appear in JENGER, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, September 1993, pp. 144-45.

²⁶ Jenger, Jean, *Le Corbusier: Architect of a New Age*, (trans. Caroline Beamish), Thames and Hudson, London, 1996, p. 147.

²⁷ Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, September 1993, pp. 81.

²⁸ Amongst those interviewed at the 'Unité' in Marseilles was M. Charles Durand, a now retired architect and resident of the building. M. Durand has lived in the very same apartment with his wife since he purchased it in 1955. He is just one of the architect-residents that formed the committee in charge

of the building maintenance. It was through this interview that much of the information regarding the residents of the building, renovations, and its present condition was obtained.

²⁹ The repainting of the building took place around 10 years ago. The paint used was mixed by the very same Swiss company that had produced the original paint for the building according to the very same specifications that Le Corbusier had given them almost 40 years ago.

³⁰ The 'Unité' in Marseille, however, has not always been so well looked after. Previous conditions of the building are discussed in part I.4 Facilities (pp. 114-27).

³¹ Marseille was originally a Greek settlement, founded as early as 7th century BC. It was taken over by the Romans in 49 BC, and became the major port of trade between the Orient and the West. (Fallon, S., Robinson, D., Fisher, T. + Williams, N., *France*, Lonely Planet Publications, Australia, 3rd Ed., 1999, pp. 666-67.)

³² Hundreds of architects and designers, as well as a myriad students of these professions, continue to make 'the pilgrimage' (as Charles Jencks describes it in *Modern Movements in Architecture*, Penguin Books Ltd., England, 1986, p. 14) to the 'Unité' in Marseille each year.

³³ In Robert Hughes' claimed that the 'Unité' in Marseille "stands a considerable way from the centre of Marseilles," (Hughes, Robert, *The Shock of the New – Art and the Century of Change*, Thames and Hudson Ltd., London, 1992, p. 188). The accompanying photographs (taken by Roger Viollet, Paris) used by Hughes to illustrate his points do not, unfortunately, indicate the year in which they were taken. It would seem, however, from their quality and the lack of development surrounding the building at the time that they would have been taken much earlier than the year of the book's publication.

³⁴ Le Corbusier, *The Marseilles Block*, trans. Geoffrey Sainsbury, The Harvill Press, London, 1953, p. 58.

³⁵ Robert Hughes criticised Le Corbusier for his inclusion of the commercial mid-level in the Marseille 'Unité', seeing it as ignorance on the architects

behalf of the fact "the French like to shop in their street markets" (Hughes, Robert, *The Shock of the New – Art and the Century of Change*, Thames and Hudson Ltd., London, 1992, p. 190). For anyone with a general understanding of the common French way of life, this comment would seem fair enough. It is interesting to note here, however, that although Le Corbusier may not have considered this fact, the local population has, and in so doing the markets they enjoy have come to them.

³⁶ Information, such as this, regarding historical details of the building, was gained from a presentation organised by the building co-operative as a series of panels providing an explanatory note to the building. These panels provide information to the tourists visiting the 'Unité' and are on display in a section of the entry foyer, at the opposite end to the lift foyer so as to be as unobtrusive as possible to the building's inhabitants.

³⁷ The book, entitled *Hip Hotels – France*, was written and compiled by Herbert Ypma and published just this year by Thames & Hudson Ltd., London, March 2001. The Hotel Le Corbusier is referred to here as one of the most notable hotels in the book's description.

³⁸ Schools and youth recreation facilities were originally to be placed in separate buildings at the base of the 'Unité', and were intended to service the whole surrounding area (displayed in Le Corbusier's second design proposal for Marseille). This arrangement would have allowed for greater interaction and communication between the children and parents of the building with those of the surrounding area. Unfortunately, the school and childcare facilities were eventually placed on the roof of the constructed 'Unité' to compact the design into a singular building unit.

³⁹ Despite his severe criticism of the building, Robert Hughes does, however, credit the roof terrace of the 'Unité' in Marseille as being "one of the great roofs of the world" comparing it to a Greek temple (Hughes, Robert, *The Shock of the New – Art and the Century of Change*, Thames and Hudson Ltd., London, 1992, p. 188 + 90). Le Corbusier himself, in fact, first described the roof terrace of the 'Unité' as having 'Homeric' qualities (Le Corbusier, *Modulor 2: La Parole est aux usagers*, Editions de l'Architecture d'Aujourd'hui, Paris, 1991, p. 304), although others have since agreed with him (see Gans, Deborah, *The Le Corbusier Guide*, Princeton Architectural Press, New York, Revised Ed., 2000, p. 115).

⁴⁰ As previously mentioned, one of Le Corbusier's most famous catch cries for his housing designs was "*soleil, espace, verdure*", endlessly repeated in his writings, and even imprinted symbolically into the concrete facades of the 'Unités' in Rezé, Briey and Firminy.

⁴¹ Some small 'boxes' for planting were included by Le Corbusier in the original roof terrace design, also just along sections of the perimeter wall. These planted sections had become rather straggling and shabby over the years, until the more recent renovation of the roof terrace.

⁴² The gymnasium was originally intended to be run by the inhabitants, for the inhabitants, but as this was not financially viable, it eventually became a privately run, limiting its access to the more elite members of the building population. The gym is still functioning today, however, despite its limited use, and is open to members four days a week.



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II. N RE – Unité Rezé-les-Nantes

The 'Unité d'habitation', Rezé-les-Nantes, 1948-52.
19, rue Crébillon, 44400 Rezé-lès-Nantes, Loire-Atlantique.

Named by the local community *La Maison Radieuse* (The Radiant House), the 'Unité d'habitation' in Rezé-les-Nantes is 110m long, 20m wide and 50m high¹. It consists of 294 apartments of 6 different types, and accommodates around 1 300 inhabitants.²

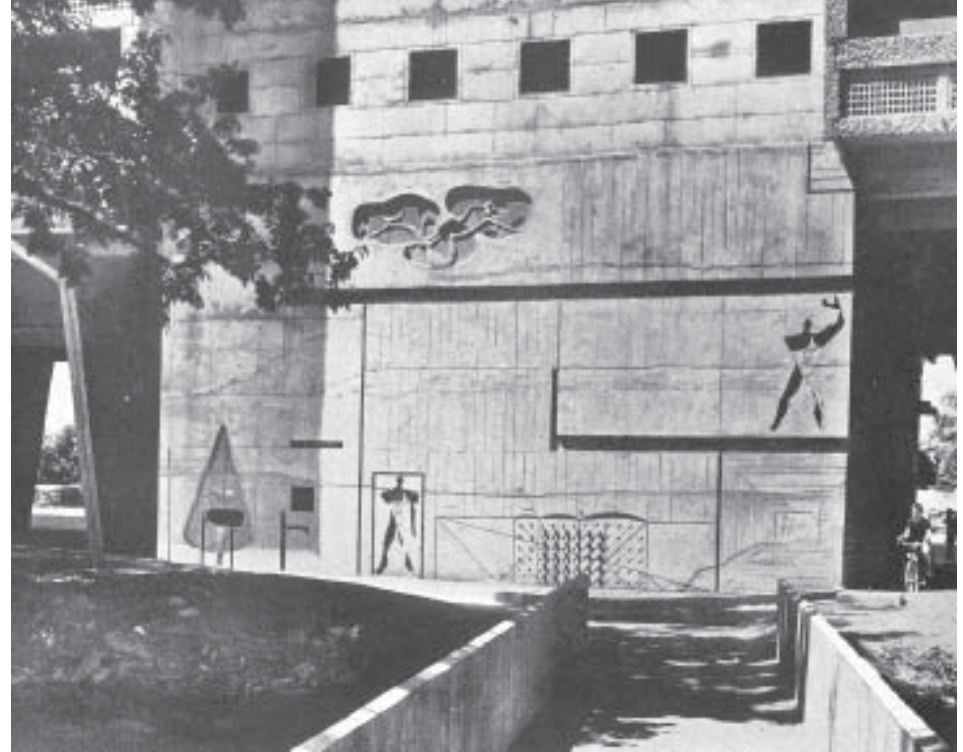
II.1 History

Development of the design for the 'Unité' in Rezé began during the construction of the one in Marseille, and due to the controversy surrounding its Marseillaise prototype, the 'Unité' in Rezé experienced criticism of its own. The construction of the first such building was already an outrage to many, so the repetition of an such an apparently evident mistake (as it was considered by some), would seem most unfortunate –

*"...not having been able to avoid the realisation of the 'Cité Radieuse' [in Marseille], it is hoped at least that this dreadful precedent will not be repeated, especially in Nantes, where such an occurrence is already in question."*³

The circumstances for the 'Unité' of Rezé were quite different, however, as here Le Corbusier was in fact approached by a co-operative of local workers and commissioned for its construction. The finances for the project were supplied in part by the regional government housing association, and supplemented by the building's future occupants.⁴ But the budget was still far less than that of Marseille's 'Unité', and as a result, several compromises were required in size, materials and common facilities.

The width of the building in Rezé was reduced by 5m in comparison to the one in Marseille, the reduction in width consequently resulting in the reduction of apartment length. This limiting of space eliminated the possibility of a double height living area, leaving the apartments of the building in Rezé seeming less spacious than those of the building in Marseille.



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77. The concrete facade at the base of the 'Unité' in Rezé pictured just after the building's opening. A view that is much the same today.

Another compromise was made in the simplification of the building's structure and sound isolation techniques. In Rezé, the reinforced concrete frame structure used in Marseille as a 'bottle-rack' was neglected. Here, Le Corbusier used what he described as a system of 'shoe boxes'⁵ – each apartment still complying with his principles of independence, but in this case separated only by bands of lead running between each 'box' to prevent direct contact and thus reduce sound transmission between adjacent apartments. The sound isolation, although still far better than that of the



78. The polychromatic painted 'loggias' of the 'Unité' in Rezé – still just as bright today.

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79-80. The brightly painted doors of each apartment along an internal 'street' of the 'Unité' in Rezé – the finishes and surfaces kept in excellent condition.

average social housing block, was subsequently less effective than that offered to the residents of the 'Unité' in Marseille.⁶

But despite all of these compromises, the residents of the building were extremely happy with it. And because because there was always an initial support for the building's construction from both its inhabitants and local area, the state of the 'Unité' in Rezé has been fairly consistently well looked after over time.



II.2 Ownership

The 'Unité' in Rezé is still of HBM status – a classification that permits not only low rent government housing, but also the progressive purchase of an apartment by its inhabitant. The progressive purchasing scheme is aimed at providing an incentive for residents to remain with in the housing block, ensuring a greater stability in the building population.⁷ The resulting increase in long-term residents enables the inhabitants to develop stronger bonds and relationships between each other, encouraging a greater sense of community. Many of the residents today have been living in the 'Unité' of Rezé for around 15 to 20 years, and some have even been there since its construction.⁸

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81-82. Inside the apartment of a family living in the 'Unité' in Rezé today (July, 2000).



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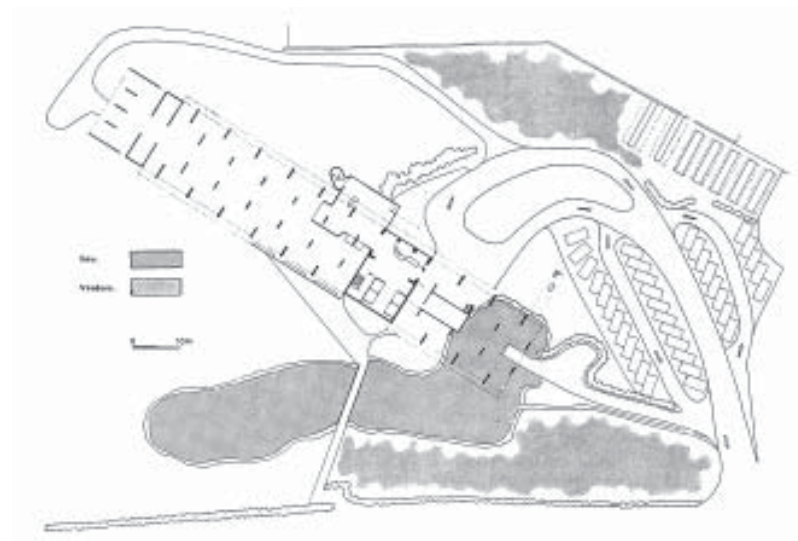
The 'Unité' of Rezé is a rather more humble building than the 'Unité' of Marseille, obviously not in its physical stature (which could actually be considered more impressive in terms of its much less developed surroundings), but rather in its social stature. It has not been glorified and monumentalised as with the 'Unité' of Marseille, and, in greater compliance with Le Corbusier's social principles, it is still inhabited by a population of lower range of socio-economic standing.

But although the 'Unité' of Rezé has not benefited from the exceptional fame and broader socio-economic range of residents of the one in Marseille, it has in fact been more consistently maintained. Because of the original resident participation in the finance of the project and the continuing owner incentive scheme resulting in its partial private ownership, there has always been a strong sense of support and respect held by the inhabitants for their building, ensuring its upkeep.

Rehabilitation and renovation work was performed on the building in 1985, in which fractures in the concrete were repaired, and the polychromatic surfaces of the loggias repainted. The mechanical ventilation and floor heating systems were also updated, and the water supply and drainage systems replaced.⁹



83-84. The 'Unité d'habitation' in Rezé pictured first in 1953, and now, July 2000.



85. Site plan of the 'Unité d'habitation' in Rezé.

II.3 Context

Rezé-les-Nantes is a small industrial town situated just outside of the larger city of Nantes, in the West of France, bordering the regions of Brittany and the Loire Valley. It is located on the site of a Gallo-Roman settlement, and its ancient beginnings are still under research today. Remains have been recently discovered on a site adjacent to that of the 'Unité' where archaeological digs are currently being undertaken.

Unlike in Marseille, the 'Unité' of Rezé is not sited along one of the town's main roads. It is set back, on the edge of the town, but its position is still prominent as it is set on the very top of a hill and is visible from anywhere in the surrounding area. This location allows the 'Unité' to seemingly preside over the meek little town to which it belongs, an impressive building, standing out above all that surrounds it – the urban fabric growing much more slowly than in the busy city of Marseille.

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Despite this lack of development, however, the small town of Rezé is compact, and services and facilities are all within sufficient proximity to each other (even for pedestrians). Just below the 'Unité', at the base of the small hill, the local council offices are located, along with a small café/bar, newsagent and church. Not far from the site is also a large shopping complex servicing the whole of the surrounding area.

The building in Rezé is situated in the middle of a 7 hectare site¹⁰, over which park and recreational space is spread.



86. The artificial lake and parkland at the base of 'Unité d'habitation' in Rezé .



87. The lake running underneath the northern end of the 'Unité' in Rezé – a popular fishing spot for some of the inhabitants.

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II.4 Facilities

Despite certain criticism of the 'Unité' in Rezé for its lack of services in comparison to the 'Unité' of Marseille,¹¹ the facilities 'amputated' (as Le Corbusier himself put it)¹² have not provided any difficulties for the residents.¹³ For the facilities that *were* possible for this 'Unité' are none the less most impressive for what is still essentially a social housing block. And their continued functioning today, despite their age, and difficulties in some cases, is a tribute to the conviction of the residents to *make* their facilities work.

The Parkland

The parkland at the base of the building includes a small children's playground (a more recent addition), a soccer field, volleyball and basketball courts, and even a small artificial lake – the most distinguishing feature of this particular 'Unité'. The use and upkeep of these facilities is ensured by the building co-operative run clubs for each of the sports involved.¹⁴

The lake of the 'Unité', at the base of the south end *pilotis*, is presently in a clean condition and even supports a natural fish and wildlife population, providing a popular recreational fishing spot for the inhabitants.¹⁵ Problems regarding the disposal of waste and rubbish in the lake were previously experienced, but these appear to have been effectively eliminated thanks to the efficiency and effectiveness of the building co-operative.¹⁶

The Entry Foyer

A small post office is located in the entry foyer of the building and is open every afternoon, from Monday to Saturday. It is a useful facility, but provides few benefits other than shear, and possibly unnecessary, convenience¹⁷. It services only the residents of the building, being set well away from the general public in the interior of the 'Unité'. If anything, the inclusion of this service is simply supports a sense of isolation experienced by these inhabitants of a proud but rather insular community.¹⁸

A concierge office, opposite the post office in the entry foyer, is provided to inform the occasional visitors that the building receives. The office was originally a small bookshop and newsagent run by one of the building's residents, but a successive owner could not be found when the first owner passed away, and so this service no longer exists. The post office is the sole remainder of the building's internal commercial activity.

In addition to the clubs and group activities (mentioned earlier) that the co-operative organises, communal picnics are also often arranged to encourage social interaction between the building's inhabitants.¹⁹ These social activities arranged by the co-operative promote a greater sense of belonging for the inhabitants of the 'Unité', establishing friendships with in the community that have played an integral role in binding the families of this 'Unité' to their homes.²⁰

A bi-monthly newsletter called *Ici Corbu* is also written and published by the co-operative of the 'Unité' in Rezé to notify the residents of any up and coming events or general building community related news. The newsletter has equally provided the co-operative with a means of educating the residents as to the design and history of their building and it's architect, promoting the ideas upon which the building was based, and proliferating a notion of pride and solidarity with in the building's community.²¹

The building co-operative for the 'Unité' of Rezé is particularly active thanks to some of the older long-term residents of the building that are extremely proud of their habitat.²² These residents have dedicated a large part of their lives to the maintenance and continued efficient functioning of the 'Unité' in Rezé, and it is thanks to them that building has remained in such a stable condition over the many years since its construction.

88. Le Corbusier's poem and symbol of 'La Main Ouverte' (The Open Hand), that were pictured in an edition of the co-operative newsletter *Ici Corbu* – an illustration to the 'Unité' residents of the humanist aspirations of their building's architect.

*“Open to receive
Open also for everyone to come
and take from it...”*

Ouverte pour recevoir
Ouverte aussi pour que chacun
y vienne prendre
Les eaux ruissellent
le soleil illumine
Les complexités ont tissé
leur trame
Les fluides sont partout.
Les outils dans la main
Les caresses de la main
La vie que l'on goûte par
le pétrissement des mains
La vue qui est dans la
palpation

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89-90. The roof terrace of the
'Unité d'habitation' in Rezé
today.

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The Roof Terrace

The most problematic facility provided in the 'Unité' of Rezé is the roof terrace.

Firstly, Le Corbusier intended the roof terrace to be a communal space for all residents, however general access to the roof terrace is now highly restricted for reasons of safety. It is not that the safety of the terrace has decreased over the years, but rather that the notion of safety is now quite different to when the building was constructed, and certain fences and balustrades are now required for this facility to be considered 'safe'.

Access is not permitted by anyone unless accompanied by an authorised member of the school or the building association, lift access is blocked outside of school hours, and the stair entry is always securely locked.





91-92. Windows looking in to the rooftop pre-school of the 'Unité' in Rezé.



93-94. Inside the rooftop pre-school of the 'Unité' in Rezé.

The Rooftop School

The rooftop school in Rezé, along with the one in Marseille, is the one of the two last remaining functioning schools of all the 'Unité' buildings.²³ And being over 45 years old, *L'Ecole Maternelle Le Corbusier* is in need of refurbishment. The teachers of the school believe its presently deteriorated condition to be unsatisfactory and unsafe.²⁴ The school was to be closed early last year with the hope that the desired renovations would take place, however, insufficient funds prevented this occurrence, and a petition organised by the building's inhabitants, who feared that the closure would be definitive, maintained the continued functioning of the school.

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Deterioration of the teaching spaces and equipment, however, is not the only problem. The location of the building under the flight path to and from Nantes airport and the severe wind levels often experienced at this height greatly restricts the use of the roof terrace that is intended to provide a play area for the school. These two factors not only limit the play equipment permissible for the children²⁵, making the terrace rather desolate and bleak, but they also produce difficulties with the health of the children – the wind levels creating ear and nose problems, particularly during winter.²⁶

But this is not all, as the wind also hinders the growth of plants that would otherwise add colour and life to the dull concrete surfaces of the terrace. For unlike in Marseille, although planting pots were equally provided in the design of the building, the harsh climate to which the plants are exposed here completely prevents their ability to be cultivated.



95. View from the roof terrace of the 'Unité' in Rezé.



96. The entry to the rooftop pre-school of the 'Unité' in Rezé – the walls displaying painted murals by previous children of the school.

The location of the pre-school on the roof of the building, rather than at ground level, also poses problems, as many of the children that attend the roof top school hardly ever leave the confines of the building.²⁷ And not only is their physical interaction with the natural environment restricted during their daily lives as a result, but their visual appreciation of it, as in Marseille, is also not considered. For again, the concrete barrier surrounding the roof terrace is of a sufficient height for an adult to appreciate the surrounding view, but provides no visibility for the children of their wider surroundings.

Fortunately, however, the school has recently obtained permission from the managing body to take the children down to the park area surrounding the building to play when the weather is fine. A rather belated acknowledgement of the building's co-operative, that it is in fact *they* above the architect that ought to govern their lives with

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in the building as its inhabitants – recognising the faults of the design and determining ways solve them. For, after all, as Le Corbusier himself said, "*it is life that is always right and the architect who is wrong*".²⁸

But such an acknowledgement is yet to be made in other cases. A proposal by the teachers to paint the internal side of the barrier surrounding the terrace, in an attempt to enliven the children's uniformly grey concrete playground, was rejected by the building's association under the grounds that it would be "uncharacteristic of Le Corbusier's style".²⁹ But Le Corbusier in fact had a tendency to frequently paint murals on many of the walls of his designs,³⁰ and such restrictions ought perhaps to be reconsidered by those governing the state of the building. (Especially seeing as murals painted many years ago, by previous pupils of the school, actually remain on some of the concrete surfaces near the lift foyer.)

The strength of the building co-operative, arising from the pride of the residents, has aided in the general maintenance of the building and for this it has been exceptionally beneficial for the 'Unité' of Rezé. But when this pride turns into misguided beliefs of purism, and refuses to acknowledge blatant problems, it can prove to have negative effects on certain aspects of the building's functioning.

¹ Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 140.

² From notes compiled by the Association of *La Maison Radieuse* for the purposes of providing information to visitors of the building.

³ *Le Parisien libéré*, August 25, 1952, (trans. I. Toland), see Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, September 1993, p. 144.

⁴ Boesiger, W., Girsberger, H., *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 148.

⁵ Ibid.

⁶ Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 141.

⁷ Information regarding this incentive scheme and the current situation of the residents was obtained in an interview with a long-term resident of the 'Unité' in Rezé, Mme Delassu. Mme Delassu is also one of the two volunteers who offer weekly tours of the building, organised in association with the local council. Guided tours of the building are conducted every Tuesday and Thursday afternoon and are organised through the local community centre situated just down the road from the 'Unité'.

⁸ In an interview with Matthieu Borderie, a 17 year old student living in the 'Unité' with his family, it was revealed that several families like his had been living in the building for many years. Matthieu had grown up with the other children of these families and developed many strong friendships with in the building community over the years. His family had lived in two apartments with in the building during his lifetime, moving to a larger apartment when his younger sister was born. They had decided to remain in the building when they moved, simply because they thought "*life [there] was wonderful*" (own translation), and their current apartment they now own thanks to the progressive purchasing scheme.

⁹ Descriptions and information on the building's renovations was also supplied by Mme Delassu (see note 7).

¹⁰ Area of land given by Mme Delassu. (Although another source, provided by *La Première Rue* of the 'Unité' in Briey-en-Forêt, regarding all constructed 'Unité' buildings, gives land area for the 'Unité' of Rezé as 9ha.)

¹¹ In Von Moos, Stanislaus, *Le Corbusier, Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, 2nd Ed., 1980, p. 163, it is stated that the 'Unité' in Rezé "*illustrates how many cuts (both in form and social equipment) were needed in order to make the Unité an economically reasonable proposition for working-class housing.*" Von Moos however, fails to state the actual 'cuts' that were made, nor does he recognise that despite these 'cuts', the equipment of the building was still far greater than the average social housing development in France.

¹² Pardo, Vittorio Franchetti, *Le Corbusier (The life and work of the artist illustrated with 80 colour plates)*, trans. Pearl Sanders, Thames and Hudson, London, 1971, p. 27. (Unfortunately no reference is given for this quote.)

¹³ The main 'amputation' in this case, was evidently the commercial mid-level that was equally eliminated from the designs of all other subsequent 'Unités'. But although Le Corbusier felt this to be a serious compromise on his total idea, as revealed in the case of Marseille, shopping outside of the building is actually much more preferable (and sane) for its inhabitants. And besides, the proximity of local shops and a large shopping centre to the site of the 'Unité' in Rezé have deemed such a level unnecessary.

¹⁴ The building co-operative provides a range of organised clubs for the residents such as fishing, volleyball, roller skating, boules, nature education, photography and even a clothes exchange club. Club rooms were provided by Le Corbusier in the design of all of the 'Unités', a feature he used to facilitate meetings between residents of similar interests. The functioning of these clubs is, however, the responsibility of the residents and their co-operative. Similar clubs were also noted in Marseille, where a library and a 'ciné-club' were allocated to some of the club rooms there.

A small library was also established by the building co-operative in one of the apartments in Rezé, just after the building's construction. The library is accessible to all residents every Tuesday evening and Saturday morning – a limited service, but useful in educational terms, and proportional to the building's population and size.

¹⁵ Interviews with residents of the building indicated that the small lake was often used by many of them. Children were also observed fishing in the lake during each of the times that the building was visited.

¹⁶ Rules for the building were established by the building's co-operative with the help of Jacques Berthier, director of *L'habitat de Loire Atlantique Habitations Syndicat* (The Loire Atlantic Housing Syndicate), on November 20, 1996. These rules have aided in the maintenance of areas such as the lake – insisting that rubbish be disposed of only in the areas specifically provided for this purpose. These specified rules also involve: the restriction of noise levels, the cleanliness of loggias visible from the exterior, the prohibition of internal "street" blockage by bikes or mopeds, the restriction of all domestic animals to the interior of their owners' apartment, and respect for all common areas and services to prevent their accelerated degradation. During visits to the building, these rules appeared to have been strictly complied with – a fact that simply reflects the respect and pride these residents have for their habitat.

¹⁷ A larger post office is also located in the commercial centre not far from the *Unité* building, where all other commercial activity of the residents would already be conducted.

¹⁸ Concern for the isolation of the building community was expressed by a teacher of the building's rooftop school who lived outside of the building. This is perhaps due to the situation of the 'Unité', located on the edge of the town, rather than being in the midst of it.

¹⁹ Such picnics are not unique, however, to the 'Unité' of Rezé, as large picnics for the inhabitants of *all* the 'Unités d'habitation' are an annual event, taking place at each 'Unité' on a rotational basis, and organised by the *Association des Unités d'habitation de Le Corbusier*. This association for all of the 'Unités' was established to ensure communication between the inhabitants of each building, allowing them to provide support to each other, and to help resolve problems that they may equally have experienced. The association has established a sense of solidarity between all the residents of the 'Unités' as well as giving them a true sense of importance. Its significance is recognised mainly by the 'Unités' of Rezé, Briey and Firminy, who have had to struggle for recognition along side their much more famous predecessor in Marseille.

²⁰ Evidence of this was expressed in the interview with resident Matthieu Borderie (as described in note 8), where the friendships created between families was described as one of the most attractive and beneficial aspects of life in the 'Unité' of Rezé. A similar opinion was expressed by co-operative member Mme Delassu.

²¹ Each edition of the *Ici Corbu* newsletter included a number of quotes and sketches of Le Corbusier, in particular those relating to his humanist approach to architecture, such as the poem and symbol of *La Main Ouverte* (The Open Hand). This symbol often appeared as concrete impressions on Le Corbusier's later work, and plans for a giant sculpture of the stylised hand were even made for the roof top of the 'Unité' in Firminy-Vert. The most famous quote of the poem is in the last two lines: "*Pleine main j'ai reçu, Pleine main j'ai donné*" ("A full hand I have received, A full hand I have given"). The poem of *La Main Ouverte* appears in Girard, Véronique, Hourcade, Agnès + Mardaga, Pierre (Ed.), *Rencontres avec Le Corbusier*, Fondation Le Corbusier, Belgium, p. 150.

²² Mme Delassu (mentioned earlier), is the best example of such a resident. In interview conducted with her, she explained the large amount of work she had done as a member of the building co-operative. Her immense pride for the building and complete and almost reverend respect for its architect – "Monsieur Le Corbusier", simply expressed her complete dedication to the place that had been her home for so many years.

²³ Schools were constructed on the roofs of only three of the 'Unités' – Marseille, Rezé and Firminy (the school facilities for the 'Unité' in Briey

were located independently, on a nearby site, incorporated into the whole urban design scheme of which this 'Unité' was a part). The school in Rezé presently consists of around 40 students divided into two classes. The children are between the ages of 2 – 6 years old and must either live in the building or have a relative as an inhabitant to be admitted (as ruled by the local governing authorities). When the school first opened in 1955, it consisted of around 100 students, but with the reduction of the average number of children per family in France, the school population as since declined.

²⁴ This view was expressed in an interview with one of the teachers of the school, Isabelle Termeau, who demonstrated the ill functioning of much of the school equipment, especially of the toilet and wash facilities that had not been changed since the building's construction. Many of the built in facilities typical of Le Corbusier's designs were also deteriorating, with cast concrete tables and children's seats cracked, chipped and with peeling paint.

²⁵ Children's play equipment on the roof terrace is limited due to the above air flight traffic, as anything considered distracting for the pilots flying overhead is strictly prohibited. Balls, for example, are not allowed, nor the playing of any games such as hopscotch, that would involve the painting of the terrace surface (also considered distracting to the overhead air traffic). The wind provides additional limitations to types of play equipment that may be used as much of it could easily be blown off. These problems regarding the playing area on the roof terrace were raised by the school's teacher Isabelle Termeau.

²⁶ Another concern expressed by Mlle Termeau.

²⁷ Le Corbusier's original theoretical studies for Rezé, as with the first designs for Marseilles, envisaged the school to be situated at the base of the building, set in the natural surroundings of the park. It was to be accessible to all children in local area, to prevent the social isolation of the children living in the building. Unfortunately, due to the proximity of the nearby school of Rezé-Bourg, the municipal council would permit only the inclusion of a small pre-school of three classes, situated on the roof of the building, in the design.

²⁸ This quote was Le Corbusier's reaction to the transformations inhabitants had made to his designs in the case of the *Quartier Moderne Frugès* in Pessac. See Boudon, Phillipe *Lived-in Architecture: Le Corbusier's Pessac Revisited*, The MIT Press, Cambridge Massachusetts, 1979, p. 2.

²⁹ The restrictions placed on the school were equally mentioned in the interview with Mlle Termeau, who expressed frustration and exasperation regarding the conditions of the school and the demands of the building's association.

³⁰ Le Corbusier painted murals on many building walls, the most notable of which are in the *Pavillon Suisse* (1930-32), The Chapel of Ronchamp (1953), the Studio at 35, rue de Sèvres, Paris (where his practice was originally based), and later in the House at Cap-Martin (in fact designed by Eileen Gray, 1926-29). Such works feature in the book Boesiger, W., Girsberger, H., text by Le Corbusier, *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, pp. 299, 305-06 + 312, in a section dedicated to Le Corbusier's paintings, sculptures and tapestries that so often feature in his designs.



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III. Br. F – Unité Briey-en-Forêt

‘Unité d’habitation’, Briey-en-Forêt, 1956-60.
Rue du Docteur-Giry, 54150 Briey-en-Forêt, Meurthe-et-Moselle,
Lorraine.

Also known as the *Cité Radieuse*, the ‘Unité d’habitation’ in Briey-en-Forêt is 110m long, 20m wide and 50m high.¹ It was constructed 339 with apartments², for around 1 400 inhabitants.³

III.1 History

The 'Unité' in Briey-en-Forêt is actually the fourth constructed 'Unité' of Le Corbusier (the 'Unité d'habitation' in Berlin, Germany being constructed in 1958), and the third constructed in France. It is this 'Unité' that has had the most turbulent history of all the five existing 'Unité' buildings.

The area of Meurthe-et-Moselle, in which Briey-en-Forêt is located, was rapidly developing due to the growth of the local steel industry in the early 1950s.⁴ Because of the resulting population growth, the architect George-Henri Pingusson⁵ was approached by the government to design a new district – a satellite village, situated on the perimeter of the small existing town of Briey.

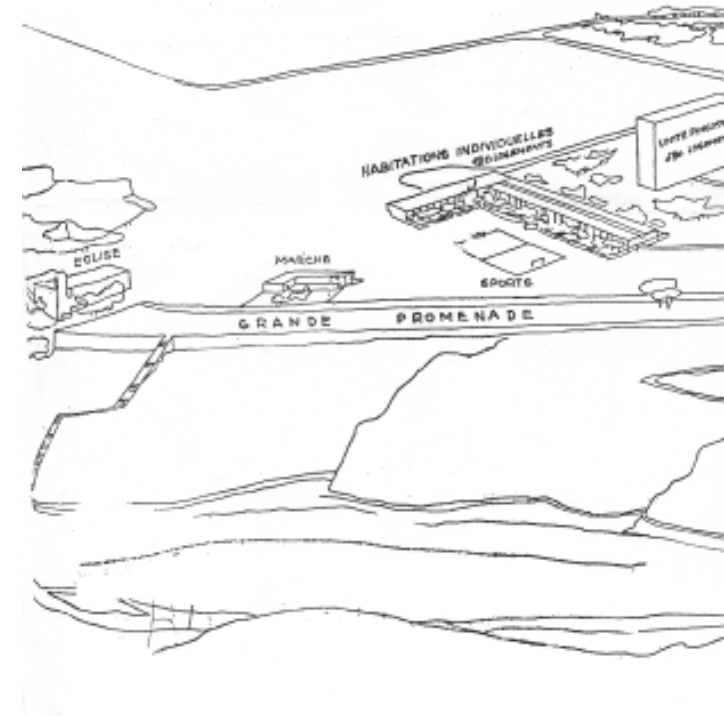
It was decided that the new village would be named "Briey-en-Forêt" (Briey in the forest), suggestive of the architect's aim to develop a site in which *"the human habitat was reconciled with nature"*⁶.

Pingusson's design for this entirely new village, consisted of three large housing developments (of which was Le Corbusier's 'Unité d'habitation' would be one), two bands of town-house style housing, a maternal and primary school, a cinema, an outdoor theatre, communal sports facilities (including a large pool), a large artificial lake, a commercial centre, and a church. Le Corbusier's 'Unité' was to be the focus of the village – located in the centre, and the largest building of the entire development (see image overleaf).

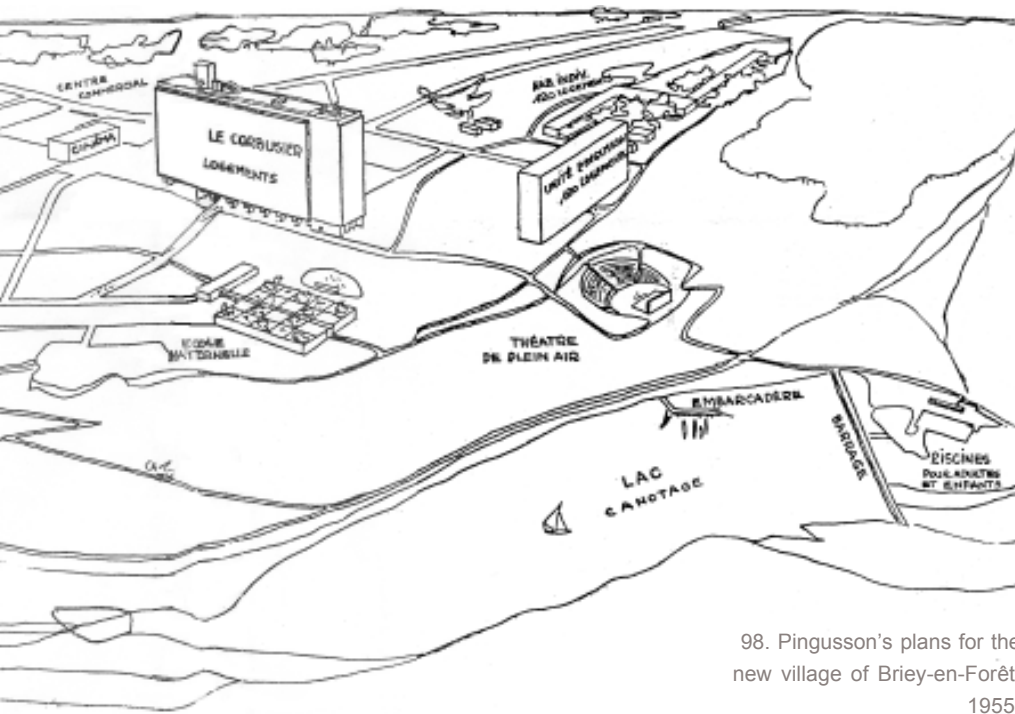
The dimensions and capacity of Le Corbusier's building in Briey-en-Forêt were based on those of the 'Unité' in Rezé-les-Nantes. Because of this, Le Corbusier was even able to reuse some of the drawings that had been done for the previous building,⁷ making the design process more expedient and economic.

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An inopportune change of local government during the planning and construction of Briey-en-Forêt, lead, however, to a decrease in support for the project, and as a result, serious compromises had to be made.⁸ The eventual, constructed urban scheme consisted only of Pingusson's two town-house developments, his maternal and primary school, and Le Corbusier's 'Unité'. The sports, entertainment, commercial and cultural facilities were all neglected. The resulting village of Briey-en-Forêt, once a grand and promising urban scheme, could barely even be considered a skeleton of a town. It had been stripped almost entirely of its vital organs, and compared to what it should have been, was an absolute disaster.



98. Pingusson's plans for the new village of Briey-en-Forêt, 1955.

As for the 'Unité' itself, Le Corbusier had to abandon the roof top maternal school⁹, bar-restaurant and hotel he had originally planned. The only resulting service provided in the 'Unité' (which didn't last long) was a small newspaper /tabacconist near the entry.¹⁰ Plans for the installation of a commercial centre were in fact formed in 1965, but further difficulties with the local government limited the financing of the project, and it was abandoned at the end of that year.¹¹ Even the sporting and recreational facilities of the other 'Unités' are completely neglected in the case of Briey-en-Forêt, presumably due to the fact that Pingusson's original scheme intended to provide these facilities. As a result, the idea of the 'Unité' here was truly 'amputated' in its comparatively severe lack of communal services.

Just a few years after construction of the 'Unité', the OPHLM (*Office Public Habitation à Loyer Modéré* / Public Social Housing Office) that managed the building began to experience serious difficulties¹² – a response, perhaps, to the fact that the residents had only been given a small and much too insubstantial part of the dream.

People with in the building were knocking down walls, altering apartment layouts and using unrented space for squats or rubbish dumps.¹³ But although this state might have been considered by some to be “no better, in fact, than any French immigrant's ghetto”,¹⁴ it would seem that many of the inhabitants at the time, although they acknowledged a certain state of anarchy, actually reminisced about these times with fondness and nostalgia for the openness and friendliness that they had shared with other residents – the doors of the apartments often left wide open for neighbouring apartments to communicate with each other, the atmosphere convivial, and even for one New Year's Eve celebration, long tables were set out along the length of the internal 'streets' for the whole building community to sit along.¹⁵

In reaction to this apparent disorder, management of the 'Unité' changed over to another Social Housing Office in 1967,¹⁶ and this new managing body took it upon themselves to reinterpret the building in a more conventional manner, with the hope of re-establishing order. The raw concrete finishes and vibrant multicoloured doors and *loggias*, characteristic of Le Corbusier's 'Unité' design, were all painted over. The exterior of the building was made a uniform white, and the internal 'streets' were repainted in a pastel shade, with apartment doors all in the one colour. The entry foyer was also later redone, and repair work was carried out on just four of the apartments.¹⁷

But the region was in serious economic recession, and the steel mines that had brought so many people to Briey-en-Forêt closed in 1969.¹⁸ The ‘Unité’, that had by then become emergency accommodation for American families of OTAN (*Organisation de traité de l’atlantique nord* / NATO),¹⁹ was abandoned by its second management in 1977, all renovation work was stopped, and soon, almost half of the building’s apartments were unoccupied.²⁰

The ‘Unité d’habitation’ of Briey-en-Forêt was closed indefinitely in July 1984.²¹ The remaining occupants were forced to leave and find homes elsewhere. The building itself had been abused by its occupants and due to its resulting state of deterioration, plans for its demolition were soon passed.

But the building, although deteriorated, had been sturdily constructed, and demolition costs were too high for the local government at the time. The structural integrity of the ‘Unité’ design, a result of Le Corbusier’s rigorous experiments in constructional concepts, had saved the building from a fate of complete non-existence – a fate that would have sealed the end of the story for the ‘Unité’ of Briey-en-Forêt, and branded it as an irredeemable failure.

Such a fate was not to be, however, and the saving of the building and its rehabilitation (which took in itself another ten years from the time of the building’s closure), has provided a certain strength to the otherwise most feeble adaptation of Le Corbusier’s Radiant dream.

In 1986, the Maillot Hospital, that had been constructed on the site adjacent to the ‘Unité’, acquired a third of the ‘Unité’ building, with the hope that they might aid in its restructuring. The hospital, however, could not do everything alone, and the co-operation of the Social Housing Office required for the building’s complete rehabilitation, was not forthcoming.²²

But fortunately, in 1987, during the celebration of the centenary of Le Corbusier’s birth, a revision of the complete works of the architect finally brought to light the dismal situation of the ‘Unité d’habitation’ of Briey-en-Forêt.

It was announced in a press conference, that there was a conspiracy to ruin the rehabilitation plans for the building, and the fate of the ‘Unité’ in Briey-en-Forêt became a matter of national controversy.²³ As a result of all this attention, the ‘Unité’ of Briey was subsequently visited later that year by the then Minister for Housing, Monsieur Mehaignerie, who, upon his visit, announced the sale of the entire building to the Maillot Hospital for a symbolic one franc.²⁴

But despite the many avid supporters Le Corbusier’s ‘Unités’ had gained and maintained over the years, there were always a certain number of passionate opponents. Prior to the handing over of the building to the Hospital, opponents of the building’s reopening broke in and took over 150 of the apartments, in a last attempt of sabotage. They withstood the authorities for a few months, but eventually relented.²⁵

Upon its take over of the building, the Maillot Hospital sold two thirds of it to a private company called *KLM Résidence*, keeping one third for the establishment of a Nursing school and intern accommodation.²⁶ At the end of 1987, the ‘Unité d’habitation’ of Briey-en-Forêt was reopened,²⁷ a decade after its abandonment. The “new” Le Corbusier apartments were opened for viewing, and the press, that had been instrumental in the building’s rescue, was invited.

The new inhabitants of the ‘Unité’ moved in the following year, and amongst these were many of the building’s previous residents – drawn back by memories of the lively place in which they had lived in.²⁸

But thanks to the media coverage of the building's reopening, these were not the only events that aided in the re-establishment of the 'Unité' – the real event, that would truly change the future of the building was yet to come. In 1989, an international organisation, associated with the National Foundation for Contemporary Art, purchased from *KLM Résidence* the 34 apartments of the first level of the building, hence the name of the association: *La Première Rue* ('The First Street').²⁹

La Première Rue re-established the original "Le Corbusier" character of the first internal 'street', re-painting the apartment doors and redoing seven of the apartments with their original 'equipment' and detailing. They also oversaw the restoration of the entry foyer, and the polychromatic repainting of the external *loggias*. It is these sections of the building that are now classed as historic monuments³⁰ (the rest of the building still remaining in the more banal apartment block state it was transformed into in the late 60's).

99. One of the internal 'streets' – repainted in 1967, their character is now entirely lost.



100. The 'First Street' with its original character since restored.

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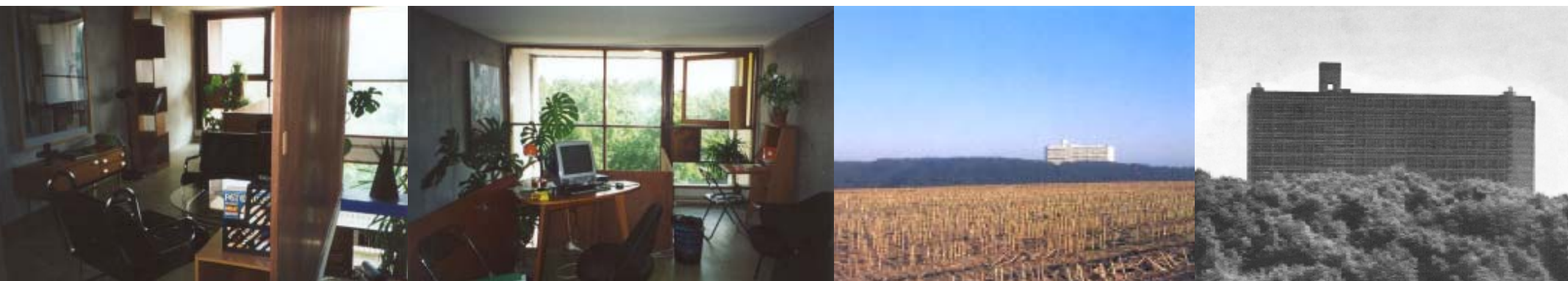
III.2 Ownership

The 'Unité' of Briey-en-Forêt is now entirely privately owned, split between the Maillot Hospital, *KLM Résidence*, and *La Première Rue*. Although, as with its counterpart in Marseille, this 'Unité' has now rejected the social ideals of its creator, its save from a dramatic end has at least ensured its preservation as a symbol of these ideals.

But despite this complete private ownership, it must equally be recognised that the building does continue to accommodate a large proportion of lower working class people simply due to its location and the size of its apartments. The resulting demographic of the building thus being of a mixed middle and working class population.

The strong participation of *La Première Rue* in the running of the 'Unité' of Briey has established the building's significance, in particular with in the international artistic and architectural community, of which some of the most prominent members have provided support.³¹ Artists and designers (both visiting and permanent) have been drawn to the lifestyle from all over the world, attracted mostly by the reputation of the building's design.³²

It is these artists, architects and designers associated with *La Première Rue* have played a large role in cementing the present sense of pride and respect that the inhabitants now have for their building.³³ *La Première Rue* is considered a significant artistic association of international repute,³⁴ and their presence with in the building, along with the artworks they have sponsored to be displayed with in it, has added a definite sense of originality to the lives of the residents in the 'Unité' of Briey-en-Forêt.



101-102. Restored interiors of apartments on the 'First Street', now inhabited by artists and designers.

103. Still in a rather isolated setting – the 'Unité d'habitation' of Briey-en-Forêt pictured in 1993.

104. Just after the building's construction, 1959.

The situation of these artists, the involvement of the Maillot Hospital, and the private mixed ownership of the rest of the building, has allowed for a variety of people with in the building's demographic similar to the case of Marseille. The fact that this 'Unité' has attracted such a broad range of people in spite of its highly inconvenient location (see III.2 describing the context) simply emphasises the fact that people are willing to adapt to the habitat they chose if they feel strongly and passionately enough about it.

The added eventful history of this particular 'Unité', along with the long history of Le Corbusier's design itself, appears to have truly ignited the passion of many in the case of the 'Unité' of Briey-en-Forêt.

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III.3 Context

The satellite-village of Briey-en-Forêt is in the very North Eastern corner of France, in the region of Lorraine, right near the German boarder. Over the past forty or so years since its construction, the town of Briey-en-Forêt has gradually grown. From its highly insubstantial beginnings of a few housing developments and a pre-school, it now includes the Maillot Hospital, a high school, sports facilities, a cultural centre, the artificial lake Pingusson had originally proposed, a few other small housing developments and various individual houses.

There are still no proper commercial facilities in Briey-en-Forêt, however, and the closest shopping area to the 'Unité' is located in the older town of Briey, over 1.5 km away. A public transport system does now services the area, with a bus stop outside the



105. View through the 'pilotis' underneath the building looking out to the surrounding forest.

The Entry Foyer

The *Unité* in Briey-en-Forêt does actually contain a small café / general store next to the entry foyer, replacing the newsagent that had been there for a few years at the very beginning of the building's existence. It is the only commercial store in the area, and exploits this fact by inflating its prices horrendously. Its stock is also very limited.³⁵

The 'First Street'

Although half of the apartments owned by *La Première Rue* are rented out to provide additional finance for their projects, the other half serve as artists' and designers' studios, and exhibition galleries (created with in the original apartment spaces). Each gallery exhibits a variety of monthly exhibitions from photography, sculpture and installations to architecture, urbanism and object design.³⁶

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Maillot Hospital (the actual 'Unité' is another 100m down the road, having to be reached by foot), but the system is highly infrequent and runs only around three times a day. As a result of this distanced and somewhat isolated location, a car is almost essential for the inhabitants of the 'Unité' in Briey, but not all of them (especially the more elderly residents) are so fortunate.

The maternal and primary school designed by Pingusson still services the building and surrounding area, and is situated just in front of the 'Unité' building.

The 'Unité' is sited on an area of parkland, the majority of which is now owned by the local government, and is surrounded by the remainders of the forest cleared for the construction of the village.

106-107. Converted apartments – now gallery spaces for *La Première Rue*.



An *Espace Le Corbusier* (Le Corbusier Space) is presently under consideration by the association of *La Première Rue* to provide an education space in one of the galleries regarding all five existing 'Unités d'habitation'. An international committee of various architects specialising in the architecture of Le Corbusier, and in particular the 'Unité' buildings, has been formed as an advisory body for the space.³⁷ Approval for the space is yet to be given by the local government and the Lorraine Regional Contemporary Art Foundation that supports *La Première Rue*.³⁸

The Parkland

Part of the park area at the base of the building is also used by the association for landscape art, whilst the 'artificial ground' space underneath the building was previously been used for a large art installation work created by the architect, Philip Johnson, and philosopher and theorist, Jeffery Kipnis.³⁹



108-109. Installation between the 'pilotis' of the building by Johnson and Kipnis, May 1993.

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110. Looking through the Johnson and Kipnis installation, May 1993.

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It is apparent from this great lack of facilities, in comparison to its counterparts, that the 'Unité' of Briey-en-Forêt is but a small fragment of what was Le Corbusier's dream. But it is this fragment, albeit small, that has provided inspiration for others to expand on, and from which to create their own dreams. The 'Unité' of Briey has become not only a habitat, but equally a vessel for artistic expression, and it is this integration of art and home that now draws people to visit it.

In the case of Briey-en-Forêt, it is truly the dream that the building represents, that draws the residents and visitors to it. For it can not be denied that this 'Unité' on the whole is one of the least impressive examples of Le Corbusier's architectural style. But the dreams and passions of many that it has come to represent over the years since its construction, and its dramatic tale of a 'near death experience', have made it the exciting and original place it is today.

¹ Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 181.

² At the opening of the building in 1961, the building contained 339 apartments. According the building's present management, however, it now in fact contains around 345 apartments: 109 rented by their managing body (KLM Résidence), 145 privately owned (of which 59 are owner occupied), 57 nurse accommodation studios, and 34 apartments belonging to the artists' association of *La Première Rue*.

³ Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 181.

⁴ Grandidier, Daniel, *Alsace, Franche-Comté, Lorraine – Terres Corbuséennes (2ème partie)*, 1991, p. 70.

⁵ Georges-Henri Pingusson (b. 1894 – d. 1978) became the first *Chef de la Reconstruction* for Moselle region in 1946 (hence his involvement in the 'Unité' of Briey in this region). Pingusson had obtained a degree in mechanical and electrical engineering at the *Ecole Supérieure* in Paris, 1913, and later went on to do architecture at the *Ecole des Beaux-Arts*, graduating in 1925. His architectural style and interests progressed from a type of 'neo-regionalism' (displayed in his early domestic work) to a pure Modernist style. Pingusson's most famous works are the hotel *Latitude 43* in Saint-Tropez (1931-32), *Le Mémorial des Martyrs de la Déportation*, Paris (1961), and the *Eglise Saint Pierre*, Borny, near Metz (1959), constructed on the foundations of the former ancient church of 1860 that was destroyed during the war.

⁶ Grandidier, Daniel, *Alsace, Franche-Comté, Lorraine – Terres Corbuséennes (2ème partie)*, 1991, pp.70-71. This aim was equally shared by the later developed "Firminy-Vert" (Green Firminy), a reference also to Le Corbusier's concept of the 'ville verte', in which his last 'Unité' building was constructed.

⁷ Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Projets et Réalisations*, Collection Architextes, Le Moniteur, Paris, 2nd Ed., 1997, p. 181.

⁸ This information regarding the history of the town was obtained in an interview with an architect and graphic designer, Steven Vitale, originally

from the USA, who has practiced from a studio on the first level of the 'Unité' in Briey for over 3 years. He had himself studied the urban designs and proposals of the town's planner, Pingusson, for a research document he had prepared some years earlier.

⁹ Because of the location of Pingusson's school at the base of the building, the service with in the building became unnecessary. This was probably quite fortunate considering the problems experienced by the roof top schools as previously described for the other 'Unités'. Because of these restrictions to the design, however, no terrace at all was constructed on the roof in Briey. And as a result, one of the most characteristic features of the 'Unité' (albeit superficial rather than practical), is totally lacking, thus diminishing the design concept quite drastically. The roof of the 'Unité' in Briey is now used as an experimental site for engineers to test the structural integrity of the concrete. Problems with the concrete structure of the building have more recently become apparent with cracking (mainly on the facades) due to the climatic variations experienced with in the area.

¹⁰ Grandidier, Daniel, *Alsace, Franche-Comté, Lorraine – Terres Corbuséennes (2ème partie)*, 1991, p. 71.

¹¹ Information taken from notes written and provided by *La Première Rue* regarding the building and its history (author not credited).

¹² Ibid.

¹³ Accounts of the building state during this time were obtained through an interview with a current resident, photographer and member of *La Première Rue*, Jacques Magali.

¹⁴ Von Moos, Stanislaus, *Le Corbusier; Elements of a Synthesis*, The MIT Press, Cambridge, Massachusetts, 2nd Ed., 1980, p. 163.

¹⁵ M. Magali (see note 13) recounted these tales he had been told by other older residents who had been amongst its original inhabitants.

¹⁶ Information from notes written and provided by *La Première Rue*.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid., See also article in *Werk, Bauen + Wohnen*, Vol. 79/46, No. 4, Apr. 1992, *The housing machine: Unités d'habitation by Le Corbusier*, p. 24, “*In Briey-en-Forêt, ...the Unité served as unpopular emergency accomodation for foreign workers (in the nearby mines)*”.

²⁰ In 1978, 102 apartments were vacated, by 1979, it was 130 apartments, and in 1981, 161 of the 339 apartments were unoccupied. (Again from notes written and provided by *La Première Rue*.)

²¹ Also from notes of *La Première Rue*.

²² Ibid.

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

²⁶ The nursing school still occupies the entire northern end of the building. It has a reception area off the first internal ‘street’, and has a separate stair access at the northern end of the building.

²⁷ From notes of *La Première Rue*.

²⁸ Ibid.

²⁹ Ibid.

³⁰ Ibid.

³¹ Many architects and artists have displayed support for the ‘Unité’ of Briey over the years, amongst them Philip Johnson, Joseph Abram and André Wogensky.

³² La Première Rue previously ran programme of artwork shop courses and apprenticeships for young artists, attracting people of a great variety of

backgrounds, from all over the world. This programme, however, was recently brought to an end due to a lack of finance. Artists and designers that work and display in the studios do, however, also come from all corners of the globe – from North and South America, England, Belgium, Italy, Switzerland, Japan..., as well as from all over France. (Information from the interview with Steve Vitale, see note 8)

In 1994, the association also began an annual architectural book conference and exhibition (*Le Salon du livre d'architecture*), which has become a large and important event for the community of the ‘Unité’ in Briey-en-Forêt. The conference runs for three days and attracts many people from many countries.

³³ A particular example of the pride that *La Première Rue* have aided to establish, was in the organisation of an exhibition in 1998. This exhibition arranged for the artworks created by the children of the nearby Pingusson school to be exhibited in the building’s gallery space. The children were asked to create works related to their living environment in the ‘Unité’ building. The exhibition was a great success, not only in educating the children and their families of the history of the building, but equally in establishing certain friendships and bonds with the artists of *La Première Rue*. To maintain this communication with the children and residents of the building, another exhibition of the children’s work was organised last year (2000) in May, displaying their visions of “*La maison du futur*” (‘The House of the Future’). The exhibition was presented in conjunction with now annual book show and conference – *Le Salon du livre d'architecture* .

³⁴ Indicated by the range of artists and designers it has attracted, and suggested in the article of *DOMUS*, No. 749, May 1993, *P. Johnson, J. Kipnis: Installations at the Unité in Briey*, pp. 4-5.

³⁵ Information and opinions of the small café /general store now at the base of the building, was obtained from the interview with Steve Vitale (see note 8).

³⁶ Information regarding the exhibitions displayed in the gallery was provided by *La Première Rue*. Some of these exhibitions included: photographs by Robert Bourdeau (July-Sept., 1999), Pascal Volpez (June-Aug., 1997), and Hiroshi Sugimoto + Nicholas Nixon (July-Aug., 2000); the architectural works of Diener & Diener (March-Apr., 1999), Atelier Beaudouin (May-June,

1999), and Sylvain Giacomazzi (Apr.-May, 1998); paintings by Peter Joseph (March-Apr., 1998); installations by Peter Downsbrough (July-Aug., 2000); and an exhibition of 50's industrial design (Sept.-Nov., 1997).

³⁷ The committee consists of: Joseph Abram (Professor at the Nancy School of Architecture, France), James Dunnett (Architect, London, England), Thilo Hilpert (Professor at the Wiesbaden University, Germany), Richard Klein (Professor at the Lille School of Architecture, France), Inès Lamunière (Professor at the Polytechnic School of Lausanne, Switzerland), Gérard Monnier (Professor at the Paris University I, Sorbonne, France), Kenneth Rabin (Artist and teacher at the Nancy School of Architecture, France), Bruno Reichlin (Professor at the Geneva Institute of Architecture, Switzerland), Arthur Rüegg (Professor at the Polytechnic School of Zurich, Switzerland), Jacques Sbriglio (Architect + Member of the Le Corbusier Foundation, Marseilles, France), Christian Sumi (Architecte, Zurich, Switzerland), Panayotis Tournikietis (Professor at the Athens Polytechnic, Greece), Ruggero Tropeano (Professor at the Polytechnic School of Zurich, Switzerland), Peter Ulrich (Professor at the Prague Polytechnic, Czechoslovakia), André Wogenscky (Architect, Paris, France), and Christina Woods (Architect, Geneva, Switzerland).

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³⁸ Information regarding this proposed space was obtained from the document compiled by *La Première Rue* for the purposes of its approval by the various parties involved.

³⁹ See article in *DOMUS*, No. 749, May 1993, pp. 4-5, *P. Johnson, J. Kipnis: Installations at the Unité in Briey*.



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IV. FIR. UN – Unité Firminy-Vert

‘Unité d’habitation’, Firminy-Vert, 1965-67.
Les Bruneaux, Place-du-Breil-Firminy-Vert, Loire.

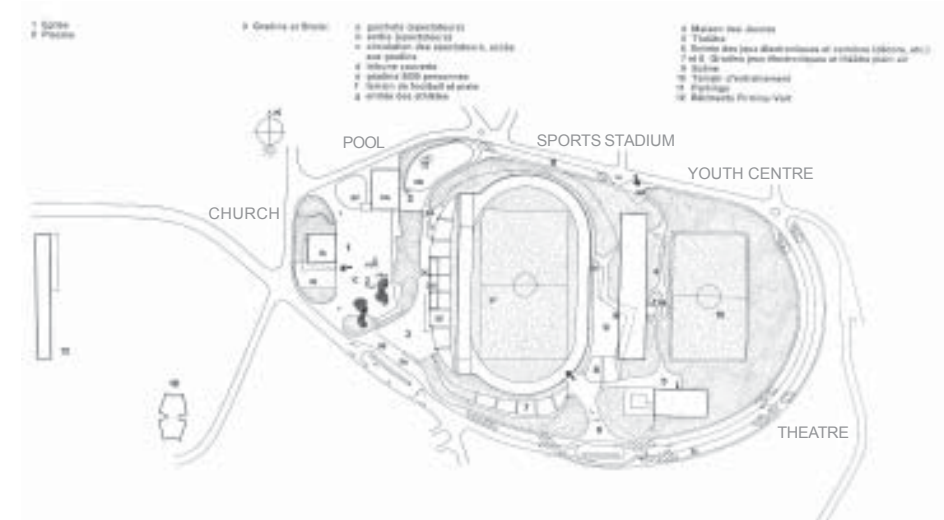
The ‘Unité d’habitation’ of Firminy-Vert is 131m long, 21m wide and 50m high.¹ It has 414 apartments and can accommodate a population of 2 000 inhabitants.²

III.1 History

The history of the ‘Unité’ of Firminy-Vert provides yet another interesting tale, again quite different to each of its predecessors. The last of the five constructed ‘Unité’ projects, and the fourth to be constructed in France, this ‘Unité’ was never actually seen by Le Corbusier himself in its finished state due to his sudden death in August 1965.³ The completion of the building, two years later, was consequently overseen by André Wogensky.⁴

Le Corbusier was approached by the Mayor of Firminy at the time, Eugène Claudius-Petit (the previous Minister of Reconstruction and Urbanism in France who had overseen the final years of the construction of Le Corbusier’s first ‘Unité’ in Marseilles), to design an entirely new urban sector as an extension of Firminy. The new sector would replace the area of land destroyed during World War II,⁵ meeting the demands of the growing population in the area, occurring due to the expansion of local coal industry.

Firminy had already become notorious for its low conditions of living and pollution from the mines, earning it the name of “Firminy Noir” (Black Firminy).⁶ Le Corbusier’s name for the new sector was an evident reaction to this, suggesting an improved quality of life in “Firminy-Vert”. Firminy-Vert proposed the ‘ville verte’, removed from the industry, open, green, clean and full of sunlight. It was a town that would reinstate the importance of the family and community, and would lay down a new history where the previous one had since been erased.⁷



112. Site plan for the Youth and Cultural Centre in Firminy-Vert, 1956-65.

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The original urban design for Firminy-Vert consisted of three ‘Unité’ buildings, a sports stadium, a communal pool, a youth / cultural centre and a church, all which were to be designed by Le Corbusier.⁸ Large boulevards were intended to link the three housing blocks with the neighbouring village of Chazeau, and a commercial centre was to be located nearby.⁹

But in 1970, Claudius-Petit’s position as mayor was taken over by an opposing political party, and all funding of the project stopped.¹⁰ The construction of Le Corbusier’s sports stadium, cultural centre and one ‘Unité’ had been completed¹¹ (despite his death 5 years earlier), however, the other two ‘Unités’, for which the sites had already been chosen, and the church of Saint-Pierre,¹² for which construction was already part way through, were abandoned.

And this was not the only problem hindering the once radiant dream of Firminy-Vert – the local coal industry was on the decline, and with it the local population.¹³ The new town, although only partially realised, was now too big for its much reduced population.

The ‘Unité’, although providing only a third of the previously proposed dwellings, became an oversized burden, and it soon became too difficult and too expensive to run.¹⁴ In July 1983, the northern half of the building was closed by the regional HLM office governing it.¹⁵ Sixty families were forced to move out of their apartments, half moving to the southern side of the building, and the other half, elsewhere.¹⁶

For almost twenty years now, only the southern half of the ‘Unité’ of Firminy has been inhabited, the northern half having been left untouched, exhibited like some strange museum display through the dusty plexiglass panels that seal it off from the rest of the building.

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113-114. Plexiglass panels in the middle of each internal ‘street’ shut off the northern half of the building.



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It would be easy to see the current state of Firminy-Vert as symbolic of the tragic fate of an architect’s attempt to adapt his once radiant and beautiful vision to reality, –

*“Thirty years later, Firminy is blacker than ever, even if the coal, mines, steel and textile industries are no longer there. The promises are gone, and so have the inhabitants. The cultural centre is now a youth club, the church was stopped at its base, and the Unité d’habitation is half empty.”*¹⁷

But this description based on mere facts, and beauty is really a matter of opinion. The afore mentioned quote is Jean-Paul Robert’s view published in *L’Architecture d’Aujourd’hui*, June, 1993. But another view, from Kester Rattenbury, published in *Blueprint*, July, 1993, states that, –

*“Despite [the empty northern half of the building], the realisation of Le Corbusier’s ideas – ‘the perfect receptacle for the family’ in a rigorous, grand, elegant building in God’s good nature, under the sky and in the sun’ – is clear, if partial. The kindergarten on the roof is still open, children play in the internal streets, and it’s definitely rude if you fail to greet people in the lift. The building, still social housing and lacking the middle class decorations of its predecessor in Marseilles, is utterly compelling.”*¹⁸

Rattenbury places emphasis on the sections that are still alive, whilst Robert dwells on the parts that are not. –

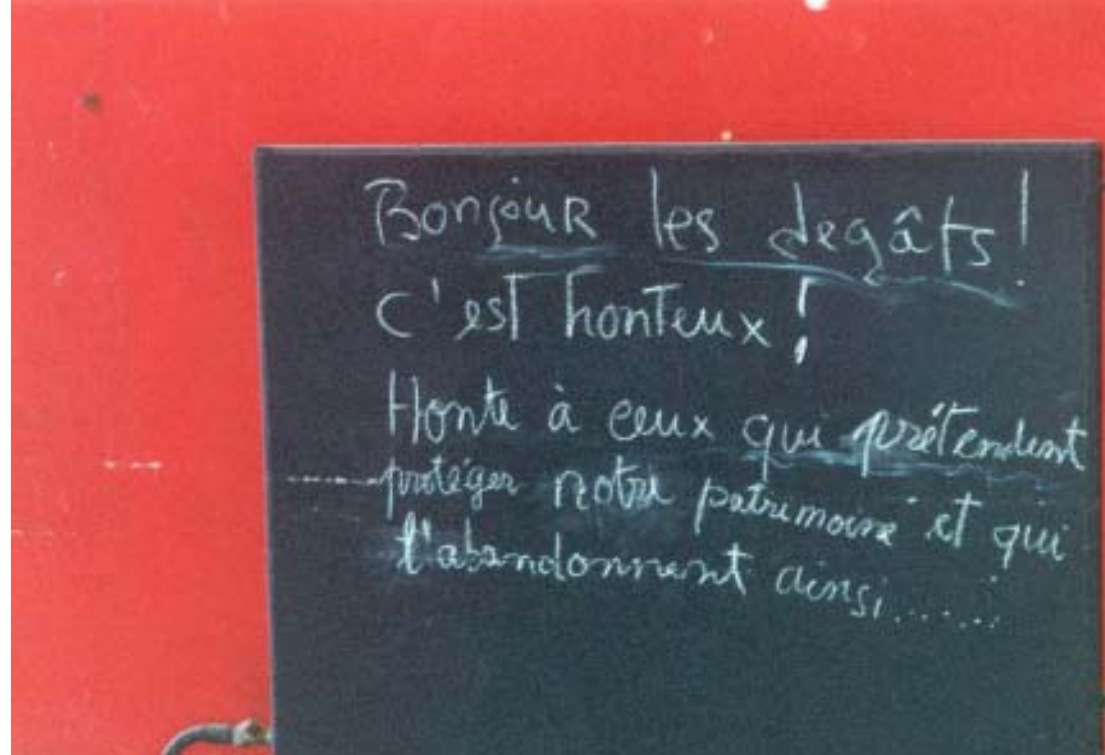
*“[The other end of the building] is inhabited by nothing but flies, that no one can even get rid of. Each Spring the lava hatches, and the insects buzz until the cold arrives and silences them. Perhaps they, like in the play of Jean-Paul Satre, are living signs of remorse, death, and rebirth.”*¹⁹

But is ‘remorse’ really the issue here? For is it not more a case of ‘regret’? – a regret for that which was *not* done, and not remorse for that which was. For the greatest problems of the ‘Unité’ of Firminy-Vert and its town, lie in the fact that the work is incomplete. One might argue that the diminished population could not have supported the ambitious plans proposed, and of course a town ought only to grow at the rate of its population. But the population of the town today would have easily met the proportions of the town, with several additional apartment buildings having since been built along the road leading up to the ‘Unité’ – there evidently having been a demand for more dwellings.

And yet half the apartments of the ‘Unité’ still remain closed, not by choice of the population, but rather by choice of the local government, against which the residents of the building have been struggling for over thirty years.²⁰ Perhaps here, the reference to Sartre’s play ought more to be with its protagonist, for the inhabitants of the ‘Unité’ have already taken responsibility for their fates.

But the residents of the ‘Unité’ continue to struggle against these ‘higher powers’. For the roof top school is no longer “still open” (as Rattenbury stated in July 1993). The school was in use for over 30 years, being opened in 1968 until it was closed for renovations in June 1999. The Foundation for Historical Monuments in France provided the funds for this refurbishment, although this was only sufficient for the renovation of two of the classrooms. The school was to be re-opened for a small number of students in September 1999, but the local council refused to give its approval.²¹ The newly renovated rooms still remain unused.

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115. “What a waste! It’s shameful! Shame on those who pretend to be protecting our patrimony and then abandon it in this way...”

An angered resident that aided in the renovations of the school leaves a note of protest to its continued closure.

The residents of the ‘Unité’ have not given up hope, however, and have continued to promote the site of Firminy-Vert to a wider international community to gain greater recognition of its historical and architectural significance. The town created its own tourist association – *Le Syndicat d’Initiative de Firminy et Environs* (The Tourist Association of Firminy and Surrounds), in 1986,²² to run group visits and tours of ‘The Le Corbusier Site’. All Le Corbusier projects are now classed as national historical monuments.²³

As with the ‘Unité’ of Briey-en-Forêt, the site of Firminy-Vert was brought to greater national and international attention during the celebration of the centenary of Le Corbusier’s birth (1987). Since this time over three thousand people visited the site from all over the world,²⁴ and an exhibition was even organised in 1993 of artists’ installations in the disused apartments along the seventh ‘street’.²⁵ This attention from the artistic and architectural communities has aided in establishing the significance of these buildings in the eyes of the local authorities who have, ever since the change in government, showed little to no support of the Le Corbusier projects in Firminy-Vert.

IV2 Ownership

The ‘Unité’ of Firminy-Vert is the only ‘Unité’ that remains classed entirely as a true HLM building. It has not, as a result, benefited from the more mixed demographic and private ownerships of the other ‘Unités’, but this does not mean that its residents do not appreciate and respect its history, design and the ideologies it embodies. One resident said of his experience there:

“I put in my application at the HLM office for a studio in Le Corbusier’s Unité d’habitation. That same day I was given the keys, ...I was delighted. A large window bathed the living room in light. I felt close to nature and open space. The view was extraordinary both at day and at night, and I was seduced by the architecture of the building. I had many friends that already lived here. It’s true happiness! ...” (October, 1969)²⁶

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116-117. Inside an apartment in the ‘Unité’ of Firminy-Vert today. The apartment is rented by a young couple and their two children. (August, 2000)





118. Children playing in the entry foyer of the 'Unité' in Firminy-Vert.

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In visiting the 'Unité' of Firminy-Vert, it is hard not to notice the pride and pure enjoyment that the residents have gained from its simple existence in spite of the hindrances they have been made to endure. For no matter how this 'Unité' may appear to others, it is clear that the inhabitants still appreciate the building. People stop and chat at the entry, smile and wave from their balconies, have picnics on the lawn behind, whilst children run, cycle, play and squeal with joy around the housing block they have come to call their own.



119. On top of the hill *Les Bruneaux*, the 'Unité d'habitation' in Firminy-Vert looks over the town that has grown gradually over the years. (June 1995)



120. Looking up to the 'Unité' of Firminy-Vert from Le Corbusier's sports stadium at the bottom of the hill – other housing blocks have since been built below it.

121. The 'Unité' of Firminy-Vert – at the top of the hill and at the end of the road.



122. View of the 'Unité' from the lawn area and soccer field behind it.

IV3 Context

The small town of Firminy is located near the larger industrial town of Saint-Etienne, at the lower end of the Loire River, in the East of France. Firminy-Vert is situated to the south of Firminy itself, and is, architecturally, a particularly significant and unique town due to the presence of three separate Le Corbusier buildings with in it.

Although the population of Firminy-Vert declined after the collapse of the local coal and steel industries, it has since gradually grown and re-established itself. The town now includes several apartment buildings, townhouses and individual homes spread over the area surrounding the Le Corbusier buildings.

The 'Unité' sits on the very summit of the hill of *Les Bruneaux* (the hill around which Firminy-Vert is spread), and as with the 'Unité' in Rezé-les-Nantes, it is in a highly visible and prominent location, standing out above all the surrounds it.

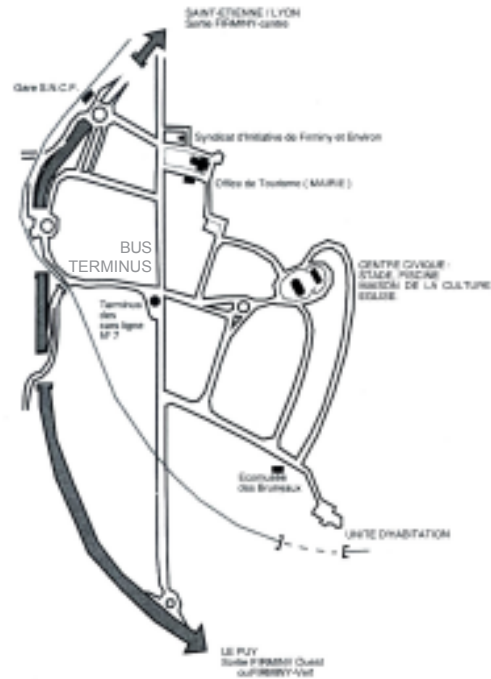
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The sports stadium, pool and cultural centre, also of Le Corbusier's original design, are still in use by the local community. They are located on a site, along with the remnants of the unfinished Saint-Pierre church, at the base of the hill of *Les Bruneaux*, looking up to the 'Unité' above them.

Trees and shrubs surround the perimeter of the 'Unité' site, however the site itself has been left open and rather barren, with no real landscaping or large tree growth. Due to this lack of surrounding high vegetation closer to the base of the building, the 'Unité' in Firminy appears to be much larger than its predecessors, despite the fact that it is of the same, or even slightly smaller proportions.²⁷

123. Map of Firminy-Vert showing location of the Le Corbusier buildings and closest public transport.



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Public transport in the area of Firminy and Saint-Etienne is fairly efficient, with buses running at around half-hour intervals throughout the day. The closest bus stop, however to the 'Unité' itself, is at the bottom of the hill of *Les Bruneux*, after which one must climb another kilometre up a rather winding road to the site. The 'Unité' is situated on the very edge of Firminy-Vert, at the very end of the road. It is far from any commercial activity, all of which is located outside of Firminy-Vert.²⁸ A car (as in the case of Briey-en-Forêt) is thus essentially a necessity for the residents of the 'Unité' of Firminy-Vert.



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124. Families enjoying picnics on the lawn behind the 'Unité' of Firminy-Vert.

IV.4 Facilities

The Parkland

Children's play equipment (a later addition), and a soccer field, are located at the base of the 'Unité' of Firminy-Vert – the only other 'Unité', along with the one of Rezé-les-Nantes, to have incorporated the sports fields at the base of the building (as described in the 'Ville Radieuse').

The main part of the parkland consists of a large undulating lawn space behind the building, surrounding the soccer field, on which many residents hold picnics when the weather is fine. Although the space is rather bare and barren, and not nearly as landscaped as the other 'Unités', the park does, however, provide a pleasant place for rest and recreation.

A more vegetated area of the parkland does exist at the bottom, southern end of the site, where a small communal garden is tucked away near the forested land of the adjacent site. The garden sits next at the base of an odd little concrete structure (also designed by Le Corbusier's studio), integrated into the landscape and housing an emergency water pump and electric generator for the 'Unité'. The garden provides a private and tranquil spot in which the residents may grow whatever vegetables or flowers they chose.

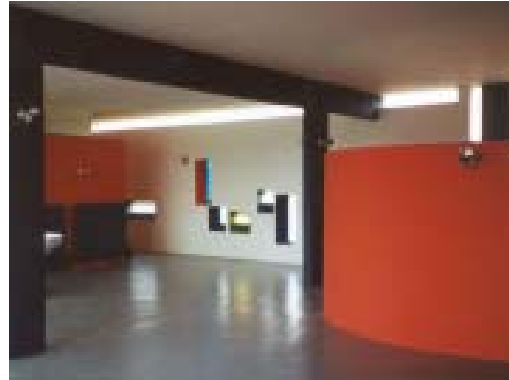
125-126. The emergency water pump and generator, and small communal garden on the lower southern end of the site.

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127. The newly refurbished space of the rooftop pre-school in the 'Unité d'habitation' of Firminy-Vert, waiting to be reopened (August, 2000).





128. Another empty space of the school – painstakingly refurbished and yet unused due to difficulties with the local government.



129-130. Renovated classrooms of the rooftop school, still waiting to be put to use.

The Rooftop School

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As with Rezé and Marseille, the ‘Unité’ of Firminy-Vert includes a roof top school on the terrace level of the building. The school in this design, however, is much bigger than any of the other schools, being split over three levels, and able to accommodate up to eight classes of maternal to first year primary school children.²⁹

The school had been intended to service, not only the ‘Unité’ on which it was sited, but equally the two other ‘Unités’ that had been proposed for Firminy-Vert, as well as other residents of the surrounding area. A school of such size was admitted by the local council in this case, as the town did not have any educational facilities with in the immediate area at the time. As the population of the region actually decreased following the ‘Unité’s completion, however, the school only ever ran a maximum of five classes, which was later reduced to just two before the closure of the school in 1999.



131-132. The resurfaced but also unused concrete landscape of the roof terrace of the 'Unité' in Firminy-Vert.

The Roof Terrace

The roof terrace of the 'Unité' in Firminy-Vert is also now closed, for the same reason as in Rezé-les-Nantes: safety. The terrace was actually only open for around three years following the building's construction before being closed due to its lack of safety. And although it was resurfaced in 1996, with the hope of finally reopening it, the level of safety was still considered insufficient.³⁰

The terrace had previously provided a play area for the children of the school, and a communal recreation space for the residents. It includes an outdoor theatre and projection wall (similar to that on the roof terrace in Marseille), a small vegetable patch that once was cultivated by the children during its time of use, and a paddling pool (again like Marseille, although here it had never been sufficiently watertight for use).

The problem of the roof terrace (with all the 'Unités') really lies in its original design, rather than in factors of deterioration. For, as

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133. Empty seat on the roof terrace of the 'Unité' in Firminy-Vert.

previously mentioned, the all-concrete landscape is not particularly merciful to the reckless or adventurous child.

The roof terraces of the 'Unités' have proved to be the greatest conundrum for its managing bodies. Marseille has been able to resolve it through its promotion as a visual landscape rather than a practical one – one to be observed rather than truly interacted with. But for the other 'Unités', that do not receive the same number of tourists to permit them to promote it in the same way, the only solution for the time being, has been simply to stop using them.

The building co-operative of the 'Unité' of Firminy-Vert, is quite similar to that of Rezé-les-Nantes, in the sense that it provides a small group of very passionate members that have dedicated much of their lives to the upkeep and functioning of the building.³¹ It is these members that have appealed to the various organisations that have provided them with the finances for renovations and promotional material for tourism. Difficulties are frequently experienced by the group with the local governing authorities that are not at all supportive of their efforts. But their conviction and determination to achieve their goals in spite of this, is a true testament to their dedication.

The co-operative also promotes a greater appreciation and understanding of the design and history of the 'Unité' with in the building's residents – knowledge their habitat transmitted mainly through the activities of the clubs and workshops the co-operative organises.³² These clubs equally facilitate the friendships formed by the residents with in their building community that are evident in the comradeship displayed around the building on a daily basis.

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It has been particularly difficult for the 'Unité' of Firminy-Vert to gain funding for improvements to the building, as it relies almost entirely on government organisations, and has not benefited from the support of any private associations or owners in the way of Marseille and Briey-en-Forêt. It is also unlike the 'Unité' of Rezé-les-Nantes, in the fact that it is entirely owned by the Local Government Social Housing Office that rents each apartment out to each of the residents, and does not offer the same opportunity of progressive apartment purchase. Because of this lack of private ownership, it has been difficult for the building co-operative to gain sufficient support and finance to improve the building's state.

But although the 'Unité' of Firminy-Vert is in the worst state of all the 'Unités' in France – with the entire northern end still closed, and now the roof top school as well – it actually has a much more relaxed and friendly atmosphere than any of the others. For the residents are not demanding people, and although they do have dreams and visions for the future towards which they will continue to strive, they remain contented with what they do still have – a home with history, complexities and stories, a close and friendly community, and consequently, a general standard of living far higher than most other HLMs could ever offer.³³

134. A club room of the 'Unité' in Firminy-Vert providing a communal painting studio and woodwork room for the residents. A timber cutout of the 'Modulor Man' leans up against the window.



135. Glipses of light – the entry foyer of the 'Unité' in Firminy-Vert.



¹ Ragot, Gilles + Dion, Mathilde *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 174.

² Ibid.

³ Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, September 1993, p. 110.

⁴ An evident variation in the design of the building, following its completion without Le Corbusier, is the use of only white, red and blue paint for the polychromatic *loggias*. The *loggias* of the three other *Unité d'habitation* buildings in France use yellow and green as well. This reduction in colour variation comparatively reduces the vibrancy of the facades.

⁵ Gans, Deborah, *The Le Corbusier Guide*, Princeton Architectural Press, New York, Revised Ed., 2000, p. 111.

⁶ Ibid.

⁷ In Boesiger, W., (Ed.), text by Le Corbusier, *Le Corbusier: Les Dernières Œuvres*, Artemis, Zurich, 3rd Ed., 1977, p. 11, Claudius-Petit writes that

Firminy-Vert would “*lay the foundations for a renaissance of the human being, the family, society;*” and “*...create the site, the everyday urban landscape; to create spaces and volumes, shapes and colours; to make the history of the town by means of utilitarian constructions that are judiciously ordered, managed, composed, seeing that nothing has remained of the town's past.*” (note dated July 21, 1969.)

⁸ Although Le Corbusier designed the buildings, the actual urban scheme for Firminy-Vert was conceived by André Sive, with the help of Marcel Roux, Charles Delfante and Jean Kling, under the guidance of Le Corbusier. (see BORY, Christophe, *Le Site Le Corbusier, Firminy*, Syndicat d'Initiative de Firminy et Environs, France, June 1995, p. 2.)

⁹ This information regarding the original plans for Firminy-Vert were obtained in an interview with a resident of the building, Christophe Bory, who is an art and design teacher at the local technical school. He has researched and written about the Le Corbusier site of Firminy-Vert, and is a member of the *Syndicat d'Initiative de Firminy & Environs* (The Tourism Association of Firminy and the Surrounding Area).

¹⁰ Gans, Deborah, *The Le Corbusier Guide*, Princeton Architectural Press, New York, Revised Ed., 2000, p. 107.

¹¹ The proposed pool complex of the urban scheme was actually constructed as well, although this was designed after Le Corbusier's death by André Wogensky. (Gans, Deborah, *The Le Corbusier Guide*, Princeton Architectural Press, New York, Revised Ed., 2000, p. 107.)

¹² Construction of the Church of Saint-Pierre began in 1961, until 1970 when it was stopped. Claudius-Petit, possibly Le Corbusier's most passionate supporter and admirer, campaigned tirelessly to raise funds for its completion, right up to his own death in 1989. The funds were never raised, however, and the church still exists today in its unfinished state – an empty concrete shell of the base (the hyperbolic cone shaped tower that was to be constructed upon this having never been begun). The weathered concrete beginnings of the church are now classed as an historical monument. (See Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 175; and Jenger, Jean, *Le Corbusier: L'Architecture pour Emouvior*, Gallimard, Evreux, September 1993, p. 108-09.)

¹³ Gans, Deborah, *The Le Corbusier Guide*, Princeton Architectural Press, New York, Revised Ed., 2000, p. 111.

¹⁴ Although the ‘Unité’ in Firminy-Vert is of the same dimensions as the other ‘Unités’ in France (being closest to the dimensions of Rezé and Briey), it actually contains around a hundred more apartments. A fact is somewhat ironic considering the severe population decrease at its time of construction.

¹⁵ Bory, Christophe, *Le Site Le Corbusier, Firminy*, Syndicat d’Initiative de Firminy et Environs, Firminy, 1995, p. 29.

¹⁶ Ibid.

¹⁷ *L’Architecture d’Aujourd’hui*, No. 287, June 1993, p. 22, article by Jean-Paul Robert, “Unité, Singulier pluriel”, trans. I. Toland.

¹⁸ *Blueprint*, No. 99, July/Aug. 1993, p. 40, article by Kester Rattenbury, “Bringing new life to Le Corbusier’s lost city”.

¹⁹ *L’Architecture d’Aujourd’hui*, No. 287, June 1993, p. 22, article by Jean-Paul Robert, “Unité, Singulier pluriel”, trans. I. Toland.

²⁰ In *Blueprint*, No. 99, July/Aug. 1993, p. 40, article by Kester Rattenbury, “Bringing new life to Le Corbusier’s lost city”, Rattenbury indicates that the closure of the building’s northern half was much to the dismay of the inhabitants, and occurred “despite the inhabitants live-in protests”.

²¹ At the time of visiting the school in the ‘Unité’ in Firminy-Vert, members of the committee for its renovation were still trying to obtain justification from the local council for its refusal to allow the re-opening to go ahead. The local council claims that the matter is still under consideration. (Information from interview with Christophe Bory whose two young children had been attending the school before its closure).

²² Bory, Christophe, *Le Site Le Corbusier, Firminy*, Syndicat d’Initiative de Firminy et Environs, Firminy, 1995, p. 31.

²³ The Le Corbusier buildings of Firminy-Vert, including the unfinished remnants of the Saint-Pierre church, are all now listed as national heritage.

²⁴ Bory, Christophe, *Le Site Le Corbusier, Firminy*, Syndicat d’Initiative de Firminy et Environs, Firminy, 1995, p. 31.

²⁵ This exhibition at the ‘Unité’ of Firminy, of a series of installations of contemporary art in the empty apartments along the last internal street, was in fact the main focus of the two previously mentioned articles (*Blueprint*, No. 99, July/Aug. 1993, p. 40, article by Kester Rattenbury, “Bringing new life to Le Corbusier’s lost city”, and *L’Architecture d’Aujourd’hui*, No. 287, June 1993, p. 22, article by Jean-Paul Robert, “Unité, Singulier pluriel”) – the exhibition having thus brought the building to the journalists’ attention. In the exhibition, each apartment had become a gallery for each individual work, the installations being the artist’s interpretation of the deserted dwelling space. The works were created especially for the exhibition, and included installations by artists such as Nigel Coates, Stuart Helm, Jasper Morrison, Christian Philippe Müller, Enric Miralles, Tony Arefin, Jim Isermann, Tom Burr and Rene Straub. Children and residents of the building were also invited to install works, either in collaboration with the artists, or independently. The exhibition was conceived and organised by Yves Aupetitallot.

²⁶ Ibid., p. 28.

²⁷ This impression is also perhaps due to the fact that the facades display the larger number of apartments through the *loggias*, suggesting a bigger housing complex in terms of building population.

²⁸ A mid-level commercial ‘street’ had in fact been included in the original plans for the building. The limitations of the budget, however, as with Rezé and Briey, resulted in its compromise.

²⁹ Information regarding the school’s history and functioning was also obtained from the interview with Christophe Bory (see note 9), whose own two children had attended the school before it was closed.

³⁰ Information from interview with Christophe Bory. (see note 9)

³¹ This was apparent in an interview with two members of the co-operative – Chrisophe Bory and Christiane Chatelain, who described the efforts of the group, their recent projects and achievements, and problems encountered by

them over the past years.

³² One of the means by which the group promotes a greater appreciation of the design is through some of the clubs and activities that they organise and run. An examples of this is in the woodwork/art club, in which previous activities have included the construction of a timber model of the ‘Unité’ demonstrating the interlocking nature of the apartments, and timber cut outs of the ‘Modulor Man’.

³³ Refer to the Introduction (p. 13) of this thesis discussing the ‘ghetto-like’ state of many HLM buildings in France.

¹ Ragot, Gilles + Dion, Mathilde *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 174.

² Ibid.

¹ Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 181.

² At the opening of the building in 1961, the building contained 339 apartments. According the building’s present management, however, it now in fact contains around 345 apartments: 109 rented by their managing body (KLM Résidence), 145 privately owned (of which 59 are owner occupied), 57 nurse accommodation studios, and 34 apartments belonging to the artists’ association of *La Première Rue*.

³ Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 181.

¹ Ragot, Gilles + Dion, Mathilde, *Le Corbusier en France: Réalisations et Projets*, Elecla Moniteur, Paris, 1st Ed., 1987, p. 140.

² From notes compiled by the Association of *La Maison Radieuse* for the purposes of providing information to visitors of the building.

Conclusion

Originality / Mass Production

Although Le Corbusier intended the 'Unités d'habitation' to be built on mass, with several of these buildings in the one residential quarter, and several of these residential quarters in towns all over the world, it has perhaps been his greatest fortune that he did not succeed. For the number of the 'Unités' – four in France and one in Germany – although multiple, has been sufficient enough to demonstrate his concept of the mass produced home, whilst still being limited enough in number to achieve a certain sense of originality with in each one. (For if a concept becomes too mass-produced, it loses its sense of value and becomes disposable.)

But each of the 'Unités' is still considered original in its design and ideas, as the way of life they propose is really quite different to that of the average housing block – the aesthetic and architectural style, the independent apartments, the communal facilities, the park setting... And as these housing blocks have established a certain reputation over time, not only for displaying the characteristic architectural style of Le Corbusier, but equally representing most his radical social ideals, they have been set aside in for their importance to the history of architecture and urbanism.

But not only are the 'Unités' unique from other housing blocks (despite the concepts of mass production on which they were based), they have also, over the years, established themselves as unique entities from each other. For although the four studied with in this thesis are all with in the same country, they have still, not only certain physical variations, but more importantly, historical, contextual and circumstantial variations that have shaped them into what they are today.

Continuity / Flux

But it is not just the fact that there are more than just one 'Unité d'habitation' that must be taken into account when considering the merits and difficulties of the design. It is also the fact that over time their situations and circumstances have varied, and in some cases quite drastically.

Most of the 'Unités' in France have undergone a rather eventful past, with changes, whether sudden or progressive, not only to the buildings themselves, but equally with in their surroundings. And the buildings are still in a state of change. For as this thesis demonstrates, the state of the 'Unités' as it is reported today, is only their state to this date, and can not be accepted as a current state in the future.

But in assessing the states of the 'Unités' today, around half a century since their conception and construction, it can at least be said that their conditions have somewhat stabilised by comparison. For now that they have reached the point when the oxymoron of 'modern heritage' is becoming a more widely recognised issue, the older they get, the more valuable they are considered in terms of heritage.

And now, the century has turned. And we are looking back on the era to which the 'Unités' belong as a revolutionary point in history. So although three of the 'Unités' were each once threatened with a chance of destruction, their classification as national patrimony makes such an event is now unlikely.

But the 'Unité' of Firminy-Vert is still struggling, and perhaps this has something to do with the fact that it is the youngest. It will be interesting to see, in a few years time, how the state of this 'Unité' has changed, if at all. And to see whether the progression of time will improve its state, as with its counterparts of Marseille and Briey, or whether it will simply deteriorate it.

Fashion / Ideology

As the 'Unité d'habitation' brought together so many of the ideas that established Le Corbusier's reputation, they have become some of the works that most exemplify him as an architect and artist. But it is not only the physical elements of the design that have established their fame, it is equally the fact that they represent the most recognisable fragments of his most famous vision: *La Ville Radieuse*.

This fame may in some cases been seen as having certain negative effects, such as the preserved impractical functioning of the roof terraces in Marseille and Rezé, and the social difficulties of mixing tourists and residents (also in Marseille). But the fame has equally aided, particularly in the cases of the three less renowned 'Unités', resulting in a greater level of general maintenance, with thanks mainly to architectural, artistic and historical associations that have subsequently taken interest in their causes.

But it is not simply a matter of aesthetics that is considered in this physical preservation. Since those that truly make the buildings continue to live, are the inhabitants that carry out their lives with in them. And not all of these people are simply interested in history and styles. For although the majority of the population in the 'Unité' of Marseille is of a professional middle-class standing and see the building as a fashionable place to live, the demographics of the three other 'Unités' is quite different.

The 'Unités' of Rezé-les-Nantes, and Firminy-Vert are both inhabited by a general working-class population. And the 'Unité' of Briey-en-Forêt, although privately owned, has a true mix, not only of working and middle-class people, but equally of nationalities and backgrounds. So what is it about the 'Unités' that makes them so attractive to such a broad range of people? And why is it that they continue to hold such a passionate and supportive group of residents despite their varied histories, contexts and conditions?

The answer to such questions is perhaps most eloquently put by Alan Colquhoun in his essay entitled *The Significance of Le Corbusier* –

*"On one hand, ... his view of architecture as the means of moral and social regeneration seem seriously flawed. On the other, the plastic subtlety and metaphorical power of his buildings – their originality and certainty of touch – cannot be denied. And yet his indisputable greatness as an architect can hardly be dissociated from the grandeur of his vision and the ruthless single-mindedness with which he pursued it. If in so many ways, Le Corbusier was deluded, his delusion was that of the philosopher-architect for whom architecture, precisely because of the connection which it implies between the ideal and the real, was the expression of the profoundest truths. He occupies one of those rare moments in history when it seems that the vision of the artist and the man of passion converges with a collective myth."*¹

For after visiting each of the four 'Unités' in France, talking to their inhabitants, and observing their functioning and existences, one thing arises above all else: that it is not simply a matter of 'fashion', but equally a matter of ideology. For tastes in fashion are not universal, and the appreciation of certain architectural styles is a purely subjective matter. So Le Corbusier may be criticised for his

ridiculously utopic ideals and the dreams that he failed to realise.
But it is this very fact – that he attempted to realise these dreams –
that have enabled the ‘Unités’ to continue to draw such a wide and
truly ranging appeal.

¹ Brooks, H. Allen (Ed.), *Le Corbusier*; Princeton University Press, New
Jersey, 1987, essay by Alan Colquhoun, ‘The Significance of Le Corbusier’,
p. 25.



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CHA – Unité Berlin-Charlottenburg

The 'Unité d'habitation', Berlin-Charlottenburg, Germany (1956-58)

The 'Unité d'habitation' (also known as the CorbusierHaus) in Berlin was the third of Le Corbusier's constructed 'Unités'. It contains around 400 apartments and can accommodate up to 2000 people.¹



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The 'Unité' in Berlin was constructed for the international 'Inter-Bau' exhibition of 1957 that exhibited models of mass housing developed as solutions for post war reconstruction. Among the architects that contributed to the exhibition, along with Le Corbusier, were Alvar Aalto, Walter Gropius and Bruno Taut. The site for the exhibition, in the Tiergarten Park on Olympic Hill, was designed by G. Jobst and W. Kreuer. Le Corbusier's 'Unité', however, was actually constructed just outside the perimeter of the site in order to accommodate its grand scale.²

Le Corbusier was in fact thoroughly dissatisfied with the 'Unité' in Berlin, and made his disapproval of the final product publicly known – *"Despite his strenuous objections, Le Corbusier's working plans for the Unité in Berlin were not respected. For all intensive purposes, the building corresponds, in its functional aspects to an Unité d'habitation of Congruent Size. However the manner of execution and the aesthetical interpretation are quite incompatible with Le Corbusier's desires."*³

Le Corbusier felt that this 'Unité' had not complied with certain principles he considered essential to the design – aspects, such as the inclusion of certain communal facilities, and mostly the employment of the 'Modulor' in its construction (the German builders had refused to use it). As the design had to be redone using metres, the proportions of this 'Unité' in Berlin are quite different to the others in France, some measurements even increased by as much as a metre.⁴

Another notable difference in the Berlin 'Unité', is that the characteristic *pilotis* with tapered edges underneath the building were replaced by a double row of blade shaped concrete columns arranged at varying intervals.⁵ A section of these columns was even enclosed to provide an area for shops, counteracting the principle of the *pilotis* – to provide spatial and visual flow of the landscape beneath the building mass.

The use of 'polychromy' in the Berlin 'Unité' is also quite different to that of the 'Unités' in France, not only in the hue of the colours used, but equally in the diagonal patterns with which the loggias of the exterior facades are painted.

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The 'Unité' of Berlin is not compared to the other four 'Unités' in this thesis, as the focus of the argument lies in the situation of the buildings in France and the sociological issues surrounding them in terms of their current or initial government housing status in this country.

¹ BOESIGER, W., GIRSBERGER, H., (Ed.), text by Le Corbusier, *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 153.

² GANS, Deborah *The Le Corbusier Guide*, Princeton Architectural Press, New York, Revised Ed., 2000, pp. 178-79.

³ BOESIGER, W., GIRSBERGER, H., (Ed.), text by Le Corbusier, *Le Corbusier 1910-65*, Thames and Hudson, London, 1967, p. 153.

⁴ GANS, Deborah *The Le Corbusier Guide*, Princeton Architectural Press, New York, Revised Ed., 2000, pp. 179.

⁵ PARDO, Vittorio Franchetti, *Le Corbusier (The life and work of the artist illustrated with 80 colour plates)*, trans. Pearl Sanders, Thames and Hudson, London, 1971, pp. 27-28.

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