'Machines for living'

Reflections on Le Corbusier's *Plan Obus* (Algiers) & *Unité d'Habitation* (Marseilles)

Hugh Pouliot

Abstract

This paper analyzes two plans for mass housing: the Plan Obus in Algiers and the Unité d'Habitation in Marseilles, designed by Swiss-French architect Le Corbusier. It assesses how the two plans represent culminations of Le Corbusier's core beliefs about the social role and impact of architecture, and argues that the essential difference between the two plans is the context in which they were designed: the former in the space of a French settler state, the latter on the French mainland itself. It is argued that, despite the seemingly benign, even spiritual intentions of Le Corbusier's utopian architectural style – inspired by a mix of monasticism, modernism, and what he called "industrial spirituality" – the social environments formed out of his style were mechanistic, alienating, and structured more toward industrial efficiency than human habitation.

Keywords

Algiers, Marseille, Le Corbusier, colonial urbanism

'The problem of the house is a problem of the epoch. The equilibrium of society today depends upon it. Architecture has for its first duty, in this period of renewal, that of bringing about a revision of values, a revision of the constituent elements of the house.'

– Le Corbusier
Towards a new architecture (1923)

The more one pores over the life and work of Swiss-French designer Le Corbusier, the more one finds in him an overwhelming testament to the dominant motifs of his era: the rise of the automobile, colonialism, world wars, the negotiation of modernity and postmodernity, fascism, socialism, and so on. His design and thought were both deeply affected by, and largely responses to, the social and environmental realities of the early 20th century. In an era of revolutions – political, cultural, technological, anti-colonial – Le Corbusier famously proposed *architecture*. That is to say, he proposed that in place of revolution and its associated turmoils, the tribulations of modern human societies could be stymied and side-stepped through better design, plan, and construction.

This paper analyzes two of Le Corbusier's plans for mass housing: the Plan Obus in Algiers and the Unité d'Habitation in Marseilles. While the two projects represent cornerstones in Le Corbusier's portfolio, and while the Plan Obus (Celik, 1997; McKay, 1994; Lamprakos, 1992) and the Unité d'Habitation (Richards, 2003; Coleman 2008; Panerai 2004) have been expertly explored in scholarly literature, for all of their similarities, they have never been analyzed side by side. This paper assesses how the two plans represent culminations of Le Corbusier's core beliefs about the social role and impact of architecture, and argues that the essential difference between the two plans is the context in which they were designed: the former in the space of a French settler state, the latter on the French mainland itself. It is argued that, despite the seemingly benign, even spiritual, intentions of Le Corbusier's utopian architectural style – inspired by a mix of monasticism, modernism, and what he called "industrial spirituality" – the social environments formed out of his style were mechanistic and alienating. This paper argues that, in Algeria, they were designed to enforce French domination of the social and cultural environment, while in France they were structured more toward industrial efficiency than human habitation.

In 1930, during the centennial celebrations of French colonialism in Algeria, Le Corbusier was invited to lead a conference in Algiers on the future of the city, and found himself spending a good deal of the following decade developing a number of (unsolicited) development plans for what he envisioned would become the capital of the African continent.[1] While none of his designs were ever put in place in Algiers, the lessons he learned and styles he developed in the city reappeared in his later designs for Chandigarh, the capital of Punjab and Haryana Pradesh in India, and the Unité d'Habitation in Marseilles, and in four other locales in France and Germany.[2] However, there is particular significance in the connection between Algiers and Marseilles, two cities long seen in the context of French colonialism as the points of connection between mainland France and its overseas empire. Each city represented within its own national territory the presence of the other half of the colonial equation: Marseilles, the most Algerian city in France; Algiers, the most French city in Algeria. It is also not insignificant that a significant portion of France's post-colonial migrant population lives in high-rise social housing whose design draws its lineage from the Corbusian imagination.

Central to Le Corbusier's design work was the idea of the house as a "machine for living." That is to say, he believed the house had a purpose for the individual and society beyond simply storing people and their things. More specifically, Le Corbusier believed that architecture, beginning at the level of individual units of dwelling, is behavioural:[3] it has the capacity to act upon people and society, to shape their tendencies and moods. The house for Le Corbusier had the potential – and an imperative – to give a human being structure, order, health, and peace of mind. It is from this radical point of departure that Le Corbusier's idea for *architecture* is revolutionary in its own way. He believed that social conflicts and disorder were ills that could be alleviated by providing the individual with an orderly, hygienic space of refuge and contemplation: distinctly urban, but also free of the noise, dust, and intermingling of street level habitation. It is from this point that we can also view Le Corbusier as a radical utopian. Consider, for example, the following selection, in which he proposes the notion of the "House-Tool":

> Eradicate from your mind any hard and fast conceptions in regard to the dwelling-house and look at the question from an objective and critical angle, and you will inevitably arrive at the 'House-Tool'...it will be beautiful too, with the vitality that

the artist's sensibility can give to its strict and pure organism.[4]

For Le Corbusier, architecture was the last step toward modernity. He believed, however, that the social state of mind necessary to embrace it was lacking.[5] His idea of the modular system seems in some ways an attempt to address this. For example, in both the Plan Obus and the Unité d'Habitation, by conglomerating a large number of individuals into a large compartmentalized unit, perhaps he believed he was laying the grounds for the social harmony and discipline necessary to cultivate the "revision of values" he idealized from his earliest works. This notion of several individualized parts making up a productive whole further exemplifies Le Corbusier's fascination with technology and industrial culture, as well as his belief that people disciplined to the realities of individualized factory production were far happier than people who anguished over their lost responsibility for "whole things."[6]

In contrast with Le Corbusier's rhetoric of discipline and technology, however, was his discernible tendency towards organic and biological rhetoric when idealizing his cities and architecture. For example, he described business and administration as the head of a city; culture as its heart; residence as its lungs; industry as its legs; and transit systems as its arteries. One commentator has argued that this tendency allowed Le Corbusier to "naturalize" his concepts[7] and, in a manner, soften the edges of the otherwise brute language of his urban order: the classification and elimination of incompatible and undesirable elements.

Le Corbusier's cities were also designed with a very specific idea of the kind of individuals his machines for living might "produce," whether in a colonial or metropolitan context. This idea was derived from both Le Corbusier's personal character, and also the archetypal human being he envisioned living in and emanating from his cities. It is well known that Le Corbusier viewed the city as something to get away from. His work constantly emphasized provisions for sunlight, solitude and elevation from street level, as well as the need to remove the distractions of the urban domain: congestion, disease, ornamentation, and so on. Furthermore, Simon Richards has recently argued that Le Corbusier's designs sought to inspire people "to search for more substantial, stable realities within themselves."[8] To facilitate this, Le Corbusier sought to make his cities more comprehensible, digestible, and stable. Fascinated by the harmony of collective and individual life he witnessed in a Florentine monastery,[9] Le Corbusier wanted to make

cities whose inhabitants could comfortably withdraw into contemplation. "Le Corbusier had a clear idea of what people should be doing in his cities," writes commentator Simon Richards. "His antisocial urbanism was intentional."[10]

Le Corbusier thus sought to mitigate the distractions of the urban domain, which included discouraging the individual's dependency on the social and political life of the city.[11] His projects had no streets for casual socializing, and formal social engagement happened only in the most predetermined manner, such as sport.[12] Political participation was reduced to maintenance of the otherwise non-negotiable, "perfect" city.[13] Richards, again, provides an interesting anecdote:

> I was in Chandigarh for the Golden Jubilee of Indian Independence on 17 August 1997. This experience gave me a useful insight into how Le Corbusier's cities were meant to work, although I did not expect or welcome this at the time. It seemed that every town and city in the country was engaged in some kind of street festival, which intensified as midnight approached. Expecting a similar event in Chandigarh, my friend and I wandered late into the streets and city centre and found them deserted. Our presence served only to arouse the suspicion of the police...[I]nitially, I was disappointed, but later I realized that...it is misguided to demand experiences from Le Corbusier's cities that they cannot and were never intended to provide.[14]

It is curious, in the same regard, to consider that Le Corbusier's two favourite analogies for the city were the monastery and the ship.[15] His ideal society was one of isolationism, collective solitude, and limited political engagement. It embraced the technological revolution of the early 20th century, and revelled in the clean and orderly. Like ocean liners or clusters of temple chambers left on a suburban plain, Le Corbusier's design is deeply informed, not only conceptually but visually, by these overarching analogies.

It is also precisely for this reason that Le Corbusier's Algerian encounter and his fascination with the North African style strikes as somewhat bewildering. Order, hygiene, and solitude were hardly the defining characteristics of Algiers in the 1930s. To the contrary, the city that Le Corbusier happened upon was the culmination of a century of divergent incursions and attempts at

sequestering the native population in the Casbah, while establishing a dominant European quarter on the waterfront. From the moment of colonization, the priority of the French had been to imprint their superiority in all forms. Urban planning and the built environment were no exceptions – in fact, they became instrumental to this end.[16] However, the architectural "order" imposed by the French is hardly something one imagines would be much to Le Corbusier's liking.

Rather, the historic Casbah was a neglected, calamitous mess, while the European quarter embodied the same ornamental, neoclassical urban forms that Le Corbusier so resented of conventional European style (fig. 1). It is curious, then, that during his visits in Algiers, Le Corbusier reportedly stayed in the Casbah,[17] the categorically native sector of the city, whose only European visitors were usually scores of uniformed men carrying rifles. What was it that drew him here? The following are excerpts from his remarks in *The Radiant City*:

Fig 1. Algiers, circa 1930. The Casbah is to the right; the European Quarter to the left. Image source.

> Pure and efficient stratification of the Casbah. Among these terraces which form the roof of the city, not an inch is wasted...O inspiring image! Arabs, are there no peoples but you who meditate daily in the splendid sunset hours? Sky, sea and mountains. Beatitudes of space. The power of eyes and mind carries far...

> While the street is a channel of violent movement, your houses know nothing of it: they have closed the walls which face the street. It is within the walls that life blooms...O inspiring image! Arabs, you are at home with the hospitable and charming house, so clean, so measured, ample and intimate...the street is only the bed for the rushing stream of passers-by.[18]

Le Corbusier was enraptured by the roof terrace culture, closed facades, and interior communal area that marked a common home in the Casbah, creating a sort of complete insular unit within a much larger whole. He was likewise absorbed by the honeycomb-like villages of the M'zab Valley south of Algiers in the northern Sahara:

> Such order, such decisiveness, such choice, such a sensitive instrument ready to serve man...every house is equipped in a standard way. Everything

has been foreseen. I go from [one house] to another house: the same law prevails. But what diversity: standards form a stable basis for imagination.[19]

As alluded to previously, however, Le Corbusier praised the Algerian domicile quite selectively in *The Radiant City*, in much the same fashion as other European Orientalists had before him. He sidestepped the formidable structural contradictions which the Casbah posed to his own notion of the ideal city, and turned a blind eye to the humanitarian condition of the Algerian quarters in his romanticized musings. This indifference seems to pervade many of his plans for Algiers as well.

There were six plans altogether, though all of them made more or less the same proposal: a large motorway following the natural curve of the harbour, connecting a proposed business quarter of central Algiers with outlying suburbs to the east and west. The Plan also proposed apartment blocks at Fort l'Empereur to the south of Algiers to house a quarter million people, to be connected by viaduct to the business quarter. This was, again visually and conceptually, one of the most striking features of the Plans, for it necessitated the viaduct intrusively passing directly over the Muslim quarters in the Casbah, essentially creating a sort of urban apartheid (fig. 2).

Le Corbusier's encounter with Algiers is undoubtedly the most popular case of colonial urbanism in French North Africa, despite the fact that none of his plans were ever taken up. The Plan Obus was proposed in a period when many young European designers sought outlets for their developing crafts and were given more or less free reign in Morocco and Algeria.[20] Even in comparison with some of the other grandiose housing schemes designed during the late colonial period in Algeria, it seems Le Corbusier's Plans may have simply been too audacious, and too costly.

Le Corbusier's designs for Algiers are ambiguous. It is never clear – explicitly, at least – what type of individual his Algerian "machine for living" was designed to cultivate, although there are sufficient remaining clues to formulate a good idea. The fact that he advocated razing 60% of the Casbah to accommodate the proposed Business Centre is one stark suggestion that his vision for Algiers was specific to one culture, which was not the culture of the Algerians. Furthermore, when we look at his proposed apartment designs for Algiers, to house a supposed

Fig 2. Plan Obus model, with viaduct bypassing the Muslim quarter to connect European suburbs with business centre. Image source.

Fig. 3. Les Bâtiments des Dunes, one of two housing superstructures built on the eastern edges of Algiers during the late colonial period. While the nod to Le Corbusier's style is clear, the provisions of the Bâtiments are certainly less generous than he might have imagined. Image source.

Fig. 4. Apartments at Fort l'Empereur were a formative precursor to Le Corbusier's designs for the Unité d'Habitation. Image source.

Fig. 5. The Unité d'Habitation at Marseilles. Image source.

quarter million newcomers to the city, it is notable how far abstracted they were from the lifestyles and economic means – automobile ownership, compartmentalization between neighbours and within the units, the desire for glass walls – of the Algerians themselves. Between these two features of his Plan Obus, it is difficult not to surmise that Le Corbusier was supportive of increased European colonization of Algiers, and given that he did not envision any "Africans" in the centre or suburbs of the proposed "capital of Africa," that he did not support the outright displacement of Algerians from the city.

Finally, it is worthy of note that in 1958, as the Algerian war for independence entered its fourth year, French authorities did borrow some aspects of Le Corbusier's Plan Obus as part of the infamous Plan de Constantine, designed to pacify revolutionary fervour. Specifically, in order to diffuse resistance in the city, authorities staged an incursion into the Casbah, seized a portion of the historic city, and relocated its inhabitants to the newly-built high-rise housing estates on the city's periphery for the remainder of the war (fig. 3). The Algerians, however, in the words of author Michele Lamprakos, "chose revolution over architecture."[21]

The design of the Unité d'Habitation occurred in a dramatically different context, although its linkages to aspects of Le Corbusier's Algerian experience are compelling. Stylistically, Paul Overy has suggested that the *brise-soleil* – designed to restrict high-angle summer sun on garden terraces – and roof terrace concepts featured in the Unité d'Habitation were directly inspired by his experiences in North Africa.[22] More generally, Overy has attributed the relative success of the Unité d'Habitation to the lessons learned from the Plans Obus and the experiment of colonial urbanism in North Africa, writing that "the Unité preserves something of the colonialist utopianism of Le Corbusier's Algiers project."[23] The visual similarities of the housing designs for Algiers and the Unité d'Habitation are present as well (figs. 4 and 5).

Le Corbusier envisioned the Unité d'Habitation as a kind of "vertical garden city,"[24] an extension of village life into space, air and light.[25] More pragmatically, Le Corbusier's mass housing was conceptualized and designed as a response to immense housing shortages following the world wars.[26] As one of the first points of entry for the Allied forces into Continental Europe at the close of the Second World War, Marseilles had been subjected to a vigorous aerial bombing campaign and much of the city had been left devastated. The drastic housing shortage was, of course, being
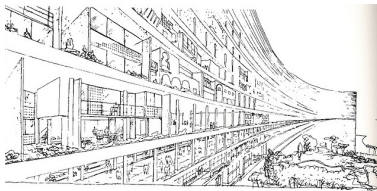
concurrently exacerbated by a tremendous influx of migrant labourers from France's countryside and her overseas colonies.

This housing would be affordable, but hospitable, and "new, but not without a sense of history or locality."[27] The Unité d'Habitation at Marseilles is a spectacular feat of architecture, comprising 337 apartments – of which there are 23 different types – which are spread between twelve storeys. As a "vertical village," the single-slab concrete edifice was designed to house roughly 1,500 people, and provides to this day a childrens' nursery, internal shopping and recreation facilities, and a restaurant and hotel. It is designed, essentially, to be a self-sufficient, insular community.

Standing on enormous concrete *pilotis*, the space below the building was envisioned as "circulation space" for pedestrians, cyclists, and the like. However, it is also a symbolic elevation of the dwelling above the detritus of street level.[28] The building also features a two-storey apartment interlock system, such that an entrance corridor and elevator stop are only necessary on every third floor. The load-bearing concrete partitions between the apartments allow for the opening of the facade, and provide a superb degree of soundproofing between units. The facade of the building is diversified with a mixture of single and double-storey balconies, and the vibrant colours applied to these inlets create what Le Corbusier called a "violent, clamorous, triumphant polychromy."[29] Finally, the roof of the Unité is designed as a terrace which he hoped would "[reclaim] the lost land beneath the building for recreation."[30] He made the overarching intentions of the Unité no secret: "I have decided to make beauty by contrast. I will find its complement and establish a play between crudity and finesse, between the dull and the intense, between precision and accident. I will make people think and reflect."[31]

Le Corbusier wanted to create a sublime structure, one whose composition evoked both fascination and humility. One of the central means of expressing this was Le Corbusier's *beton brut* style, by which the unpolished concrete of his structures was given a wooden texture left behind by the wooden planks used to give the concrete form as it was poured. This graphic convergence of technology and nature is one of the defining features of the Unité. Furthermore, he wanted to create a space conducive to contemplation, evoking a sense of understanding by design. He wanted, in the same sense as many designers and builders, to make a temple out of the home for its inhabitants.

One of Le Corbusier's close colleagues, André Wogenscky, with whom he collaborated on the Unité at Marseilles, remarked that "deep down it was not architecture that interested [Le Corbusier], but people."[32] Architecture was simply his means of affecting them. The Unité of 1952 in Marseilles thus represents the culmination of Le Corbusier's project of fortifying "the integrity of individual and collective life on a mass scale" (fig. 6).[33]

The Unité d'Habitation was designed originally to be housing for poor Marseilles port workers, and a prototype for social housing everywhere in France.[34] However, with its ocean liner-like facilities and amenities, the finished item was well beyond the reach of most working class people. Today the Unité at Marseilles is inhabited mostly by young professionals, and is the subject of vastly differing opinions from architectural observers and the building's inhabitants. The Unité has been called the "negation of the city," in which "any reference to continuity and spatial proximity was abolished."[35] The internal structure of the Unité eliminates the notion of street corners, "next-doors" and "across-the-streets," and the *pilotis* prevent any kind of interaction with the building at the level of passersby.[36] Others have remarked upon the irony that, in singing the praises of technology and industrialization, Le Corbusier genuinely believed he was addressing human alienation in the modern world.[37]

Assessing Le Corbusier's work several decades after the fact, its successes and failures are quick to surface and easy to praise or reprimand. It is important to perform this assessment in the architect's own context as much as possible. For example, one might suggest that Le Corbusier did not design for "this world": whether one believes this to be to his detriment or to his credit, the veracity of the original statement is quite real. Simon Richards' example from Chandigarh in 1997 serves well to this effect. The city performs its task relatively well as per Le Corbusier's intentions, despite the overall unsuitability of his design to typical Indian urban forms and lifestyles.

What, then, can be said of Le Corbusier's "machines for living" on the edges of the French colonial empire, between Algiers and her Provençal sister city? What can the two projects tell us about the individual who designed them? Despite all of the overlapping qualities of the two projects, the fundamental difference between the two is one of context: the first is colonial, and the second falls in the domain of the colonizing power. Thus, in spite of the benign appearance of Le Corbusier's plan for Algiers, it is difficult to disguise the fact that it was designed, if implemented, to

Fig. 6. The Unité d'Habitation at Marseille. Despite the presence of some collective facilities, one of the most common criticisms of the structure remains the insularity of the apartments, the gradual decay and disuse of the collective facilities, and the isolation of the structure from the rest of the city. Image source.

facilitate European colonization and make Algerians "historical artefacts" in their own city. Such is the mechanism of architecture in the colonial context. His admiration for the Casbah – and his inclusion of various stylistic nods to the North African style in his design – notwithstanding, Le Corbusier's 'machine for living' in Algeria was not concerned with who Algerians were or how they lived.

In much the same way, the Unité seems to presuppose human beings as clay, not as individuals with pre-established customs and tendencies. Regarding the Unité, Nathaniel Coleman has lamented that "although the world that Le Corbusier demanded has more or less come to pass, the resulting environment is often alien and unfriendly, not at all a better home."[38] It is difficult to imagine that, by virtue of conglomerating several hundred families into one unit, but separating them in several hundred enclaves, it is possible to create a kind of unified inhabitation. In addition to light, air, and space, it is a more or less universal fact that human beings need human encounters, even those produced by chance. Underlying much of Le Corbusier's thinking related to the Unité was a kind of monastic ideal. Yet Le Corbusier's model of the monastery, in which the unifying principle – the contemplation of God – is replaced by the principles of solitude and productivity, does not lend itself well to the kind of social harmony he witnessed and so admired in Florence. To my own mind, the idea of a kind of "industrial spirituality" is a source of peculiarity and intrigue in the Unité, but not a source of creative inspiration. In the cases of both the Plan Obus and the Unité d'Habitation, it must be wondered what they say of a builder so deeply concerned with people, but so often thoroughly unconcerned with their lifestyles and needs.

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