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THE CORBUSIAN LANDSCAPE: ARCADIA OR NO MAN'S LAND?

The architect, planner and painter Le Corbusier (1887–1965) has had a wide influence on architecture and town planning. Despite criticism from the landscape profession, his ideas have contributed considerably to a change of approach and affected landscape and gardens during the latter half of the twentieth century. This paper provides a brief survey of the visions of this hero of architects and how they resulted in disappointing and poorly resolved landscapes.

Le Corbusier was extremely skilled in drawing publicity, and publicizing his ideas. Dressed in black or white with round, thick dark-rimmed glasses, his image became and has remained a cliché for avant-garde architects. More than any other architect he has become the personification of the Modern Movement. Author of the much criticized *La Charte d'Athènes* (1943),[1] his name is frequently used metaphorically. High-rise buildings are referred to as 'Corbusian' and so is a white building without ornamentation. During the latter years of the twentieth century Le Corbusier's work became the inspiration for the Minimalist movement. He was not well known for his design of gardens, although he did design several, but it was more his general approach to landscape design that drew interest from landscape architects, architects and developers. Hence, this paper concentrates on these aspects.

Despite the fact that Le Corbusier is one of the most written about architects of the twentieth century, until recently there have been no reviews of his landscape work. A chapter in Dorothée Imbert's *The Modernist Garden in France* (1993), by means of a series of chronological examples, concentrates primarily on Le Corbusier's approach to garden design, but includes some notes on landscape design.[2] An earlier paper by Jürgen Ulpts concentrates on his villa gardens and provides observations on their composition, with analyses of axiality and proportion, the grid and freeform, very much in the light of Colin Rowe's seminal essay 'The mathematic of the ideal villa' published in 1947, which elevated the latter's status by drawing comparisons between his work and that of Andrea Palladio.[3] Ulpts' observations conclude with some remarks on the relationship of form language between city and garden. It correctly highlights Le Corbusier's preoccupation with geometry, rather than the nature of the site.[4]

While special in their own way, Le Corbusier's gardens can be related to examples of other contemporary French architects. Additionally, the influence of these gardens was

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limited, as they were hardly known by landscape architects at the time. Le Corbusier's main concerns were the setting of his buildings and use of the surrounding area. The English landscape architect Brenda Colvin observed that he placed buildings in the landscape without changing the setting, and judged this 'incomplete and immature, ignoring far too much of the nature of things as they are'.[5] Thomas Adams and Peter Youngman wrote about 'a curious reversion to eighteenth-century landscape',[6] while Christopher Tunnard remarked that 'he must be congratulated on extending the natural garden style to its logical conclusion'.[7] Tunnard had evidently observed some of Le Corbusier's garden layouts, for he stated that Le Corbusier's planning schemes 'include garden lay-outs which are adaptations rather than pure creative works'.[8]

Similarly the Dutch landscape architect Mien Ruys referred to Le Corbusier's lack of vision in providing a setting and thought that he misunderstood the meaning of nature. Le Corbusier's approach was to place his buildings in nature, reasoning that nature could then be appreciated by all, and the objections of living closely together would be resolved. Ruys noted that this was impossible, arguing that the basic principle of nature is lack of control, a lack of paths, dense vegetation and inaccessibility. A single person may wade through the wilderness but this cannot be done by the thousands of residents who live in such buildings. Ruys considered this a typical illusion of someone who searches for a contrast between form and nature. 'Isn't this thought born in the brain of the real city dweller, who visits nature from time to time, idealises it, but does not know it?'[9]

These critical views show how controversial the landscape proposals by Le Corbusier were, and indicate the need for a contextual assessment of landscape within his architectural work. Exploration of some of his main conceptual proposals for the city and individual buildings will do this. The various issues are illustrated by schemes that were particularly influential in landscape terms.

FORMATIVE YEARS

Le Corbusier was raised in La Chaux-de-Fonds, a watch-making town in north-west Switzerland near the French border. Born as Charles-Edouard Jeanneret, he grew up in a bourgeois family, his father a watch engraver and his mother a pianist. His father was an enthusiastic mountaineer who frequently led his son to the summits of the Jura Mountains. These walks provided not only physical exercise, but also lessons in biology, geology and meteorology. When 13 years of age, Charles-Edouard went to the trade (art) school of La Chaux-de-Fonds, where his teacher Charles l'Eplattenier encouraged his critical appreciation. The young Jeanneret was educated in the principles of the Art Nouveau, with its search after organic ornamental forms. While still at school, as a student project, he designed and executed his first building.

He continued his studies by travelling and meeting the most eminent architects of the period; Joseph Hoffmann in Vienna, Tony Garnier in Lyons and Theodor Fischer in Munich. He worked for Auguste Perret in Paris from 1908 to 1909 and for Peter Behrens in Berlin in 1910. Turning down an offer of work from Hoffmann, Jeanneret set out on another journey around the Mediterranean. Here he drew inspiration from the indigenous white houses and ancient monuments, particularly the Acropolis in Athens. In 1917 he settled in Paris, supporting himself by working as brickworks' manager, while in his spare time he wrote and painted. His arrival in Paris coincided with the heyday of Cubist painting, and its influence was reflected in his work.[10]

THEORY AND PRACTICE

From 1917 to 1925 Le Corbusier cooperated with the painter Amédée Ozenfant (1886–1966), who introduced him to Cubism; together they launched the magazine *L'Esprit Nouveau* and wrote the first of more than 40 books.[11] Ozenfant encouraged Jeanneret to adopt his pseudonym. In 1922 Le Corbusier gave up his work at the brickworks to set up an architectural practice with his cousin Pierre Jeanneret. Apart from a break during the Second World War, they continued in partnership; nevertheless biographers have almost completely ignored any influence Pierre may have had. From 1927 they started to employ assistants, typically four or five. Unlike contemporary architects at the Bauhaus and Frank Lloyd Wright, there is no evidence that Le Corbusier ever employed a landscape architect to work on his designs, though he was certainly visited by several landscape architects. He continued to paint in the morning and to practice architecture in the afternoon.[12]

Le Corbusier's practice dedicated itself initially to designing villas and town houses; he also planned a small housing scheme in Pessac. The number of commissions was disappointingly small, which left Le Corbusier with plenty of time to work on competitions and on theoretical projects. He attempted to revolutionize the building process and make it more economical, always continuing to look for new forms. Similarly, his town plans attempted to reorganize the way people lived and to create a modern society. Several schemes were presented to the International Congresses of Modern Architecture, which from its inception in 1928 came to be dominated largely by Le Corbusier.[13] Only after the Second World War was he commissioned for large schemes such as the planning of Chandigarh in Punjab State, India, and L'Unité d'Habitation in Marseilles. All his theoretical work and practice was very well publicized and its influence, particularly in the planning and architecture professions, was wide and far-reaching. Throughout there was an emphasis on photography, where he exploited his blindness in one eye. This handicap left him with the ability to judge good shapes for this popular medium, enabling him to promote his architecture with aesthetically attractive and memorable images. Landscape architectural interest in his work lies mainly in his provision of an appropriate setting for his projects and in his theoretical town planning schemes.

LANDSCAPE IDEALS

Le Corbusier's ideal for a landscape setting was reminiscent of overgrown landscape parks; mature trees irregularly spaced in grass and sinuous walks. The Bois de Boulogne to the south-west of Paris frequently served as a prototype.[14] He applied this in proposals for his utopian schemes, *Urbanisme* (1925) and *La Ville Radieuse* (1935).[15]

One of the most memorable settings by Le Corbusier was that associated with the paradigm of the modern villa, the 'machine for living' as exemplified by his Villa Savoye in Poissy near Paris (1929–31). Here a white house in the shape of a perforated square box partly raised on *pilotis* (pillars) is set in the centre of a field overlooking the surrounding landscape (Figure 1). The construction on *pilotis* gave the visual impression that the building hovered above the landscape. This villa was a prototype in which Le Corbusier illustrated a setting in an undesigned agricultural landscape.[16] He suggested settlements of twenty of such villas in the Argentinean countryside, 'set in grass of an orchard where cows continue to graze'. A system of roads would be poured in concrete, while grass would be left to grow alongside the roads, 'nothing will be disturbed, neither trees nor

Figure 1. Villa Savoye, Poissy, was the prototype for the 'machine for living' set on agricultural land. It had no connection to the local environment, and even the dimensions of the villa were determined by external ones: the turning circle of the owner's car. Photo: author.

flowers nor herds'. He noted that the home life of the inhabitants would be set in a Virgilian dream, providing all the stylistic references in his design of the early landscape style, with serpentine drives and irregular clumps.[17]

These pastoral references show that he was as much concerned with content as with form. With this type of setting, however, Le Corbusier ignored the issues of space and use. Buildings were sculptural objects, set in an infinite space. Their sculptural importance could be proven by the fact that the windows were conceived as a continuous band on all four façades disregarding room divisions, indoor spaces and roof terraces. Such sculptural buildings are best seen when set on an elevated position, as at Villa Savoye, and viewed from one side against a gentle slope. As a result most publications show the north-eastern façade of the building on rising ground, but rarely the south-west, which slopes down to the building (Figure 2).

The inhabitants of the villa would have to console themselves with views from the building, while having to negotiate the cow pats when they walked to their cars. Le Corbusier's ideal landscape appears not to have been very idyllic. It is clear, however, that the Virgilian landscape and the natural landscape of the green city are fairly similar, both principally consisting of grass and trees.

Life for the inhabitants of these villas modelled on Savoye would be contained within the house and on the roof gardens on the first and second floor. This provided the architect full control of the human environment; everything was contained within the house. The architect controlled even the appreciation of the views. Large sections of the landscape were blocked out with walls, with openings at strategic positions. The landscape

Figure 2. A sculptural building like Villa Savoye is best seen when set on an elevated position. As a result, the south-western façade, which is on a downward slope, is rarely shown. Photo: author.

was framed as if it was a painting. By doing so, Le Corbusier removed the inhabitant from nature both by placing them on a different level, and by framing the view. The roof gardens were also highly controlled areas that included sculpted elements and with planting restricted to small planters.

UTOPIAN CITIES

The starting point for Le Corbusier's proposals for modern cities was the unhealthy overcrowded, polluted living conditions in old cities, with road systems unable to meet traffic demands. At the same time the expansion of suburbia and the founding of garden cities ate away the countryside. To overcome these problems, he proposed a theoretical town, Une ville contemporaine in 1922. This was misleadingly translated as 'The City of To-morrow' in 1929 since he denied being a Futurist and claimed to be working for the present generation, solving present-day problems. With the nineteenth century Parisian transformations by Georges-Eugène Haussmann, which Le Corbusier much admired, still within living memory, Le Corbusier provided a precedent for his far-reaching proposals suggesting that 'Cities die every 50 years, or even more often. They are demolished, they are rebuilt'.[18] He clearly saw the architect as having the power to resolve the ills of society and by doing so would prevent revolution, finishing *Vers une architecture* (1923) with the warning 'Architecture or Revolution./ Revolution can be avoided'.[19]

Une ville contemporaine was a theoretical proposal for a town of 3 million inhabitants consisting of a city centre of 24 skyscraper office blocks 60 stories in height, with a capacity of 500,000 people. Each skyscraper was placed in a park with direct access to an underground system. The residential zone was next to the business centre and

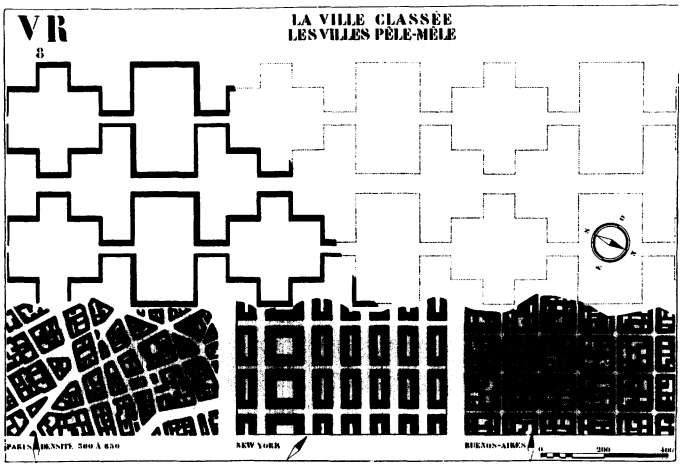

Figure 3. The starting point for The Radiant City was a concern for living conditions of existing towns and the provision of fresh air and sunshine. Le Corbusier recommended continuous apartment buildings (superblocks) on *pilotis*, irregularly indented, and criticized existing cities, even those laid out on a regular grid pattern, as a mishmash. This comparison of (from bottom left) Paris, New York and Buenos Aires makes clear the frightful scale of Le Corbusier's proposals (top); Le Corbusier, La Ville Radieuse, 1930; Plan FLC 24903; © Fondation Le Corbusier.

contained large continuous apartment buildings, superblocks, set in parkland. The different types of traffic were to be separated and on different levels. The model thus provided was a business centre, not allowing for industry or expansion.[20] This served as a model for his scheme for the replanning of Paris that followed, 'Plan Voisin'.[21] From this was developed the best known of his schemes: La Ville Radieuse, 'The Radiant City', in 1933, which he presented at the Congrès Internationaux de l'Architecture Moderne (CIAM) conference.

Unlike The City of To-morrow, The Radiant City was developed as a city plan capable of extension and was influenced by the 1929 proposals by Arthur Korn and N. A. Miliutin.[22] At the same time the idea of radiant towers clearly related to Bruno Taut's utopian city in *Die Stadtkrone* (1919).[23] The Radiant City was intended for 3 million people. To Le Corbusier it provided the model adopted, with modifications, for cities such as Rio de Janeiro in Brazil, Algiers in Algeria, Antwerp in Belgium, Stockholm in Sweden, Barcelona in Spain and Nemours in France. The proposals were intended to decongest the centre, increase population density, develop a means of transport, and liberate the ground for nature, sports and agriculture.

Like that directed by his masters Garnier and Perret, and probably influenced by the layout of his hometown La Chaux-de-Fonds, Le Corbusier's utopian city was organized on a grid. The Radiant City followed a grid of 400 × 400 metres with roads raised by 5 metres. Underneath this road system ran a system of road cars — urban trains — and goods vehicles. Continuous apartment buildings (superblocks) on *pilotis* stand over the roads, irregularly indented (Figure 3). The areas within the grids of roads are given over to pedestrians, who pass from one square to the next through tunnels beneath railtracks and roads. Parking facilities were on platforms in front of entrances to the apartment buildings. The *pilotis* allowed pedestrians to walk unobstructed in all directions through the park. Within the park were schools and facilities for sports such as swimming, football, basketball and tennis as well as bowling greens. Swimming pools were 100–150 metres long and designed in an organic shape. To one side a sandy beach bordered the swimming pools, and slightly set back was a paddling pool for the younger children (Figure 4).[24]

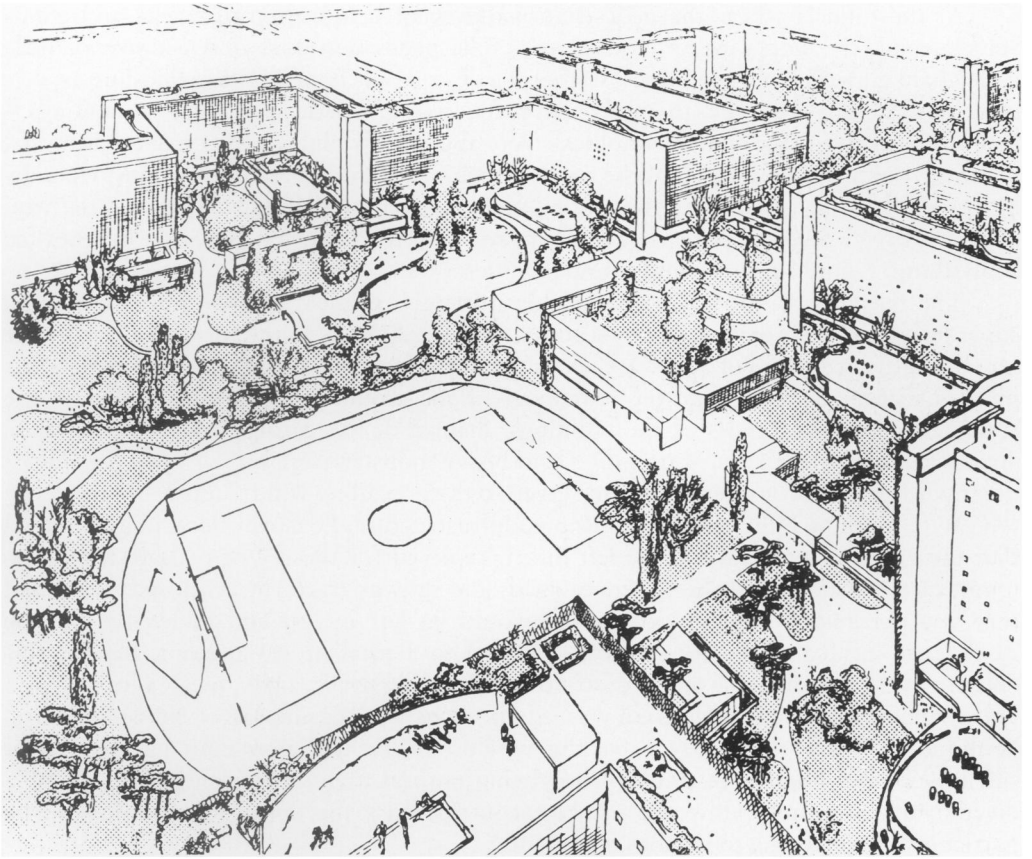

Figure 4. Sports provision and schools in The Radiant City were the only facilities at ground level. These were interlinked by a meandering path system 'only to provide certain charm, an element of pleasure, a feeling of being out for a stroll'. Le Corbusier, Paris, Ilot insalubre, no. 6, 1936; Plan FLC 22829; © Fondation Le Corbusier.

The available area of greenery was calculated at 1 hectare per 1000 inhabitants. This space could be accessed by the occupants of the apartments and contained a network of pedestrian walks criss-crossing diagonally and orthogonally at the same time, providing the shortest route to any location. In clear contrast to the more functional approach by his German contemporaries who explored functional layouts, these paths were slightly sinuous, designed, wrote Le Corbusier, 'only to provide certain charm, an element of pleasure, a feeling of being out for a stroll'. The proposal was to cover these walkways with awnings, making 'the 'bourgeois' accessory, the umbrella, obsolete'.[25] The grid of 400 × 400 metres was determined by what Le Corbusier considered reasonable walking distances. Also, the spaces created in between the apartment buildings would be big enough to accommodate sports facilities and schools. Thus, one might say that the proportions were guided by functional requirements. It is notable that Le Corbusier compared these proposals for The Radiant City with Central Park in New York, which he judged as being too big.[26]

At the tunnels where the pedestrian walks went below the rail tracks and goods vehicle road, the slopes were 'landscaped'. 'The pedestrian goes down a sort of little valley banked with lawns and trees, so that the descent has none of the forbidding aspects of a tunnel'.[27] The rail tracks themselves were fenced off from the park with iron railings.[28] The spaces between the apartment blocks were abundantly planted with trees. Additional planting took place on the top of the roofs, which were laid out as roof gardens, whereby he argued that they recaptured the ground surface taken by buildings. They created vital sources of hygiene, sun, pure air and pleasure, with the inclusion of sandy beaches for sunbathing, swimming pools and sports facilities.

The business centre was set separately from the residential area and contained a superdensity of 3200 occupants per hectare. Here skyscrapers in the form of a cross were set within the same grid of 400 × 400 metres. Car parking was provided at different levels including ground level, while the remainder of the ground was 'landscaped' as in the residential area. The roofs of the buildings, instead of the gardens, were proposed as airport landings. Factories, warehouses and heavy industry were on the opposite side of the town, with due consideration being given to the prevailing wind (Figure 5).

With all these buildings and additional infrastructure, Le Corbusier still maintained that the ground surface would be left intact, reserved for the use of pedestrians alone. Omitting to acknowledge the system of roads and railway tracks he proposed, he argued that 100 percent of the ground surface would be left intact, and added to this the 11 percent surface of the roof gardens, adding to a total of 111 percent. Besides this deception, his claim that the pedestrian would thus never again meet a car is also unconvincing in that the pedestrian was led underneath roads and rail tracks by subways. With hindsight it is now known that this would have created an unenticing prospect of smelly subways filled with graffiti, thus being natural areas for crime. The lack of a diversity of transport types would also have contributed to this unsafe environment, being particularly threatening to females (Figure 6).[29]

It follows that even within his theoretical model Le Corbusier could not make the landscape flow underneath the buildings as proposed, despite the fact that they had been positioned on *pilotis* precisely for the purpose. Additionally, this would provide functional space underneath the buildings, but Le Corbusier omitted to consider the adverse microclimate created in these areas underneath high-rise buildings or the quality of such spaces. The main outcome of these proposals was the creation of traffic islands divided by main arteries. All human activity had been effectively removed from there to the first floor inside the buildings and he proudly referred to this as the 'death of the street'. The model of this ideal and controlled life to Le Corbusier was that of an ocean liner, which helps to explain the detached relationship of the buildings to the landscape, and provided the designer with full control over all activities.

The ideas for The Radiant City were produced at the 4th CIAM conference on 'The Functional City' held in 1933, which set out to analyse existing cities. Le Corbusier presented fully worked out solutions and 10 years later presented a popular account of the conference in *La Charte d'Athènes* (1943), with which he attempted to validate his own The Radiant City proposals. These had suggested different 'sectors' for living, working, transportation and recreation, while the original text had used the less specific word 'areas'. The charter (*point de doctrine* 78) maintained: 'Plans will determine the structure of each of the sectors allocated to the four key functions and they will also determine their respective locations in the whole. . . . Each key function will have its own

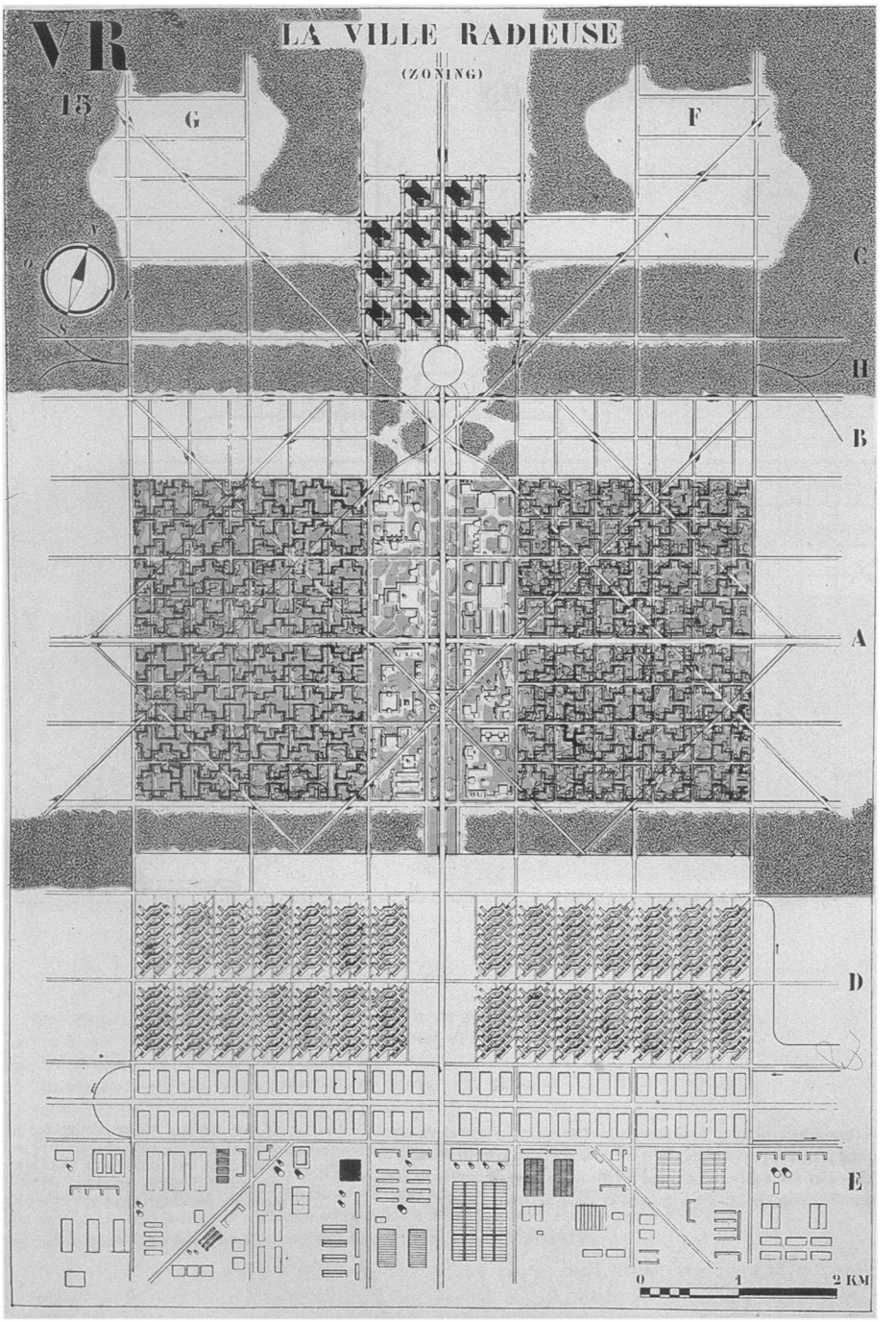

Figure 5. The Radiant City, with the residential area in the centre clearly separated from the business centre to the north and the industrial area to the south. The axiality and emphasis on greenspace was a stylistic reference to Versailles aimed to appeal to the bourgeois élite. Le Corbusier, La Ville Radieuse, 1930; Plan FLC 24909; © Fondation Le Corbusier.

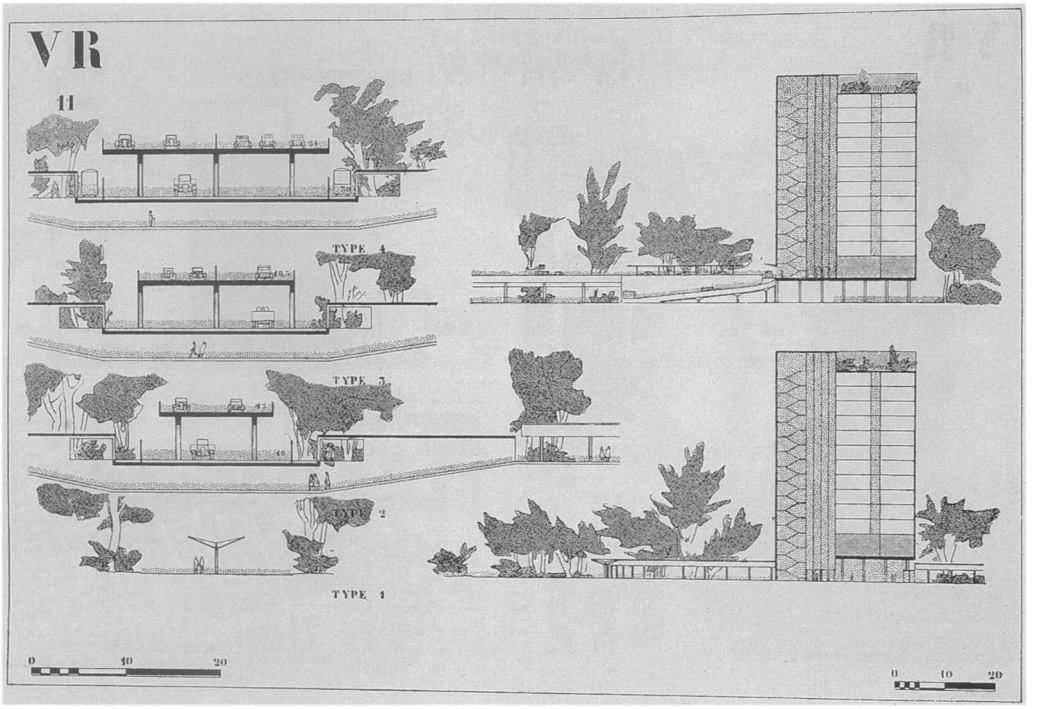

Figure 6. Cross-sections of The Radiant City emphasize the nature of some of the details with raised urban motorways and underpasses, which are now considered part of the failed planning concepts of the 1960s and 1970s. Le Corbusier, La Ville Radieuse, 1930; Plan FLC 24909; © Fondation Le Corbusier.

autonomy, based on circumstances arising out of climate, topography, and local customs; each will be regarded as an entity to which land and buildings [or 'territories and premises' in direct translation from the French text[30]] will be allocated . . .'.[31]

By stressing autonomy and territories, he not only implied a different scale, but also complete independence, while the original text describes the 'laws and conditions' inherent in the different functions, which must be respected in making a town plan. This can hardly be interpreted as recommending autonomous territories, and it shows his desire to control city dwellers.

It was particularly this point that influenced post-war town planning, because zoning was easy to do, required little research and enabled control over different activities. Although there were voices at the time that warned of social alienation of such separation, these ideas were generally accepted by planning departments, which were now trying to return to principles of mixed use by integrating living and working areas. By the 1960s the mistakes of this approach had become clearly visible, resulting in sterile environments desolate at certain times of the day. The dormitory town, which during the day was only inhabited by mothers and children, causing social alienation, was one of the most desperate consequences and became a great social concern. Le Corbusier's *La Charte d'Athènes* became mistakenly regarded as the official 4th CIAM proceedings, so CIAM rather than Le Corbusier was normally blamed for the failures.[32]

The plan for The Radiant City has often been compared with the seventeenth-century layout of Versailles; but beyond the superficial formal resemblance, there is no

comparison with the way Le Corbusier's proposals were carried out, or with regard to the spaces created, their scale or proportion. Doubtless Versailles served as a source of inspiration, with allusions to grandeur, a continuing history and a fulfilment of dreams of the past. The public perceived this at a subconscious level. In addition, his emphasis on greenery in The Radiant City reflected Versailles and would appeal to the Parisian bourgeoisie. It has been suggested that 'to give proposals credibility in the eyes of the bourgeois élite, it is necessary to legitimise them in terms of widely shared ideals: thus Le Corbusier's insistence upon the necessity for large public parks is a direct response to the traditional rhetoric of reformist planners and politicians in Paris'.[33]

A GRAND SCHEME REALIZED: CHANDIGARH, PUNJAB STATE, INDIA (1951–65)

The realization of a new capital for the Punjab region of India following the Partition in 1947 of India and Pakistan enabled Le Corbusier to bring some of his ideas in practice. A parliamentary committee sought a site for the capital, and a relatively flat area bounded by two river valleys some 5 miles apart and in the foothills of the Himalayas was selected.[34] These river valleys were dry for most of the year, but a large dam was built to form a lake to retain water from the Himalayas in July and August. Several villages in the area were not integrated but instead were cleared and demolished, while occasional groves and peepul trees were carefully retained.

Le Corbusier assisted by Pierre Jeanneret, E. Maxwell Fry and Jane B. Drew prepared a town plan. The town was initially intended for a population of 150,000 people, a figure later to be increased to 500,000. The site was laid out in a gridiron pattern formed by roads *c.*800 metres apart on one axis and *c.*1200 metres on the other. The gridiron pattern was slightly softened to a curve on the instigation of Fry and Drew. The gridiron had its long axis in a north-east–south-west direction, avoiding any sunshine from striking buildings parallel to the road. The rectangular squares or sectors intended for residential purposes were planned as self-contained units with communal services, such as schools, a health centre, a club and a shopping centre. An interconnected system of greenspaces ran through the sectors, superimposing a landscape pattern over the gridiron, similar to Le Corbusier's 1951 outline proposal for Marseilles-South (Figure 7).[35]

Housing was one and two storeys high; the large capital buildings were multi-storey with a horizontal direction. Low-rise housing was proposed, unlike the Utopian Radiant City where high-rise buildings were provided, because the latter would be unsuitable in the hot climate. As the low-rise created a rather undistinguished flat area, Le Corbusier created artificial hills within the city with the spoil obtained from the building of the roads. These hills were planted with evergreen tree species to make them seem even larger. In the other areas within the town, treebelts were planted 'to enclose the horizon'.

Additional greenery was provided by tree planting along the roads, which unlike in The Radiant City roads were all at ground level. With the assistance of a chart, a hierarchical system of treeplanting was developed with due regard to size, habit, colour and character of foliage (deciduous or evergreen; dense or sparse). They were treated as architectural elements and selected on aesthetic criteria. Roads in the north-east–south-west direction were to be planted with evergreens cut in the form of a tunnel and kept very low, while the trees on the perpendicular roads were species with sparse foliage. This was done to obtain maximum benefit from the sun and shade when required, but it also assisted in directing the traffic. Similarly, trees gave a different character to each sector by the use of different species.[36]

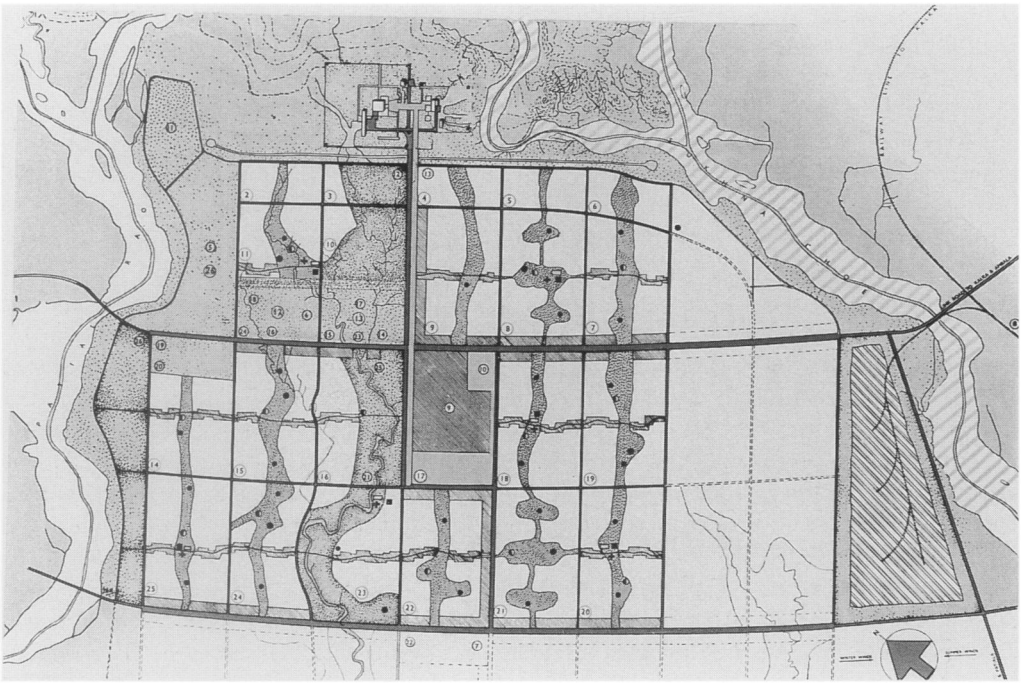

Figure 7. Chandigarh, Punjab State, India, town plan showing a grid pattern with a superimposed system of interconnected greenspaces. Like The Radiant City, Chandigarh was planned for the car. Le Corbusier, Chandigarh: Capitole, 1950–65; Plan FLC 2902; © Fondation Le Corbusier.

Whatever Le Corbusier's efforts, Chandigarh was not a success. The capital complex, built on the north side of the city, which like The Radiant City was separated from the housing area, has been particularly criticized. The buildings were too dispersed for officials to walk from one building to another; nor was it possible to appreciate their physical relationships, except at a distance. One observer noted that 'The beauty of Le Corbusier's government buildings is in fact marred by the naivety of his landscape design and his failure to learn the Mogul lessons regarding the scale of external space'.[37] Charles Jencks compared the setting of the government buildings to an acropolis of monuments, which would radiate out its presence for miles. He wrote that 'while this intention may have been realised, it has resulted in an over-monotonous fixation on each monument, unlike the Athenian acropolis where the buildings are much more intensely related and can thus be experienced together'.[38]

Architectural historians have mainly reserved their critique to the capital area, and several have become side-tracked in the symbolism of Chandigarh. One of the few reviewers of the residential areas was Michael Blee, who addressed the issue of *genius loci*, a term which he thought might well fall into disfavour through indiscriminate or excessive use. 'Its widespread currency today does, however, indicate an increasing awareness of the importance of context; a reaction against the tendency to photograph and record objects abstracted from their total environment'. Blee noted that he could still reveal an understanding of place in Le Corbusier's early sketches of the site in relationship to the capital by associating this with the hills beyond. He found this completely lacking in the housing areas, writing that:

> This city sector development, however, when studied in detail, succeeds only in destroying this overall impression of unity and sense of place. Criticism has already drawn a parallel between the lack of scale and humanity found here and that in the New Towns, revealed the vacuity and sense of desolation apparent in all areas . . . the dispersal of buildings — no doubt in the name of hygiene, open space, access, etc. has destroyed all cohesion, and they lack individually that capacity of 'resilience' which effects and is moulded by human contact and is demanded by the Indian way of life.

Blee continued to describe and illustrate the traditional Indian way of life and contrasted this to Le Corbusier's buildings.[39]

Le Corbusier's attempts at zoning the different functions did not match the mixed economy of Indian society with its complex mixed uses. There had generally been too little regard for human occupation. Within the less affluent districts little attention was paid to the buildings, which resemble crude multi-storey car parks set in bleak spaces. The latter shocked Fry when he returned to see how the city had evolved.[40] In the selection of trees little consideration had been given to growing conditions. Trees had great difficulty in getting established, particularly in the poorer areas, and as a result the wide spaces intended for avenues had mainly become undeveloped space.[41] The roads were too wide for comfort and like The Radiant City, Chandigarh was planned for the car. This point was eloquently made by Kenneth Frampton who wrote that the greatest tragedy of it all was that it was 'a city designed for automobiles in a country where many, as yet, still lack a bicycle'.[42] It might, of course, be argued that the road system could be easily adapted to any future expansion of car use, but this is somewhat inconsistent with Le Corbusier's aim of building a city for today, the contemporary city. Nor does it encourage a sustainable approach towards transport and living, as a result of which the concept was overtaken before it could prove itself.

L'UNITÉ D'HABITATION, MARSEILLES; THE VERTICAL GARDEN CITY

In August 1945, M. Raoul Dautry, the first Minister of Reconstruction after the War invited Le Corbusier to demonstrate the application of his vertical garden city theory to a site in Marseilles in Southern France. The Mediterranean port had suffered badly from Allied and German bombing, and with 50,000 people homeless in 1945, the housing shortage was acute. The proposed L'Unité d'Habitation was intended as middle-class housing accommodating 320 families of different sizes. The site selected opposite the Boulevard Michelet had been used as a dumping ground for redundant army vehicles during the War. The perimeter of the 4-hectare site was bounded by eucalyptus and plane trees, and 'landscaping' was included as part of the building process.[43] In it were sited a swimming pool and a school.[44]

The high-rise building was positioned obliquely to the line of the Boulevard Michelet to create a more exciting conjunction than if positioned parallel. This arrangement was said to have been guided by the existing trees, but a cursory view at a plan shows that positioning parallel to the road would have been possible without additional clearance. Another reason given for the oblique arrangement was that the arrangement of individual flats required a virtually exact north–south orientation. Yet the total dogma with which this exact arrangement was adapted created awkward left over spaces on the ground (Figure 8).

The flats were arranged on a split-level and occupy the whole depth of the building. There were deep loggias and *brizes soleil* that intercepted the low sunshine. Nearby trees

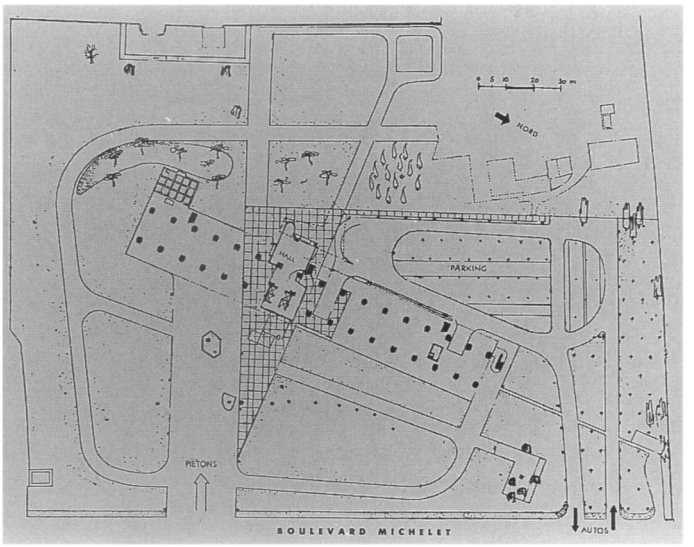

Figure 8. L'Unité d'Habitation, Marseilles, was positioned obliquely to the line of the Boulevard Michelet to save existing trees, but a cursory view at a plan shows that a positioning parallel to the road would have been possible without additional clearance. Le Corbusier, Marseille: Unité d'Habitation, 1945; Plan FLC 26823; © Fondation Le Corbusier.

around the building also contributed to the reduction of light, and thus reduced heat, while above this level flats reaped the benefit of the breeze.[45] The shops were arranged on the seventh and eighth floors of the 17-storey building. These were not very successful, and when Le Corbusier was commissioned to built a second slightly smaller L'Unité d'Habitation at Rézé in Nantes in 1953, they were excluded. Delivery of supplies was difficult, and it was impossible to rely solely on customers from within the building, which was necessary because there were no passers-by.[46] As a result this living in the sky divorced from the ground did not provide a vibrant environment.

The large-scale communal roof garden realized at L'Unité d'Habitation was on the model of those for The Radiant City. The green element of this garden was limited, incorporating 'tubs of flowers' and was laid out in a sculptural manner mimicking the deck of an ocean liner. It incorporated different facilities: artificial mounds, a gymnasium, two solariums, a swimming/paddling pool, a children's nursery and garden, an open-air theatre and a 300-metre running track.[47] The intention was to create a community centre on the roof, which brought together not only the children, but also the grown-ups in sports play and special occasions. One source noted: 'Le Corbusier has achieved a masterpiece of modern architecture in the spatial plasticity of the articulation of the whole roof resulting from the use of most simple means, usually concrete with exposed shuttering'.[48]

Others were slightly more critical and assessed the actual use of the spaces. The town planner H. B. Reichow ridiculed the children's playground on the roof where piles of sand had been modelled in concrete, noting that: 'all natural urge to self activity is made a mockery'.[49] Additionally, it is questionable how many sports people would choose to use a mindless running track on a concrete roof while having the choice instead to use the surrounding parkland. One observer wrote about the practicalities of the running track: 'Incidentally, I tried running round the semi-circular end of the running track. There is no banking at the moment, and the bend is so sharp that unless it is very steep indeed I

visualise runners reaching parapet level at full speed and flying off the edge of the building'.[50]

While roof gardens on private houses might form a valuable addition to the quality of life when carefully designed, this does not appear to have been the case for the communal roof gardens proposed by Le Corbusier. The latter were more vulnerable to the elements, particularly windblown as well as sun-exposed. This appears to have been the reason for the failure of the roof garden of the Secretariat in Chandigarh (1958), a factor partly resolved at Marseilles. Roof gardens never became the centre of public life as Le Corbusier intended, since they did not lead anywhere, and part of the enjoyment of human life is to experience others passing by.

CONCLUSIONS

Le Corbusier's concept for landscape was determined by the self-sufficient character of his buildings, which implied a segregation of building and landscape. Ideally his landscapes were left untouched, just with serpentine walks and drives. In those instances where he did create a landscape, applying a grid or a Golden Section (his modular) to the area did this. Symbolism was applied as a means to validate and gain support for his proposals. Axiality associated with the baroque was frequently used to emphasize the centre of power. Stylistic references to informality, i.e. the landscape style, symbolized nature and freedom. These were principles that would be generally be understood by Le Corbusier's middle-class patrons.

Nature to Le Corbusier consisted of a simple Virgilian landscape of grass and trees. As a result the only spaces created were those determined by the buildings. The love for unbounded, endless landscape, of course, did not create pleasant or beautiful spaces. To ameliorate this Le Corbusier ensured that he framed his landscapes with holes in the walls and to control the views. Besides the framed views, he exerted control over the environment by means of zoning, by allocating functions to territories and buildings.

This approach overemphasized built form and suffered from a lack of sense of place. There was little interest in landscape, which if at all was best left unresolved to provide a setting for his self-sufficient buildings, the machines for living. This point was well observed by Osbert Lancaster in his drawing of a modern movement house. The caricature depicted it (with Le Corbusier on the sun roof) as floating in the sky (Figure 9). Le Corbusier's approach deprived people of contact with nature by removing them from the ground to the inside of the buildings. His proposals for applying grids to landscape meant the applying of patterns irrespective of natural features. This is despite the fact that he was normally keen to preserve natural contours. His proposals for zoning of areas for different functions meant the creation of traffic and dormitory cities. By the 1960s, the mistakes of zoning were being recognized; it still made headway as a planning principle because it was so easy to apply by politicians. The death of the street resulted in a loss of community life.

It is remarkable how Le Corbusier has become the archetypal modern movement architect; the application of symbolism, the diversion from flat roofs and white painted walls with curved shapes, and use of sculptural forms as well as ornamentation all diverted from the orthodox view of what such an architect should do. Additionally he provided autocratic models rather than the democratic preoccupations that underlined the Modern Movement elsewhere. This ultimately cannot be considered separately from Le Corbusier's persona of an egocentric architect. Other architects have generally

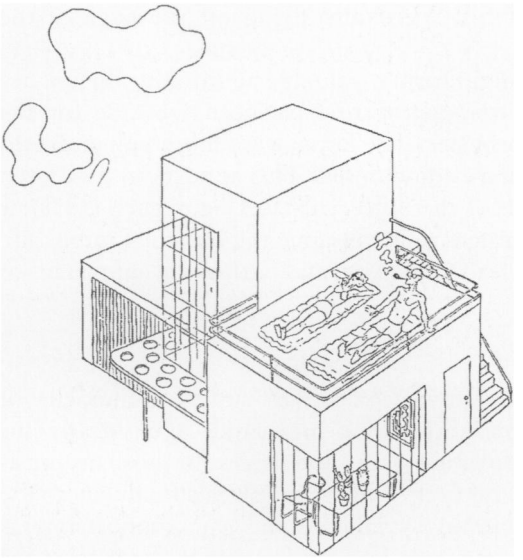

Figure 9. By floating a Modern Movement house in the sky, Osbert Lancaster eloquently summed up Le Corbusier's disregard for landscape and his failure to address it appropriately; from Osbert Lancaster, *Pillar to Post* (London: John Murray, 1938), 81.

heralded his ideas and given them importance way beyond their sketchy meaning. Several landscape architects immediately recognized the effect his influence might have on landscape, but the simplicity of the landscape treatment now left architects and engineers able to take charge of the environment, which was something they gratefully adopted. The failure of his visions can be easily illustrated by the fact that the spatial concepts did not work and as a result the landscapes have been extensively altered since they were laid out.

Le Corbusier's ideas about landscape were simplistic and obsessively directed towards the control of the living environment irrespective of people's needs, without sympathy and sensitivity towards people, places and nature. While he may have immortalized the 'machine for living', he did not understand the concept of a landscape for living.

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