

Green space and cosmic order: Le Corbusier's
understanding of nature

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Candidate's declaration

I declare that this thesis has been composed by myself, that the work is my own and that the work has not been submitted for any other degree or professional qualification.

Abstract

This thesis attempts to define Le Corbusier's understanding of the natural world. While this theme has frequently been discussed in the secondary literature, it has not yet been comprehensively addressed. Each chapter of the thesis approaches the topic from a different thematic angle, in an attempt to bring together the different aspects of Le Corbusier's conception of nature. The first deals with his sense of nature as both ordered and Order: a way of thinking which owes more to pre-modern than modern culture. The second, in tackling the connection which Le Corbusier made between nature and the well-being of urban dwellers, considers a more instrumental aspect of his thinking. The third shows that he saw the experience of nature primarily as belonging to the private domain, and investigates the consequences of this for his cities. The fourth links the idea of the architectural promenade with the natural world and shows that nature was figured as both static image and dynamic experience by Le Corbusier. The fifth takes as its starting point his conviction that 'primitive' peoples lived in closer contact with nature than those of the industrialised world, but argues that he was not therefore guilty of the reductive, idealising approach to non-western culture usually associated with primitivism. Le Corbusier's attitude to vernacular architecture, the dwellings of "natural" men, is explored in the sixth chapter, where the connection between the vernacular and the idea of the standard is considered. Throughout the intention is to position Le Corbusier as caught between an ancient sense of nature as cosmic order, full of symbolic potential, and a modern approach which sees nature as nothing more than an expanse of greenery or a view of trees.

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Prefatory notes

Le Corbusier went by his given name, Charles-Edouard Jeanneret, until 1920; to avoid confusion, I have referred to him by his pseudonym throughout.

I have followed published translations wherever they exist. All other translations are my own, with the original French given in footnotes.

All italics in quotations appear in the originals.

Introduction

“Above all”, wrote Le Corbusier in 1950, the future city “must keep in view the aim of *taking man back to nature*” and so “bring new light into the individual’s life”.¹ As the phrase “taking man back to nature” implies, he saw human and natural worlds as hopelessly and dangerously alienated from each other: the nineteenth century industrial city had caused a division between man and nature which only the twentieth-century city could now repair. Le Corbusier saw himself as uniquely positioned – called, even – to find a formula for modern urban living that restored harmony between human and natural domains, and over the course of his career the effort to do so would become one of his most deeply felt concerns.

“Restor[ing] the conditions of nature to the life of man”,² as Le Corbusier put it towards the end of his life, was a concern of the modern movement in architecture more generally. The early modernists Hermann Muthesius and Peter Behrens placed great emphasis on the importance of gardens in the new architecture: the Deutscher Werkbund-built town of Hellerau in which both were involved sought to provide ample green space to promote the physical and mental well-being of its inhabitants. For Behrens, a garden could facilitate the spiritual renewal that he and many others in the early twentieth-century avant-garde were seeking:

In my opinion, a garden is as essential a part of a dwelling as a bathroom, for only in the garden [...] can we find a spiritually purifying union with nature. Only if we have grown together with this fragment of nature, only if we have been influenced by it even if it has been given form by our desires, will we rediscover the relationship to organic being that leads to inner harmony.³

¹ Le Corbusier, *The Marseilles Block*, Geoffrey Sainsbury, trans., Harvill Press, London, 1953, p. 24. First published as *Unité d’habitation Marseille*, *Le Point* 38, November 1950.

² Le Corbusier, *Mise au point*, in *The Final Testament of Père Corbu: A Translation and Interpretation of Mise au point by Ivan Žaknić*, Yale University Press, New Haven and London, 1997, p. 96.

³ Peter Behrens, “The Modern Garden”, quoted in Barry Bergdoll, “The Nature of Mies’s Space”, in Terence Riley and Barry Bergdoll, eds., *Mies in Berlin*, ex. cat., Museum of Modern Art, New York, 2001, pp. 66-105, p. 76.

Barry Bergdoll has suggested that Mies van der Rohe, who, like Le Corbusier, worked with Behrens in the early 1910s, should be seen as the inheritor of this way of thinking about the relationship between architecture and nature. He cites the “complex layering of outdoor and indoor space”⁴ in Mies’s buildings and argues for a reappraisal of his work which takes his interest in gardens more fully into account. Certainly the attempt to break down the boundaries which had traditionally existed between interior and exterior space was a central concern of architectural Modernism, as one of its earliest historians, Sigfried Giedion, noted in 1941.⁵ Frank Lloyd Wright was one of the first of the “high” modernists to make this fusion of internal and external space a central part of his work: the strong horizontals of his early houses seem to extend into the landscape beyond them, and in *Falling Water* (1934) he achieved a radical interleaving of architecture and nature, conceiving the house as a series of cantilevers jutting out over rocks and water. For Wright as for Behrens, however, nature was more than merely a setting for a building: it was a moral force, spiritually cleansing and reviving. In *The Natural House* he extolled the virtues of building with large areas of glazing:

It is by way of glass that the sunlit space as a reality becomes the most useful servant of a higher order of the human spirit. It is first aid to the sense of cleanliness of form and idea when directly related to free living in air and sunlight. It is this that is coming in the new architecture. And with the integral character of extended vistas gained by marrying buildings with ground levels, or blending them with slopes and gardens; yes, it is in this sense of earth as a great human *good* that we will move forward in the building of our new homes and great public buildings.⁶

⁴ “The Nature of Mies’s Space”, p. 67.

⁵ Sigfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition*, Harvard University Press, Cambridge, Mass. and Oxford University Press, London, 1967, p. 521.

⁶ Frank Lloyd Wright, *The Natural House*, Pitman Publishing, London, 1971, p. 52. First published Horizon Press, New York, 1954.

Nature also played a role in Modernism as a justification for the supremacy of the machine in the new architecture. In 1923 Eric Mendelsohn looked to nature as the ultimate exemplar of a machine-like clarity and logic:

Now that we have discovered [the machine's] forces we apparently *dominate* nature. In reality we merely serve it with new means. / We have apparently freed ourselves from the law of gravity. / In truth we merely comprehend its logic with new senses. The precision of its revolutions, the harsh sounds of its course, impel us to fresh clarity, the metallic gleam of its material thrusts us into a fresh light.⁷

Hugo Häring, similarly, drew on nature to support his contention that the form of an object must proceed from its function:

In nature there is no independent problem of appearance; hence there is nothing in opposition to the forms dictated by fitness for purpose. This occurs only among mankind. The essential problem of applied art is clearly that of appearance.⁸

Nature, then, was understood within Modernism in various different ways: modernists saw in the natural world reflections of their own concerns or agendas, and used it to support their particular lines of argument. With the possible exception of Wright, however, Le Corbusier engaged more fully and more passionately with nature than any other figure of his time. His understanding of nature was highly individualised and uniquely complex; it is worth studying not just for the insights that it gives us into the most fundamental issues at stake in his work, but also for the light which it sheds onto the problematic status of nature in twentieth-century culture more generally.

Conceptions of nature have changed dramatically over time, and in order fully to understand how Le Corbusier saw nature we first need to recognise that he directed a significant proportion of his efforts towards recovering a pre-modern way of

⁷ Eric Mendelsohn, "Dynamics and Function" (1923), in Ulrich Conrads, ed., *Programmes and Manifestoes on Twentieth Century Architecture*, Michael Bullock, trans., Lund Humphries, London and MIT Press, Cambridge, Mass., 1970, pp. 72-73, p. 72.

⁸ Hugo Häring, "Formulations Towards a Reorientation in the Applied Arts" (1927), in *Programmes and Manifestoes*, pp. 103-05, p. 103.

thinking in which the human and the natural exist in a divinely ordered continuum. We have, therefore, to some extent to detach ourselves from the attitudes of our own time, which tend to see nature as separate from or external to human life, a discrete entity which can be provided or consumed as required. We often hear the term “nature” used interchangeably with “landscape” or “countryside” – as in “getting out into nature” or “love of nature” – betraying an instrumentalised view in which nature is viewed simply as trees, fields, rivers and weather conditions. Today, bringing “nature” into an architectural project usually means little more than making provision for a small area of landscaping. This way of thinking would have been quite alien to anyone living before the Enlightenment, at a time when nature was still seen in a holistic, highly symbolic manner as the embodiment and expression of the divine order. Nonetheless, Le Corbusier was inescapably a product of his time and culture: while he sought to transcend the modern, instrumentalised conception of nature, he could not entirely avoid falling into it, with the result that symbolic systems and built forms of great potential richness coexist in his work with bland expanses of urban green space. Le Corbusier therefore embodies in a uniquely fascinating and paradoxical way both the traditional, symbolic understanding of nature which he aimed to revive and the modern, atomised view from which he wished to liberate modern society.

Despite the central importance of nature in Le Corbusier’s work, a full and detailed study of the subject is still lacking. The persistent misapprehension outside Le Corbusier scholarship, and in some cases within it, that his work was fundamentally opposed to nature, remains in need of challenging. His was emphatically not the vision of bleak concrete landscapes and social disfunction of the public imagination. Stephen Bayley, for instance, writing in the *Independent on*

Sunday shortly after the riots that took place in various French cities in 2005, blamed Le Corbusier for the disturbances, arguing that the housing projects built under his influence were unnatural, inhuman and conducive to violent unrest.⁹ The majority of Le Corbusier scholars, however, recognise that the natural world was of fundamental significance to him, and much has now been written on the subject. Nonetheless, a tendency to think of “nature” as emerging in Le Corbusier’s work only in the early 1930s, with the rubble walls of certain houses of that period and his marriage to Yvonne Gallis, remains fairly common. The underlying assumption here seems to be that anything curvilinear, “organic”, or primitive can be catalogued under “nature”, with all things rectilinear, rational and whitewashed representing an entirely different strain in his work. A recent exhibition at the Victoria and Albert Museum, “Modernism: Designing a New World 1914-1939”, showed that this way of thinking extends towards the modern movement as a whole: “nature” had a room of its own, following in chronological succession from the avant-garde and the functional. Those commentators who see nature as a constant theme in Le Corbusier’s work from his earliest years to his death have, in my view, taken a richer and more productive approach, and I have attempted to build on the foundations which they have laid. Paul Turner and Harold Allen Brooks have made us aware of the crucial and enduring importance of nature in Le Corbusier’s upbringing and training in La Chaux-de-Fonds;¹⁰ Patricia Sekler, in tracing the influence of Ruskin on Le Corbusier from his childhood to his work on the Open Hand monument at Chandigarh, has pointed

⁹ Stephen Bayley, “France is burning – and architecture lit the match”, *Independent on Sunday*, 20 November 2005.

¹⁰ Paul Turner, *The Education of Le Corbusier*, Garland Publishing Inc., New York and London, 1977 and Harold Allen Brooks, *Le Corbusier’s Formative Years*, University of Chicago Press, Chicago and London, 1997.

towards both the continuity and complexity of his understanding of nature.¹¹ Caroline Constant takes a similar approach, using concepts of landscape design in the twentieth century to link the Villa Savoye with the Capitol complex in Chandigarh.¹² Tim Benton and Dorothée Imbert have written in revealing detail about the gardens in the villas of the 1920s,¹³ and Anthony Sutcliffe has usefully described Le Corbusier's view of nature as "optimistic", showing how this sense of the natural environment as "ordered and harmonious" fed into the city plans.¹⁴

While discussions of nature are therefore richly scattered throughout the secondary literature, the only study to date entirely dedicated to the subject comes from Flora Samuel, whose *Aalto and Le Corbusier: Nature and Space*, co-authored with Sarah Menin, appeared in 2003. This is a valuable contribution to the scholarship, touching on many aspects of the subject and giving a strong sense of its complex and multi-faceted nature. However, Samuel is prevented by the comparative structure of the book from exploring all aspects of Le Corbusier's work: his city plans, for instance, are omitted. She identifies his sense of nature as a "fundamental and unchanging order",¹⁵ but does not expand fully on this central tenet of his understanding of the natural world, although her conclusion that he conceived of nature as that which is "fixed" is apt and thought provoking.¹⁶ Samuel does not challenge the division described above of Le Corbusier's career into an early

¹¹ Mary Patricia May Sekler, "Ruskin, the Tree, and the Open Hand", in Russell Walden, ed., *The Open Hand*, MIT Press, Cambridge, Mass. and London, 1977, pp. 42-95.

¹² Caroline Constant, "From the Virgilian Dream to Chandigarh", in Stuart Wrede and William Howard Adams, eds., *Denatured Visions: Landscape and Culture in the Twentieth Century*, Museum of Modern Art, New York, 1991, pp. 66-72.

¹³ Tim Benton, *The Villas of Le Corbusier 1920-1930*, Yale University Press, New Haven and London, 1987 and Dorothée Imbert, *The Modernist Garden in France*, Yale University Press, New Haven and London, 1993.

¹⁴ Anthony Sutcliffe, "A Vision of Utopia: Optimistic Foundations of Le Corbusier's *Doctrine d'urbanisme*", in *The Open Hand*, pp. 216-43, p. 223.

¹⁵ Sarah Menin and Flora Samuel, *Aalto and Le Corbusier: Nature and Space*, Routledge, London and New York, 2003, p. 22.

¹⁶ *Aalto and Le Corbusier: Nature and Space*, p. 165.

“technological” phase and a later “natural” one, arguing that, “within [his] work [...] there was a counter-insurgence of nature-inspiration, if not actually a drive which could be identified as iconoclastic in the modern realm of his own making which became more clearly manifest from the mid-1930s”.¹⁷ Finally, Samuel does not give space in her account to any kind of historical context, whether of the ways in which conceptions of nature have changed over time or of the conditions of twentieth-century culture, both of which informed Le Corbusier’s understanding of the natural world at a fundamental level.

The various aspects of Le Corbusier’s conception of nature, together with a broader discussion of the changing meaning of nature over time and its problematic status in the modern period, have not, therefore, yet been synthesised in a single study. What follows represents an attempt to examine Le Corbusier’s understanding of nature from a number of different angles, to provide some historical contextualisation and to suggest some ways in which we may usefully reconsider earlier conclusions or ways of thinking. The dissertation is structured thematically rather than chronologically, in the hope that this approach can best reflect the tangled threads of continuity and contradiction that characterise this most complex of subjects.

¹⁷ *Aalto and Le Corbusier*, p. 159.

Chapter 1: Nature as ordered

Writing in 1911 of the view from the heights of Mount Athos, the young Le Corbusier imagines “with a shudder the frightening depths and terrifying blackness of the bottomless sea”,¹ then recounts his vision of the violent storm which once destroyed the fleet of Xerxes:

Every anchor desperately plunging for a bottom that is nowhere to be found, blown sideways by that fury and striking the rock; the splintering of wood, the dry jetty, the crushed men, the oblique descent of the Persian warriors to the glaucous depths, eyes closed, mouths open – their landing on sands never stirred, unexpected visitors to regions supposedly calm.²

By 1936, however, he was writing in very different terms to a group of young South African architects:

How are we to enrich our creative powers? Not by subscribing to architectural reviews, but by undertaking voyages of discovery into the inexhaustible domain of Nature! ‘Beauty first!’ is the true lesson of architecture. We find it in her adaptability, her precision, in the convincing reality of the spectacle of her harmonious combinations and creations which she offers us in everything: a serenity even in the perfect harmony of natural catastrophes, geologic cataclysms, etc...³

Le Corbusier has transformed himself from a young man terrified by the unpredictable and chaotic violence of the natural world into a mature architect finding evidence in such violence for the order and harmony underlying all creation. Nature may seem chaotic, he argues, but if we look beyond superficial appearances we will see that it is in fact governed by ‘natural laws’; that those laws do not always promote the convenience or comfort of man, moreover, does not refute their existence. Le

¹ Le Corbusier, *Journey to the East*, Ivan Žaknić, ed., trans. and annotated in collaboration with Nicole Pertuiset, MIT Press, Cambridge, Mass. and London, 1987, p. 186. First published as *Le Voyage d’Orient*, Jean Petit, ed., Forces Vives, Paris, 1966.

² *Journey to the East*, p. 188.

³ Letter published as a preface to Le Corbusier and Pierre Jeanneret, *Oeuvre Complète 1910-29*, Editions Dr H Girsberger, Zurich, 1937, p. 6. First published 1929.

Corbusier conceived of nature as a continuum in which all phenomena, human and non-human alike, are related to each other through their obedience to the same mathematical laws. The task of the architect, as he saw it, was to reflect the order inherent in nature; since nature is based on numerical systems, mathematics and geometry are essential tools in that endeavour. The reconciliation with nature of which Le Corbusier so often spoke was, therefore, as much a matter of understanding the natural order and working in harmony with it as of providing access to sun, air and greenery for the inhabitants of the twentieth-century city. This chapter will trace the development of Le Corbusier's conception of nature as ordered, from his training in La Chaux-de-Fonds through his Purist period in Paris to the publication of *The Modulor* in 1950. I will consider whether it is possible to rethink certain aspects of his urbanism, such as the Contemporary City and Chandigarh, as expressions of nature's order rather than as impositions of a man-made order, and conclude by discussing the implications of this aspect of his understanding of nature for his attempts to define a new, non-theistic sense of the sacred.

The historical context

As I suggested in the introduction, conceptions of nature have changed a great deal over time; in order to put Le Corbusier's understanding of the natural world in context, then, a brief historical outline will be given of the shift from a way of thinking about nature in the ancient world to that of the modern period. In Greece in the sixth century BC Pythagoras described the order of the universe as based on the musical harmonies of the Greek scale; for him, moreover, numbers were not merely arbitrary figures but had sacred meaning in and of themselves. "This discovery of the close interrelationship of sound, space and numbers", comments Rudolf Wittkower,

“had immense consequences, for it seemed to hold the key to the unexplored regions of universal harmony”.⁴ Plato, similarly, viewed the universe in terms of a single continuum of existence: in the *Timaeus* he tells us that “the god, wishing to make this world most nearly like that intelligible thing which is best and in every way complete, fashioned it as a single visible living creature, containing within itself all living things whose nature is of the same order”.⁵ In Plato’s cosmos, a system of ideal mathematical proportions relates everything existing to everything else. Later in the same work he assigns to each of the four elements – water, fire, earth and air – a perfect geometric solid which describes their composition: these primary forms represent “the lowest level at which the element of order and design contributed by the Demiurge can be discerned”.⁶ Wittkower asserts that “it was mainly owing to Plato’s never-forgotten cosmological theory that such figures as the equilateral triangle, the right-angled isosceles triangle, and the square were charged with a deep significance and played such an important part in the Western approach to proportion”.⁷ Medieval cathedrals had plans based on the geometric forms that, according to Plato, could be derived from his primary solids: in this way they sought to represent symbolically the harmony and perfection of the divine. The ancient world’s emphasis on a numerical cosmological order was fully revived during the Renaissance, in which there prevailed “a vision of architecture as an art that takes its meaning and value from a Platonist philosophy of the world as microcosm which reflects in its proportions the Divine order of the Creation”.⁸ Architecture can only

⁴ Rudolf Wittkower, “Le Corbusier’s Modulor”, in Carlo Palazzolo and Riccardo Vio, eds., *In the Footsteps of Le Corbusier*, Rizzoli, New York, 1991, pp. 11-19, p. 12.

⁵ Plato, *Timaeus*, Francis MacDonald Cornford, trans., in *Plato’s Cosmology*, Routledge, London, 2000, p. 40.

⁶ *Plato’s Cosmology*, p. 210.

⁷ “Le Corbusier’s Modulor”, p. 13.

⁸ Caroline van Eck, *Organicism in Nineteenth Century Architecture*, Architectura and Natura Press, Amsterdam, 1994, pp. 64-65.

have meaning if it speaks to us of the harmonious order of the divinely created universe; to do so, it must be mathematically proportioned. Perfect geometric forms such as the circle were favoured and for the first time centralised, bi-axially symmetrical plans were introduced in church building. Man, too, was both a product and an expression of the divine order, part of nature and able to stand for it; the proportions of the human body were therefore an ideal source of architectural form. Renaissance architects followed Vitruvius's assertion that architecture should imitate the human body by using a proportional system to relate all its parts to the whole; further, they believed that since an ideal human body could in different postures fit exactly into the perfect forms of a circle and a square – as Leonardo da Vinci famously illustrated – its proportions led directly back to the divine.

The development of garden design in sixteenth-century Italy relied more on symbolism than geometry – though the latter remained the dominating organisational principle – as David Dernie has shown in his study of the Villa d'Este at Tivoli, whose garden “symbolises the legendary journey of the Tiburtine Sibyl”:

The unity of intention is first stated powerfully as a visual drama at the Fountain of the Dragon and then completed as a journey in which the inventive imagination discovers successive pieces of a complex game, each unveiling an instructive message at the heart of the garden's artificial landscape, and together synthesising the emblematic references of the Christian journey through life itself.⁹

Baroque architecture, while moving away from the Renaissance conception of building as microcosm, continued in a highly symbolic vein to reflect a world in order. At Versailles, the source of this order shifts to the divinely appointed king. The layout of palace and park, united in one proportional network, is an expression of Louis XIV as the Sun King: from his bedroom at the centre of the palace axes radiate

⁹ David Dernie, *The Villa d'Este at Tivoli*, Academy Editions, London, 1996, p. 16.

out into the landscape like beams of light, symbolising the limitless power and boundless influence which he had been divinely sanctioned to hold. Although, as Christian Norberg-Schulz points out, the belief in a geometrically ordered cosmos with the earth at its centre had broken down by the Baroque period, nature continued to be perceived as having symbolic content.¹⁰ Only when man found his relationship with the natural environment fundamentally altered by the agricultural revolution, only when nature began to be seen as that which could be exploited for economic gain, did the separation familiar to us between human and natural realms begin to open up. Raymond Williams describes the emergence of the picturesque style of landscape gardening in England against this background, arguing that a need to represent nature as distinctly different from humankind, which generally involved an emphasis on its artlessness and, later, wildness, only arose once traditional links with nature had been lost. The increased cultivation of the land and the emphasis on yields per acre brought about by the Enclosure Acts of the eighteenth and nineteenth centuries, and the rage for creating gardens which claimed to represent nature in its ‘natural’ state are, for Williams, two sides of the same coin. “When men could produce their own nature”, he tells us,

both by the physical means of improvement (earth-moving with new machines; draining and irrigation; pumping water to elevated sites) and by the understanding of the physical laws of light and thence of artificial viewpoints and perspectives, there was bound to be a change from the limited and conventionally symbolic and iconographic decoration of the land under immediate view.¹¹

John Ruskin bemoaned the same condition in the first half of the nineteenth century, claiming that architecture only needed to represent nature when man’s relationship with the natural world had become impoverished:

¹⁰ Christian Norberg-Schulz, *Baroque Architecture*, Faber and Faber, London, 1986.

¹¹ Raymond Williams, *The Country and the City*, Oxford University Press, New York, 1973, pp. 122-23.

We cannot all have our gardens now, nor our pleasant fields to meditate in at eventide. Then the function of our architecture is, as far as may be, to replace these: to tell us about Nature, to possess us with memories of her quietness, to be solemn and full of tenderness, like her, rich in portraitures of her; full of delicate imagery of the flowers we can no more gather, and of the living creatures far away from us in their own solitude.¹²

From this basis Ruskin argued in favour of a Gothic revivalist style for architecture, which, in its flexibility and forms reflective of vegetal growth, recalled nature most strongly.

By the early twentieth century, then, conceptions of nature had become characterised by a strong tendency towards instrumentalisation and a complete decline of any symbolic understanding. Le Corbusier's view of nature as an all-unifying, ordered continuum of human and non-human existence must therefore be seen as an attempt to recover a long-lost tradition and to revive a very distant way of thinking.

The early years in La Chaux-de-Fonds

Harold Allen Brooks tells us that while Le Corbusier was in Germany working for Peter Behrens in 1910-11 he ceased to seek inspiration from medieval architecture and turned instead to ancient Greece and Rome. This, Brooks argues, involved an “agonising conversion to classicism that required overthrowing most of the values that he previously held dear”.¹³ From this point onwards, certainly, the young Le Corbusier concentrated much more on volume and space than on surface decoration: while his sketchbooks from his travels of 1907, for instance, are full of Ruskinian studies of sculptural detail, those from the “journey to the east” of 1911 focus on the play of architectural volumes in space. In his description of the Acropolis from the

¹² John Ruskin, *The Stones of Venice*, quoted in *Organicism in Nineteenth Century Architecture*, p. 194.

¹³ Harold Allen Brooks, *Le Corbusier's Formative Years*, University of Chicago Press, Chicago and London, 1997, p. 245.

later trip, moreover, Le Corbusier emphasises the visual impact of the white marble forms under the strong Mediterranean sun: the foundations for the famous formulation of *Towards a New Architecture* (1923) – “architecture is the masterly, correct and magnificent play of masses brought together in light”¹⁴ – have already been laid. Brooks is correct, then, when he tells us that classical rather than medieval architecture was the inspiration for Le Corbusier’s shift towards a more modern aesthetic which would find its full expression in the 1920s; nonetheless, his inference that Le Corbusier’s mature work therefore owed little to the principles inculcated in him during his pre-1910 training is misleading. His belief in nature as ordered, for instance, has its basis in the lessons of those years.

The most comprehensive account which Le Corbusier gives of his training in La Chaux-de-Fonds is found in the final chapter, entitled “Confession”, of *The Decorative Art of Today* (1925). In it he moves from the close observation of nature to the abstraction of its essential forms to the underlying order which defines those forms, beginning by recalling that,

Our childhood was illuminated by the miracles of nature. Our hours of study were spent hunched over a thousand flowers and insects. Trees, clouds and birds were the field of our research; we tried to understand their life-curve, and concluded that only nature was beautiful and that we could be no more than humble imitators of her forms and wonderful materials.¹⁵

Le Corbusier recounts how Charles L’Eplattenier, his teacher at La Chaux-de-Fonds and the mentor of his early years, encouraged him and his fellow pupils in this devoted study of nature:

¹⁴ Le Corbusier, *Towards a New Architecture*, Frederick Etchells, trans., Dover Publications Inc., New York, 1986, p. 29. First published as *Vers une Architecture*, Editions Crès, Paris, 1923.

¹⁵ Le Corbusier, *The Decorative Art of Today*, James I Dunnett, trans., The Architectural Press, London, 1987, pp. 132-33. First published as *L’Art décoratif d’aujourd’hui*, Editions Crès, Paris, 1925.

My master had said: ‘Only nature can give us inspiration, can be true, can provide a basis for the work of mankind. But don’t treat nature like the landscapists who only show us its appearance. Study its causes, forms and vital development, and synthesise them in the creation of *ornaments*.’ He had an exalted conception of ornament, which he saw as a kind of microcosm.¹⁶

The bible of the art school was Owen Jones’s *Grammar of Ornament*, which took precisely this approach of abstracting the essential in nature to create stylised forms for use in architectural ornamentation (fig. 1.1). Le Corbusier remembers the injunction the students were given to “go and explore in the calm of the library the great compendium by Owen Jones” and comments that,

This, without question, was a serious business. The pure ornaments which man had created entirely out of his head followed one another in sequence. Yes, but what we found there was overwhelmingly man as part of nature, and if nature was omnipresent, man was an integral part of it, with his faculties of crystallisation and geometrical formulation. From nature we moved on to man. From imitation to creation.¹⁷

Eugène Grasset, whose Art Nouveau furniture and graphic designs were based on forms abstracted from nature, was also an influential figure at La Chaux-de-Fonds: Le Corbusier describes him as “the geometrician and algebraist of flowers”.¹⁸ Ruskin, another formative influence on Le Corbusier through L’Eplattenier’s teaching, also saw nature as inherently ordered and harmonious. As Brooks comments, Ruskin “championed the study of nature, insisted that nature was based upon natural laws that must be pursued by the artist, and urged artists to draw analytically while endeavouring to isolate and synthesise these fundamental laws”.¹⁹ In his autobiography, *Praeterita*, Ruskin describes the moment of revelation in which the

¹⁶ *Decorative Art*, p. 194.

¹⁷ *Decorative Art*, p. 133.

¹⁸ *Decorative Art*, p. 132.

¹⁹ *Le Corbusier’s Formative Years*, p. 69.

order of nature became clear to him. During a drive near Fontainebleau his attention was caught by the branches of a tree visible through the carriage window:

Languidly, but not idly, I began to draw; and as I drew, the languor passed away: the beautiful lines insisted on being traced, – without weariness. More and more beautiful they became, as each rose out of the rest, and took its place in the air. With wonder increasing every instant, I saw that they ‘composed’ themselves, by finer laws than any known of men [...] The woods, which I had looked on as wilderness, fulfilled I then saw, in their beauty, the same laws which guided the clouds, divided the light, and balanced the wave.²⁰

In Le Corbusier’s own sketches made during his training, such as those of pine trees (fig. 1.2), we can see him drawing out the underlying geometry of his subjects and arranging them in a pattern in a way which shows the influence of Jones, Grasset and Ruskin very clearly, and in his first house, the Villa Fallet (1906; fig. 1.3), Le Corbusier used a geometric pattern evoking natural forms to decorate the façade. Ornament, geometry and nature are therefore all closely linked at this period. While Le Corbusier would later dismiss ornamentation as decadent, ugly and superfluous, the foundation for his belief that architecture must represent the order inherent in nature was laid during these early years. In *The Decorative Art of Today* he could therefore mount an attack on meaningless decoration while simultaneously honouring the principles that his schooling had given him.

As Judi Loach has suggested, Le Corbusier’s reading of Henri Provensal’s *The Art of Tomorrow* a few years after leaving art school would have reinforced the idea of nature that he had received there:

Provensal was preoccupied by ‘the Absolute’, which reveals itself in art, through divine laws, ‘eternal laws of unity, number and harmony’. The purpose of art is to raise man to a spiritual realm, and to do this it must use generalised, ‘universal’ forms. The ‘art of tomorrow’ will be characterised by its union with science, and thus the

²⁰ John Ruskin, *Praeterita*, quoted in *Organicism in Nineteenth Century Architecture*, p. 211.

union of reason with sensibility. Since beauty is defined as that which is ‘eternal and general’ the artist should turn to nature to discover ‘essential forms’.²¹

This search for essential, universalised forms, together with a belief in a set of metaphysical laws of order and harmony and a conviction that art had much to learn from science, would form the basis of Purism, as we will see.

The art school at La Chaux-de-Fonds, then, took as its guiding lights those of the most influential figures of the nineteenth century who saw nature as an inherently ordered entity, obeying a set of laws and characterised by an inner harmony. Writing in 1925 in *The Decorative Art of Today*, having abandoned regional styles and embraced the machine aesthetic, Le Corbusier still paid homage to these early mentors, who might at first seem to have very little to do with his modernist programme. He continued to publish his early drawings of trees and leaves, moreover, in later books. In *Une maison – un palais* (1928), for instance, he juxtaposed a photograph of the entrance façade of the Villa Stein-de Monzie (1926-27) with a sketch of a leaf (fig. 1.4), commenting, “in drawing this leaf from a tree (and from many trees at the time when I occupied myself religiously studying the marvels of nature), one realises what a clear arrangement is”.²² In *The Modulor* Le Corbusier placed an early sketch of a tree (fig. 1.5) alongside another reference to his years of training in La Chaux-de-Fonds:

From 1900 until 1907, he studied nature under an excellent master; he observed natural phenomena in a place far from the city, in the mountains of the High Jura. The call was for a renewal of the decorative elements by the direct study of plants, animals, the changing sky. Nature is order and law, unity and diversity without end,

²¹ Judi Loach, “Le Corbusier and the creative use of mathematics”, *British Journal for the History of Science* 31/109, June 1998, pp. 185-215, p. 190.

²² “A dessiner cette feuille d’arbre (et tant d’autres au temps où je m’occupais pieusement à étudier les merveilles de la nature), on prend conscience de ce qu’est une organisation claire.” Le Corbusier, *Une maison – un palais*, Fondation Le Corbusier, Paris, 1989, pp. 78-79. First published Editions Crès et Cie, Paris, 1928.

subtlety, harmony and strength: that is the lesson he learnt between the ages of fifteen and twenty.²³

Because Le Corbusier's work from the 1920s onwards has such a different appearance from that which he produced under the name of Charles-Edouard Jeanneret, it is tempting to conclude that he did indeed turn his back on all the influences of his formative years. The enduring impact of Le Corbusier's years in La Chaux-de-Fonds can, therefore, be easily underestimated, as it is to some extent in Brooks's account of his dramatic "conversion to classicism". As we have seen, however, one of the strongest convictions informing Le Corbusier's mature work – his belief in nature as "order and law" – has its roots in these early years.

The Purist period

The focus at La Chaux-de-Fonds on the order inherent in nature, according to Paul Turner, points towards "a Platonic conviction that one must penetrate beneath the superficial appearance of nature and discover the ideal, universal reality".²⁴ Le Corbusier carried this "Platonic conviction" into his creation, with Amedée Ozenfant, of the new artistic movement that they called Purism. Nevertheless, the conception of nature which Le Corbusier developed during the Purist period became more complicated than a straight forward belief in an order underlying nature: he could not entirely reconcile his love of the machine with his love of nature, though much of the rhetoric surrounding Purism is dedicated to trying to do so. The Purist period therefore throws up paradoxes which Le Corbusier would only much later in his career find a way to resolve.

²³ Le Corbusier, *The Modulor: A Harmonious Measure to the Human Scale Universally Applicable to Architecture and Mechanics*, Peter de Francia and Anna Bostock, trans., Faber and Faber, London, 1954, p. 25. First published as *Le Modulor*, Architecture d'aujourd'hui, Boulogne, 1950.

²⁴ Paul Turner, *The Education of Le Corbusier*, Garland Publishing Inc., New York and London, 1977, p. 6.

Le Corbusier and Ozenfant's statement in *After Cubism*, the first Purist manifesto, that "Purism does not believe that a return to nature means a return to copying nature",²⁵ takes us directly back to Charles L'Eplattenier's injunction to study nature's "causes, forms and vital development" rather than merely its "appearance". For Le Corbusier and Ozenfant, however, the new art, being based in nature, has much in common with science, not a science of "speculative abstraction"²⁶ or "hypothetical arrangements insufficiently grounded in nature",²⁷ but a science which is based on "knowledge of the natural order".²⁸ *After Cubism* exhorts us to think of art as a rational, quasi-scientific endeavour which takes on science's long-established aim of understanding the laws of nature. That those laws exist, and that they serve to create order and harmony in nature, Le Corbusier and Ozenfant are not in doubt, despite what appearances might suggest to the contrary:

Sensed or seen superficially, nature appears to be a magma of ever-changing, variable events [...] If observed carefully or sensed seriously, however, nature resembles not a fairyland without a plan but a machine. Laws allow us to maintain that nature acts like a machine. This very complicated machine produces a very complex fabric, but one woven to a geometric pattern. Physical and mathematical geometry define the laws of force that are effectively its organising axes.²⁹

Paul Turner comments aptly on this passage that, unlike the Italian Futurists, who celebrated cars and aeroplanes, the Purists do not have any specific piece of machinery in mind here: the weaving machine is purely metaphorical, representing the *ur-machine* that is nature.³⁰ Taking the machine metaphor a stage further, they go

²⁵ Charles-Edouard Jeanneret (Le Corbusier) and Amedée Ozenfant, *After Cubism*, John Goodman, trans., in Carol S Eliel, ed., *L'Esprit Nouveau: Purism in Paris 1918-25*, ex. cat., LACMA, Los Angeles and Harry N Abrams, New York, 2001, pp. 129-68, p. 166. First published as *Après le cubisme*, Edition des Commentaires, Paris, 1918.

²⁶ *After Cubism*, p. 136.

²⁷ *After Cubism*, p. 157.

²⁸ *After Cubism*, p. 153.

²⁹ *After Cubism*, p. 152.

³⁰ *The Education of Le Corbusier*, p. 154.

on to argue that nature's products, being generated by immutable laws, are constant and invariable:

This machine acts in accordance with laws so rigorous that, despite its infinite complexity, the most rigorous measurement cannot produce evidence of the slightest variation in its products: INVARIABILITY [...] A feeling for, a knowledge of the laws affords an idea of harmony in these things that is not far removed from that of beauty.³¹

Hence Le Corbusier and Ozenfant's choice of standardised objects, such as bottles, glasses, pipes and musical instruments – the “type objects” – as subject matter for Purist painting. Invariability in the works of man reflects invariability in the works of nature; the quasi-scientific aim of Purism, to uncover those constants which unite man and nature, can then be achieved:

What do pure art and pure science share? How can the spirit of one serve the other? Only their technical instruments differ, their goal is the same: the goal of pure science is the expression of natural laws through a search for *constants*. / Likewise, the goal of serious art is the search for the *Invariable*.³²

“Purism”, the more condensed, considered manifesto which appeared in *L'Esprit Nouveau* in 1921, further develops this theoretical position around the standardised object. Early on in the text Le Corbusier and Ozenfant reassert their belief in ordered nature: “one of the highest delights of the human mind is to perceive the order of nature and to measure its own participation in the scheme of things”.³³ They then move on to the universal impact of the primary geometrical forms in a passage which has strong Platonic overtones:

³¹ *After Cubism*, p. 152.

³² *After Cubism*, p. 151.

³³ Charles-Edouard Jeanneret (Le Corbusier) and Amedée Ozenfant, “Purism”, reprinted in Robert Herbert, ed., *Modern Artists on Art*, Prentice-Hall, Englewood Cliffs, New Jersey, 1964, pp. 58-73, p. 61.

What we have said for the cube and the sphere is true for all the other primary forms, for all the primary colours, for all the primary lines; it is just as true for the cube, the sphere, the cylinder, the cone and the pyramid as for the constituent elements of these bodies, the triangle, the square, the circle, as for straight, broken or curved lines, as for obtuse, right, or acute angles, etc. – all the primary elements which react unthinkingly, uniformly, in the same way, on all individuals.³⁴

Other articles in *L'Esprit Nouveau* make the same claim for artefacts from Africa and the South Pacific, showing the parity perceived by the avant-garde at this time between the modern search for essential form and that undertaken by primitive culture, as I will discuss in a later chapter. Standardised objects, to which Le Corbusier and Ozenfant turn next, are products of these essential forms and thus expressions of the natural order. Their development, the authors go on to argue, is the result of another kind of order: a version of Darwinian natural selection which they call “mechanical selection”. Through history, they claim, men have made objects according to “general laws”: “only the means of making them changed, the rules endured”.³⁵ The machine has therefore not overthrown the order of nature, but perpetuated it:

Modern mechanisation would appear to have created objects decidedly remote from what man had hitherto known and practised. It was believed that he had thus retreated from natural products and entered into an arbitrary order; our epoch decries the misdeeds of mechanisation. We must not be mistaken, this is a complete error: the machine has applied with a rigour greater than ever the physical laws of the world's structure [...] If blind nature, who produces eggs, were also to make bottles, they would certainly be like those made by the machine born of man's intelligence.³⁶

Machine-made objects are thus justified as obeying a constant or invariable law: for Ozenfant and Le Corbusier, they are as much a product of nature as eggs, and exhibit the same geometrical perfection of form. The choice of subject matter for a Purist painting, then, is far from arbitrary or conventional; rather, the bottles, glasses and

³⁴ “Purism”, p. 62.

³⁵ “Purism”, p. 63.

³⁶ “Purism”, p. 64.

other machine-made objects which appear on canvas after canvas, as ‘types’ or constants, represent the geometrically ordered and harmonious character of the universe. Those bottles and glasses cannot therefore be as radically fragmented or splintered as they are in a Cubist painting: they must retain a purity and a wholeness that allows their quality as “type objects” to come through. Christopher Green emphasises this aspect of Purist painting in his account of Ozenfant’s *Bottle, Pipe and Books* (fig. 1.6), exhibited in 1918:

Things have volume here and space is perspectival with only a little Cubist distortion; such was the case in all their exhibits [...] The structural order to be observed in everything, they believed, was reflective, as in a microcosm, of the order behind existence altogether. The order of their paintings was to be grasped, they hoped, as an order inherent not merely in the painting but in its subject as well; and their almost systematic adaptation of Cubist shifts of viewpoint was geared above all to lucidity in the representation of things.³⁷

Le Corbusier and Ozenfant tell us elsewhere, however, that man, through the machine, has the capacity to make objects more regularly shaped and geometrically exact than those produced by nature. The first hint of this contradiction comes in *After Cubism* with the suggestion that art has a crucial role to play in revealing what nature cannot reveal on its own:

Nature never presents itself in pure form, an infinite number of causes veils its clarity. Painters should make purity, a spiritual aspiration, real. Clear pictorial organisation is satisfying because it realises the sensation that nature seems to favour, and that we sense.³⁸

Le Corbusier goes further in *The Decorative Art of Today*:

The machine is all geometry. Geometry is our greatest creation and we are enthralled by it. / The machine brings before us shining disks, spheres, and cylinders of polished

³⁷ Christopher Green, *Cubism and Its Enemies: Modern Movements and Reaction in French Art, 1916-28*, Yale University Press, New Haven and London, 1987, pp. 10-11.

³⁸ *After Cubism*, p. 162.

steel, shaped with a theoretical precision and exactitude which can *never be seen in nature itself*.³⁹

Rather than merely reflecting the order in nature, the machine now completes that order by making forms more geometrically perfect than those found in nature. In *La Peinture Moderne* (1925), which was made up of articles by Le Corbusier and Ozenfant from *L'Esprit Nouveau*, two contradictory statements find themselves on the same page: “man also is part of nature” and “nature is an entity external to man”.⁴⁰ In the section entitled “Nature and Creation”, Le Corbusier and Ozenfant tell us that geometry is a man-made tool, and that if we see geometrical order in nature, it is because nature is imitating man, not the other way around:

Nature, when she seems beautiful, is only beautiful in relation to man, which is to say, to art; beautiful nature is only beautiful because she finds herself, fortuitously or by accident, imitating the geometrical disposition which respond to the geometrical animal which we are.⁴¹

To illustrate this point, they include two images, one, captioned “nature”, showing a tropical river, and the other, captioned “human creations, tools of perception and measurement”,⁴² showing a group of geometric solids (fig. 1.7).

Le Corbusier and Ozenfant’s understanding of nature during the years of their collaboration is, then, somewhat paradoxical. They want to accord nature all the power of organising and ordering which is more conventionally associated with a monotheistic idea of God; at the same time, they claim that power for man. Giving to nature with one hand and taking from it with the other, they are caught between

³⁹ *Decorative Art*, p. xxiv.

⁴⁰ “L’homme aussi fait parti de la nature”; “la nature est un fait extérieur à l’homme”. Amedée Ozenfant and Le Corbusier, *La Peinture Moderne*, Editions Crès et Cie, Paris, 1925, p. 40.

⁴¹ “La nature, quand elle paraît belle, n’est belle que par rapport à l’homme, c’est-à-dire à l’art; la nature belle n’est belle que parce qu’elle se trouve imiter fortuitement ou par hasard les dispositifs géométriques qui touchent l’animal géométrique que nous sommes.” *La Peinture Moderne*, p. 41.

⁴² “La nature”; “creations humaines, outils de perception et de mesure”. *La Peinture Moderne*, pp. 40-41.

ancient and modern understandings of nature, between an idea of nature as that whose all-encompassing order should be mirrored in the works of man and a belief in man's own creative and technological powers which leads him to see reflected in nature an ordered structure of his own making.⁴³ Here we see the dual nature of Purism emerging: it was characterised both by a search for the timeless and immutable and by a breathless enthusiasm for new technology. Inevitably, Purism could not recover a traditional understanding of nature and reintroduce it into the twentieth century intact, although Le Corbusier would continue to attempt to do so long after his collaboration with Ozenfant had come to an end.

Writing on nature as ordered: Le Corbusier's contemporaries

Despite the fraught nature of the endeavour, Le Corbusier and Ozenfant were by no means alone in the 1910s and 20s in preaching a mathematical order in nature. Building on ideas developed during the nineteenth century, such as those of Adolf Zeising, who believed that all phenomena owed their structure to the golden section, several books appeared during and after the First World War which used biological examples to prove that natural forms obeyed mathematical laws. It may be that the horrifying chaos unleashed on the battlefields of northern France prompted a search for an underlying order and clarity for which a world at peace would not have felt so great a need. Certainly it was these wartime horrors which caused André Lhote to coin the phrase "the call to order" ("le rappel à l'ordre") which characterised much of the art produced during and after the war: Picasso, for instance, abandoned his Cubist style and adopted a more naturalistic, classical approach. For artists to neglect clarity, rigour and order in their work would be to betray the troops on the battlefield, an

⁴³ Richard Padovan sees this conflict in terms of Wilhelm Worringer's distinction between abstraction and empathy (see his *Proportion: Science, Philosophy, Architecture*, E & FN Spon, London, 1999, chapters 1 and 2).

attitude reflected in Paul Dermée's rejection of Romanticism, which was far too closely associated with Germany to be indulged in any longer.⁴⁴ War damage, furthermore, necessitated huge rebuilding programmes in which the advantages of standardisation, as promoted by Le Corbusier since the mid 1910s, were becoming clear. There were, then, metaphysical, nationalistic and practical reasons for the rise of interest in order and proportion in nature and architecture during this period.

In 1914 Theodore Cook published *The Curves of Life*, a study of the spiral in nature and art. The appearance of spiral formations in so many diverse organic and inorganic phenomena, from shells and bones to plants, led Cook to conclude that the spiral form was itself evidence of "a community of process imposed by the operation of universal laws".⁴⁵ Hoping to apply the methods of the physical sciences to the biological ones, he suggested that,

Just as Newton began by postulating Perfect Motion, and thence explained the working of the solar system, so it may be possible to postulate Perfect Growth (by means of a logarithmic spiral) and thence arrive at some law ruling the forms of organic objects as gravitation is held to prevail in the physical world.⁴⁶

From natural phenomena Cook moves on in the second part of his book to man-made objects such as spiral staircases; there is a clear parallel here with Le Corbusier's assumption that the works of man and the works of nature all have the same starting-point in being governed by "the operation of universal laws" manifested in geometry. D'Arcy Wentworth Thompson, whose *On Growth and Form* appeared three years later in 1917, took up Cook's argument about the necessity for the biologist to adopt the methods of the physicist in order to understand the laws of nature. One cannot make sense of the natural world, he argued, except through the use of mathematics:

⁴⁴ Kenneth Silver, *Esprit de Corps: The Art of the Parisian Avant-garde and the First World War, 1914-25*, Thames and Hudson, London, 1989, p. 209.

⁴⁵ Theodore Cook, *The Curves of Life*, Constable, London, 1914, p. 4.

⁴⁶ *The Curves of Life*, p. 6.

As soon as we adventure on the paths of the physicist, we learn to *weigh* and to *measure*, to deal with time and space and mass and their related concepts, and to find more and more our knowledge expressed and our needs satisfied through the concept of *number*, as in the dreams and visions of Plato and Pythagoras; for modern chemistry would have gladdened the hearts of those great philosophic dreamers.⁴⁷

Following this method, Thompson demonstrates that natural forms, from the bones of the human skeleton to the fir cone, can be explained numerically. He does not apply the same principles to artistic production, but does refer to the construction of bridges, arguing that the laws of engineering follow the laws of nature:

[The engineer] begins by drawing in outline the structure which he desires to erect; he calculates the stresses and bending-moments necessitated by the dimensions and load on the structure; he draws a new diagram representing these forces, and he designs and builds his fabric on the lines of this statical [sic] diagram. He does, in short, precisely what we have seen nature doing in the case of the bone.⁴⁸

Again, the connection which Thompson makes here between the mathematical laws governing the works of man and the works of nature was also at the heart of Le Corbusier's thinking during the same period, as we saw above.

Jay Hambidge's *The Elements of Dynamic Symmetry*, originally published as a series of articles in *The Diagonal* in 1919-20, is, after an introductory section on plants, mainly concerned with ancient Greek art and architecture. His analysis starts from the assumption that art mirrors "the symmetry of natural form"⁴⁹ and, further, that the greatest art follows the particular kind of symmetry found in nature which he calls "dynamic symmetry" and defines as "the type of orderly arrangement of members of an organism such as we find in a shell or the adjustment of leaves on a

⁴⁷ D'Arcy Wentworth Thompson, *On Growth and Form*, Cambridge University Press, Cambridge, 1917, p. 2.

⁴⁸ *On Growth and Form*, p. 695.

⁴⁹ Jay Hambidge, *The Elements of Dynamic Symmetry*, Yale University Press, New Haven and London, 1948, p. xii.

plant”.⁵⁰ Greek art, for Hambidge, demonstrates this dynamic symmetry with supreme clarity and should, therefore, form the basis of a new art founded on a return to the ancient Greeks’ “clear understanding of law and order”.⁵¹ There is a strong echo here of the “call to order” which underlay Le Corbusier and Ozenfant’s Purist project. The Corbusian tone grows stronger in the concluding paragraph of Hambidge’s introduction:

The indications are that we stand on the threshold of a design awakening [...] When it is realised that symmetry provides the means of ordering and correlating our design ideas, to the end that intelligent expression may be given to our dreams, we shall no longer tolerate pilfering [from the past]. Instead of period furniture and antique junk we shall demand design expressive of ourselves and our time. The oriental rug, the style house, the conscious and the artificial craft products, all echoes of other times and other peoples and sure evidence of design poverty, must give place to a healthy and natural expression of the aspirations of our own age.⁵²

The combination here of a conception of nature as mathematically ordered, a belief that art should reflect that order, and a call for an art appropriate to the new post-war age brings us very close to Le Corbusier and Ozenfant’s position in *After Cubism* and, later, to Le Corbusier’s in *Towards a New Architecture* and *The Decorative Art of Today*.

Le Corbusier, as Judi Loach tells us, knew of Hambidge through Matila Ghyka.⁵³ Le Corbusier wrote a preface to the 1934 edition of Ghyka’s *Esthétique des proportions dans la nature et dans les arts* in which he endorsed his friend’s approach, stating that, “in researching the laws of proportion, there is the most honest

⁵⁰ *The Elements of Dynamic Symmetry*, p. xv.

⁵¹ *The Elements of Dynamic Symmetry*, p. xvii.

⁵² *The Elements of Dynamic Symmetry*, p. xvii.

⁵³ “Le Corbusier and the creative use of mathematics”, p. 201. Ghyka also makes reference to Thompson’s *On Growth and Form* in his *Esthétique des proportions dans la nature et dans les arts*, Gallimard, Paris, thirteenth edition (undated), pp. 177-78. Le Corbusier owned the work in its third (1927) and thirteenth editions.

and most loyal endeavour to which an artist can dedicate himself'.⁵⁴ Ghyka opens his work by recounting his discovery of Fra Luca Pacioli di Borgo's 1509 treatise *De divina proportione*, which traced the appearance of geometric figures in natural phenomena. The artists of the Renaissance, like the ancient Egyptians and Greeks before them, Ghyka argues, "believed that in living nature and in the art which proceeds from it this law of Number resonates into infinity";⁵⁵ Le Corbusier marked this passage in his copy of the thirteenth edition. After the relationships between different geometric shapes, Ghyka's main interest is in the appearance of dimensions generated by the golden ratio in natural forms, particularly shells. His plates of shells remind us of Le Corbusier's own shift away from "type objects" to "objects evoking a poetic reaction", which included natural objects such as bones, shells and stones as well as artefacts from primitive cultures, during the 1920s. He began to collect examples of such objects, and by the end of his life had amassed a huge number, which are now stored in his archives at the Fondation Le Corbusier. Rather than indicating a break with his Purist past, with its emphasis on machine-made objects, however, his collections of natural objects are consistent with his earlier beliefs. For Le Corbusier, a shell was as clear an example of mathematical order as a bottle: we remember his assertion in "Purism" that "if blind nature, who produces eggs, were also to make bottles, they would certainly be like those made by the machine born of man's intelligence". If he was influenced by Ghyka in his turn towards natural objects, however, the influence was by no means only one-way. Le Corbusier annotated Ghyka's statement in *Esthétique des proportions* that "the bond between architecture and mathematics in general, [and] the geometric spirit in particular, is

⁵⁴ "Il y a, dans la recherche des lois de la proportion, la plus honnête et la plus loyale manifestation à laquelle un artiste puisse se vouer." Le Corbusier, "Tracés régulateurs (à propos de la réédition de *L'Esthétique des proportions dans la nature et dans les arts* par Matila Ghyka)", FLC U3-5-191.

⁵⁵ "[Ils] croyait que dans la nature vivante et dans l'art qui en est une emanation, résonne indéfiniment cette loi du Nombre." *Esthétique des proportions*, p. 11.

completely broken”,⁵⁶ together with the footnotes which refer to his own *Towards a New Architecture*. Like Hambidge, Ghyka called for a revived artistic and architectural culture based on the mathematical and geometric rigour of the ancient Greeks and their inheritors in the Renaissance with which Le Corbusier was happy for his own work to be associated.

Ghyka was the only one of the writers I have discussed whose influence Le Corbusier acknowledged publicly, but it is clear that he was nonetheless working during the 1910s and 20s at a time of huge interest in the links between nature, mathematics and art and, moreover, of a confluence of opinion that nature, being mathematically ordered, should be the basis of art and architecture. Despite his efforts to persuade his readers that he was working, heroically and with great difficulty, essentially alone – his account of his work on “regulating lines” in *The Modulor* mentions no contemporary or near-contemporary influences apart from the architectural historian Auguste Choisy and Ghyka, for instance⁵⁷ – Le Corbusier’s own thinking on nature and mathematical order developed within, and drew from, this cultural background.

Urbanism and ordered nature

Le Corbusier returned to writing explicitly about his conception of nature as ordered in *The Modulor* (1950), as we will see; in the meantime, that conception continued to inform his work, much of which was concerned with urban planning. The city plans from the 1920s to the 1950s fall into two broad types: those which are based on grids, such as the Contemporary City for Three Million Inhabitants of 1922, the Radiant City of 1933 and, much later, Chandigarh, and those which use other

⁵⁶ “Le lien entre l’architecture et les mathématiques en general, l’esprit géométrique en particulier, est complètement rompu.” *Esthétique des proportions*, p. 422.

⁵⁷ *The Modulor*, pp. 26-29.

methods of organising urban space, such as the plans for Rio de Janeiro of 1929 and for Algiers of 1930. Opponents of Le Corbusier's urban grids have seen them as anti-natural and as impositions of the human will on the natural world. Diana Agrest, for instance, describes the Plan Voisin as "an abstract Cartesian grid with no past traced on virgin land"; she goes on to claim that Le Corbusier treated nature as nothing more than "an element in the machinery of circulation".⁵⁸ Catherine Ingraham, similarly, argues that, "orthogonality keeps culture hegemonically superior to nature and attempts to obliterate the trace of nature in culture".⁵⁹ Le Corbusier's conception of nature was, however, as we have seen, much more complicated than these interpretations suggest. While he does at times write of nature in a way which does indeed imply that he saw culture as "hegemonically superior" – a city is "a human operation directed against nature",⁶⁰ for instance – his work is also full of evidence to the contrary, that he saw nature as the supreme ordering force which man could not do better than to imitate. The strength of his belief in nature as mathematically ordered, however paradoxical, should, therefore, make us reconsider Agrest and Ingraham's position and rethink Le Corbusier's urban grids not as impositions of a man-made order on nature, but as reflections of an order inherent in nature.

The City of Tomorrow (1924), the first of many books which Le Corbusier would devote to city planning, calls for the great cities of Europe to throw off their reliance on nineteenth-century Romantic and revivalist thinking and embrace orthogonality. A rational person, Le Corbusier asserts, will see immediately the advantages of a city based on straight lines; anyone who does not is equated with a

⁵⁸ Diana Agrest, "The Return of the Repressed: Nature", in Diana Agrest, Patricia Conway and Leslie Kanes Weisman, eds., *The Sex of Architecture*, Harry N Abrams, New York, 1996, pp. 49-68, p. 58.

⁵⁹ Catherine Ingraham, *Architecture and the Burdens of Linearity*, Yale University Press, New Haven and London, 1998, pp. 68-69.

⁶⁰ Le Corbusier, *The City of Tomorrow*, Frederick Etchells, trans., The Architectural Press, London, 1971, p. 1. First published as *Urbanisme*, Editions Crès et Cie, Paris, 1924.

pack-donkey, moving around his urban environment thoughtlessly and aimlessly.

Orthogonality is human, noble and purposeful; irregularity and curvilinearity are merely animal. We should not, however, take the pack-donkey as automatically representing 'nature', since in the second chapter, "Order", Le Corbusier shows us that the human tendency towards orthogonality in fact has its basis in nature:

Man, created by the universe, is the sum of that universe, as far as he himself is concerned; he proceeds according to its laws and believes he can read them; he has formulated them and made of them a coherent scheme, a rational body of knowledge on which he can act, adapt and produce. This knowledge does not put him in opposition to the universe; it puts him in harmony with it; he is therefore right to behave as he does, he could not act otherwise. What would happen if he were to invent a perfectly rational system in contradiction to the laws of nature, and tried to put his theoretic conceptions into practice in the world around him? He would come to a full stop at the first step.⁶¹

Being a part of ordered nature, man cannot do otherwise than act in an ordered manner. This established, Le Corbusier then tackles the paradox of nature's apparent irregularity:

Nature presents itself to us as a chaos; the vault of the heavens, the shapes of lakes and seas, the outlines of hills. The actual scene which lies before our eyes, with its kaleidoscopic fragments and its vague distances, is a confusion. There is nothing there that resembles the objects with which we surround ourselves, and which we have created. Seen by us without reference to any other thing, the aspects of Nature seem purely accidental. / But the spirit which animates Nature is a spirit of order; we come to *know* it. We differentiate between what we see and what we learn or know. Human toil is regulated by what we know. We therefore reject appearance and attach ourselves to the substance.⁶²

No matter how chaotic nature may seem, Le Corbusier reassures us, if we penetrate beneath the surface we will find an underlying order which we can then use as a guide in our own creative activities. Nature's apparent disorder is therefore no justification for planning cities along curved or winding street lines.

⁶¹ *City of Tomorrow*, pp. 23-24.

⁶² *City of Tomorrow*, pp. 24-25.

To complete his argument in favour of orthogonal planning, Le Corbusier seeks to convince us that the right angle, the basic element of a grid plan, is rooted in natural law:

The laws of gravity seem to resolve for us the conflict of forces and to maintain the universe in equilibrium; as a result of this we have the vertical. The horizon gives us the horizontal, the line of the transcendental plane of immobility. The vertical in conjunction with the horizontal gives us two right angles. There is one vertical, one horizontal; they are two constants. The right angle is as it were the sum of the forces which keep the world in equilibrium. There is only one right angle; but there is an infinitude of other angles. The right angle, therefore, has superior rights over other angles; it is unique and it is constant. In order to work, man has need of constants. Without them he could not put one foot before the other. The right angle is, it may be said, the essential and sufficient instrument of action because it enables us to determine space with an absolute exactness. The right angle is lawful, it is part of our determinism, it is obligatory.⁶³

Without referring to city planning directly, Ozenfant makes the same point in *La*

Peinture Moderne:

The vertical and the horizontal are among the appreciable manifestations of the phenomena of nature, constant verifications of one of her most clearly apparent laws. The horizontal and the vertical make two right angles; among the infinitude of possible angles, the right angle is the type angle; the right angle is one of the symbols of perfection. In fact, man works on the basis of the right angle. / This explains and justifies the orthogonal spirit. It is the origin of all human activity and the necessary condition for his most transcendental artistic works.⁶⁴

For both Le Corbusier and Ozenfant, then, the special importance of the right angle emerges from their earlier emphasis on “type objects”: their use here of the phrase “type angle” seems deliberately chosen to underline this connection with the earlier manifestos of *After Cubism* and “Purism”. Later in his career, in a more mystical

⁶³ *City of Tomorrow*, pp. 26-27.

⁶⁴ “La verticale et l’horizontale sont parmi les manifestations sensibles des phénomènes de la nature, des verifications constantes d’une de ses lois les plus directement apparentes. L’horizontale et la verticale déterminent deux angles droits; parmi l’infinité des angles possibles, l’angle droit est l’angle type; l’angle droit est un des symboles de la perfection. En fait, l’homme travaille sur l’angle droit. / Ceci explique et justifie l’esprit orthogonal. Il est l’origine de l’activité humaine et il est la condition nécessaire à ses travaux les plus transcendants de l’art.” *La Peinture Moderne*, pp. 155-56.

mode, Le Corbusier would take the right angle as a symbol of the reconciliation between man and nature and the resulting potential for creativity; in the 1920s, however, the significance of the right angle rests in its status as a standard form reflective of the universal laws of nature.

The position taken up by Agrest and Ingraham, moreover, rests on a separation between human and natural worlds and an assumption that orthogonality is always aligned with culture and the curved or ‘organic’ with nature. As we have seen, Le Corbusier tried to recover a way of thinking that saw man and nature as part of a whole rather than as existing in separate domains; further, he saw orthogonality as inherent in rather than foreign to nature. Such commentators, in other words, base their judgement of Le Corbusier in precisely the post-Enlightenment view of nature that he was trying to counteract. A similar problem arises from debates about the difference between his orthogonal and non-orthogonal plans. Kenneth Frampton, for instance, in his discussion of the Rio plan, suggests that “[Le Corbusier] seems to have realised on this occasion that it would be inappropriate, if not impossible, to impose idealised urban grids on highly contoured, irregular sites.”⁶⁵ Hence, he argues, the curvilinear viaduct sweeping around the bay which is the primary element of the Rio plan (fig. 1.8). Mary McLeod, similarly, finds in the Plan Obus for Algiers (1.9) a “responsiveness to climate and geography”.⁶⁶ The implication from both Frampton and McLeod is that grid plans can never respond to their sites in the same way and must, therefore, always be an imposition on the land. The grid remains in the realm of the ideal; the non-orthogonal plan can, by its engagement with ‘nature’ (understood here in the modern sense of landscape or terrain), become real. The grid

⁶⁵ Kenneth Frampton, “The Other Le Corbusier: Primitive Form and the Linear City 1929-52”, in Victoria Wilson and Michael Raeburn, eds., *Le Corbusier, Architect of the Century*, ex. cat., Arts Council, London, 1987, pp. 29-34, p. 32.

⁶⁶ Mary McLeod, “Le Corbusier and Algiers”, *Oppositions* 19-20, winter/spring 1980, pp. 54-85, p. 59.

plan of Chandigarh, the new capital of the Punjab with which Le Corbusier was occupied during the 1950s, was, however, as much a response to site and landscape as the curvilinear plans for Rio and Algiers. Letters show that Le Corbusier was drawn to the project by the openness of the site, which he described to his mother as “a limitless plain unroll[ing] itself over the hills and the foothills of the Himalayas”:⁶⁷ the grid plan was for him a logical response to such a large, open, gently graded area. Chandigarh’s grid, moreover, works with rather than against natural features: it bends where necessary to accommodate the large river valley running through the site and works in counterpoint with sinuous ribbons of greenery running from north-east to south-west (fig. 1.10). For Le Corbusier, the grid plan could simultaneously assert the order of nature and adapt itself to topographical conditions. His city plans therefore resist the automatic equation of curvilinearity with natural-ness and site-specificity, and orthogonality with the ideal and anti-natural; to make such an equation is to fall into the very modern – and very non-Corbusian – view that the orthogonal and the natural are mutually exclusive.

The Modulor and the idea of the sacred

Just as there was a cluster of publications dealing with the idea of nature as mathematically ordered in the period of and following the First World War, so the publication in 1950 of *The Modulor*, Le Corbusier’s exposition of the proportional system which he had invented, also came at a time of a general revival of interest in the subject; again, this coincided with the end of a world war. Wittkower, looking back in 1961, suggested that, “we must admit that the time was right for the

⁶⁷ “Une plaine illimitée s’appuyant sur des collines et un fond d’Himalaya.” Le Corbusier to his mother, 12 March 1951, in Jean Jenger, ed., *Le Corbusier, Choix de Lettres*, Birkhäuser – Editions d’Architecture, Basel, Boston, Berlin, 2002, p. 342.

Modulor”;⁶⁸ the time was right not just for the Modulor, but also for a number of other hugely influential publications on the role of proportion in architecture, including Colin Rowe’s “The Mathematics of the Ideal Villa” in 1947 and Wittkower’s own *Architectural Principles in the Age of Humanism* in 1949. Peter Smithson commented in 1957, at a debate at RIBA on the motion “that systems of proportion make good design easier and bad design more difficult”, that,

Proportion was important to architects, as a matter of tooth and claw debate, in 1948 and 1949. Then one could have had a debate in which people’s actual beliefs were tested against other people’s strident disbeliefs, rather than this somewhat polite exchange of attitudes [...] If one went to look at the Palladian buildings in 1948, one could not step an inch without tripping over an architect, and what were they all there for? They were looking for something to believe in.⁶⁹

To revive proportion in architecture during this period, in other words, was more than merely an aesthetic exercise: it was an act of faith. This, along with the post-war need for mass housing programmes, was the basis of Le Corbusier’s *The Modulor*, which combined sections of quasi-spiritual rhetoric with the specific example of the Unité d’Habitation at Marseilles (1945-52), then under construction. As well as presenting mathematical proportion in architecture as a practical response to the post-war condition, *The Modulor* is also the culminating expression of Le Corbusier’s conception of the sacred. In it, furthermore, he found a way to reconcile the conflict between the supremacy of nature and the capabilities of man with which, as we saw, he was grappling during the Purist period.

Le Corbusier’s Modulor grew out of his earlier use of regulating lines as a means of relating the parts of a building to the whole and of applying a system of

⁶⁸ “Le Corbusier’s Modulor”, p. 11.

⁶⁹ Quoted in *Proportion*, p. 2.

harmonic proportions based on the golden section to the overall composition.

Padovan sums up his method as follows:

These 'regulating lines' were the diagonals of significant rectangular parts of facades [...] which, by their parallelism or perpendicular intersections, revealed the recurrence of one or a few shapes throughout the whole composition. The composition was thus determined by a geometry of similar rectangles, the preferred figure being that which has its sides in the golden section ratio.⁷⁰

In the opening section of *The Modulor* Le Corbusier recounts the process by which, following Choisy, he first identified the presence of regulating lines on the facades of certain historic buildings, such as Michelangelo's Capitol in Rome, and then applied them to his own work, from the Villa Schwob (1917) to the Villa La Roche (1923-24) and the Villa Stein-de Monzie. Taking this system as his starting-point, Le Corbusier originally conceived of the Modulor as a proportioning grid, but, at a critical moment in its development, abandoned this idea in favour of a "rule",⁷¹ or set of dimensions which, later, would be applied to a measuring tape (fig. 1.11).⁷² The Modulor also marked its departure from Le Corbusier's earlier thinking on architecture and mathematical proportion by its emphasis on the human body. As we have seen, man and nature were unified for Le Corbusier: the proportions of the body, being numerically related to each other and organised around a single axis of symmetry, could stand for ordered nature as a whole, a way of thinking close to the Renaissance conception of man as a microcosmic reflection of the divinely ordered universe. Le Corbusier therefore puts particular emphasis in *The Modulor* on the validity of the

⁷⁰ *Proportion*, pp. 317-18.

⁷¹ *Modulor*, p. 48.

⁷² In *The Modulor*, Le Corbusier credits Jerzy Soltan, who had only arrived in the studio in 1945 and so brought a fresh perspective to the project, with initiating this change: "After the first few days, [Soltan] had a strong reaction against the whole thing, saying, 'It seems to me that your invention is not based on a two-dimensional phenomenon but on a linear one. Your 'Grid' is merely a fragment of a linear system, a series of golden sections moving towards zero on the one side and towards infinity on the other.' 'All right,' I said, 'let us call it henceforth a rule of proportions.' [...] Soltan made me a splendid strip of strong glossy paper, going from zero up to 2.164 m., based on a man 1.75 m in height." (pp. 47-48.)

imperial system of measurements, which is based on the human body, alongside the metric. He further justifies the use of the imperial system by recalling its origins in primitive and ancient societies, whose builders used their own body parts to determine dimensions:

Primitive men at all times and in all places, as also the bearers of high civilisations, Egyptian, Chaldean, Greek, all these have built and, by that token, measured. What are the tools they used? They were eternal and enduring, precious because they were linked to the human person. The names of these tools were: elbow (cubit), finger (digit), thumb (inch), foot, pace, and so forth... Let us say it at once: they formed an integral part of the human body, and for that reason they were fit to serve as measures for the huts, the houses and the temples that had to be built. / More than that: they were infinitely rich and subtle because they formed part of the mathematics of the human body, gracious, elegant and firm, the source of that harmony which moves us: beauty.⁷³

The connection between Le Corbusier's sense of nature as ordered and his reverence for primitive culture will be discussed in a later chapter; here, the important point is the connection which he perceived between the proportions of a building, the proportions of the human body and the source of those proportions in nature. Le Corbusier saw the body, furthermore, as based on the golden section, a position which, he argues, is rooted in sound reasoning and historical precedent: "it has been proved, particularly during the Renaissance, that the human body follows the golden rule".⁷⁴ The Modulor therefore brought the golden section measurements which were the foundation of his earlier system of regulating lines and the dimensions of the body together. As Wittkower points out, the influence of Ghyka, from whom Le Corbusier learnt that the golden section is one of the fundamental principles by which nature is organised, once again makes itself felt.⁷⁵

⁷³ *Modulor*, pp. 18-19.

⁷⁴ *Modulor*, p. 56.

⁷⁵ "Le Corbusier's Modulor", p. 15. Wittkower also comments that Le Corbusier was wrong in thinking that the human body was proportioned according to the golden section: "in actual fact, Renaissance artists found in the human body only commensurate musical proportions" (p. 15).

If a building is proportioned according to the dimensions of the human body, moreover, we will automatically feel at home in it: it will be “to the human scale”,⁷⁶ rather than existing in an abstract numerical realm.⁷⁷ Le Corbusier warns in *The Modulor* against the dangers of getting lost in numbers for their own sake; this, he argues, leads to an architecture which cannot be appreciated from a human, embodied perspective:

Architecture is judged by the eyes that see, by the head that turns, and the legs that walk [...] The human eye is not the eye of a fly, placed within the heart of a polyhedron: it is situated upon the body of man, in twin position on either side of his nose, at an average height of 1.60 m. above ground. That is, in every sense, our tool for the appreciation of the architectural sensation.⁷⁸

Hence, again, Le Corbusier’s attachment to the imperial system: the metre is “nothing but a length of metal at the bottom of a well at the Pavillon du Breteuil near Paris”,⁷⁹ which “might well be found to be responsible for the dislocation and perversion of architecture”. He goes on,

‘Dislocation’ is quite a good word for it: it is dislocated in relation to its object, which is *to contain men*. The architecture of the ‘metre men’ seems to have gone a little astray: that of the ‘foot-and-inchers’ gives the appearance of having survived the last century, the century of clean sweeps, with some assurance and an attractive sense of continuity.⁸⁰

⁷⁶ *Modulor*, pp. 59-60.

⁷⁷ Le Corbusier’s insistence that the Modulor promotes architecture “to the human scale” comes out of his urban theory. In *The Radiant City*, for example, he calls for dwellings to be “standard, necessary, and sufficient (the human scale).” (*The Radiant City*, Pamela Knight, Eleanor Levieux and Derek Coltman, trans., Faber and Faber, London, 1964, p. 30. First published as *La Ville Radieuse*, Vincent, Fréal et Cie, Paris, 1933.) He states that perfect examples of such dwellings may be found on the Cyclades: “here in the bosom of human measure, here in Greece, on this soil redolent of decency, intimacy, of what is rational forever guided by the joy of living, we find *measurements on the human scale*.” (p. 52.) At the level of the whole city, “the miracle of trees and parks reaffirms the human scale.” (p. 221.)

⁷⁸ *Modulor*, pp. 72-73.

⁷⁹ *Modulor*, p. 57.

⁸⁰ *Modulor*, p. 20.

For the Modulor to be based simultaneously on the human body and on a fixed set of measurements, however, it had to take as its starting-point a set of ideal human proportions. The Modulor man is therefore a “type man”, equivalent to the earlier “type objects” and “type angle”: a standardised ideal which could in reality correspond to only a few actual, living people. Le Corbusier’s humane intentions of creating an architecture in which we can all feel at home thus conflicts with his long-standing preference for the fixed, the invariable and the universal.

The creation of the Modulor – and all of Le Corbusier’s previous work on the mathematically ordered character of nature – was part of this life-long search for the sacred. Le Corbusier did not experience what he called “the miracle of faith”,⁸¹ but in his search for the invariable and the universal he was, nonetheless, engaged in an inherently religious undertaking. As the Pythagorean and Platonic traditions show, belief in an ordered universe does not require adherence to the monotheistic conception of God; Le Corbusier’s idea of the sacred, similarly, was formed independently of all organised religion. To some extent, nature replaced God for Le Corbusier as the creative, all-unifying force behind the universe and source of all harmony. He therefore rejected any form of mysticism or spirituality which was not rooted in nature; his objections to the theories of the “fourth dimension”, which were widespread among his contemporaries in the 1910s and 20s, for instance, arose from his sense that such a thing was neither observable in nature nor representable in art:

The objection which is here aimed at the fourth dimension, if one wishes to reflect upon it, strikes only the gratuitous hypotheses of the theoreticians of cubism; this hypothesis is outside all plastic reality. Being immaterialisable in painting, it only adds to misunderstanding [...] [The Cubists] forgot that the fourth dimension of the mathematicians is an entirely speculative abstraction, a part of hypothetical geometry, a marvellous play of the intellect, with no material contact with the real world,

⁸¹ Le Corbusier, *New World of Space*, Reynal and Hitchcock, New York and Institute of Contemporary Arts, Boston, 1948, p. 8 and *The Modulor*, p. 32.

conceivable but not representable, since the human senses distinguish only three dimensions in space.⁸²

Le Corbusier's determination to distance himself from meaningless mysticism remains constant in *The Modulor*: in the introduction to the second edition he asserted that,

The door has not been opened in vain on this wonderfully human problem of harmony achieved through relationships of dimensions. This kind of idea had disappeared from the stock-in-trade of the professionals, or else it had become esoterical, shrouded in mysticism.⁸³

In Le Corbusier's writings of the Purist period, as I argued above, he seems at times caught between a belief in nature as all-powerful and a desire to assert the superior claims of man, who has all the tools of mathematics, geometry and, now, the machine at his disposal. This dichotomy at first seems to persist in *The Modulor*, which begins with a discussion of the birth of musical notation:

Sound is a continuous phenomenon, an uninterrupted transition from low to high [...] For thousands of years men used sound to sing, or play, or dance. That was the first music, transmitted by the voice, no more. / But one day – six centuries before Christ – someone first thought of making music permanently transmissible in another way than from mouth to ear: that is, to write it down. No method or tool was available for this. Sound had to be registered at certain determined points, its perfect continuity being destroyed in the process. It was necessary to represent sound by elements which could be grasped, breaking up a continuous whole in accordance with a certain convention and making from it a series of progressions. These progressions would then constitute the rungs of a scale – an artificial scale – of sound.⁸⁴

Music has been divorced from its natural state by the human decision to codify it.

Nonetheless, Le Corbusier sees this as a vital part of the creative process and aspires for his own *Modulor* to follow in the path blazed by musical notation:

⁸² *After Cubism*, p. 136.

⁸³ *Modulor*, p. 6.

⁸⁴ *Modulor*, p. 15.

Nothing that is built, constructed, divided into lengths, widths or volumes, has yet enjoyed the advantage of a measure equivalent to that possessed by music, a working tool in the service of musical thought [...] If a tool of linear or optical measures, similar to musical script, were placed within our reach, would it help in the process of construction? That is the question which I am going to discuss here.⁸⁵

Human ingenuity, it would seem, takes precedence over the works of nature. Le

Corbusier makes a distinction in *The Modulor* between “mathematics” and

“numbers”, however, which complicates his opening remarks in a critically important

way and which, I want to argue, is essential to understanding his conception of

relationship between man, nature and the sacred:

Mathematics is the majestic structure conceived by man to grant him comprehension of the universe. It holds both the absolute and the infinite, the understandable and the forever elusive. It has walls beyond which one may pace up and down without result; sometimes there is a door: one opens it – enters – one is in another realm, the realm of the gods, the room which holds the key to the great systems. These doors are the doors of the miracles. Having gone through one, man is no longer the operative force, but rather it is his contact with the universe. In front of him unfolds and spreads out the fabulous fabric of numbers without end. He is in the country of numbers. He may be a modest man and yet have entered just the same. Let him remain, entranced by so much dazzling, all-pervading light.⁸⁶

“Numbers”, then, exist in a quasi-divine realm; untouched by human systems of

notation, they are a sacred mystery. Mathematics exists on the other side of the door

which divides the human from the divine; not sacred itself, it has been made by men

as a tool which can give us access to the sacred, or, as Le Corbusier puts it, as the

“key” which opens the door to the “realm of the gods”. However chaotic or

disordered nature may seem, if we look at it with the tools we have made for

⁸⁵ *Modulor*, p. 16-17.

⁸⁶ *Modulor*, p. 71. Le Corbusier reprises the image of dazzling light later in *The Modulor*, combining it with a traditional symbol of the sacred, the garden: “[The Modulor] manifested the constant and ingenious wonder of a man who, in the face of the dazzling light of infinite order, has never been cramped by academic constrictions. Day after day, he reckoned that his art was governed by a rule. He recognised that rule and greeted it with joy and respect; and, having to transmit his ideas through the medium of the minds and hands of twenty assistants, he discovered with more and more certainty that, once through the door of miracles, good fortune had brought him into a veritable garden of numbers.” (*The Modulor*, p. 129.)

ourselves of mathematics and geometry, we will see that it is in fact governed by an underlying order; we can then “reject appearance and attach ourselves to the substance”. By the time of *The Modulor*, Le Corbusier had found a way to explain his belief in the inherent order of nature in a coherent and non-contradictory way: rather than presenting man and nature as existing in conflict, he now emphasises the harmony between them which can be brought about by mathematics:

It takes only twenty-six letters to write tens of thousands of words in fifty languages. The Universe, at our present state of knowledge, is composed of ninety-two elements. All arithmetic is written with ten figures, and music with seven notes. The year has four seasons, twelve months, and days composed of twenty-four hours. It is by means of hours, days, months and years that we draw up the programmes of our work. All this is the fruit of the marriage of the human and cosmic orders. Order is the very key of life.⁸⁷

Moreover, we need such systems of notation in order to achieve anything on earth: being human, we cannot carry out our work without humanly created systems. As Le Corbusier comments, “seconds fall unceasingly, a stream of time that flows and passes. You cannot regulate a system of behaviour by that”; on the contrary, “we have to provide the ins and outs of an acceptable life, because that is how we shall escape from hell on earth, omnipresent and virulent everywhere”.⁸⁸ The necessity for human endeavour, however, does not conflict with nature, whose numerical workings continue regardless, behind the “door of the miracles”.

Ideas of nature as sacred and nature as ordered are bound up together in *The Modulor* in one further sense. Le Corbusier acknowledges that if the Modulor is used merely as a tool and not as part of a wider creative process, it cannot produce great architecture:

⁸⁷ *Modulor*, p. 75.

⁸⁸ *Modulor*, p. 75.

Your eyes are your judges, the only ones you should know. Judge with your eyes, gentlemen. Let us repeat together, in simple good faith, that the ‘Modulor’ is a working tool, a precision instrument; a keyboard shall we say, a piano, a *tuned* piano. The piano has been tuned: it is up to you to play it well. The ‘Modulor’ does not confer talent, still less genius. It does not make the dull subtle: it only offers them the facility of a sure measure. But out of the unlimited choice of combinations of the ‘Modulor’, the *choice* is yours.⁸⁹

On its own the Modulor cannot give rise to the secular transcendence offered by the experience of “l’espace indicible” (translated variously as “ineffable space” or “inexpressible space”), a notion which Le Corbusier defined in *New World of Space* in a passage which he repeated in *The Modulor*. To explain the concept he goes back to Cubism and the fourth dimension, crediting the Cubists with huge inventiveness in the representation of space, but explaining that he himself has, by the mid-century, come to understand space in his own way. For him, a space can only be “indicible” if it is grounded in mathematics – “it is a victory of proportion in everything” – but nonetheless the architect must use his creative powers to make that space more than simply mathematical: “then a fathomless depth gapes open, all walls are broken down, every other presence is put to flight, and the miracle of *inexpressible space* is achieved”.⁹⁰ Le Corbusier concludes, “I have not known the miracle of faith, but I have often known the miracle of inexpressible space, the apotheosis of plastic emotion”:⁹¹ ultimately, he came closest to religious faith not only in his conception of nature as a quasi-theistic force ordering all human and non-human life, but also in his belief in the transcendent possibilities of space itself.

⁸⁹ *Modulor*, pp. 130-31.

⁹⁰ *Modulor*, p. 32.

⁹¹ *Modulor*, p. 32.

Chapter 2: Nature as provider of physical and spiritual well-being in the city

Le Corbusier, as well as understanding nature in the somewhat abstract sense of an autonomous, ordered entity governed by fundamental laws, saw it in more pragmatic terms as an essential element in the revolution which he aspired to bring about in urban living. This revolution needed to address itself to two problems: the physical health of urban dwellers on the one hand and their spiritual well-being on the other, both of which had, in his opinion, degenerated appallingly. The urgency with which Le Corbusier approached such issues must be understood in the context of the nineteenth-century industrial city, whose problems the cities of the early twentieth century had inherited; this chapter will therefore begin by outlining urban conditions in the nineteenth and early twentieth centuries and by examining those approaches to improving them which were well-established by the time that Le Corbusier was beginning to think about city planning. I will also show that his concern with the physical and mental health of city dwellers emerged out of well-established debates around the impact of the modern metropolis on its inhabitants. In his attempts to combat urban squalor, overcrowding and poor levels of hygiene, Le Corbusier drew heavily on the work of Camillo Sitte and the adherents of the Garden City movement: I will examine their concern over the effects of an alienation from nature brought about by city life and argue that the influence of these predecessors in urban reform on Le Corbusier has not yet been explored in sufficient depth.

For Le Corbusier, both physical and spiritual well-being were fundamentally connected to the role of nature in the city: he writes in *Concerning Town Planning* that “man has made mock of the conditions of nature, and the sport has cost him his life. The conditions of nature must be re-established in men’s lives for the health of

the body and the spirit”.¹ I will show how he attempted to do this by providing access to the “essential joys” of sunlight, air and greenery, and by encouraging participation in sport; Le Corbusier’s use of metaphor, moreover, reveals the extent to which this literal understanding of nature was bound up for him with a sense of its potential for spiritual renewal; it also points us back to his profound belief in nature as ordered and, as such, as the basis for all urban organisation.

Urban conditions in the nineteenth and early twentieth centuries

Le Corbusier’s conviction that open green space was an essential element of the future city has its roots in the nineteenth century. As Dana Arnold has recently argued, with the growth of London’s population in the early nineteenth century and, in particular, the movement of the landed elite into the city, came the reshaping of the urban environment along principles developed on the country estates which had been left behind. Pockets of air and greenery opened up in London in the form of garden squares, allowing the gentry a quasi-rural view from their new, more confined dwellings.² This principle was developed on a much larger scale in Regent’s Park (1812-30), which “imposed for the first time an open space, to which the public had some access, on the cityscape”.³ Moreover, this was the first time that the state, rather than the aristocracy, had taken a hand both in the laying out of the urban environment and the provision of amenities within it.⁴ By the mid-century, in the paternalistic and moralistic climate of the Victorian era, the idea that the state bore a responsibility for the well-being of its urban subjects was fully entrenched, and, with the growing

¹ Le Corbusier, *Concerning Town Planning*, Clive Entwistle, trans., The Architectural Press, London, 1947, p. 11. First published as *Propos d’Urbanisme*, Editions Bourelle et Cie, Paris, 1946.

² Dana Arnold, *Rural Urbanism: London Landscapes in the Early Nineteenth Century*, Manchester University Press, Manchester and New York, 2005, pp. 4-6.

³ *Rural Urbanism*, p. 53.

⁴ *Rural Urbanism*, p. 6.

industrialisation of the city, carving out green spaces to which all had access became a high priority. Steen Elier Rasmussen's account of Battersea Park in London, which opened in 1858, shows the extent to which public parks were intended not only to counteract the encroachment of industry but also to offer wholesome alternatives to the amusements of the pleasure gardens of Vauxhall and Ranelagh, generally in the form of sporting activities:

In another part of [Battersea Park] are the large lawns typical of an English landscape garden. They are always full of people. There are football fields, cricket pitches, bowling and putting greens, space for quoits and hockey. There are three gymnasias, one for adults and two for children. There is a running track with complete facilities for athletic practice.⁵

In Paris during the same period Baron Haussmann's reshaping of the city resulted in several new parks: for him, a programme of public works aimed at urban renewal naturally included the provision of public green space. Françoise Choay describes the parks which he had laid out as providing Paris with a "respiratory system"⁶ for the first time. His Bois de Boulogne and Bois de Vincennes provided the setting for a conscious retreat from the city and an escape into nature, while the Parc des Buttes Chaumont used the rubble from houses destroyed to make way for the new boulevards to create a fantasy landscape in one of the poorest parts of the city.

Despite the colossal scale of Haussmann's interventions, both in opening up green spaces and clearing large areas of slum housing, Paris in the first few decades of the twentieth century – that is, at the time of Le Corbusier's move there and the writing of the books which would make his name – was still in many parts a squalid, disease-ridden and unhygienic city. The main threat to public health was tuberculosis,

⁵ Steen Elier Rasmussen, *London: The Unique City*, MIT Press, Cambridge, Mass. and London, 1982, pp. 322-23.

⁶ Françoise Choay, *The Modern City: Planning in the Nineteenth Century*, Marguerite Hugo and George R Collins, trans., Studio Vista, London, 1969, p. 19.

which remained rife throughout Europe until after the Second World War. Despite Haussmann's destruction of many infected areas, "there remained [...] much to do"⁷ in the early twentieth century. This was the case far beyond France: many European countries and, indeed, the United States, were suffering the same high rates of disease, overcrowding and infant mortality. The determination to reverse such appalling trends and to restore life and health to the city resulted in the international hygienist movement, whose debates, competitions and publications dominated urban discourse in the first few decades of the twentieth century, intersecting with those around the Garden City. In Paris, by 1919 seventeen "îlots insalubres" had been identified, whose infestation by the tuberculosis bacillus made them fit only for destruction; these were in some cases fairly large areas, covering in total 257 hectares.⁸ The link between housing and disease was thus well established by this period; indeed, as Anthony Sutcliffe points out, "the effect of bad housing conditions on tuberculosis mortality" had been understood since the 1890s.⁹ By the early twentieth century, moreover, a consensus had been reached on the precise aspects of a poor domestic environment which caused tuberculosis to spread: the lack of sunlight, fresh air and green space characteristic of the "îlots insalubres". In 1906 Lucien Ferrand in his *Habitation à bon marché* described the conditions required for the tuberculosis bacillus to flourish:

[It] can subsist for years in a state of somnolence, provided that it is sheltered from sun and fresh air, that it has found refuge in a dark and humid corner, in the back of an alcove, or between the floorboards, in ground contaminated by a drain or privy, or in a heap of garbage deposited by the door of a dwelling.¹⁰

⁷ "Il restait [...] beaucoup à faire." Pierre Lavedan, *L'Histoire de l'Urbanisme à Paris*, Hachette, Paris, 1975, p. 497.

⁸ Norma Evenson, *Paris: A Century of Change, 1878-1978*, Yale University Press, New Haven and London, 1979, p. 213.

⁹ Anthony Sutcliffe, *The Autumn of Central Paris: The Defeat of Town Planning 1850-1970*, Edward Arnold, London, 1970, p. 197.

¹⁰ Quoted in *Paris: A Century of Change*, p. 210.

This description corresponds exactly to contemporary accounts of the Parisian slums, which were to change very little over the next couple of decades.¹¹ In 1913 the Commission d'Extension de Paris announced that “tuberculosis is the disease of darkness” which must be combated by “its natural enemy, the sun”.¹² It also emphasised the importance of open green space: “to demolish squalid quarters, to reconstruct there healthy dwellings, provide squares, planted spaces: this is a program that will seduce philanthropists, statesmen, and administrators concerned with public health”.¹³ In fact, as Christina Flötotto points out in her study of hygiene and architecture in interwar Germany, the formula of “light, air, sun and cleanliness” which was originally prescribed in the late nineteenth century by Robert Koch, discoverer of the tuberculosis bacillus, had become something of a stock phrase by the early twentieth.¹⁴ By the time that Le Corbusier was turning his mind to the problem of housing in the 1910s and, most famously, in the 1920s, then, the link between the urban built environment, and specifically its provision of sunlight, air and greenery, and public health was well established: nature, it was generally agreed, was an essential tool in the fight against disease and the campaign for healthier, more hygienic cities.

As Flötotto suggests, not only nature but also architecture itself was seen within the hygienist movement as a cure for tuberculosis. In France, adherents of the Garden City movement such as Georges Benoît-Lévy, Georges Risler and Augustin Rey, inspired by English forerunners such as Raymond Unwin, dedicated themselves to finding a form of urban habitation which would ensure healthy living through the

¹¹ *Paris: A Century of Change*, pp. 211-13.

¹² Quoted in *Paris: A Century of Change*, p. 211.

¹³ Quoted in *Paris: A Century of Change*, p. 211.

¹⁴ It “became a catchphrase encapsulating the basic conditions for the promotion of health, and which caught on in ordinary language usage up until the 30s stereotypically as a synonym for hygiene.” Christina Flötotto, *Neues Bauen and hygiene: a mutually profitable relationship investigated in relation to the medical doctor Friedrich Wolf*, unpublished Ph.D thesis, University of Edinburgh, 2003, p. 31.

introduction of sun, air and greenery to each dwelling. Le Corbusier was by no means unfamiliar with these efforts: we will see below that his Garden City-esque project for Saint-Nicolas-d'Alhiermont, near Dieppe (1917), brought him into contact with Benoît-Lévy, who publicised it through periodicals in France, England and America. In 1908 the United States had taken a similarly architecturally driven approach to the problem of tuberculosis, launching at the Sixth International Congress on Tuberculosis in Washington DC a competition for "the best exhibit of a furnished house, for a family or group of families of the working class, designed in the interests of the crusade against tuberculosis".¹⁵ As Patricia Sekler tells us, the American architect Milton Dana Morrill began in his entry to this competition to design a series of houses dedicated to hygiene and healthiness.¹⁶ His "Germ-Proof House" in Maryland (1908-10) was built from concrete, had a flat roof and smooth, whitewashed walls; only a veranda protruding from the front façade broke the box-like form of the house, and ornamentation was minimal: in other words, it was modernist both in its style and in its sense that architecture had the power to improve the lives of ordinary people. Le Corbusier would embrace both aesthetic and ideology; his formulation of Modernism in the 1920s was therefore prefigured to a great extent by developments within the hygienist movement during the previous two decades. He would take the transformative potential of architecture way beyond mere physical survival, however, aiming at no less than the complete over-haul of society's well-being in the broadest possible sense.

Le Corbusier's belief that a person's psychological or spiritual life as well as his or her bodily health was bound up with the quality of the urban environment also

¹⁵ Quoted in Patricia Sekler, "Le Corbusier, Jeanneret, Patented Ideas and the Urban Cell", in *La Ville et l'Urbanisme après Le Corbusier*, Editions d'En Haut SA, La Chaux-de-Fonds, 1993, pp. 122-38, p. 125.

¹⁶ "Le Corbusier, Jeanneret", pp. 125-26.

emerged within the context of a pre-existing debate in the late nineteenth and early twentieth century. As Anthony Vidler has shown, the idea that the modern metropolis worked particular psychological effects on its inhabitants became increasingly entrenched from the mid-nineteenth century onwards, so that “by the late 1880s the diagnoses of the American George Miller Beard, who had in 1880 identified neurasthenia as the principal mental disease of modern life, were commonplaces of urban criticism”.¹⁷ Vidler goes on,

The Great City was seen to shelter a nervous and feverish population, overexcited and enervated [...] Of special interest was the space of the new city, which was now subjected to scrutiny as a possible cause of an increasingly identified psychological alienation [...] of the metropolitan individual, and, further, as an instrument favouring the potentially dangerous behaviour of the crowd. Metropolis rapidly became the privileged territory of a host of diseases attributed directly to its spatial conditions, diseases that took their place within the general epistemology of Beard’s neurasthenia and [Jean-Martin] Charcot’s hysteria, but with a special relationship to their supposed physical causes. Among these, and the earliest, were Carl Otto Westphal’s and Henri Legrand du Saulle’s agoraphobia and Benjamin Ball’s claustrophobia, to be followed by a host of other assumedly phobic conditions.¹⁸

For commentators such as Georg Simmel, Siegfried Kracauer and Walter Benjamin, the new urban condition could give rise to various forms of estrangement: “the estrangement of the inhabitant of a city too rapidly changing and enlarging to comprehend in traditional terms; the estrangement of classes from each other, of individual from individual, of individual from self, of workers from work”.¹⁹ Others, however, focused on the alienation from nature in the industrial metropolis as a primary cause of mental illness. The highly influential late nineteenth-century Austrian psychiatrist Richard von Krafft-Ebing believed that the “nervous ailments” provoked by “the anxieties and unhygienic conditions of life in the big city” were

¹⁷ Anthony Vidler, *Warped Space: Art, Architecture, and Anxiety in Modern Culture*, MIT Press, Cambridge, Mass. and London, 2000, p. 25.

¹⁸ *Warped Space*, pp. 25-26.

¹⁹ *Warped Space*, p. 65.

caused specifically by the lack of fresh air there which, he felt, led “to a general sapping of nervous reserves, making people more vulnerable to nervous disease”.²⁰ His prescription, naturally enough, was to withdraw his patients from the city and encourage their recuperation in a sanatorium surrounded by sunlight, air and greenery. Josef Hoffmann, who, heavily influenced by Krafft-Ebing’s theories, built such a sanatorium at Purkersdorf, outside Vienna (1903-04), was also a “passionate opponent of the modern metropolis”.²¹ The critic Joseph August Lux picked up on this link between the natural environment and mental health, emphasising in his review of Purkersdorf the “light, air and sun and the beautiful green forest landscape, which stream through the windows into the building and into the [patients’] souls”.²² Krafft-Ebing’s recommended cures for nervous disorders – exposure to sun and air – were, as we saw above, also adopted as the most effective weapons against tuberculosis: mental and physical illness, both caused by poor urban living conditions, were therefore closely linked during this period, with the same antidotes being prescribed for both.

When Le Corbusier spoke of the necessity of responding to the needs of the urban dweller’s “physiological and psychological being”,²³ he did so, then, as the inheritor of a long-established way of thinking which connected the urban environment with the physical and mental lives of its inhabitants and which, in particular, saw a lack of access to sunlight, air and greenery as psychologically damaging. The phrase itself, moreover, shows that Le Corbusier saw the physical and mental well-being of city dwellers as inseparable: tackle one, it implies, and you will

²⁰ Leslie Topp, *Architecture and Truth in Fin-de-Siècle Vienna*, Cambridge University Press, Cambridge, 2004, p. 66.

²¹ *Architecture and Truth*, p. 68.

²² *Architecture and Truth*, pp. 74-75.

²³ Le Corbusier, *The Radiant City*, Pamela Knight, Eleanor Levieux and Derek Coltman, trans., Faber and Faber, London, 1967, p. 86. First published as *La Ville Radieuse*, Vincent, Fréal et Cie, Paris, 1933.

also be addressing the other. The same concerns characterised the work of Camillo Sitte and the Garden City movement, particularly in their vision of the role of nature in the city, and it is for this reason that I want to go on to argue that Le Corbusier's urban vision is more deeply rooted in these predecessors than is usually acknowledged.

The enduring influence of Camillo Sitte and the Garden City movement

The standard account to be found in histories of nineteenth and twentieth-century urbanism puts Le Corbusier (and modernist planning more generally) and Sitte and the Garden City movement into two completely separate camps. Françoise Choay, for instance, identifies two models for ways of thinking about the city: the “progressivist” and the “culturalist”. In the first category she places Robert Owen, Tony Garnier and Le Corbusier, for their emphasis on functionalism, rationalism and hygiene, and in the second she locates Ruskin, William Morris, Sitte and the adherents of the Garden City movement, for their concern with the spiritual qualities of urban life and evocation of nature.²⁴ As we have already begun to see, however, Le Corbusier was much more than a straight-forward rationalist and functionalist; moreover, his sense of the potential of the urban environment to create a richer spiritual life for its inhabitants was deeply bound up with his emphasis on bringing nature back into the city.²⁵ Furthermore, Le Corbusier's reading in the Bibliothèque Nationale in Paris in the early 1910s, which laid the foundations for his ideas of city

²⁴ *The Modern City*, p. 103 following.

²⁵ Indeed, it is debatable whether the modern movement as a whole privileged functionalism and rationalism to the extent that Choay claims. Iain Boyd Whyte, in his introduction to a collection of essays on the theme of the survival of spiritual or sacred content in modernism, notes “the confusion between timeless, immutable goals and an unstable, progressive process aiming at a distant resolution” in modern architecture. (Iain Boyd Whyte, ed., *Modernism and the Spirit of the City*, Routledge, London and New York, 2003, p. 3.) He quotes Colin Rowe's statement in *The Architecture of Good Intentions* that “It is only this eminently dramatic and ultimately Hebraic conception of history in terms of architectural sin and architectural redemption which provides any real accommodation for the emotional preconditions of modern architecture's existence.” (pp. 6-7.)

planning, spans Choay's two models: he looked into French city planning of the seventeenth and eighteenth centuries, such as Pierre Patte's *Monuments érigés en France à la Gloire de Louis XV* (1765), the more recent studies by Eugène Hénard and Tony Garnier, as well as the garden city planning of Barry Parker and Raymond Unwin; he was also reading Sitte's *Der Städtebau* in its French translation during this period. Edward Relph acknowledges that Le Corbusier and the adherents of the Garden City movement had common roots in their utopianism and reaction against the legacy of nineteenth-century industrialisation, but he does not see the Garden City as having had any particular influence on Le Corbusier: he claims, for instance, that the use of the term "garden cities" in the *Contemporary City for Three Million Inhabitants of 1922* "seems to owe nothing to [Ebenezer] Howard".²⁶ Given that Le Corbusier was certainly familiar with the Garden City movement, including Howard, both through his research in the Bibliothèque Nationale and his correspondence with the leader of the French Garden City Association, Georges Benoît-Lévy, it seems more likely that he *did* intend to make a reference here to the Garden City.

Peter Hall, like Choay, makes a clear division between Sitte and the Garden City tradition and Le Corbusier and the architects of the welfare state in Britain in his *Cities of Tomorrow*; he also leaves us in no doubt of his personal preference for the former.²⁷ For Hall, the Garden City style is defined by low-rise housing, high quality green space and well maintained estates;²⁸ however, as he acknowledges, Le Corbusier never intended to house people in towers, only to locate offices there.²⁹ Levels of maintenance, moreover, will differ from place to place, independent of the

²⁶ Edward Relph, *The Modern Urban Landscape*, Croom Helm, London and Sydney, 1987, p. 70.

²⁷ Peter Hall, *Cities of Tomorrow*, Blackwell Publishing, Oxford, 2000.

²⁸ These are the criteria according to which Hall defines the housing developments of Römerstadt, Siemensstadt, Onkel-Toms-Hütte and Berlin-Britz, all built in Germany during the 1920s and 30s, as inheritors of the Garden City tradition (*Cities of Tomorrow*, pp. 124-27).

²⁹ *Cities of Tomorrow*, p. 246.

style of housing: Le Corbusier's Unité d'Habitation in Marseilles, for instance, is very well maintained. Hall also makes much of Le Corbusier's authoritarianism while glossing over the more proscriptive aspects of the Garden City, failing to mention, for instance, that alcohol was originally banned in Letchworth in order to ensure the health and reliability of the workers who had been relocated there.

Harold Allen Brooks argues that both Sitte and the Garden City movement ceased to have any influence over Le Corbusier after 1915, portraying his development from that point until 1921, as we saw in Chapter 1, as a gradual rejection of anything traditional in form and an inexorable march towards the modern. Brooks divides the archival material from Le Corbusier's studies in the Bibliothèque Nationale into two time periods, arguing that the material which focuses on Sitte and the Garden City dates from 1910, while the later notes and sketches which refer to French Enlightenment planning and its successors were made in 1915.³⁰ While he acknowledges that the later material "follow[s] the same themes as did his research in 1910 – plans of cathedral squares at Strasbourg and Rouen, views of Mont-Saint-Michel and medieval Nuremberg, and repeated references to the works and writings of those involved in the Garden City movement in England", Brooks nevertheless infers from Le Corbusier's additional interest in French seventeenth and eighteenth-century planning that around 1915 he was beginning to reject Sitte and the Garden City and to undergo instead "a conversion to classical ideals of urban design".³¹ It does not necessarily follow from this argument, however, that Le Corbusier completely abandoned his earlier research after 1915; indeed, in the later cache of

³⁰ H. Allen Brooks, *Le Corbusier's Formative Years*, University of Chicago Press, Chicago and London, 1997, p. 404, n. 15. This division, however, is questioned by staff at the Fondation Le Corbusier, as I discovered during a visit there in May-June 2005. They suggest that all the material was amassed in 1909-10 while Le Corbusier was working for Auguste and Claude Perret, on the grounds that this was the only period during which he would have had sufficient time to carry out such extensive research. However, for the purposes of argument, I follow Brooks's proposition here.

³¹ *Le Corbusier's Formative Years*, p. 404.

material the books which he marks as “à acheter” relate to the Garden City.³² Later projects, moreover, can just as convincingly be read as extensions of the Garden City tradition as rejections of it. Some, in fact, such as the workers’ housing at Saint-Nicolas-d’Aliermont and Pessac (1925-28), are explicitly presented as falling within that tradition, as we will see below.

Other writers seem to me closer to the mark in identifying the importance of Sitte and the Garden City in Le Corbusier’s development. Paul Turner, for instance, argues that,

The fact that Jeanneret’s first serious encounter with city-planning was by way of the garden-city movement seems to have had a number of important effects on his urbanistic attitudes from then on. For example, the garden-city assumption that housing ought to be set in the middle of large park-like grounds was to be accepted by Le Corbusier as axiomatic throughout his career – from his 1922 *Ville Contemporaine* to his *Unités d’Habitation* of the 1950s – and had much to do with his lack of sympathy for the conventional European city of streets and street-façades.³³

Stanislaus von Moos, similarly, suggests that Le Corbusier “shares with the Garden City Movement a profound belief in the salutary effects of natural surroundings upon urban man”.³⁴ While these conclusions from Le Corbusier scholars have not been reflected in more general studies of urban history, a connection between Le Corbusier and the Garden City movement is therefore reasonably well established. However, in the case of both Sitte and the Garden City, little attention has been given to the precise aspects of their thinking which were important for Le Corbusier: in general, commentators have limited themselves to passing comments about a shared interest in green space rather than entering into any deeper analysis. In particular, Le Corbusier shares with Sitte and the Garden City movement a way of thinking about the role of

³² For instance, Georges Benoît-Lévy’s *Le cité jardin d’Amérique*, FLC B2-20-18.

³³ Paul Venable Turner, *The Education of Le Corbusier*, Garland Publishing Inc., New York and London, 1977, p. 128.

³⁴ Stanislaus von Moos, *Le Corbusier: Elements of a Synthesis*, MIT Press, Cambridge, Mass. and London, 1979, p. 191.

nature in the city as both practical tool and source of spiritual meaning which has not so far been examined in any detail.

Discussions of Sitte's influence have focused on the link between his emphasis on the changing urban vistas offered to the pedestrian and Le Corbusier's architectural promenade;³⁵ while there is certainly an important connection here, the dominance of this approach has meant that the crucial role which nature played in Sitte's conception of the city has been somewhat overlooked. While Vidler links Sitte's advocacy of a small-scale urban environment, with plenty of enclosed squares and closed vistas, with his awareness of the agoraphobic response which could be induced by the modern city, he does not mention that the lack of greenery there also contributed to Sitte's anxiety about the new urban condition.³⁶ In 1900 Sitte published an article entitled "Greenery in the City", which was summarised in the French edition of 1902 of his hugely influential *Der Städtebau*, a copy of which Le Corbusier owned. In it Sitte argued that lack of access to green space was damaging not only to the health but also to the psychological and spiritual life of city dwellers:

The melancholic city dweller suffers from a partly imaginary, partly real sickness of this sort, from a longing or nostalgia for unfettered nature. This ailment, which can be aggravated to the point of the loss of all desire to work, is not to be cured by the unconscious inhalation of so many cubic yards of oxygen or ozone, but only by the sight of greenery, by the presence of beloved Mother Nature. This the master-planner can and must take into account, and with this his task becomes feasible.³⁷

Le Corbusier also saw the city as the agent which must reconcile man with nature: in a passage in *The Radiant City* which contains striking echoes of Sitte, he speaks of "those symphonic images [of the new, green city] that enable the human spirit to draw

³⁵ See, for instance, Richard Etlin, *Frank Lloyd Wright and Le Corbusier: The Romantic Legacy*, Manchester University Press, Manchester, 1994.

³⁶ *Warped Space*, pp. 26-29.

³⁷ "Greenery in the City", in Camillo Sitte, *City Planning According to Artistic Principles*, George R Collins and Christiane Crasemann Collins, trans., Phaidon, London, 1965, p. 171.

strength from its active collaboration with the forces and beauties of nature – nature, our indisputable and immutable mother”.³⁸ Sitte’s next proposal, however, shows the essential difference between him and Le Corbusier:

The necessity of producing several square yards of leafy surface for each breathing lung would dissolve every city into endless suburbs. However, the mere suggestion, the mere sight of green foliage is in itself sufficient, even if it be only a single tree reaching over a garden wall.³⁹

While the tree which Le Corbusier made a part of the Pavilion de l’Esprit Nouveau (1925) or the terrace gardens of the Immeubles Villas (1922) perfectly illustrate this position, he far surpassed Sitte in the scale of his urban ambitions, envisaging a city of office and residential blocks set in acres of parkland.⁴⁰ Nonetheless, Sitte’s emphasis on the importance of a reconciliation with nature was, as his reference to a “longing or nostalgia for unfettered nature” suggests, part of his conception of a city’s potential for spiritual meaning, and here he prefigures Le Corbusier. In *Der Städtebau*, as George and Christiane Crasemann Collins point out, Sitte stood out against the functionalism of his day, such as that of Otto Wagner,⁴¹ to insist that cities must above all serve the deepest needs of their inhabitants:

The question was not one of mere sanitary drainage or traffic flow as others had insisted, but of how to shape the accretion that a city is so that it would be psychologically and physiologically adequate for the needs of successive generations of city dwellers – specifically, for their open-air assemblies and their promenading, for the satisfaction of individual contemplation, etc.⁴²

³⁸ *Radiant City*, p. 70.

³⁹ “Greenery in the City”, pp. 171-72.

⁴⁰ Sitte’s opposition to sprawling suburbia finds an echo in Le Corbusier’s later excoriation of the low-density city, however (see n. 72 below).

⁴¹ David Frisby sets the opposing positions of Sitte and Wagner within the context of the wider debate at the turn of the century between the adherents of “crooked streets” and picturesque urban layouts and the proponents of rational, orthogonal planning in his article “Straight or crooked streets? The contested rational spirit of the modern metropolis”, in *Modernism and the Spirit of the City*, pp. 57-84.

⁴² George R Collins and Christiane Crasemann Collins, *Camillo Sitte and the Birth of Modern City Planning*, Phaidon, London, 1965, p. 49.

In “Greenery in the City” he linked this “psychological adequacy” to nature, stating that, “for townspeople in their longing for nature every tree, every little patch of grass, every flowerpot is something sacred”.⁴³ Le Corbusier, similarly, wrote in *The Radiant City* that,

The basic pleasures, by which I mean sun, greenery and space, penetrate into the uttermost depths of our physiological and psychological being. They bring us back into harmony with the profound and natural purpose of life.⁴⁴

For Le Corbusier, as for Sitte, the idea of a spiritual dimension to urban life is inseparable from a close connection between people and nature.

A close reading of Sitte, then, shows that Le Corbusier by no means rejected the principles underlying his work when he turned his back on an urban aesthetic based on medieval and Baroque precedents. The same is true of the influence of the Garden City movement, which picked up and developed many of Sitte’s ideas in the early years of the twentieth century. Le Corbusier was exposed to the Garden City movement not only through reading about it, but also through direct experience of various built examples in Germany, of which he gave an account in 1912 in his *Study of the Movement in the Decorative Arts in Germany*:

We see in all the plans beauty, harmony, good taste and novelty [...] The streets will be like park avenues; they will shape themselves for the best use of the site. The stations will be charmingly convenient, the great leafy spaces jealously guarded. The houses will be by Muthesius, Bruno Paul, Behrens, or their many followers. So much so that, taking a walk in spring or summer in any one of these [garden] cities, the visitor from the great furnace of Berlin will be deeply struck; he will feel as if he were truly living in [an atmosphere of] health-giving calm.⁴⁵

⁴³ “Greenery in the City”, p. 167.

⁴⁴ *Radiant City*, p. 86.

⁴⁵ “C’est de beauté, d’harmonie, de bon gout, de nouveauté, qu’on parle dans tous les prospectus [...] Les rues seront comme des avenues de parcs; elles se courberont pour l’utilisation meilleure du terrain. Les gares seront d’une convenance coquette, les grands espaces feuillus gardés jalousement. Les maisons seront de Muthésius ou de Bruno Paul ou de Behrens ou de la foule de leurs satellites. Si bien que, se promenant un soir d’été ou de printemps dans l’une de quelque de ces cités, le visiteur qui vient de la grande fournaise berlinoise sera profondément frappé; il se sentira vivre vraiment dans un

As he goes on to explain, Le Corbusier became particularly familiar with the Garden City of Hellerau, near Dresden. Between November 1910 and May 1911 he was working in Berlin for Peter Behrens; during the same period his musician brother, Albert, was studying in Hellerau at the dance academy of Emile Jacques-Dalcroze, the founder of eurhythmics. Le Corbusier was therefore a regular visitor to Hellerau during these years and beyond, and saw how houses by Riemerschmid, Tessenow, Muthesius and Baillie Scott, each with its own back garden, were juxtaposed with green spaces planted with trees. Le Corbusier admired the egalitarian, quasi-Socialist basis on which Hellerau had been conceived, commenting that it was a “truly collectivist phenomenon”: “it shows the redirection of capital, up to now channelled towards selfish goals, returning to those who have produced it”.⁴⁶ Alongside a progressive approach to housing, Hellerau offered through the Institut Jacques-Dalcroze the possibility of health-giving exercise of the most modern kind. Barbara Miller Lane describes the Institute as consistent with the progressive ideas of the ‘life-reform’ movement which underlay the development of Hellerau as a whole:

[The inhabitants of Hellerau] and the young students of Jacques-Dalcroze practised ‘Swedish gymnastics’, studied the rhythmic movements that Jacques-Dalcroze believed would reform body and mind, enjoyed the ‘light bath’ within the institute building, and attended performances of experimental theatre”.⁴⁷

In a report for the La Chaux-de-Fonds newspaper *La Feuille d’avis* in July 1913, Le Corbusier professed himself particularly impressed by the effects that the eurhythmic exercises had on Jacques-Dalcroze’s students:

calme bienfaisant.” Charles-Edouard Jeanneret (Le Corbusier), *Etude sur le mouvement d’art décoratif en Allemagne*, Da Capo Press, New York, 1968, p. 48.

⁴⁶ “Hellerau est proprement une manifestation collectiviste. C’est le détournement du capital jusqu’ici canalisé vers un but égoïste, retournant à ceux qui le produisent.” *Etude sur le mouvement*, p. 50.

⁴⁷ Barbara Miller Lane, *National Romanticism and Modern Architecture in Germany and the Scandinavian Countries*, Cambridge University Press, Cambridge, 2000, p. 156.

I promise you that it's just like in the Latin Quarter: virile youthfulness. But it's more than in the Latin Quarter, since if the chins exude energy, the eyes, here, everywhere, are sparkling with joy. At Hellerau, however dull with tiredness they were, I couldn't help but see that they laugh and, in looking after their bodies and spirits, their hearts expand and enthusiasm bursts out of them.⁴⁸

Le Corbusier's admiration for the Institut Jacques-Dalcroze persisted into the 1920s: in 1924 he sent its founder a copy of *Towards a New Architecture*, together with a note which assured him, "you are one of those persons who, by your hard work, have greatly helped in the development of a new spirit".⁴⁹ Le Corbusier saw at Hellerau, then, a combination of progressive housing, abundant green space and provision for physical activity which was both physically and psychologically beneficial: all these would become essential elements of his own urban vision in the 1920s and 30s.

Sometime between 1912 and 1916, as Paul Turner dates it, Le Corbusier read Georges Benoît-Lévy's *La cité-jardin* in its 1911 edition,⁵⁰ which summed up what had been achieved in England by Ebenezer Howard and the architects Barry Parker and Raymond Unwin, and which pointed the way towards a specifically French approach. Turner emphasises the non-objective and quasi-spiritual aspects of Benoît-Lévy's book which, he tells us, were precisely those which most appealed to Le Corbusier. For Benoît-Lévy, city planning was the task of an artist in which he could express his "spirit" or "soul"; he quotes Henri Bergson's theory that the artist's soul "vibrat[es] in unison with the divine principles of nature",⁵¹ an idea which Le Corbusier would revive in *Towards a New Architecture*. There are also echoes here of Sitte's conviction that an urban design must go beyond the merely practical in

⁴⁸ "Et je vous promets que c'est comme au Quartier Latin: de la jeunesse virile. Mais c'est plus qu'au Quartier Latin, car si les mentons recèlent l'énergie, les yeux, ici, partout, écalent de joie. A Hellerau, quoique maussade de fatigue, j'ai dû voir qu'on rit et qu'en soignant son corps et son esprit, le coeur se dilate et l'enthousiasme jaillit." Charles-Edouard Jeanneret (Le Corbusier), "Hellerau", *La Feuille d'avis*, 4 July 1913, FLC X1-1-5.

⁴⁹ "Vous êtes une des personnalités qui par votre labeur avez aidé beaucoup au développement d'un véritable esprit nouveau." Le Corbusier to Emile Jacques-Dalcroze, 12 January 1924, FLC E1-18-2.

⁵⁰ The first edition of Benoît-Lévy's book had appeared in 1903.

⁵¹ *The Education of Le Corbusier*, p. 132.

order to satisfy the spiritual needs of its projected inhabitants. Turner concludes, “Benoît-Lévy’s view of city-planning as a full-fledged ‘art’ – which expresses its creator’s personality, his soul, and even the Bergsonian-Reality underlying nature – was precisely what was needed to interest Jeanneret seriously in urbanism”.⁵²

Without the introduction of this spiritual dimension, in other words, the young Le Corbusier would never have occupied himself with city planning at all; had it been presented to him merely as a technical or practical matter, Turner suggests, it would have held no interest for him.

It may be that Le Corbusier was already familiar with Raymond Unwin before his reading of Benoît-Lévy: he traced Unwin’s plan for Hampstead Garden Suburb (fig. 2.1) and made some copies of various groups of houses there from Hans Eduard von Berlepsch-Valendas’s article “Eine Studie über städtische Bau in England – Hampstead”, which he had found in the Bibliothèque Nationale in, according to Brooks, 1910.⁵³ Certainly by the time that he had read Benoît-Lévy, Le Corbusier was sufficiently intrigued by the examples given in it to go directly to source: an undated list of his reading in the Bibliothèque includes books by Parker and Unwin⁵⁴ and a page from his sketchbook (which Brooks would date from 1915) makes a note of Howard’s *Garden Cities of Tomorrow* as well as the British journal *The Town Planning Review*.⁵⁵ A couple of pages later in the same sketchbook he reaches further back to the origins of the Garden City movement in England, making a note to himself to ask at an unnamed bookshop for works by William Morris.⁵⁶ Le Corbusier, then, was looking very much to the English Garden City for inspiration during this

⁵² *The Education of Le Corbusier*, p. 135.

⁵³ *Le Corbusier’s Formative Years*, p. 204.

⁵⁴ FLC B2-20-1. It appears that Le Corbusier intended to read these books in their German translations, as he refers to Parker’s *Wohnhausarchitecten des Mittelalter* and Unwin’s *Städtebau*.

⁵⁵ FLC B2-20-63.

⁵⁶ FLC B2-20-67.

period, and as late as 1941 he continued to acknowledge the importance of this early influence, stating that, “the garden suburbs surrounded London with a measure of architectural revival”.⁵⁷ For him, the Garden City movement did not go nearly far enough towards realising an entirely new vision of urban life, but nonetheless he makes it clear here that he saw it and his own much more daring proposals as part of the same tradition of “architectural revival”. In an earlier book Le Corbusier called his project for workers’ housing at Pessac, near Bordeaux, a “garden-city”⁵⁸ and, to describe his much larger-scale plans, adapted the term into his own phrase, “vertical garden cities”.⁵⁹ He further acknowledged his debt to the movement, moreover, by including what he called “garden cities” beyond the green belt which surrounds the Contemporary City,⁶⁰ showing that Howard’s prototype had continuing relevance for him in the 1920s alongside a city of towers and medium-rise, modernist housing blocks.

Alongside these influences from England and Germany, the specific context of Le Corbusier’s birth and upbringing in the Suisse Romande town of La Chaux-de-Fonds, the capital of the canton of Neuchâtel in the region known as the Jura, also helps explain his early attraction to the Garden City movement. Howard, Unwin and the planners of Hellerau based their proposals for new urban forms on a political ideology inspired by Socialist ideals of wealth redistribution and social egalitarianism; Unwin’s mentor, for instance, was the Socialist Edward Carpenter. While there was a long-standing tendency towards co-operativism, collectivism and Socialism

⁵⁷ Le Corbusier, *The Four Routes*, Dorothy Todd, trans., Dennis Dobson, London, 1947, p. 128. First published as *Sur les quatre routes*, Gallimard, Paris, 1941.

⁵⁸ Le Corbusier, *Towards a New Architecture*, Frederick Etchells, trans., Dover Publications Inc., New York, 1986, p. 258. First published as *Vers une Architecture*, Editions Crès, Paris, 1923.

⁵⁹ *Radiant City*, p. 57.

⁶⁰ Le Corbusier, *The City of Tomorrow*, Frederick Etchells, trans., The Architectural Press, London, 1971, p. 167. First published as *Urbanisme*, Editions Crès, Paris, 1924.

throughout the Swiss Federation, this was particularly strong in Le Corbusier's home town, as Judi Loach has shown:

[...] La Chaux-de-Fonds, while not conforming to the Marxist model of an industrial town, seems to have been a seedbed of radicalism. Already in the 1870s the Swiss anarchist movement had had found its strongest support among the Protestant watchmakers of the Jura [...] In 1912 the Socialists won the election at La Chaux-de-Fonds. When, in 1917, Lenin left his exile in Switzerland for the Russian Revolution, he departed from La Chaux-de-Fonds, where he had gone to address workers; subsequently the local Socialist leader was imprisoned, engendering a popular uprising which was only quelled by military occupation of the town.⁶¹

This climate of radical left-wing activism and commitment to social equality and workers' rights must have given the Neuchâtel capital a particularly strong sense of political identity which the young Le Corbusier would have absorbed and internalised. The idea of the Garden City, with its Socialist basis, was therefore naturally suited to the Jura, and was rapidly and enthusiastically adopted there as elsewhere in the Suisse Romande and in Switzerland as a whole, on the back of the many co-operative housing societies which had been formed during the second half of the nineteenth century:

At the beginning of the twentieth century, the dominance of Swiss socialism [...] rested on a tradition essentially nationalist and reformist. The fifty-year old existence of co-operative organisations, as extensive in the city as in the country, centrally run, influenced the development of the first *co-operative housing societies*. The Basel Wohn-Genossenschaft was set up in 1900, and was followed in 1903 by the co-operative associations for workers' housing in Geneva and Lausanne, and then by similar societies in Saint-Gall, Coire, and so on.⁶²

⁶¹ Judi Loach, "Jeanneret Becoming Le Corbusier: Portrait of the Artist as a Young Swiss", *The Journal of Architecture* 5, spring 2000, pp. 99-107, p. 101.

⁶² "Au début du Xxe siècle, la tendance dominante du socialisme helvétique [...] repose sur une tradition essentiellement nationaliste et réformiste. Les habitudes cinquantennaires des organisations coopératives de consommation, répandus tant en ville qu'à la campagne, et centralisées dans leur administration, influencent le développement des premières *sociétés coopératives d'habitation*. La Basler Wohn-Genossenschaft se constitue en 1900, suivie en 1903, par les Associations coopératives de la maison ouvrière de Genève et de Lausanne, puis de sociétés similaires à Saint-Gall, Coire, etc." Jacques Gubler, *Nationalisme et Internationalisme dans l'architecture moderne de la Suisse*, L'Age d'Homme, Lausanne, 1975, p. 51.

The urban form of La Chaux-de-Fonds, as well as its politics, also paved the way for the introduction of Garden City settlement patterns. The town centre, where Le Corbusier was born and brought up, was organised on a grid plan, with four-storey apartment blocks lining the streets. Each block had a shared garden behind it; the home-working undertaken by many of those employed in the watch-making industry ensured that these gardens, as well as small-holdings further out, were well cultivated.⁶³ The urban fabric therefore interspersed high-density dwellings with a good amount of green space, embodying the ideal of a return to nature through combining the advantages of urban and rural forms so dear to the champions of the Garden City.

Initially, however, the Swiss branch of the movement followed its predecessors in England and Germany in emphasising the individual house. Even as late as 1918, the Swiss equivalent of the Deutscher Werkbund was seeking through a housing exhibition in Zurich “to promote the ‘little house’ as the best solution to the [post-war] housing crisis”.⁶⁴ As Jacques Gubler points out, and as is demonstrated by the example of La Chaux-de-Fonds, “in the context of the Swiss dwelling culture, this was to some extent a kind of innovation [...], the general tendency preferring high-density residential blocks.”⁶⁵ The Garden City movement, however, as we would expect from its Socialist underpinnings, posited this apparently retrogressive return to the individual dwelling as an alternative to the co-option of the housing market by uncontrolled, capitalist speculation:

⁶³ “Jeannert Becoming Le Corbusier”, p. 100.

⁶⁴ “[...] promouvoir la ‘Petite Maison’ (Kleinwohnhaus) comme la solution optimale de la crise du logement.” *Nationalisme et Internationalisme*, p. 73.

⁶⁵ “Dans le cadre de la ‘Wohnkultur’ helvétique, il s’agit en quelque sorte d’une innovation [...], la tendance générale valorisant au contraire l’immeuble à forte densité d’habitation.” *Nationalisme et Internationalisme*, p. 73.

The case for the little family house put up ‘freely’ and its little garden implies a critique of a politics of housing based on speculative building. The ‘caserne locatif’ of six to ten apartments, however uncomfortable it might be, helped to raise the value of the land, on account of its high returns in rent.⁶⁶

At first, Le Corbusier followed this model: the plan which he drew up in 1914 for a “Cité-jardin aux Crétets” at La Chaux-de-Fonds, for a local property developer called Arnold Beck, is composed of detached houses describing winding street lines; his plan drawn up three years later for workers’ housing at Saint-Nicolas-d’Aliermont arranged houses in pairs on a more rectilinear plan. As the 1910s drew to a close, however, Le Corbusier followed the general drift of Swiss (and, as we will see in Chapter 6, French) developments in moving towards higher densities, no longer convinced of their incompatibility with a progressive agenda. A competition launched in 1919 by the Genevan firm Piccard, Pictet et Cie for a garden city for its workers was won by Hans Schmidt, whose design was based on terraced houses, regularly laid out and liberally provided with green space. In the same year, Hannes Meyer’s garden city at Freidorf, perhaps the most famous built example of the movement in Switzerland, followed a similar pattern. Le Corbusier’s Monol houses, also from 1919, are grouped in series; his workers’ housing scheme for La Grande Couronne in La Seine-Maritime (1920) runs its dwelling units in terraces. From this point on, he would champion the model of high-density dwellings set within green space as the ideal human settlement;⁶⁷ his choice of such a model, however, is inseparable from the example which his hometown had given him both in its radical

⁶⁶ “Le plaidoyer pour la petite maison familiale s’élevant ‘librement’ (freistehend) et son petit jardin exprime implicitement la critique d’une politique de logement fondée sur la speculation immobilière. La ‘caserne locatif’ (Mietkaserne) de 6 à 10 appartements, si peu confortable soit-elle, contribue à hausser la valeur du sol à cause de son fort rendement locatif.” *Nationalisme et Internationalisme*, p. 74.

⁶⁷ It may be that Le Corbusier was in fact ahead of the Swiss Garden City movement in moving back to higher densities and that his plans for the Cité-Jardin aux Crétets and Saint-Nicolas-d’Aliermont were chosen to reflect the taste of his clients rather than his own: the Domino house, for instance, on which he started work in 1914, was designed for use individually or in series.

political sympathies and its dense urban form, and, more generally, from the development of the Garden City in the country of his birth.

The adherents and supporters of the Garden City in all the countries where the movement took root imagined a series of new towns based on the provision of a healthier living environment for everyone, particularly those currently living in slum housing, and a revival of spiritual well-being in urban life. Both principles, as for Sitte, depended on a close connection with nature. As the title of a 1901 lecture by Unwin to the Fabian Society, “Light, air and the housing question”, suggests, healthier living in towns and cities could only be achieved by harnessing the beneficial power of the elements: housing must be separated from industry, green space must be provided for air and exercise and hygienic facilities such as indoor bathrooms built in to every house. Alongside these practical measures, however, was a strong belief in the possibility of spiritual regeneration through a “simple life” lived close to nature. Responding to his mentor Edward Carpenter’s poem *Towards Democracy*, Unwin imagined the dawning of a spiritually revived world:

Content, in happy unity with its body, the soul of man, thus accepting equality of spiritual status, and enjoying free communion with its fellows, discovers a new relation to the universe, to nature, and to the Great Spirit which pervades it; a new faith, not of belief in this or that, but of trust.⁶⁸

For Unwin, as for Le Corbusier, this spiritual dimension was closely linked to the more down-to-earth questions of food, hygiene and housing. Spiritually and bodily, the inhabitants of his Garden City schemes would be cleansed and purified in “a better land altogether where life would be freer and happier, more natural, everything made pure and clean, clean food, clean lives, clean bodies, all open and above board”.⁶⁹

⁶⁸ Quoted in Mark Swenarton, *Artisans and Architects: The Ruskinian Tradition in Architectural Thought*, Macmillan, London and Basingstoke, 1989, p. 133.

⁶⁹ Quoted in *Artisans and Architects*, p. 134.

The language itself prefigures Le Corbusier's calls in his books of the 1920s for purity and cleanliness, both of body and spirit:

[The] home is made clean. There are no dirty, dark corners. *Everything is shown as it is*. Then comes *inner* cleanness, for the course adopted leads to refusal to allow anything at all which is not correct, authorised, intended, desired, thought-out: no action before thought. Once you have put Ripolin on your walls you will be *master of yourself*. And you will want to be precise, to be accurate, to think clearly.⁷⁰

The architectural forms advocated by Unwin, furthermore, are proto-modernist: in designing the houses for Hampstead Garden Suburb, he and Barry Parker broke away from the over-ornamentation typical of the period and proposed simplified dwellings in which everything had been reduced to essentials and which were orientated to give maximum access to light: "it is now pretty generally realised", Unwin wrote, "that no sacrifice is too great which is necessary to enable us to bring plenty of sunshine into all the main living rooms".⁷¹ Everyone, moreover, was to have a view of and access to green space, both in private gardens and in public areas: each house at Hampstead had its own back garden, as well as fronting onto a common green; the vast green space of Hampstead Heath was also accessible nearby. Provision was also made for sports facilities, in particular tennis courts, which in some cases doubled as the greens around which the houses were grouped. We saw the same principles applied at Hellerau: the importance of air, sunlight, open space and physical activity in urban design was therefore impressed on Le Corbusier both by his knowledge of the English Garden City, particularly the work of Parker and Unwin, and by his experience of the movement in Germany.

⁷⁰ Le Corbusier, *The Decorative Art of Today*, James I Dunnett, trans., The Architectural Press, London, 1987, p. 188. First published as *L'Art décoratif d'aujourd'hui*, Editions Crès, Paris, 1925.

⁷¹ Raymond Unwin, "The Art of Designing Small Houses and Cottages", in Raymond Unwin and Barry Parker, *The Art of Building a Home*, Longmans, Green and Co., London, New York and Bombay, 1901, pp. 109-33, p. 112.

In 1914, in his first attempt at urban design, Le Corbusier drew up plans for a garden city of his own: the “Cité-jardin aux Crétets” mentioned above (fig 2.2). With its curving streets following the slope of the site, pitched-roof houses, open green spaces and numerous trees, the plan shows the influence of Hellerau, Hampstead and the early Swiss Garden City developments very clearly. Additionally, as Patricia Sekler points out, “at the south-west end of the site, space was reserved on an existing knoll for an elevated grove of trees, rather like a symbolic shaded promontory to which one could retire to survey the panorama, or to meditate”:⁷² again, the potential for spiritual content in urban life and nature are linked. In 1917, as we saw, his work at Saint-Nicolas-d’Aliermont (figs. 2.3 and 2.4) brought Le Corbusier into direct contact with Georges Benoît-Lévy, who reviewed it favourably in the American journal *The Survey* and the British periodical *Town Planning* in 1918, highlighting its “rural aspect”⁷³ and village-like character. The scheme provides each house with a garden and the whole site with trees in the Garden City manner; there is also space for a small public square or playground. Le Corbusier emphasised the importance of this provision of green space in a letter to Benoît-Lévy: “[There is a] minimum of 800 square metres of ground per house, in which [to put] a kitchen garden, orchard, courtyard or flowers”.⁷⁴ The whole design bears a strong resemblance to the plans of individual streets and groups of houses at Hampstead Garden Suburb which Unwin published in *Town Planning in Practice*.

Between 1917 and 1922 Le Corbusier continued to work on small-scale projects for workers’ housing. These become increasingly modern in appearance, with flat roofs and unadorned façades, but even as late as 1920 Le Corbusier was

⁷² Patricia Sekler, “Ruskin, the Tree, and the Open Hand”, in Russell Walden, ed., *The Open Hand*, MIT Press, Cambridge, Mass. and London, 1977, pp. 42-95, p. 53.

⁷³ Georges Benoît-Lévy, “A French Garden-Hamlet”, *The Survey*, 2 February 1918, FLC X1-110.

⁷⁴ “Minimum de 800m² de terrain par maison, d’où potager, verger, cour, et fleurs.” Le Corbusier to Georges Benoît-Lévy, 16 August 1917, FLC G1-6-3.

including enclosing walls, a motif taken from Hampstead, and shutters at La Grande Couronne (fig. 2.5). By 1922, however, in the design of the Immeubles Villas, he appears at first glance to have left all vestiges of the Garden City tradition behind (fig. 2.6). The basic unit of the plan is the single-person apartment, an example of which Le Corbusier would build and exhibit as the Pavillon de l'Esprit Nouveau in 1925. Each apartment is separated from its neighbour by a terrace garden, making the overall composition a play of solid and void and giving all the inhabitants access to a private open space, planted with greenery and functioning as a "modern formula for a practical intake of fresh air":⁷⁵ the equivalent, perhaps, of the individual gardens of Unwin's Hampstead. The five-storey blocks into which a hundred such apartments are gathered – the Immeubles Villas – are constructed around a huge courtyard where, as Le Corbusier tells us, there is space for a tennis court. The houses at Hampstead, we recall, were grouped around courtyards, some of which contained tennis courts; the young Le Corbusier sketched just such an arrangement from Berlepsch-Valendas in the Bibliothèque Nationale (fig. 2.7). When he incorporated these blocks into the Contemporary City, he unfolded them and joined them together at right angles to enclose expanses of greenery (fig. 2.8), a prototype for mass housing which he would retain in all his urban plans. The Garden City idea of houses grouped around green space therefore remained constant in Le Corbusier's urban thinking throughout his career. Presenting the Contemporary City plan in *The City of Tomorrow*, Le Corbusier emphasised how green its urban landscape would be:

The whole city is a Park. The terraces stretch out over lawns and into groves. Low buildings of a horizontal kind lead the eye on to the foliage of the trees [...] Here is the CITY with its crowds living in peace and pure air, where noise is smothered under the foliage of green trees [...] Here, bathed in light, stands the modern city [...] There

⁷⁵ Le Corbusier, *Precisions on the Present State of Architecture and City Planning*, Edith Schreiber Aujame, trans., MIT Press, Cambridge and London, 1991, p. 97. First published as *Précisions sur un état présent de l'architecture et de l'urbanisme*, Editions Crès et Cie, Paris, 1930.

are gardens, games and sports grounds. And sky everywhere, as far as the eye can see. The square silhouettes of the terrace roofs stand clear against the sky, bordered with the verdure of the hanging gardens.⁷⁶

He concludes by asserting that the city will evoke “an overwhelming sensation”:⁷⁷ by creating an urban environment in which nature is paramount, Le Corbusier hopes to offer to its inhabitants the possibility of a kind of secular transcendence.

Writing in *The Radiant City* of the experience of flying over rural Argentina, Le Corbusier praises the standard dwelling type of the *cuadra*, or farmhouse, commenting that, “one senses that it is easy to move among them and that the little houses are a pleasure to live in as they nestle amid the surrounding greenery and gardens”; he also admires the “market gardening and neat orchards”.⁷⁸ The aerial view allows him to appreciate the close interweaving of the *cuadras* with their natural environment: they appear to have their own gardens as well as land set aside for larger-scale cultivation. Le Corbusier describes what he sees, in other words, as an Argentinian Garden City. He goes on to give an account of a village made up of such houses, and then a town which has “grown up in a bend of the river”: “it is an organism in the prime of life, in full bloom. Its lines of force and of direction are all clearly apparent. There is city planning for you!”⁷⁹ These settlements, as Le Corbusier sees it, have developed organically, and yet with a certain instinctive logic. When he reaches Buenos Aires, however, he bemoans the way in which humans have distorted nature’s purpose in neglecting to bring a clear and logical structure to the city:

The diagnosis is clear: through lack of forethought, a primary cellular structure [the *cuadra*] has been allowed to develop without the introduction, when the proper time

⁷⁶ *City of Tomorrow*, p. 177.

⁷⁷ *City of Tomorrow*, p. 178.

⁷⁸ *Radiant City*, p. 81.

⁷⁹ *Radiant City*, p. 81.

came, of the requisite organic structure. Where nature would have made immediate haste to give such mass a proper structure, to organise the requisite channels of supply, evacuation, and energy (viscera, lungs, bones, limbs), human heedlessness has allowed a primary organic form of life to exceed the dimensions proper to it. The mass has collapsed into decay and become a stagnant pond. Buenos Aires is nothing more than a mass of protoplasm!⁸⁰

What is appropriate at the level of the village or town cannot be appropriate for a great city: exporting the *cuadra* prototype into the capital has led to an urban disorder which runs counter to nature. This gives us an insight into Le Corbusier's attitude to the Garden City and, perhaps, the reason why he is so often seen as its strongest opponent: it is not the Garden City principle to which he objects, but the idea that it could provide a solution to the problem of the large-scale metropolis.⁸¹ For the scale at which Le Corbusier wanted to work – three million inhabitants in the case of the Contemporary City, one million for the Radiant City – much higher densities than those of the Garden City, or the traditional Argentinian *cuadra*, were required. He therefore directed his efforts into devising a modern, metropolitan version of the Garden City: the “vertical garden city” of high-rise office blocks and medium-rise residential blocks set within parkland. For Le Corbusier, as for Ebenezer Howard, there was no reason why a city could not be as ‘natural’ an environment as the countryside; if nature were brought back into the city, there would be no necessity for people to leave it either for trips to the countryside or homes in the suburbs. By placing high-density office and housing blocks amid acres of greenery, he combined the concentration essential to an urban environment with the open space and constant

⁸⁰ *Radiant City*, p. 82.

⁸¹ Le Corbusier objected above all to the commuting which the Garden City-type development necessitated (see *The Radiant City*, p. 38 and *The Marseilles Block*, Geoffrey Sainsbury, trans., Harvill Press, London, 1953, p. 32. First published as *Unité d'habitation Marseille*, *Le Point* 38, November 1950). However, as Peter Hall points out, this is typical of the garden suburbs, such as Hampstead, in which Ebenezer Howard's ideas most commonly found their built expression, but is not a true representation of his original vision, since he saw the Garden City as an independent entity, not a satellite of a larger urban agglomeration (*Cities of Tomorrow*, p. 88). In this respect Le Corbusier is closer to Howard than to the builders of the garden suburbs.

view of greenery associated with country living. The Corbusian dream of creating an urban environment which effected a much-needed reconciliation between man and nature, providing access for all to the “essential joys” of light, air and greenery, is therefore not a rejection of the Garden City tradition, but another, much more radical, chapter in its history.

Sport in the Corbusian city

While the expanses of greenery in which Le Corbusier placed the architecture of his ideal cities allowed light and air into the apartment blocks, they also had the function of providing space for sporting activities: the natural environment was to provide the location for the fulfilment of the inhabitants’ need for exercise. Writing in *Towards a New Architecture* of his “housing scheme for garden cities on the ‘honeycomb’ principle” of 1925, Le Corbusier commented that, “it ought to be possible to indulge in games and sports generally at any time on any day right at one’s door, not in ‘sports grounds’, which are really only suitable for professionals and people of leisure”.⁸² The typical occupant of a plan for a “university quarter”, also published in *Towards a New Architecture*, similarly, “wants to find opportunity for games with his fellow-students at a stone’s throw”.⁸³ The Immeubles Villas provide exactly this opportunity, with a “gymnasium and sports room” in each block and a “communal hall for sports and a 300 yards track”⁸⁴ on the roof. In the quasi-courtyards around which the residential blocks of the Radiant City are gathered, Le Corbusier sketched in sports grounds, fulfilling his own strident injunction in *Precisions* that “sport should be regular, daily, or at least semiweekly [sic]. If one does not wish to evade urgent realities, one must *lay out sports grounds at the foot of*

⁸² *Towards a New Architecture*, pp. 250-51.

⁸³ *Towards a New Architecture*, p. 260.

⁸⁴ *Towards a New Architecture*, p. 249.

*dwelling*s”.⁸⁵ He imagines the life of a family dedicated to following this programme of sporting activity: “a worker comes home, he puts on his gym suit, facing his home he finds his team or his instructor; his wife and children do as much”.⁸⁶ For Le Corbusier, to be able to exercise in the open air, surrounded by greenery, without having to go further than the foot of one’s own apartment block, was a basic right. He does not question whether the workers will actually *want* to participate in sport: exercising regularly is simply part of being a modern, healthy urban dweller. Moreover, Le Corbusier also saw sport, and in particular the exposure to greenery which it gave, as essential for psychological as well as physical health: “given the immense, indeed the limitless areas of space available, [sport] will revivify their lungs, improve their circulation, strengthen their muscles, and fill [the city dwellers] with joy and optimism”,⁸⁷ he proclaimed. Physical well-being sustains mental well-being: the mind is “kept in a continual state of activity and optimism by daily physical exercise”.⁸⁸

Le Corbusier’s interest in physical exercise was first aroused at Hellerau, as we saw above; in the 1920s he was encouraged to prioritise sport in his cities by his friend and colleague Dr Pierre Winter, who also saw sporting activity as essential for both mental health and physical well-being. The two men met in the mid 1920s and began playing weekly games of basketball together;⁸⁹ soon, Winter became a regular contributor to *L’Esprit Nouveau*. For him, it was natural that a review concerned with all aspects of an emerging “new spirit” should publish articles on sport, but he was not interested simply in reporting scores and analysing technique:

⁸⁵ *Precisions*, p. 101.

⁸⁶ *Precisions*, p. 103.

⁸⁷ *Radiant City*, p. 65.

⁸⁸ *Radiant City*, p. 67.

⁸⁹ Robert Fishman, *Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright and Le Corbusier*, Basic Books, New York, 1977, p. 224.

Factories, music halls, laboratories, exhibitions of painting or of cars, circuses and cinema – *L'Esprit Nouveau* wants to see everything. Here it is on the sporting grounds. It will leave the job of giving detailed reports to specialised magazines. It wants to imagine the physical renaissance of modern man in a wide sense.⁹⁰

For Winter, the triumphs of the machine age would inspire people to take part in sport; they would be awakened from their slumber by the swift movements of machines and be inspired to imitate them:

Machines, trembling with life, machines which reduce time and space, increase the speed of life and speed up its rhythm... and *at the same time* the *body awakes, the body vibrates*, it hears the call of multiplying forces, it wants to fight, to run, to jump, to make his joints supple, to perfect its gestures, to feel more acutely (for man feels with his whole body) the new life which these discoveries have created.⁹¹

The rhetoric of man-as-machine grows stronger when Winter turns his attention to the figure of the spectacularly gifted athlete:

Bonin, the famous runner [...] was truly the machine-man, the chronometer-man [...] This equilibrium, this rhythm, which only exists in the real champions, gives to their attractions a beauty which does not escape the observation of the crowds. [...] The law of order, the law of economy show themselves here as elsewhere.⁹²

The laws of nature manifest themselves in the action of the athlete's body, in a demonstration of a profound harmony, long lost, between man and nature. Sport can, moreover, show the way to a better way of life altogether: "such a discipline, with the

⁹⁰ "Usines, music-hall, laboratoires, expositions de peintures ou d'automobiles, cirques et cinema – *L'Esprit Nouveau* veut tout voir. Le voici sur le terrains de sport. Il laissera aux journaux speciaux le soin de compte rendus détaillés. Il veut envisager la renaissance physique de l'homme moderne dans un sens large." Pierre Winter, "Les Sports", *L'Esprit Nouveau* 14, whole issue unpaginated.

⁹¹ "Les machines, frémissantes de vie, machines à diminuer le temps et l'espace, augmentent la vitesse de la vie et accélèrent son rythme... et *synchroniquement* le *corps se reveille, le corps vibre*, il entend cet appel des forces multipliées, il veut s'ébattre, courir, sauter, assouplir ses rouages, perfectionner ses gestes, pour mieux sentir (car l'homme sent avec tout son corps) la vie nouvelle que ses découvertes ont créé." "Les Sports".

⁹² "Bonin, le fameux coureur [...] était bien l'homme machine, l'homme chronomètre [...] Cet équilibre, ce rythme, qui n'existe que chez les véritables champions, donnent à leur allure une beauté qui n'échappe pas à l'observation des foules sportives [...] La loi de l'ordre, la loi d'économie se vérifient ici comme ailleurs." "Les Sports".

essential joys which it gives, will extend itself beyond the sporting grounds into all types of human activity”.⁹³

Plans, the syndicalist journal which Le Corbusier helped to launch in January 1931, gave Winter a further opportunity to spread the gospel of sport. In the first issue he announced that, “it is thanks to sport [...] that we have re-made contact with the elements, the earthly and human eternal truths of our being”.⁹⁴ In a later article he expanded on this theme, bemoaning the degradation of man’s connection with nature which had been brought about by a false distinction between the work of the body and the work of the mind: “a duality has established itself between muscular work and cerebral work, and the harmonious laws of nature, which set the right balance between the forms of human activity, have been progressively lost from view”.⁹⁵ “To escape from this confusion”, he goes on, “we must seek and find real man, naked man who works and struggles to live under the raw light of the sun, man face to face with the elements”.⁹⁶ Le Corbusier would make this vision a reality on the roof of the Marseilles Unité, where he laid out a running track under the Mediterranean sun, within a landscape of hills and sea. Influenced by Winter, then, Le Corbusier made sport transcend its traditional definition as healthy physical activity to become a central element in a reconciliation between man and nature.

⁹³ “Une telle discipline et les joies absolues qu’elle donne s’étendront hors des terrains de sport, à tous les modes de l’activité humaine.” “Les Sports”.

⁹⁴ “C’est grace au sport [...] que nous avons repris contact avec les éléments, les vérités terrestres et humaines éternelles de nos êtres.” Pierre Winter, “La Médecine, Science de la santé”, *Plans* 1, January 1931, pp. 39-43, p. 41.

⁹⁵ “[...] une dualité s’est établie entre le travail musculaire et le travail cerebral et que furent progressivement perdues de vue les harmonieuses lois naturelles conditionnant les justes alternances des formes de l’activité humaine.” Pierre Winter, “Travail et Sport”, *Plans* 13, March 1932, pp. 20-27, p. 21.

⁹⁶ “Pour sortir de la confusion il nous faut rechercher et retrouver l’homme réel, l’homme nu qui travaille et lutte pour vivre sous la lumière crue du soleil, l’homme face aux éléments.” “Travail et Sport”, p. 22.

Health as a metaphor

As we have seen, Le Corbusier had been trying to bring his vision of a mentally and physically cleansing city into being since the 1920s. Christina Flötotto focuses on Le Corbusier's representation of the physical effects of a better living environment, quoting his remark in *Towards a New Architecture* that “we shall soon need far too many sanatoriums”⁹⁷ and stating that he shared with the architects of *Neues Bauen* the aim of preventing tuberculosis through creating domestic environments which protected their inhabitants from infection. The lack of ornamentation, large areas of glazing to let in the bacillus-killing sun and well aerated living spaces which are characteristic both of *Neues Bauen* and Le Corbusier's work of the 1920s are, she argues, direct products of an architectural ideology which valued health and hygiene above all else. There is a sound basis for this assumption: Le Corbusier includes hygiene in a list of things that should be provided by the “machine for living in”;⁹⁸ he also decries the existing urban condition of “streets in narrow trenches [...] enclosing unhealthy courtyards, airless and sunless wells”⁹⁹ and “narrow streets full of noise, petrol fumes and dust” lined with buildings whose windows “open wide on to this foul confusion”.¹⁰⁰ While Le Corbusier certainly believed that architecture had a role to play in disease reduction, however, and while his formulation of a new architectural style, with its emphasis on the provision of light, air and greenery, arose within the context outlined above of the continuing prevalence of tuberculosis in Paris in the early twentieth century, his focus is in fact less on the physical health of urban dwellers – he never refers directly to tuberculosis in *Towards a New Architecture*, for instance – than on their inner lives. This is revealed as much

⁹⁷ *Towards a New Architecture*, p. 14.

⁹⁸ *Towards a New Architecture*, p. 95.

⁹⁹ *Towards a New Architecture*, p. 61.

¹⁰⁰ *Towards a New Architecture*, p. 57.

by his use of language as by what he chooses to include: the numerous references to health and cleanliness in *Towards a New Architecture* are as often metaphorical as literal, with good health frequently associated with the purging of ornamentation from the domestic sphere and the creation of a new, pared-down architectural style. The conventional house, Le Corbusier argues, is an antiquated tool which must be discarded:

Architecture is one of the most urgent needs of man, for the house has always been the indispensable and first tool that he has forged for himself [...] The tool is the direct and immediate expression of progress; it gives man essential assistance and essential freedom also. We throw the out-of-date tool on the scrap heap: the carbine, the culverin, the growler and the old locomotive. This action is a manifestation of health, of moral health, of *morale* also; it is not right that we should produce bad things because of a bad tool; nor is it right that we should waste our energy, our health and our courage because of a bad tool; it must be thrown away and replaced.¹⁰¹

The engineer, who must show the way towards a better conception of the dwelling rather than the Beaux-Arts-educated architect, is “healthy and virile, active and useful”:¹⁰² as Le Corbusier’s use of the phrase “moral health” in the passage quoted above suggests, it is the inner life as well as the physical well-being of the engineer which is so superior to that of the conventional architect. Later on, Le Corbusier contrasts examples of the over-ornamentation which he so detests – “tail pieces and garlands, exquisite ovals where triangular doves preen themselves or one another, boudoirs embellished with ‘poufs’ in gold and black velvet” – not with those products of the machine age with which a modern man might furnish his home, but with “fresh air and pure daylight”:¹⁰³ nature is used here as a metaphor for the pared-down, modernist architectural style which Le Corbusier advocates, with the light and air which will flood the modern house coming to stand for the house itself. A few pages

¹⁰¹ *Towards a New Architecture*, p. 13.

¹⁰² *Towards a New Architecture*, p. 14.

¹⁰³ *Towards a New Architecture*, p. 91.

further on, Le Corbusier describes society as in a “diseased state”, not because of the ravages of tuberculosis, but because “we mix up art with a respectful attitude towards mere decoration”.¹⁰⁴ By contrast, he singles out Tony Garnier’s plans for housing in his *Cité Industrielle* as an example of the psychological benefits of simple, geometrical forms: “where order reigns, well-being begins”.¹⁰⁵ “Cleanliness”, Le Corbusier tells us, “shall ravish the spirit”:¹⁰⁶ it has a function, in other words, far beyond the prevention of disease. The linguistic entanglement in *Towards a New Architecture* between health, cleanliness and nature and a psychological revolution in the souls of urban dwellers, then, shows the extent to which, for Le Corbusier, practical and spiritual concerns were inseparable.

Le Corbusier’s use of health as a metaphor continued throughout his writings, most frequently in his equations of the city with the human body, as in his reference to “the requisite channels of supply, evacuation, and energy” as “viscera, lungs, bones, limbs” quoted above. “Towns are biological phenomena”, he declared in *Concerning Town Planning*, “they have hearts and organs indispensable to the accomplishment of their special functions”; they can, however, “lose their vital nature and degenerate into vast parasitic conurbations”:¹⁰⁷ the ordered entity that a city should represent can disintegrate into a mass of organic matter in which no organising principle can be perceived, as it had, according to Le Corbusier, in Buenos Aires. In *The City of Tomorrow* he calls the “open spaces” which he wants to create by building high-density housing blocks “the lungs of a city”:¹⁰⁸ the need of the human body to take in air for respiration is conflated with the function of urban green space, as if the city itself, rather than its inhabitants, were breathing. The plans of the Radiant City

¹⁰⁴ *Towards a New Architecture*, p. 95.

¹⁰⁵ *Towards a New Architecture*, p. 54.

¹⁰⁶ *Towards a New Architecture*, p. 40.

¹⁰⁷ *Concerning Town Planning*, p. 48.

¹⁰⁸ *City of Tomorrow*, p. 163.

and, later, Chandigarh, are themselves anthropomorphic, with the industrial centre in the former and the Capitol in the latter representing the head and the residential quarters the trunk. Individual apartment blocks, moreover, are anthropomorphised by the giant disembodied eyes which Le Corbusier drew on them in images which recur from book to book, as if the blocks themselves have taken over their occupants' capacity for gazing out at the surrounding landscape (fig. 3.12).

Le Corbusier often represented the city as a diseased body in need of radical surgery. The Parisian suburbs are “diseased flesh” in *Concerning Town Planning*; the institutions of the re-planned city centre, by contrast, constitute a “vital ganglion of organs” which “will be inserted in the flesh of the town”.¹⁰⁹ Le Corbusier proposes a similar medical intervention in *The Home of Man* (1942):

And should it happen, in Paris for example, that the bed of certain vital routes has been allowed to become encrusted by the narrow walls of history, a surgical operation will trace a new bed parallel to the first, capable of handling modern speeds, with no damage to our inheritance from the past.¹¹⁰

In *The City of Tomorrow* Le Corbusier pays homage to the originator of this way of thinking about the city: Baron Haussmann. He includes a map showing “Haussmann’s main surgical operations” – the new roads which the Préfet drove through the centre of Paris – and comments,

Haussmann cut immense gaps right through Paris, and carried out the most startling operations. It seemed as if Paris would never endure his surgical experiments. / And yet today does it not *exist* merely as a consequence of his daring and courage?¹¹¹

¹⁰⁹ *Concerning Town Planning*, p. 51.

¹¹⁰ Le Corbusier and François de Pierrefeu, *The Home of Man*, Clive Entwistle and Gordon Holt, trans., The Architectural Press, London, 1948, p. 69. First published as *La Maison des Hommes*, Librairie Plon, Paris, 1941.

¹¹¹ *City of Tomorrow*, pp. 153-54.

All the more reason, therefore, for those in authority to give Le Corbusier permission to put his own daring and courageous plans for the city into action, to allow him to take his place as the natural successor to the original urban surgeon, Haussmann. In a later chapter he declares that “Paris is sick, deadly sick”¹¹² and aligns himself with those who propose curing it with “surgery” and “the knife” rather than with “physic”: “in truth, the physicians are timid and the surgery is of a soothing kind!”¹¹³

From the idea of the city as a “biological phenomenon”, it was a natural step for Le Corbusier to think of it as having a cellular structure. Once again, debates around hygiene and housing in the early twentieth century preceded him, as Patricia Sekler shows:

The [...] obvious source for Le Corbusier’s thinking about the dwelling in terms of the ‘cell’ was the wealth of literature in which that term was actually used: the literature that had been generated by the many national and international congresses and associations concerned with demography, hygiene, workers’ housing, and the garden city movement, literature which dealt with issues relevant to the creation of more salubrious living conditions and to major health issues of the period, such as alcoholism and tuberculosis.¹¹⁴

The metaphorical link between dwelling units and biological cells was therefore well-established when Le Corbusier adopted it in his own writings; he took it much further, however, applying it not just to individual dwellings but to the city as a whole: just as a healthy human body is made up of healthy cells, so the healthy city must be composed of healthy housing units, massed together into “unités d’habitation” and distributed throughout areas of greenery. And, moreover, just as all cells in nature which serve the same function are exactly alike, so those housing units must be standardised. In *The City of Tomorrow* Le Corbusier imagined “cellular” residential blocks as sponge-like organisms, with voids for taking in air – the identical hanging

¹¹² *City of Tomorrow*, p. 251.

¹¹³ *City of Tomorrow*, p. 252.

¹¹⁴ Sekler, “Le Corbusier, Jeanneret”, p. 124.

gardens or “alvéoles” – dispersed geometrically among the solid material of the equally identical enclosed living spaces: the biological metaphors run alongside a rhetoric of standardisation. Later on, he captioned an illustration of the Immeubles Villas in *The Marseilles Block*, “the cell incorporated in the organic whole”,¹¹⁵ explaining that,

In nature, the smallest, the cell, determines the validity and health of the whole, making mountains of rocks or stinking mud-flats. / Everything depends on the value, the efficiency, and the integrity of the cell. When it comes to human housing [...] it is the cell which commands.¹¹⁶

Le Corbusier reiterates this point a few pages later, emphasising once again the importance of the health of the cell: “in nature, the unit, the cell, determines the value and health of the organism”.¹¹⁷ In architecture as in nature, if the cell is badly designed, or, as in the case of Buenos Aires, if it is stretched over too great an area, the overall structure collapses. A city should, therefore, follow the example of nature, which always tends towards organisation. In the *Almanach d’architecture moderne* (1925), Le Corbusier used the example of the geometrically ordered snail’s shell as a metaphor for a form of housing suitable for the modern age:

The snail’s shell. The snail is in a snail’s shell; it’s true. Us? We have tried, from the moment when the machine revolutionised society, to put the snail in, for example, a pig-pen. The machine must lead the snail back to its shell. A wise dream.¹¹⁸

Images from nature, then, such as the snail’s shell, the human body and the cell, were pressed into service by Le Corbusier both as a call for order in the city and

¹¹⁵ *Marseilles Block*, p. 41.

¹¹⁶ *Marseilles Block*, p. 13.

¹¹⁷ *Marseilles Block*, p. 27.

¹¹⁸ “La coquille de l’escargot. L’escargot est dans une coquille d’escargot; c’est vrai. Nous? On a tenté, à partir du moment où le machinisme a bouleversé la société, à mettre l’escargot dans, par exemple, une boîte à cochon. Le machinisme doit reconduire l’escargot à sa coquille. Rêve sage.” Le Corbusier, *Almanach d’architecture moderne*, Bottega d’Erasmus, Turin, 1975, p. 5. First published Editions Crès et Cie, Paris, 1925.

as a promise of the reconciliation with nature which that order would bring about. The image of the cell, as we saw, was particularly useful as a justification for architectural standardisation. Le Corbusier's search for and attraction to archetypes led him to equate ordered nature with ordered human habitation: both were based on standard units reduced to essentials and endlessly reproduced. Le Corbusier would also find the same spirit of quasi-natural organisation in the buildings and artefacts of 'primitive' peoples, as we will see in a later chapter. His call for a physically and spiritually revivifying city was therefore inseparable from his belief in the fundamental order of nature. Despite the fact, however, that a city is, unavoidably, a public space, Le Corbusier conceived of this reconciliation primarily as a private experience, a paradox which the next chapter will explore.

Chapter 3: Nature as private retreat

As we saw in the previous chapter, Le Corbusier considered the cities of the industrial west to be in a state of terminal decline. Their inhabitants were ill, anxious and unhappy, suffering above all from the loss of any sense of higher meaning, a loss which he attributed in large part to a complete alienation from nature. His principal task, therefore, as he saw it, was to restore meaning to urban life by bringing about a reconciliation between man and the natural world. It is hardly surprising that such an over-ambitious endeavour should fail; the success of certain of Le Corbusier's private house commissions, however, helps us to understand why. He developed there a sense that reconnecting with nature was primarily a private experience which he could not keep out of his urban plans, despite the very different demands of the inherently public space that is a city. This chapter will trace the origins of Le Corbusier's sense of nature as private retreat, from the Romanticism which coloured his upbringing to his encounter with the Carthusian monastery at Ema in 1907, and, through readings of certain private house projects, consider its impact on his cities.

Connecting with nature at the Marseilles Unité

Firstly, to understand what Le Corbusier had in mind when he spoke of a reconciliation with nature, I want to look at the specific example of the Marseilles Unité, where he came closest, in my view, to conveying in built form his vision of collective living in harmony with nature. In *The Marseilles Block* he emphasised that this is not something that can be achieved alone:

Everyone likes to see trees when he looks out of his window, and, to realise their dream, people fly from the town to settle down peacefully in the suburbs. But with 100,000 others doing the same thing, the dream is soon tarnished. If, on the other hand, 2000 or 5000 or 10,000 band together to exploit a site, and if they succeed in

doing so wisely, they will find themselves, not merely with a tree or two to look at, but an unbroken country landscape. They can have a vast stretch of parklands with lawns laid out for pleasure, exercise, and games [...] Under such conditions children can grow up well built and healthy. They can fill their lungs with air, and their eyes can look into the distance. They are safe from danger and the noise of traffic. No, far from abolishing the word liberty, our organisation [the Unité], if it is intelligently and humanely applied, will bring new light into the individual's life. Above all it must keep in view the aim of *taking man back to nature*. Nature has been stamped out of town life, and, paradoxical though it may sound, it is well on the way to being stamped out of the country life too.¹

The low-rise model of the commuter suburb, Le Corbusier argues, will never serve the aim of “taking man back to nature”, since it distances people from both open green space and their places of work. In *Mise au point*, he framed his call for an end to commuting in terms of the solar cycle which orders all human life:

The twenty-four hour day is completely distorted by uncoordinated and totally arbitrary distances between the home and work place. / Man began to live on wheels: suburban trains, suburban buses, bicycles, motorcycles, individual cars. The sun continued to turn impassively every twenty-four hours, dividing the solar day in two: day and night. And it was an insane expense: the squandering of modern times.²

Nature emerges here as the eternal, unassailable law by which night follows day and day follows night: we can choose whether to harmonise our lives with this law or to ignore it, but the passage of time will proceed regardless. The separation of home and work, for Le Corbusier, goes way beyond the practical: as well as tiring people out and wasting their time, it disconnects them from the cosmic forces which govern their lives. Centralised living, by contrast, can reverse this process of disconnection and allow nature to function once again as a source of spiritual meaning in urban life.

This sense of the timeless, enduring and regulatory quality of natural forces is expressed symbolically at the entrance to the Marseilles Unité. In front of the east

¹ Le Corbusier, *The Marseilles Block*, Geoffrey Sainsbury, trans., Harvill Press, London, 1953, p. 24. First published as *Unité d'habitation Marseille*, *Le Point* 38, November 1950.

² Le Corbusier, *Mise au point*, in Ivan Žaknić, *The Final Testament of Père Corbu: A Translation and Interpretation of Mise au point*, Yale University Press, New Haven and London, 1997, p. 93.

façade, between the approach from the street and the main door, is a concrete block carved with a section through the building and two arcs, one above it and one intersecting it, denoting the passage of the sun in summer and winter (fig. 3.1). As they make their way into the building, the residents are constantly reminded of their place within a wider cosmic order and given a sense of those higher things with which the building was intended to connect them. The roof garden performs the same function. Here, nature in the modern sense of greenery or landscaping is carefully contained, with shrubs and small trees growing in concrete planters (fig. 3.2): this is no leafy roof top garden but a negotiation between the bare concrete planes of the super-structure and the surrounding landscape. The walls marking the perimeter of the roof block out the city below, leaving only hills, sea and sky: the temporal is effaced in favour of the eternal (fig. 3.3). For Vincent Scully, the Marseilles roof testifies to a kind of primitive sensibility in Le Corbusier's late works:

We are in the realm of basic Mediterranean religion and myth, not of the Enlightenment, as if once the machine aesthetic was given up, everything in between having been contemptuously abandoned, only the primordial could remain.³

Le Corbusier, as Scully sees it, tapped into an ancient tradition at Marseilles in which man and nature are fused together in a symbolic continuum. The effect achieved by the perimeter walls is underpinned elsewhere on the roof: in the corners against the south wall, for instance, two concrete mounds are shaped to echo the hills in a deliberate interweaving of the architectural forms of the roof and the natural forms of the landscape (fig. 3.3). The concrete itself reinforces this link between the building and the natural environment: it is left deliberately rough, with the rocky make-up of the aggregate clearly visible, as if it had been hewn directly out of the surrounding

³ Vincent Scully, "Le Corbusier, 1922-65", in Neil Levine, ed., *Modern Architecture and Other Essays*, Princeton University Press, Princeton and London, 2003, pp. 236-49, p. 247.

hills. Finally, a thin slab set vertically against the horizontal line of the south wall makes the sign of the right angle (fig. 3.4), Le Corbusier's symbol from *The Poem of the Right Angle* of the "pact of solidarity" between man and nature.⁴ The Marseilles roof shows us, then, that underneath his call for a reconciliation with nature is a quasi-religious quest to reconnect his clients with the organising forces of the cosmos, to help them understand their place on the "axis of the laws" which unite "nature, man, cosmos" and which "from the depths beyond our reach, animate our universe".⁵ This, as well as reaching back to an ancient condition – to Scully's "realm of basic Mediterranean religion and myth" – is a profoundly Romantic ambition. The legacy of Romanticism for Le Corbusier, however, is also felt in his emphasis on privacy and the inner life of the individual, as the next section will show.

Privacy and nature: Romanticism

Le Corbusier spent his childhood and early career in the quintessentially Romantic setting of the mountainous landscape of the Swiss Jura. His father was a keen mountaineer who was determined to inspire the same passion in his sons; Charles L'Eplattenier, too, was a devotee of the natural world, a "real man of the woods". Recalling his early years in *The Decorative Art of Today*, Le Corbusier depicts himself as formed by these two figures into a child of the woods and the mountains, a free spirit delighted by the natural wonders around him:

My master was an excellent teacher and a real man of the woods, and he made us men of the woods. Nature was the setting where, with my friends, I spent my childhood. Besides, my father was passionately devoted to the mountains and the river which made up our landscape. We were constantly on the mountain tops: the long horizons

⁴ Le Corbusier, *The Poem of the Right Angle*, Kenneth Hylton, trans., Fondation Le Corbusier and Editions Connivences, Paris, 1989, p. 30.

⁵ Le Corbusier, *New World of Space*, Reynal & Hitchcock, New York and Institute of Contemporary Arts, Boston, 1948, p. 11.

were familiar. When there was a sea of mist, its infinite expanse was like the real sea – which I had never seen. That was the crowning spectacle.⁶

The mountain tops make another appearance a few lines later, followed by an account of L'Eplattenier's exhortation to his pupils to leave La Chaux-de-Fonds altogether in order to make art:

Sundays found us together at the top of the highest hill. It had pinnacles as well as grandly sweeping slopes: pastures, herds of large cattle, uninterrupted horizons, flights of rooks. We were preparing for the future. 'Here,' said the master, 'we will build a monument dedicated to nature and we will make it our lives' purpose. We will leave the town and live under the trees, beside the building which we will gradually fill with our works. It will incorporate the whole landscape – all the flora and fauna.⁷

L'Eplattenier's students clearly took this injunction to retreat outside La Chaux-de-Fonds seriously: Le Corbusier tells us that, "most of us had left our family homes and rented barns outside the town to which we returned in the evenings to be closer to nature".⁸

This enthusiasm for being "closer to nature" comes directly out of the Romantic movement of the late eighteenth and early nineteenth centuries, which was itself a product of the earlier notion of the sublime. Commentators such as Uvedale Price and Richard Payne Knight taught their readers that craggy mountains and rocky outcrops were not to be shrunk from, but embraced in a delicious ecstasy of fear and admiration. A truly sensitive and artistic person should no longer view a landscape with the calm pleasure to which they had become accustomed, but allow themselves to be overwhelmed by its "sublime" qualities. Price and Knight led the way on their own estates, which were laid out under their direction in the 1770s and which made

⁶ Le Corbusier, *The Decorative Art of Today*, James I Dunnett, trans., The Architectural Press, London, 1987, p. 194. First published as *L'Art décoratif d'aujourd'hui*, Editions Crès, Paris, 1925.

⁷ *Decorative Art*, pp. 194-95.

⁸ *Decorative Art*, p. 195.

maximum use of dramatic outcrops of rock, cascades and grottos, where, as Knight put it in his poem *The Landscape*, “sympathy with terror is combined, / To move, to melt, and elevate the mind”.⁹ The touchstone for this notion of taking pleasure in a certain kind of controlled fear was Edmund Burke’s *Philosophical Enquiry into the Origins of our Ideas of the Sublime and the Beautiful* (1759). Burke drew a distinction between the enjoyment to be gained from contemplating the “small”, the “smooth” and the “delicate”,¹⁰ which are the essential characteristics of the beautiful, and the more challenging mode of perception of the sublime:

If the pain and terror are so modified as not to be actually noxious; if the pain is not carried to violence, and the terror is not conversant about the present destruction of the person [...] they are capable of producing delight; not pleasure, but a sort of delightful horror, a sort of tranquility [sic] tinged with terror; which as it belongs to self-preservation is one of the strongest of all the passions. Its object is the sublime.¹¹

The idea that the contemplation of the natural world could result not in a renewed sense of the order and harmony inherent in the universe but in a quasi-transcendental experience of its awesome power and scale was fundamental to the birth of Romanticism around the turn of the century. The German Romantic painter Caspar David Friedrich captured this mode of engagement with nature in his paintings of figures, either alone or in small groups, allowing themselves to be overwhelmed by the grandeur around them. In *Moonrise on the Seashore* (1822; fig. 3.5) two women and a man, seen from behind, look out over the sea from their perch on a rock; the moon casts its first beams on the water, catching the waves in points of shimmering light. Two companions are suddenly caught by the view of the moon while taking a nocturnal walk in a forest in *Two Men Contemplating the Moon* (1819; fig. 3.6), while

⁹ Quoted in John Dixon Hunt, *The Picturesque Garden in Europe*, Thames and Hudson, London, 2002, p. 73.

¹⁰ Edmund Burke, *A Philosophical Enquiry into the Origins of our Ideas of the Sublime and the Beautiful*, The Scolar Press Ltd., Menston, England, 1970, p. 222.

¹¹ *Philosophical Enquiry*, p. 257.

in the earlier *Monk by the Sea* (1809-10; fig. 3.7) the tiny figure in the foreground is completely subsumed by the vastness of sea and sky. For Friedrich, nature is a quasi-divine power: as intangible as moonlight, as omnipotent as the elements, it stands in for and even to some extent replaces God himself. Wieland Schmied describes *Woman Against the Setting Sun* (1818; fig. 3.8) as showing “a state of oneness with Nature, which is experienced in pantheistic terms as full of Divine immanence and as the highest destiny of humankind”:¹² the woman stands alone in the landscape, depicted once again from behind, stretching out her hands towards the rays of the declining sun in a gesture of supplication.

During the same period the English Romantic poets looked to the natural world as the source of all creativity and goodness in human life: for William Wordsworth, for instance, nature was “the anchor of my purest thoughts, the nurse, / The guide, the guardian of my heart and soul / Of all my moral being”.¹³ John Constable, similarly, saw nature as “the fountain’s head, the source from which all must originally spring”;¹⁴ he paid homage to the natural world by refusing to rely on pictorial conventions, such as those of Claude Lorrain, striving instead to render everything exactly as he saw it and hence capture some essential truth. In the mid-nineteenth century Ruskin developed this idea of nature as a higher power or moral repository, a source of inspiration which would spur individual craftsmen on in their work. As he wrote in “The Nature of Gothic”,

The sculptor who sought for his models among the forest leaves, could not but quickly and deeply feel that complexity need not involve the loss of grace, nor

¹² Wieland Schmied, “Faces of Romanticism: Friedrich, Delacroix, Turner, Constable”, in Keith Hartley, ed., *The Romantic Spirit in German Art 1790-1990*, Scottish National Gallery of Modern Art, Edinburgh and Hayward Gallery, London, 1994, pp. 28-35, p. 28.

¹³ “Lines Composed a Few Miles above Tintern Abbey”, in *William Wordsworth: Selected Poems*, John O Hayden, ed., Penguin, London, 1994, p. 68.

¹⁴ Letter to John Dunthorne, May 1802, quoted in Anthony Hull, *English Romanticism*, Minerva Press, London, 2000, p. 358.

richness that of repose; and every hour which he spent in the study of the minute and various work of Nature, made him feel more forcibly the barrenness of what was best in that of man: nor is it to be wondered at, that, seeing her perfect and exquisite creations poured forth in a profusion which conception could not grasp nor calculation sum, he should think that it ill became him to be niggardly of his worn rude craftsmanship; and where he saw throughout the universe a faultless beauty lavished on measureless spaces of brodered field and blooming mountain, to grudge his poor and imperfect labour to the few stones which he had raised one upon another, for habitation or memorial.¹⁵

In the second half of the nineteenth century the Impressionists were inspired by Constable and the painters of the Barbizon School in their attempts to render nature just as they saw it, from the rural scenes which they chose as subject-matter to those who inhabited them; this in its turn bequeathed to the members of the many rural artists' colonies of the turn of the century an idea of the innate moral worth of the life and landscape of the countryside.

While the Romantics venerated the natural world as an autonomous entity, all-inspiring and all-powerful, they also internalised it. A sense of nature as having order and meaning persists, but, as Charles Taylor points out, “the access to this meaning requires that we turn within”:¹⁶ to understand natural phenomena we must build an awareness of the emotions that they evoke in us. Raymond Williams, similarly, argues that in Romanticism “nature [is] a principle of creation, of which the creative mind is part, and from which we may learn the truths of our own sympathetic nature”.¹⁷ Emphasis shifted from common principles and *a priori* modes of understanding onto the individual consciousness: the inner life, rather than the conventions of society, was now of supreme importance. The German Romantic poet Novalis identified this change in 1799: “a tremendous intimation of the creative will, of the boundlessness, of the infinite multiplicity, of the sacred particularity and

¹⁵ John Ruskin, “The Nature of Gothic”, in *The Stones of Venice*, Folio Society, London, 2001, pp. 157-58.

¹⁶ Charles Taylor, *Sources of the Self*, Cambridge University Press, Cambridge, 1989, p. 301.

¹⁷ Raymond Williams, *The Country and the City*, Oxford University Press, New York, 1973, p. 127.

universal capability of the inner man seems everywhere to be astir”.¹⁸ The self was no longer static, but constantly in a process of formation: for the Romantics, “the self is not a discrete substance decreed at creation, but rather a process of relationships both within the individual and without”.¹⁹ The natural world was drawn into this Romantic self-fashioning both as the vehicle by which a heightened state of consciousness could be reached and the ultimate reward of a search for higher meaning in human life – hence the frequency with which landscape was depicted in the painting and poetry of the period.

From the managed landscapes of the eighteenth century, then, nature was transformed in the nineteenth century into both a quasi-divine power and a prompt or inspiration for artistic production. It is this understanding of nature as both autonomous entity and inspiring backdrop that informs Le Corbusier’s description in *The Decorative Art of Today* of it as the “setting” where he had spent his childhood. His reading as he grew older reinforced the Romantic idea of nature which L’Eplattenier’s teaching and the Jura landscape had first implanted in him, and introduced him to the idea of the solitary genius. Henri Provensal’s *The Art of Tomorrow*, as we saw in the first chapter, convinced the young Le Corbusier of nature’s obedience to fundamental laws. Provensal’s Romanticism, however, comes through in his objection to materialist or positivist philosophy and in the profoundly spiritual bent of his thinking; he also extolled the figure of the Romantic genius, a person capable of rising above the reactionary and backward-looking masses to point the way towards “the art of tomorrow”. Edouard Schuré’s *The Great Initiates*, which Le Corbusier read in 1909, took up similar themes, as Paul Turner shows:

¹⁸ Quoted in Philip Gilbertson, “Boundaries and the Self in Romanticism”, in James Pipkin, ed., *English and German Romanticism: Cross-Currents and Controversies*, Carl Winter Universitätsverlag, Heidelberg, 1985, pp. 143-51, pp. 143-44.

¹⁹ “Boundaries and the Self in Romanticism”, p. 150.

Schuré's hero [...] is the mystical prophet, appearing throughout history in different guises but always bearing the same esoteric truths [...] [His] main theme, like Provencal's, is the need for the spiritual revival of modern civilisation and the rejection of the prevailing Materialism, which Schuré blames on the 'positivisme' of Auguste Comte and Herbert Spencer.²⁰

Schuré's book, which examined the lives of the "great initiates" Rama, Krishna, Hermes, Moses, Orpheus, Pythagoras, Plato and Jesus, was highly mystical in tone, emphasising the importance of gifted individuals in the discovery of essential truths. Friedrich Nietzsche, whose *Thus Spake Zarathustra* Le Corbusier read at around the same time, made a link between individual genius, solitude and nature. Zarathustra, the opening lines of the text tell us, has spent the past ten years in the mountains where "he enjoyed his spirit and his solitude"; now, however, he wants to share the vision he has nurtured there with the rest of humanity, and descends to "bestow and distribute" his philosophy of the *Übermensch*.²¹ Another text which contributed to this cocktail of idealist philosophy, spiritualism, the solitary artist-prophet and the natural environment was Ernst Renan's *The Life of Jesus*: in a passage marked by Le Corbusier, Jesus is described as withdrawing from society "to meditate on mountains and in remote places".²² Le Corbusier's early reading, then, was characterised by a highly idealist approach which attempted to fill the vacuum left by the decline of traditional religion at the hands of scientific and rationalist thinking. This search for alternative or spiritual meaning, together with the emphasis on the gifted individual, has its roots in Romanticism; it would also be the basis, as I will discuss in a later chapter, of the appeal of the primitive to the artistic avant-garde.

²⁰ Paul Turner, *The Education of Le Corbusier*, Garland Publishing, New York and London, 1977, pp. 24-25.

²¹ Friedrich Nietzsche, *Thus Spake Zarathustra*, Thomas Common, trans., Wordsworth Editions Ltd., Hertfordshire, 1997, p. 3.

²² "De méditer sur les montagnes et dans les lieux solitaires", Ernst Renan, *La Vie de Jésus*, quoted in *The Education of Le Corbusier*, p. 63.

Le Corbusier's letters to L'Eplattenier at this time show that he was profoundly affected by what he had been reading, and determined to live up to the Romantic ideal of the solitary seeker of truth. Writing from Paris in November 1908 he emphasised how necessary solitude was to him in forging a rigorous intellectual life:

Oh, how I wish that my friends, our companions, would chase away their little lives of everyday pleasures and, in burning what they love most, believing that these cherished things are good, realise how base their perceptions are and how little they *think*. It is by thought that today or tomorrow we will make a new art. Thought reveals itself, and one must fight with it. And to understand it after having fought with it, one must enter into solitude. Paris gives solitude to him who ardently seeks silence and retreat.²³

Le Corbusier refers again to an inward, solitary struggle to understand high things when he describes art as “an intense love of one's ego: one looks for it in retreat and solitude, this divine ego which can become an earthly ego when one forces it, through a struggle, to become so”.²⁴ His friends in La Chaux-de-Fonds, he claims, have no grasp of this understanding of art and must “seek solitude” to improve their minds. Le Corbusier implies here a divide between the enlightened, solitary individual and the unthinking masses which recalls that found in Provencal, Schuré and Nietzsche.

The Romanticism which characterised Le Corbusier's early reading, was, however, essentially an anti-urban philosophy: whenever the natural environment is mentioned, it is always in the form of a rural, generally remote, location. Le Corbusier moved permanently to Paris in 1917 and began a few years later to make

²³ “Oh, combien je voudrais ardemment que mes amis, nos camarades chassent loin la petite vie aux satisfactions journalières et brûlant ce qu'ils avaient de plus cher, croyant que ces choses chères étaient bonnes, – sentent combien bas ils visaient et combine peu ils *pensaient*. C'est par la pensée qu'aujourd'hui ou demain on fera l'art nouveau. La pensée se dérobe et il faut se battre avec elle. Et pour la rencontrer afin de se battre avec elle, il faut aller ds [sic] la solitude. – Paris donne la solitude à celui qui ardemment, cherche le silence et la retraite aride.” Le Corbusier to Charles L'Eplattenier, 22 November 1908, FLC E2-12-41.

²⁴ “[...] amour intense de son moi: on va le chercher ds [sic] la retraite et la solitude, ce ‘moi’ divin qui peut être 1 [sic] moi terrestre quand on le force – par la lutte – à le devenir.” Le Corbusier to Charles L'Eplattenier, 25 November 1908, FLC E2-12-50.

the city the object of as well as the setting for his career as an architect and urbanist; yet in 1925, as we have seen, he was advertising his rural upbringing in *The Decorative Art of Today*. He did so as a means of justifying the central importance which he gave to nature in his city plans: for Le Corbusier, nature was not antithetical to the city, as it was for the Romantics, but an essential element in its reform, and he therefore saw no reason to suppress his early years in the mountains in an account of his present concerns. The city was the only possible place where one could engage with and participate in contemporary culture: if the choice is between “the life of a shepherd vegetating among his flocks” and “participation in a machine civilisation”, as he puts it in *The Modulor*, Le Corbusier unquestioningly opts for the latter.²⁵ At the same time, he was convinced that if the city were to be made habitable once more, it must find a way of embracing the “long horizons” of his childhood.

From the inwardness which characterised the Romantic movement, together with its veneration of individual genius, grew a more general cultural shift in emphasis from the public realm to the private sphere. Meaning and fulfilment were no longer to be found in active participation in public life but in a retreat into the realm of the personal, as Richard Sennett explains in *The Fall of Public Man*:

The traumas of nineteenth-century capitalism led those who had the means to try to shield themselves in whatever way possible from the shocks of an economic order which neither victors nor victims understood. Gradually the will to control and shape the public order eroded, and people put more emphasis on protecting themselves from it. The family became one of these shields. During the nineteenth century the family came to appear less and less the centre of a particular, non-public region, and more an idealised refuge, a world all its own, with a higher moral value than the public realm.²⁶

²⁵ Le Corbusier, *The Modulor: A Harmonious Measure to the Human Scale Universally Applicable to Architecture and Mechanics*, Peter de Francia and Anna Bostock, trans., Faber and Faber, London, 1954, p. 111.

²⁶ Richard Sennett, *The Fall of Public Man*, Faber and Faber, London, 1986, p. 19.

Hence the urge to flee the city and build up an untouchable, precious preserve of domestic life in the suburbs: this is the basis of the Garden City developments by which, as we have seen, Le Corbusier was so strongly influenced. Diana Periton traces through the example of the Goncourt brothers' residence at 53 boulevard de Montmorency in Paris, where they lived from 1868, "the new value which society had begun to place on the notion of home".²⁷ She paraphrases a lecture delivered by Benjamin Constant in 1819 on the difference between classical and modern ideas of liberty:

[Constant] explained that liberty, and the sense of pleasure and fulfilment it affords, consisted for the ancients in the ability to participate constantly and actively in public government [...] In contrast, he suggested, the modern ideal of liberty is concerned with the enjoyment of our private existence. In the modern state an individual, absorbed within the multitude, can exert very little public influence. Constant argued that this loss of influence was amply compensated by a vast increase in the possibilities for individual happiness, and ultimately for fulfilment in modern private life.²⁸

This retreat into the private realm and the resulting significance attached to one's home had reached such a point by the mid-twentieth century that Jane Jacobs was moved to launch a furious attack on the decline of all forms of sociability and street life in the city. She called for a return to traditional neighbourhoods like her own in Greenwich Village, New York, and described the pleasure which she took each morning in watching the "sidewalk ballet" enacted there:

I make my own first entrance into it a little after eight when I put out the garbage can, surely a prosaic occupation, but I enjoy my part, my little clang, as the droves of junior high school students walk by the centre of the stage dropping candy wrappers [...] While I sweep up the wrappers I watch the other rituals of morning: Mr Halpert unlocking the laundry's handcart from its mooring to a cellar door, Joe Cornacchia's son-in-law stacking out the empty crates from the delicatessen, the barber bringing

²⁷ Diana Periton, "The Interior as Aesthetic Refuge: Edmond de Goncourt's *La maison d'un artiste*", in Mari Hvattum and Christian Hermansen, eds., *Tracing Modernity: Manifestations of the Modern in Architecture and the City*, Routledge, London and New York, 2004, pp. 137-55, p. 137.

²⁸ "The Interior as Aesthetic Refuge", p. 137.

out his sidewalk folding chair [...] Simultaneously, numbers of women in housedresses have emerged and as they crisscross with one another they pause for quick conversations that sound with either laughter or joint indignation, never, it seems, anything in between. It is time for me to hurry to work too, and I exchange my ritual farewell with Mr Lofaro, the short, thick-bodied, white-aproned fruit man who stands outside his doorway a little up the street, his arms folded, his feet planted, looking solid as earth itself. We nod; we glance quickly up and down the street, then look back to each other and smile. We have done this many a morning for more than ten years, and we both know what it means: All is well.²⁹

Jacobs's ideal city – low to medium-rise, high density – is also, interestingly, one which excludes nature, which reaches back, almost, to a pre-nineteenth century model in which rural and urban domains were kept separate. She appreciates the large green space of Central Park, but challenges the idea that greenery should be introduced everywhere as a matter of course, arguing that the *de facto* greening of neighbourhoods is a quick way to kill off sociability and a sense of community. Le Corbusier's urban green spaces, as we will see, were not meant to foster such values: they served as sites for walking or taking exercise and to provide views of greenery for solitary consumption from the apartments.³⁰ Le Corbusier's emphasis on the almost sacred value of private life is a result, inevitably, of the cultural shift described above. His sense that nature, in particular, belonged primarily to the private domain had a more personal source, however: in his life-long obsession with monastic life.

Privacy and nature: the monastery garden

In 1907, while travelling in Italy, the young Le Corbusier made the short trip from Florence to the outlying village of Galluzzo, to visit the Carthusian monastery

²⁹ Jane Jacobs, *The Death and Life of Great American Cities*, Vintage Books, New York, 1961, pp. 50-51.

³⁰ The lively street life advocated by Jacobs, is, however, not excluded: rather than taking place at ground level, it happens within the residential blocks themselves. At the Marseilles Unité, for instance, the shopping street provides a public space which fosters sociability; the roof-top amenities of a gym and childrens' art room are well used, and the message board in the foyer testifies to an active community life within the building, as I discovered when I visited the building in May 2005.

there. Brooks has described Le Corbusier's encounter with "la Chartreuse d'Ema" as "the most profound architectural experience of his life";³¹ certainly it was one of the most influential. We will see in a later chapter that Le Corbusier saw monastic life as the apotheosis of simple living; what is most significant here, however, is his response to the high levels of privacy enjoyed by the monks at Ema. Of all the monastic orders, the Carthusians put most emphasis on the importance of solitude: each monk in a Charterhouse has a relatively large amount of space to himself, his quarters amounting more to a cottage than a traditional cell, with several separate rooms and a garden. Here the monks take their meals, study, pray and tend their gardens alone; they gather in the chapel for the various offices, but only speak to each other on Sundays, when they eat and walk in the countryside together.³² The monks' rooms at Ema are on two floors, with a bedroom below and a living room above; a covered walkway extends to the south, from which one looks down into a private garden. Le Corbusier recorded this arrangement carefully in plan and section (fig. 3.9). His letters, too, tell us how valuable the encounter with Ema was to him: "I would like to live my whole life in what they call their cells", he wrote to Charles l'Eplattenier.³³

Throughout his career Le Corbusier would refer to Ema as an example of how to balance individual and communal life in mass housing; in *The Marseilles Block*, for instance, he wrote that,

The *Chartreuse d'Ema* near Florence made me conscious of the harmony which results from the interplay of individual and collective life when each reacts favourably on each other. *Individual and collectivity* comprehended as fundamental dualism.³⁴

³¹ Harold Allen Brooks, *Le Corbusier's Formative Years*, University of Chicago Press, Chicago and London, 1997, p. 105.

³² See Robin Bruce Lockhart, *Halfway to Heaven: The Hidden Life of the Carthusians*, Darton, Longman and Todd, London, 1999.

³³ Le Corbusier to Charles l'Eplattenier, 19 September 1907, FLC E2-12-6.

³⁴ *Marseilles Block*, p. 45.

At Ema, as we have seen, the monks spent most of their time alone; that Le Corbusier saw them as having achieved an ideal balance between “individual and collectivity” is therefore very revealing. Solitude, moreover, was bound up at Ema with an experience of nature: each monk had a private garden within his cell, as Le Corbusier’s 1907 sketches show. His later sketches, made during his second visit in 1911, focus particularly on the interpenetration of interior and exterior space in the cells, this time bringing in the additional element of the surrounding Tuscan landscape. Le Corbusier drew a cell from the perspective of someone walking around it, showing the walkway as a ramp along which one progresses towards the view framed in a window at the end, or from which one looks down into the garden (fig. 3.10). He recorded the presence of two seats cut out of the thickness of the stone below the window, implying the potential for solitary contemplation of the landscape which they provided. Reading the sketch from left to right, the line of the hills is first contained within the window and then breaks free to span the space above the wall enclosing the garden. The perspectives on nature imagined by Le Corbusier are therefore complex and multiple: the monk can absorb the landscape both as a framed image and an unbounded vista; he can look simultaneously out over it and down into his garden; he can immerse himself in the garden itself without being aware of anything beyond. In fact, the original medieval monks, steeped in a pre-modern understanding of nature, would have made a clear distinction between the hills outside, which were wild, untouched and therefore of little interest, and the garden within, which, by virtue of its shaped, bounded quality, was full of symbolic meaning. For the twentieth-century Le Corbusier, however, the landscape itself is as much a potential source of inspiration as the enclosed garden; his sketches therefore transform the monks into Romantic figures, opening themselves in solitude to unbounded

nature. Despite his limited understanding of the principles underlying the monastery garden, however, Le Corbusier took away from Ema a vision of a built environment in which a private communion with nature is an essential part of a rich spiritual life. This connection between privacy, spiritual fulfilment and the natural world would inform much of his mature work, as we will see.

In the Immeubles Villas, Le Corbusier aimed to provide something of the same quasi-sacred, solitary interaction with nature for a secular community. In the *Oeuvre Complète* he described the Contemporary City plan, of which the Immeubles Villas was a part, in overtly monastic language, stating that it was “dedicated to the study of the ‘cell’ of habitation”; “on the one hand”, he continues, “a man in a group of three million; on the other a man returning alone to his cell”.³⁵ He goes on to make the link between the Immeubles Villas and Ema explicit: “they were born out of a memory which came to me after a lunch of a Charterhouse in Italy (happiness through serenity) and [were] sketched on the back of a restaurant menu”.³⁶ As the image of a man “returning alone to his cell” suggests, Le Corbusier did not have families in mind for the Immeubles Villas, but a community of single men, each seeking solitude at the end of a day’s work. The two-storey maisonettes which make up the Immeubles Villas were based on the Citrohan house prototype of the previous year, which, as Peter Serenyi tells us, was “a studio house, primarily designed for the single artist”.³⁷ The drawings in the *Oeuvre Complète* imply cultivated, leisured inhabitants: each flat has a grand piano; elegant furniture is arranged in the terrace gardens; and in a sketch of a well-appointed sitting room, a man leans out on his balcony, presumably

³⁵ “[...] consacré aux études de la ‘cellule’ d’habitation. D’une part, l’homme en collectivité de 3 millions; d’autre part, l’homme tout seul rentrant chez lui dans sa cellule.” Le Corbusier and Pierre Jeanneret, *Oeuvre Complète 1910-1929*, Editions Dr H Girsberger, Zurich, 1937, p. 40.

³⁶ “Ils sont nés d’un souvenir évoqué après un déjeuner, d’une Chartreuse d’Italie (bonheur par la sérénité) et crayonné sur le dos d’un menu de restaurant.” *Oeuvre Complète 1910-1929*, pp. 40-41.

³⁷ Peter Serenyi, “Le Corbusier, Fourier and the Monastery at Ema”, in Peter Serenyi, ed., *Le Corbusier in Perspective*, Prentice-Hall, New Jersey, 1975, pp. 103-16, p. 103.

contemplating a view of greenery (fig 3.11). The terrace gardens in particular take us back to the original community of single men, engaged in high-minded pursuits: filling a double-height space around which the rest of the apartment forms an L-shape, they are the private monks' gardens at Ema transposed into a modern form. The whole apartment plan bears a strong resemblance to that of Ema, with the dining and sitting rooms forming the long arm of the L and protruding outwards, just like the monastery walkways.

What is striking here is that Le Corbusier did not seek to explain or justify the unusual nature of the Immeubles Villas as a housing block for single men: on the contrary, he presented it as a standard solution. Working not in response to a commission but on a hypothetical scheme, Le Corbusier gravitated towards a personal ideal. The apartments of the Marseilles Unité, which represent his return to mass housing after the Second World War, are more problematic. He offered complete solitude to their inhabitants, telling them, "you will then be alone, you will meet no-one, you will be in peace, sunlight and space".³⁸ The noise of modern urban life, felt Le Corbusier, was psychologically damaging, and the dwelling must offer a retreat from it:

Silence. More exactly the problem is to decide what *noises* are *admissible* and what are not. We have here one of the most serious problems for modern society, for many of our nervous and mental ills can be attributed to the quantity and infinite variety of noxious sounds that constantly assail our ears.³⁹

³⁸ Unsourced quotation from "Le Corbusier, Fourier and the Monastery at Ema", p. 115.

³⁹ *The Marseilles Block*, p. 21. There is a striking parallel here with a passage in Nietzsche's *The Gay Science*: "One day, and probably soon, we will need some recognition of what is missing primarily in our big cities: quiet and wide, expansive places for reflection – places with long, high-ceilinged arcades for bad or all-too-sunny weather, where no shouts or noise from carriages can penetrate and where refined manners would prohibit even priests from praying aloud: a whole complex of buildings and sites that would give expression to the sublimity of contemplation and stepping aside." Friedrich Nietzsche, *The Gay Science*, Josefina Nauckhoff, trans., Cambridge University Press, Cambridge, 2001, p. 159.

Next to this passage is a drawing showing the Unité amid sun, space and greenery, with a giant eye looking out from a balcony on one of the higher floors (fig. 3.12): the juxtaposition seems to imply that the peacefulness and quiet which Le Corbusier assumes all city-dwellers are seeking can be found in contemplating the view of nature from an elevated vantage-point. These promises of silence and solitude seem strange ones to make to the inhabitants of a mass-housing block, and owe more to the memory of the monks at Ema than to a realistic assessment of what high-density living is actually like. *The Marseilles Block* promises a private space to each inhabitant which the building itself cannot satisfy. Le Corbusier begins the section entitled “Individual Liberty” with a quotation from Pascal: “all the trouble comes from men not spending enough time in their own rooms”.⁴⁰ He then outlines his vision for the individual lives of the inhabitants, each in his own room:

Basic individual liberty has to be guaranteed by an enclosure, a case, vessel, or container which is of course nothing else than a ROOM. The room must be perfect. It should be complete, satisfying all individual needs and encouraging personal activity, reading, drawing, sewing, weaving, pottering about, thinking, meditating etc.⁴¹

“If a room of one’s own is the essence of personal liberty, the living room (the hearth) is the essence of family life”,⁴² Le Corbusier continues. A standard apartment for two adults and two children, however, cannot offer this clear distinction between private and family life: the plan is so compact that there is no space for everyone to have a room of his or her own. The children have their own rooms, but are obliged to join them together by means of a sliding door to have space to play in; the kitchen, sitting room and balcony downstairs are the family rooms, with the adults’ bedroom in a mezzanine above (fig. 3.13). Where each of the parents can find private space for

⁴⁰ *Marseilles Block*, p. 17.

⁴¹ *Marseilles Block*, p. 17.

⁴² *Marseilles Block*, p. 20.

“personal activity” is unclear. There is a slippage between Le Corbusier’s ideal of the single life, in which solitude is freely available, and his vision of that of the family, in which it is at a premium.

Le Corbusier was finally able to realise in built form his vision of a community of single men living in harmony with nature in the monastery of La Tourette (1953-61). There he built his largest roof garden in the form of a roof-top cloister, which commands a panoramic view of the surrounding countryside; while he saw this as offering great potential for solitary communion with nature for the monks, however, Le Corbusier advised them to ration their use of it so that the vast landscape did not become a source of easy consolation:

Suddenly I had the idea of saying to myself: let’s put the cloister on the roof. But if I put it on the roof it will be so beautiful that the monks will use it as a distraction, perhaps a dangerous one, from their religious life, because this is an issue in your magnificent, courageous life. You have a very hard interior life; it is demanding. The delights of the sky and the clouds are perhaps too easy. What if you go up there from time to time, when you are given permission to climb the staircase which leads to the roof, that could be a reward for those who have been good.⁴³

The landscape, for Le Corbusier, must contribute to the solitary, spiritual life of the monks and not detract from it. For the same reason he wanted to avoid reducing the cloister to a belvedere onto the vast panorama. When the monks arrive on the roof they cannot see the landscape at all, because the cloister is entirely surrounded by walls which reach to above head-height (fig. 3.14); to get an unrestricted view they have to climb up one of the sets of steps provided. Le Corbusier acknowledged that the countryside was beautiful, but insisted that it only became useful to the monks

⁴³ “J’ai eu un moment l’idée de me dire: mettons le cloître là-haut. Mais si je le mets là-haut ce sera si beau que les moines en feront une évasion peut-être périlleuse pour la vie religieuse, parce qu’il y a une question dans la vie magnifique, courageuse. Vous avez la vie intérieure très dure; elle est forte. Les délices du ciel et des nuages sont peut-être trop faciles. Que vous y alliez de temps en temps, qu’on vous autorise à monter par l’échelle qui va sur le toit, c’est une permission pour ceux qui auront été sages.” Jean Petit, ed., *Un Couvent de Le Corbusier*, Les Editions de Minuit, Paris, 1961, p. 28.

when they contemplated it mindfully and deliberately; without boundaries, he stated, “panoramic views are not worth much [...] They are empty, without substance”.⁴⁴

Le Corbusier did, however, provide uninterrupted views from the balconies of the monks’ cells: here, however, they are framed in such a way as to provide the necessary boundaries. In a letter to André Wogensky Le Corbusier linked these balconies directly to his encounter with Ema, arguing that they could not therefore be sacrificed as part of the economy drive which Wogensky deemed necessary:

I do not want to remove the balconies, which are from a monastic perspective the key that inspired all my domestic architecture from 1907 [when I visited] the Charterhouse at Emma [sic] in Tuscany [...] where the practice of solitary meditation before nature struck me once and for all.⁴⁵

The balconies, it seems, are another interpretation of the monastery gardens at Ema, scaled down to suit both the restrictions of plan and budget at La Tourette and the rule of the Dominican order, which requires the monks to be much less reclusive than that of the Carthusians.

The entire upper floor at La Tourette, which contains the cells, is orientated towards the views of the landscape framed by the balconies. From the corridors outside the cells, thin strip windows give a view down into the central courtyard of the monastery, which is crossed by walkways; the view from the end of these corridors is blocked off by angled concrete screens, so that the impact of the open view from the cells is heightened. The cells themselves are long and thin, with the fenestration spanning the short end and opening onto the balcony: they are therefore entirely orientated both to focus attention on the view and to frame it. A photograph in the

⁴⁴ “Les vues panoramiques ne valent pas cher [...] C’est vide, sans substance.” *Un Couvent de Le Corbusier*, p. 28.

⁴⁵ “Je ne veux pas supprimer les loggias, qui sont au point de vue moine la clef même qui a inspiré toute mon architecture domestique à partir de 1907 à la Chartreuse d’Emma [sic] en Toscane [...] où l’événement de la méditation solitaire devant la nature m’a frappé une fois pour toutes.” Le Corbusier to André Wogensky, 13 March 1956, FLC K3-7-63.

book which Le Corbusier published on La Tourette shows a monk studying at his desk, which is placed sideways on to the balcony (fig. 3.15); beyond is a view of hills, framed on the left by a curtain and on the right by the window frame, and on top and bottom by the balcony masonry. All the light in the photograph comes from the balcony, throwing all the vertical surfaces of the interior into deep shadow, a *chiaroscuro* effect which serves to emphasise the frame around the view. Next to the photograph, on the facing page, “silence” is printed in large, bold type. The monk pictured epitomises Le Corbusier’s ideal of the contemplative life in which communion with nature fuses with a search for the sacred.

The experience of nature within clearly defined boundaries which affected Le Corbusier so profoundly at Ema has long been fundamental to the notion of sacred space. Terry Comito gives the example of “the medieval artist’s shorthand for gardens, a fence enclosing a tree or fountain”;⁴⁶ the fact that a space such as a Carthusian monastery garden is limited, he argues, is what makes it sacred. Perhaps the inclusion of such bounded external spaces in all his domestic projects, with their implications of a retreat into nature, is what Le Corbusier had in mind when he wrote in *Mise au point* that his intention throughout his career had been “to introduce into the home a sense of the sacred; to make the home the temple of the family”;⁴⁷ in the letter to Wogensky, after all, he makes a link between the enclosed, sacred gardens at Ema and his entire domestic output. Later in *Mise au point* Le Corbusier reiterates the idea of the dwelling as sacred:

For my part, I devoted fifty years of my life to the study of housing. I brought back the temple to the family, to the home. I restored the conditions of nature to the life of man.⁴⁸

⁴⁶ Terry Comito, *The Idea of the Garden in the Renaissance*, The Harvester Press, Sussex, 1979, p. 50.

⁴⁷ *Mise au point*, p. 91.

⁴⁸ *Mise au point*, p. 96.

The close interconnection of domesticity, the sacred and the natural environment here show the extent of the influence on Le Corbusier of the monastic tradition: despite his stated intention of housing families, the image of a monk meditating alone before nature persisted from his visit to Ema in 1907 to the very end of his career.

Nature as private retreat in the Villa Meyer, 24 rue Nungesser-et-Coli and the city plans

Ironically, while Le Corbusier saw a profound and far-reaching connection with nature as achievable only through collective action – people must band together if they want an open view, as he explained in *The Marseilles Block* – he tried to replicate in his cities the kind of communion with the natural world expressed in his private commissions. Two such house projects exemplify the reconciliation with nature which he was trying to achieve: the Villa Meyer and his own flat at 24 rue Nungesser-et-Coli. Le Corbusier sought to persuade Madame Meyer to give him the go-ahead to start work on her house by offering her a vision of peaceful seclusion amid the beauties of nature. He published the illustrated letter which he sent her in 1925 in the *Oeuvre Complète*, directing our attention to two particular sketches from it by enlarging them on the facing page (figs. 3.16 and 3.17). The first shows a walkway extending from the house to a raised gazebo and down into a morass of bushes and shrubs, giving the impression of a descent into wild, unkempt nature. The garden, Le Corbusier writes, is “not at all French, but a wild piece of land where thanks to the bushes of the Parc St James [which it overlooked] one can imagine oneself far from Paris”.⁴⁹ The sense of a retreat into nature is reinforced by the two axonometric drawings looking down onto the roof garden which are reproduced on

⁴⁹ “Ce jardin n’est point à la française mais est un bocage sauvage où l’on peut grâce aux futaies du Parc St-James se croire loin de Paris.” *Oeuvre Complète 1910-1929*, p. 89.

the preceding page (fig. 3.18). The roof is divided into four parts: a covered space, which presumably houses the staircase, with an adjacent terrace; a swimming pool surrounded by foliage; a sitting area with a retractable canopy to provide shade and a solarium with a day bed partially surrounded by a curved concrete screen. Madame Meyer is to commune with nature through swimming, sunbathing and looking out at the view: the roof garden is the setting for a complete surrender to the elements. Moreover, she will be communing with nature alone. In the letter Le Corbusier imagines her life on the roof:

Behind the swimming pool and the services one has breakfast [...] From the boudoir one has climbed up onto the roof where there are neither tiles or slates but a solarium and a swimming pool with grass growing between the slabs. The sky is above: with the walls, no one around will see you. In the evening one sees the stars and the dark mass of the trees of the Folie St James. With the screens one can isolate oneself completely.⁵⁰

The second of the two enlarged sketches also refers to isolation in nature; however, the solitary communicant is now Le Corbusier himself. In the foreground is the curve of a shoreline and some boulders; across an expanse of water are rocky hills and what looks like a group of buildings. It is captioned:

This project, Madame, was not born all of a sudden from the hasty pencil of an office draughtsman, in between a couple of telephone calls. It has been long ripened, nurtured, on days of perfect calm in view of a site of high classicism.⁵¹

The sea scene, wherever it is, is the “site of high classicism” which has inspired the project: here Le Corbusier seeks to connect the wild verdure of the Folie St James

⁵⁰ “Derrière la piscine et le service on prend le petit déjeuner [...] Du boudoir, on a monté sur le toit où ne sont ni tuiles, ni ardoisses, mais un solarium et une piscine avec de l’herbe qui pousse contre les joints des dalles. Le ciel est dessus: avec les murs, autour personne ne vous voit. Le soir on voit les étoiles et la masse sombre des arbres de la Folie St James. Avec des écrans on s’isole complètement.” *Oeuvre Complète 1910-1929*, p. 89.

⁵¹ “Ce projet, Madame, n’est pas né d’un coup sous le crayon hâtif d’un dessinateur de bureau, entre deux coups de téléphone. Il a été longuement mûri, caressé, en des journées de calme parfait en face d’un site hautement classique.” *Oeuvre Complète 1910-1929*, p. 89.

with an equally untouched coastal landscape, as if to evoke a sense of the eternal unity of the natural world and to locate the Villa Meyer within this all-embracing, primordial vision; at the same time, he links Madame Meyer's private immersion in nature on the roof with his own solitary, nature-inspired act of creation.

Le Corbusier's own flat at 24 rue Nungesser-et-Coli, too, is based on those activities which were for him sources of meaning in personal life – creative work, communion with nature, one-ness with cosmic forces – and which are given built expression in a large studio for painting and sculpture, an annexe for writing and a roof garden. Le Corbusier devoted his mornings to painting, going into his practice only in the afternoons; he guarded the privacy of his morning sessions jealously, once turning furiously on his wife when she came into his studio unexpectedly.⁵² Off the studio is Le Corbusier's study, with a desk and bookshelves in dark wood; it is a small, cave-like space, partitioned off from the soaring vault and lightness of the studio. A window sheds light on to the desk, but the glass panels which make it up are opaque (fig. 3.19): just as Le Corbusier sought to protect the monks of La Tourette from the distraction of a roof-top view, so he guarded himself in his hours of intellectual work from the temptation of gazing outwards. His study testifies to the intense interiority which, as he saw it, any creative individual must cultivate. The expansive views of the hills of St Cloud are all from the other side of the apartment, the side containing the kitchen, dining room and bedroom and associated with family life, the activities of eating, sleeping, and Yvonne. Peter Carl has suggested that the unusually high bed in which Le Corbusier and his wife slept was aligned with the

⁵² André Wogenscky, *Le Corbusier's Hands*, Martina Millà Bernad, trans., MIT Press, Cambridge, Mass. and London, 2006, p. 27.

horizon:⁵³ the site of their waking and sleeping as well as of their sexual life is thus on a level with the rising and setting sun, so that the pattern of their lives is in tune with the cosmic order. At Nungesser-et-Coli, then, the natural environment is linked with the more elemental, quasi-primitive aspects of life – food, sex, sleep, ablution – and excluded from the realm of intellectual and artistic creation: if the whole apartment is a vessel for Le Corbusier’s creativity, the moments of communion with nature which feed that creativity need to be carefully orchestrated, just as they were at La Tourette.

In shaping the space of his own apartment, moreover, Le Corbusier set the creative process within a symbolic and ritualistic framework, as Carl shows. The staircase which leads from the entrance hall to the roof garden marks the ascent from a dark, confined, curvaceous space to a light, airy, orthogonal one, an effect clearly conveyed by the composition and *chiaroscuro* of a photograph in the *Oeuvre Complète* looking upwards towards the roof (fig. 3.20). Reading this entrance sequence through the lines “how the night is / alive rich in the warehouses the collections the library / the museums of sleep!” from *The Poem of the Right Angle*, Carl posits it as a metaphor for the creative process: from the womb-like darkness in which ideas are nurtured, the artist rises into the sunlight of active creativity. This, he argues, is emblematic of the process which Le Corbusier intended his cities to engender in each of their inhabitants:

As a drama which transforms a latent order into a new order of compelling clarity and forcefulness, the procedure is emblematic for Le Corbusier of the several dimensions of creativity embodied in the new life of the ‘radiant’ city. On this basis, I would like to suggest that these entry sequences are structured to allow the inhabitant to re-enact this drama, which [...] I would provisionally term an ‘awakening to creativity’.⁵⁴

⁵³ Peter Carl, “Le Corbusier’s Penthouse in Paris, 24 rue Nungesser-et-Coli”, *Daidalos* 28, June 1988, pp. 65-75, p. 68. The bed was later lowered, perhaps because Le Corbusier and Yvonne found it difficult to climb into as they grew older.

⁵⁴ “Le Corbusier’s Penthouse in Paris”, p. 71.

The sense implied here of the potency of private life, together with the essential role played in it by nature, spilled over from Le Corbusier's individual house projects into his urban plans, where it found a much less successful form of expression. In the Immeubles Villas Le Corbusier laid out his vision of a cultivated life lived close to nature; in *The Home of Man* he went further, positing the city as a protective screen interposed between man and his natural environment. The first in a sequence of sketches (fig. 3.21) shows the distinctive rock in the bay of Rio de Janeiro; the second adds the surrounding mountains and the third the vegetation. By this point the scene has become so attractive that "one stops, one installs one's armchair": a man is shown sitting alone, gazing at the landscape. The final sketch shows a glazed wall dropped between the man and the view: "your room is installed before the site", announces Le Corbusier, "the whole sea-landscape enters your room".⁵⁵ Man's solitary encounter with nature comes first; architecture follows. At the same time, the city is reduced to the entirely private domain of a series of individual viewing-boxes.

A solitary viewer is also implied by the over-scaled eyes which, from the 1930s onwards, Le Corbusier drew looking out from Unité-type blocks or apartments. Such a drawing in *The Marseilles Block* (reproduced from *Concerning Town Planning*; fig. 3.12) shows a single apartment hanging in mid-air, with a tiny figure on the balcony and a giant eye projecting outwards: the act of private viewing is magnified, as if, as Beatriz Colomina suggests, seeing were synonymous with dwelling.⁵⁶ Surrounding the apartment are the "essential joys" of "sun, space and greenery", the objects of the solitary gaze; Le Corbusier's way of drawing them points

⁵⁵ Le Corbusier and François de Pierrefeu, *The Home of Man*, Clive Entwistle, trans., The Architectural Press, London, 1948, p. 87. First published as *La Maison des Hommes*, Librairie Plon, Paris, 1942.

⁵⁶ Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media*, MIT Press, Cambridge, Mass. and London, 1994, p. 330.

us to a central problem in the role of nature in his cities. A thin shaded strip runs along the base of the image: this is “the natural ground”; a tree and two bushes are perched on it, standing for “greenery”; the sun burns in the sky, while “space” is represented by an amorphous, cloud-like blob, floating between the greenery and the sun. Nature has been atomised, divided into its constituent parts in a wholly artificial way and robbed of any of that higher meaning with which Le Corbusier elsewhere invested it. There is a vast discrepancy between this conception of nature and that contained in the concrete tablet at the entrance to the Marseilles Unité. Le Corbusier has failed to translate his sense of nature’s laws as eternal and self-sustaining, which is implied in the symbol of the twenty-four hour day, into the much more simplistic, instrumental treatment of nature as merely “sun, space and greenery” which dominates his urban visions. Ironically in the context of the public space that is a city, it is only Le Corbusier’s emphasis on the importance of nature in the private realm which saves it from becoming entirely meaningless: as we have seen, it is an essential part of a domestic environment which dramatises an “awakening to creativity”. Without the solitary spectator, then, nature would be nothing more in the Corbusian city than an area coloured in green on a plan.

The natural world which Le Corbusier makes available for private consumption in the city has a particular character, moreover: it is a means of escape from the chaos of urban life, the scene of moments of calm, meditation and retreat. In *Modulor 2* Le Corbusier confessed his preference for soothing rather than disturbing landscapes, for the beautiful over the sublime:

I love the sea, the flat coasts and the plains more than the mountains. The foothills of the Alps, the Alps themselves crush me. Higher up, near the summits, on the last pasture meadow and on the peaks, space is born again, but the materials employed there bear witness to the savagery of unleashed elements, the catastrophe of geological upheavals. How much deeper is my feeling for the admirable clock that is

the sea, with its tides, its equinoxes, its daily variations according to the most implacable of laws, but also the most imperceptible, the most hidden law that exists.⁵⁷

Le Corbusier turns to those landscapes which reassure him that nature is inherently ordered and rejects those which remind him that it is also cruel, unpredictable and overwhelming. He has transferred his affections from the mountains of his childhood to the more abstract, primordial version of nature represented for him by the sea.

Since there is nothing restful or calming in contemplating a wild, mountainous landscape, any agitating natural elements must be banished from the city and replaced by soothing expanses of green. The process of ascending towards a view of nature is itself calming, as Le Corbusier emphasises in his account of climbing the Eiffel

Tower in *The City of Tomorrow*:

The very act of mounting gives me a feeling of gladness; the moment is a joyful one, and also a solemn one. And in proportion as the horizon widens more and more, one's thought seems to take on a larger and more comprehensive cast: similarly, if everything in the physical sphere widens out, if the lungs expand more fully and the eye takes in vast distances, so too the spirit is roused to a vital activity. Optimism fills the mind.⁵⁸

It was precisely this experience of joyful serenity that Le Corbusier wanted to offer to the workers in the Secretariat building in Chandigarh:

Three thousand employees must climb forty metres once or twice a day. If we put in lifts they will have one or two overwhelming rush hours each day, and will contribute nothing at any other time. / The motivating force is there to be taken in the feet and in the energy of each of the three thousand employees. In installing a beautiful ramp [and] making a magnificent viewing point onto the landscape, the city and the Capitol itself, we will give to those employees for ten months at least the possibility of a wonderful morning walk.⁵⁹

⁵⁷ Le Corbusier, *Modulor 2: Let the User Speak Next*, Peter de Francia and Anna Bostock, trans., Faber and Faber, London, 1958, p. 27.

⁵⁸ Le Corbusier, *The City of Tomorrow*, Frederick Etchells, trans., The Architectural Press, London, 1971, p. 186. First published as *Urbanisme*, Editions Crès et Cie, Paris, 1924.

⁵⁹ "Trois milles employés doivent monter jusqu'à 40m. une ou deux fois par jour. Si on installe les ascenseurs ceux-ci auront une ou deux heures de pointe formidables, puis ne serviront plus à rien. / La force motrice est à prendre dans les pieds et dans l'énergie de chacun des 3000 employés. En installant

When Le Corbusier found himself working with a spectacular site, whether mountainous or not, he was more than capable of responding to it: the play between architecture and landscape in such buildings as the Marseilles Unité, the Ronchamp chapel, La Tourette and the Chandigarh Capitol is one of their most striking aspects. Faced with a blank sheet of paper on which to draw his ideal urban landscape, however, it is perhaps inevitable that Le Corbusier's sense of nature as sedative should have led him to envisage bland, generic, empty green spaces. James Dunnett identifies exactly this quality in the landscaping of Le Corbusier's cities, attributing it to the emphasis which they placed on silence, stillness and calm. Each apartment, he tells us,

would be solitary in that its outlook would not be into a busy street, but into the stillness and emptiness of distance. It would be lofty – its outlook was one of Olympian detachment.⁶⁰

In both Le Corbusier's built work and city plans, then, he attempted with varying degrees of success to restore meaning to urban life through a reconciliation with nature. The dominance of the private over the public sphere which by the late nineteenth century had overtaken Western culture would have made it difficult for Le Corbusier to imagine such a reconciliation as anything other than a private experience. When working in a rural context, as we will see in the case of the Radiant Farm and Village in a later chapter, he came much closer to creating a genuinely public realm, helped perhaps by his perception that those who work on the land do not need to detach themselves from others to contemplate it from a distance. The privileging of a private experience of the natural environment, nonetheless, remains

une belle rampe faisant point de vue magnifique sur le paysage, sur la ville et sur les beautés du Capitol lui-même, on donne à ce personnel, pendant dix mois au moins la possibilité d'une promenade matinale magnifique." Le Corbusier to Jane Drew, 11 June 1952, FLC P2-11-175.

⁶⁰ James Dunnett, "The Architecture of Silence", *Architectural Review*, October 1985, pp. 69-75, p. 75.

dominant in his work: it fed into the combination of transformative passage through space, fluidity between interior and exterior and meaningful contact with nature which characterises the architectural promenade, as we will see next.

Chapter 4: Visual and experiential approaches to nature

Two ways of interacting with the natural world emerge within Le Corbusier's work: one purely visual, in which nature becomes that which is looked at, and the other experiential, in which nature is understood through movement. The architectural promenades which define the villas of the 1920s are, as their name suggests, inseparable from ideas of movement and experience; they are also, as this chapter will show, bound up with Le Corbusier's conception of nature as view or image. His urban plans have been criticised for confining nature to a narrowly visual domain: this is the implication of Dunnett's analysis quoted at the end of the previous chapter, for instance. Stanislaus von Moos makes a similar critique, arguing that Le Corbusier's early sensitivity to "the laws governing organic growth in plants, leaves, flowers, and trees" was overtaken in his city plans by "a hunger for grandiose vistas and the sensation of limitless space":

Eight hundred feet above ground one no longer perceives the rustling of the leaves at the foot of the towers. Both the green vegetation and the greyish urban carapace grow faint and become no more than a pleasant decorative carpet. Nature appears in the grandiose (although by no means vital) form of distant perspectives and infinite spaces.¹

This chapter will try to broaden this line of argument by showing that while the attraction of the distant view was always strong for Le Corbusier, he was at the same time as concerned with movement through nature in his cities as in his built work. Ultimately, neither a perception of Le Corbusier as primarily occupied with the visual nor an interpretation based on his insistence on movement is sufficient to understand his attitude to nature: rather we need to take his interest in the visual and the

¹ Stanislaus von Moos, *Le Corbusier: Elements of a Synthesis*, MIT Press, Cambridge, Mass. and London, 1979, p. 193.

experiential together. It was in their fusion and eventual reconciliation that he saw potential for creative activity, whether in the building of a single house or in the remaking of the traditional city.

The place of the roof garden in the architectural promenade

In the series of villas which Le Corbusier built during the 1920s he was occupied with conceiving, developing and refining the idea of the architectural promenade, which can be loosely defined as a thematic unfolding of space in response to bodily movement. For Peter Carl, the promenade dramatises through a series of carefully orchestrated spatial effects and symbolic markers an “awakening to creativity”, as we saw in the previous chapter. More recently, Jan Birksted has suggested that this symbolic ascent may be linked to Le Corbusier’s interest in Freemasonry, specifically the highly charged, ritual initiations which those seeking to join a Masonic lodge had to undergo.² Other commentators have connected the emphasis on embodiment and temporality in the promenade with the picturesque movement of the eighteenth century: this approach was first proposed by Richard Etlin and has been frequently taken up since, most recently by John Macarthur.³ Less well documented, however, is Le Corbusier’s use of the promenade as a means of experimenting with different modes of perceiving and experiencing nature.

Throughout the 1920s, as we will see, the roof garden gained ever greater prominence

² Jan Kenneth Birksted, “‘Beyond the clichés of the hand-books’: Le Corbusier’s architectural promenade”, *The Journal of Architecture* 11/1, February 2006, pp. 55-132.

³ See Richard Etlin, *Frank Lloyd Wright and Le Corbusier: The Romantic Legacy*, Manchester University Press, Manchester, 1994 and John Macarthur, *The Picturesque: Architecture, Disgust and Other Irregularities*, Routledge, Abingdon and New York, 2007. Caroline Constant has also drawn on the picturesque as a way of reading Mies van der Rohe’s Barcelona Pavilion, picking up on the same emphasis within it on movement and temporality: “The meaning of the Barcelona Pavilion is not conveyed through a priori formal logic or the representation of some external reality but is given to sensual and temporal experience. While immersed in the experience of Mies’s pavilion, the spectator is simultaneously distanced from it. Such contradictions were nascent in the Picturesque.” (“The Barcelona Pavilion as Landscape Garden: Modernity and the Picturesque”, *AA Files* 20, autumn 1990, pp. 47-54, p. 47.)

in his domestic projects, becoming, ultimately, the essential culmination of the promenade. For Le Corbusier, the encounter with nature, along with intellectual or creative work, was the highest of all human activities: in the Villa Cook (1926), the Weissenhof Siedlung (1927) and the Maison de Monsieur M. X. in Brussels (1929), he placed the roof gardens and libraries next to each other, as if to state their equivalence as clearly as possible.⁴ The approach taken by Carl, Birksted, Etlin and others, then, needs to be expanded by a discussion of the way in which Le Corbusier saw the promenade both as a way of paying homage to the natural world and as an induction into a meaningful encounter with nature.

Le Corbusier first used the term “architectural promenade” in relation to the Villa La Roche as a way of explaining how it differed conceptually from the adjoining Villa Jeanneret:

These two houses joined together in a single block dramatise two very different problems: one of the houses shelters a family with children and consists of a large number of small rooms with all the services useful for the running of a family. The other house is for a bachelor, owner of a collection of modern paintings and passionate about art. This second house will be a bit like an *architectural promenade*. One enters: the architectural spectacle at once offers itself to the gaze; one follows a path and the views develop with great variety: one plays with the influx of light lighting up the walls or creating shadows. Bays open on to views of the exterior where one finds again the architectural unity.⁵

Given the emphasis which Le Corbusier placed on solitude, this distinction between the functionality of a family house and the spatial play of a bachelor’s dwelling is

⁴ Tim Benton makes the point that all Le Corbusier’s promenades “rise, typically, through the levels of human activity to culminate in a library, or in the contemplation of nature”. (*The Villas of Le Corbusier 1920-1930*, Yale University Press, New Haven and London, 1987, p. 10.)

⁵ “Ces deux maisons accouplés en un seul massif, réalisent deux problèmes très différents: l’une des maisons abrite une famille avec enfants et comporte quantité de petites pièces et tous les services utiles au mécanisme d’une famille. L’autre maison est destinée à un célibataire, propriétaire d’une collection de peinture moderne et passionné des choses de l’art. Cette seconde maison sera donc un peu comme une *promenade architecturale*. On entre: le spectacle architectural s’offre de suite au regard; on suit un itinéraire et les perspectives se développent avec une grande variété: on joue avec l’afflux de la lumière éclairant les murs ou créant les pénombres. Les baies ouvrent des perspectives sur l’extérieur où l’on retrouve l’unité architecturale.” *Oeuvre Complète 1910-1929*, p. 60.

significant: a single man who appreciates the higher things in life, like avant-garde art, is, it would seem, the appropriate consumer of the architectural promenade. We enter the Villa La Roche into the lower, darker area underneath the mezzanine that Le Corbusier inserted into the hall (fig. 4.1), and then move into the light and openness of the full triple-height space (fig. 4.2). We then pass through the hall, up a staircase and onto a cantilevered balcony (fig. 4.3), which gives a view into the space which we have just crossed – a pause in the promenade – and then progress through a corridor-like space into the gallery. Here there is a recapitulation of the entrance hall and its mezzanine: we enter the gallery through the small, covered space created by the library above (fig. 4.4) and move from there into the full height of the gallery itself (fig. 4.5). Moving to the end of the room and turning back on ourselves, we ascend the ramp (fig. 4.6) and reach the library (fig. 4.7), the culmination of the promenade; from the library there is, again, a view down into the hall. Here Le Corbusier plays with the atmospheric contrasts of darkness and light, restriction and openness, movement and stasis: in juxtaposing the experience of moving through a particular space with a view of that space from above and so constantly inviting us to contemplate the spaces through which we have just passed, the promenade at La Roche also encourages a reflective self-awareness.

Earlier plans show that Le Corbusier had originally imagined the defining element of the villa's spatial organisation as a central courtyard garden, incorporating the tree which was already on the site; four sketches published in the *Oeuvre Complète* show the major internal spaces revolving around this courtyard, giving views into, across and outwards from it, a vision closer to that eventually realised in the Villa Savoye (1929-31; figs. 4.8 and 4.9). In the Villa La Roche as built, however, no garden, courtyard or terrace has such prominence. The raising up of the

gallery on pilotis allows for a small area of landscaping underneath, but this would have been almost entirely by-passed by Raoul La Roche or any of his visitors, as one turns immediately to the right through the gate to reach the entrance. Rather than a proper roof garden, furthermore, the Villa La Roche has a small terrace hemmed in between the two houses, almost entirely enclosed and so deprived of light; this is also not part of the promenade, which, as we saw, terminates in the library. Building regulations, Le Corbusier explained in the *Oeuvre Complète*, had obliged him to abandon the original scheme, whose interpenetration of internal and external space, of architecture and nature, would have been much greater than that of the villa as built:

The plan seems tormented, because brutal regulations demanded it and strictly limited the use of the site: regulations about areas which could not be built on, existing trees to respect, regulations about height. Moreover, the sun was behind the house; the site being orientated to the north, it was necessary by various strategies to go and find the sun from the other side.⁶

Nonetheless, despite the suppression of the central courtyard, Le Corbusier still saw the promenade at La Roche as bringing the house into closer contact with its natural environment: “bays open on to views of the exterior where one finds again the architectural unity”.⁷ The principal windows look onto the space at the front of the house, where one of the “existing trees”, which would have been located within the courtyard of the first project, dominates the view (fig. 4.10). By “architectural unity”, then, Le Corbusier seems to imply a continuity between internal architectural space and external nature. He describes a similar continuity between the Athenian

⁶ “Le plan semble tourmenté, parce que des servitudes brutales l’ont exigé et ont limité strictement l’emploi du terrain: servitude de non-édificandi, arbres séculaires à respecter, servitudes de hauteur. De plus, le soleil est derrière la maison; le terrain étant orienté au nord, il faut, par certains stratagèmes, aller chercher le soleil de l’autre côté.” *Oeuvre Complète 1910-29*, p. 64.

⁷ “Les baies ouvrent des perspectives sur l’extérieur où l’on retrouve l’unité architecturale.” *Oeuvre Complète 1910-1929*, p. 60.

Acropolis and its surrounding landscape in *Towards a New Architecture*, published just as he was beginning work on the Villa La Roche:

This is architecture of a high order: the Acropolis extends its effect right to the horizon. The Propylea in the other direction, the colossal statue of Athena on the axis, and Pentelicus in the distance. This is what tells.⁸

In “extending its effect right to the horizon”, the Acropolis gathers architecture and landscape into one entity, into the unity which Le Corbusier claims for the Villa La Roche. As we will see later, he connected this effect with the visitor’s movement around the temples: the Acropolis, both through his own experience and Auguste Choisy’s account of it as “pittoresque”, would be of central importance in the development of the promenade. From the beginning of Le Corbusier’s mature career, then, nature, architecture and bodily movement were closely linked, with the aim of creating buildings which transcended functionality, an architecture “of a high order”.

In later villas Le Corbusier would place much greater emphasis on the roof garden in order to make this connection between architecture and nature more explicit. In the un-built Villa Meyer, the Villa Cook and the Villa Stein-de Monzie, roof gardens are placed at the highest level, juxtaposed in the case of Meyer and Stein-de Monzie with lower terraces, as if to imply a hierarchy of gardens through which the clients ascend in a promenade through nature. However, Le Corbusier had not yet found a way of fully integrating these gardens into the promenade as a whole, as the example of the Villa Stein shows. One of the main problems to be solved in its design was the linking of the roof garden and the hanging garden or *jardin suspendu*, and, as Tim Benton tells us, between July and December 1926 Le Corbusier considered various solutions. In the most striking of these he makes the eastern

⁸ Le Corbusier, *Towards a New Architecture*, Frederick Etchells, trans., The Architectural Press, London, 1987, p. 189. First published as *Vers une Architecture*, Editions Crès, Paris, 1923.

section of the north façade, behind which is the hanging garden, into a false wall, cuts a window-like opening into it from which a staircase rises up the north façade and onto the roof garden (fig. 4.11). Other solutions involve staircases which snake their way around the sides of the house to link the hanging garden with the roof garden. By the final design, however, Le Corbusier had abandoned the idea of linking the hanging and roof gardens, preferring to keep all the means of circulation within the rectangular plan of the house (with the exception of the staircase which links the first floor terrace with the “real garden”⁹ at ground level): the hanging garden leads into the salon, from where a staircase ascends to the roof garden.

That Le Corbusier conceived the spaces of the Villa Stein-de Monzie as an architectural promenade is suggested by his arrangement of six photographs on a single page in the *Oeuvre Complète* to show the sequence of perspectives that unfold as one ascends through the house (fig. 4.12). His comments quoted above on the Villa La Roche show that a sequence of changing views was the essence of the promenade for him: here he presents the same idea not in text but in a series of photographs.¹⁰ Although the Villa Stein, then, undoubtedly synthesises internal with semi-external and external spaces in an exemplary way in terms of its plan, and although the south façade reveals the whole programme with wonderful lucidity (fig. 4.13), the architectural promenade itself cannot be said to have been fully resolved in its design: there is no sense of an uninterrupted flow from ground floor to roof garden. If the purpose of the promenade is to make a building’s system of circulation transcend its inherent functionality and to turn it into a self-reflective, quasi-spiritual

⁹ “Vrai jardin”, *Oeuvre Complète 1910-29*, p. 146.

¹⁰ Beatriz Colomina has shown that Le Corbusier used film in the same way. In *L’Architecture d’aujourd’hui*, which he directed with Pierre Chenal in 1929, Le Corbusier ascends energetically through the Villa Stein, coming to rest only at the “lookout point” at the top of the spiral staircase on the roof. In the same film, a woman is shown tracing the architectural promenade at the Villa Savoye. (*Privacy and Publicity: Modern Architecture as Mass Media*, MIT Press, Cambridge, Mass. and London, 1994, pp. 289-93.)

journey, then the roof garden, as the place in which man can commune fully with nature, must be the culmination of a fully resolved spatial sequence if the promenade's transcendent meaning is to be realised. Two further projects show Le Corbusier beginning to attain this goal: the Villa Savoye (1929-31) and the League of Nations project for Geneva (1927-28).

At Savoye, the ramp, which had made occasional appearances in earlier villas, most notably at La Roche, becomes the principal element of the promenade. From the outside, the Villa Savoye presents a pure, uninterrupted, square envelope: the whitewashed walls wrap around the body of the house like an inscrutable skin (fig. 4.14). Le Corbusier maximised the impact of this effect by putting the main entrance at the rear, so that his clients were obliged to circumnavigate the house before going in. The contrast on exploring the interior is therefore all the more striking. The spaces of the terrace and roof garden open up inside the envelope as if dug out from above, revealed to us in sequence by the ramp which cuts through the house at all levels. As we go up the ramp from the first floor we emerge into the light as we reach the level of the terrace (fig. 4.15).¹¹ From here, we can see into the terrace garden, across it and out of it through the unglazed strip windows on the other side. This small, open, architectural space is thus juxtaposed with the natural surroundings beyond it in such a way as to make architecture's inherent connectedness to and essential difference from nature clear: the terrace is open both to the elements and the view, but it is enclosed, man-made and functional. Having glimpsed the terrace garden from the ramp we progress to walking out onto it. Again, we are made aware of the interpenetration of interior space, exterior space and landscape: the salon and

¹¹ There is a parallel here with the entrance sequence at 24 rue Nungesser-et-Coli, which Peter Carl describes in "Le Corbusier's Penthouse in Paris" as an ascent from a dark, curvaceous, cave-like space to a light, orthogonal one: the ground floor at Savoye is characterised by the curving forms of the glass wall, staircase and hand basin, while the ramp leads upwards into the airy rectilinearity of the terrace garden.

the terrace are made visually contiguous by the glass wall which divides them, while the unglazed strip window of the terrace garden runs seamlessly into the glazed window of the salon (fig. 4.16). We then continue up the ramp which takes us out of the terrace and, doubling back on itself, onto the roof garden. All levels of the villa are thus united in one promenade, with the ramp making the passage from front door to roof exceptionally smooth and coherent. “In this house”, wrote Le Corbusier, “it is a question of a real architectural promenade, offering views which are constantly changing, unexpected, sometimes surprising”.¹² Again, the essence of the promenade is described as a sequence of views, in this case views which serve to dramatise the relationship which the house bears to its surroundings. The promenade here finds its fullest expression as the medium through which the interpenetration of architecture and nature is revealed and experienced.

Writing in *Cahiers d'art* on the Villa Savoye, Le Corbusier restated his belief in the potential of a roof garden to forge a connection between his clients and nature:

It is less a question of passively adapting oneself to the ground than of uniting with the country-side [sic]: with the sky, and especially with the air! [...] The urban client for whom this construction is intended aspires to dominate the landscape rather than finding himself close to the trees and bushes. He wants to enjoy the panorama, the wind, the sun. He wants to feel the full liberty of nature, of which he is deprived in his profession.¹³

Here Le Corbusier sees nature as analogous with retreat, appropriately enough in the context of a weekend house in the suburbs of Paris. The particular experience of nature which he has in mind for the Savoyes, however, involves being elevated above ground, not too “close to the trees and bushes”. It is the sweeping view, the air and the sun which are important, rather than the details of the foliage, just as they were,

¹² “Dans cette maison-ci, il s’agit d’une véritable promenade architecturale, offrant des aspects constamment variés, inattendus, parfois étonnants.” *Oeuvre Complète 1929-34*, p. 24.

¹³ Quoted in Etlin, *Frank Lloyd Wright and Le Corbusier*, p. 127.

according to Von Moos, in the city plans. Le Corbusier reiterates this preference for an aerial view of nature in the *Oeuvre Complète*, adding that elevated gardens also have the advantage of being healthier than those on the ground:

If one is standing up in the grass, one cannot see very far into the distance. Moreover, the grass is [too] unhealthy, humid, etc... to live on it; for this reason, the real garden of the house will not be on the ground, but above the ground, at three metres fifty: this will be the hanging garden where the ground is dry and hygienic, and it is from this ground that one will have a good view of the countryside, much better than if one had stayed on the ground.¹⁴

The significance of the roof garden as the culmination of the promenade begins to become clear: the clients are moving upwards along the ramp towards a *view* of nature, a view which of course can only be obtained from an elevated position. This is the function of the pilotis, as Le Corbusier explains in an earlier account of the house in the first volume of the *Oeuvre Complète*: “the floor containing the living spaces, with its hanging garden, finds itself elevated on the pilotis in such a way as to give extensive views towards the horizon”.¹⁵ In *Precisions* he describes how the pilotis free up the ground for car parking and allow the garden to be relocated on the roof: a sketch labels the verdant ground “reconquered” and the equally verdant roof “gained”. A few pages later Le Corbusier spells out the benefits of a roof garden: “the air is clean, noise is smothered, views are distant, the street is far away”.¹⁶

This juxtaposition in the promenade of movement through nature and a view of nature is accentuated by Le Corbusier’s use of framing devices. At Savoye, on

¹⁴ “Si l’on est debout dans l’herbe, on ne voit pas très loin l’étendue. D’ailleurs, l’herbe est malsaine, humide, etc... pour y habiter; par conséquent, le véritable jardin de la maison ne sera pas sur le sol, mais au-dessus du sol, à trois mètres cinquante: ce sera le jardin suspendu dont le sol est sec et salubre, et c’est de ce sol qu’on verra bien tout le paysage, beaucoup mieux que si l’on était resté en bas.” *Oeuvre Complète 1929-34*, p. 24.

¹⁵ “L’étage de l’habitation, avec son jardin suspendu, se trouvera élevé au-dessus de pilotis de façon à permettre des vues lointaines sur l’horizon.” *Oeuvre Complète 1910-29*, p. 186.

¹⁶ Le Corbusier, *Precisions on the Present State of Architecture and City Planning*, Edith Schreiber Aujame, trans., MIT Press, Cambridge, Mass. and London, 1991, p. 44. First published as *Précisions sur un état présent de l’architecture et de l’urbanisme*, Crès et Cie, Paris, 1930.

reaching the top of the ramp which leads on to the roof garden, we are rewarded not with the open view of which Le Corbusier makes so much in the textual accounts of the house, but with a section of landscape framed in an opening cut out of the wall which forms the roof garden superstructure (fig. 4.17). From the experience of moving through nature in the promenade, we feel ourselves suddenly in the realm of the pictorial. The significance of this opening is made clear by a photograph published in the *Oeuvre Complète* of the view up the ramp towards it, captioned “architectural promenade” (fig. 4.18), as if here the whole promenade finds its essential expression in the combination of movement through nature on the ramp and a static, purely visual image of nature in the framed view.¹⁷ Inherent here is a combination of visual and experiential ways of approaching nature, of movement and stasis, a combination which is also at work in an almost contemporaneous project, the Palace of the League of Nations in Geneva (fig. 4.19).

In his account of the proposed design for the League of Nations project in *Une maison – un palais* (1928), Le Corbusier implies that the ecstatic contemplation of the landscape from the roof terrace must be preceded by a passage through that landscape at ground level if a true communion with nature is to be achieved. He begins by

¹⁷ This arrangement of ramp and frame has a source in Le Corbusier’s 1911 sketch of a cell at Ema, described in the previous chapter, in which a ramp leads to a framed view of the landscape beyond. As I found when I visited the monastery in August 2005, however, the walkways in the cells are not in fact ramps: they are completely flat. That Le Corbusier drew them as ramps, however, suggests that the ideal of an ascent towards a view of nature was already present in his mind. Jurgen Joedicke suggests the entrance to the monastery as a source for Le Corbusier’s use of ramps: “the visitor encounters a long, gently ascending ramp with low steps leading upward in the opposite direction. Going up this ramp one is looking out through large apertures enclosed with semicircular arches onto the path one has come. Was this the prototype, the model – retained in the memory – for the ramp in the Villa Savoye and all other ramps in Le Corbusier’s later work?” (“The Ramp as Architectonic Promenade in Le Corbusier’s Work”, *Daidalos* 12, June 1984, pp. 104-08, p. 105.) What he describes as a ramp running up towards the main entrance of the monastery is in fact a driveway: the monastery is on a hill, with the private road within its grounds branching off the main road, curving around the summit of the hill and finally depositing visitors at the entrance, where, as Joedicke’s accompanying photograph shows but which he does not choose to highlight in the text, a set of steps leads into the vestibule. The stairs which lead “upwards in the opposite direction” do not therefore immediately double back on the road, as Joedicke implies. The sketch of the individual cell, therefore, remains a more convincing source for the architectural promenade at Savoye.

describing the site – “it is omnipotent: magnificent groups of trees and green lawns come to see their reflections in the glittering waters of the lake”¹⁸ – and then focuses on the visitor’s approach to and movement through the building, showing us that what we are dealing with here is an architectural promenade on a grand scale. Le Corbusier explains how the approach to the building will make use of its magnificent surroundings:

But since a magnificent, high group of trees crowns the park at the end of this road [the Lausanne-Geneva road], we will conserve it; the access routes to the Palace will cross it, traced in the bushes, under the trees. Then you leave the road; you plunge into the trees with their majestic trunks; you forget the road, you come out where the land slopes towards the lake; you have forgotten the road, and Geneva and Lausanne, because in front of you, suddenly, is the prestigious site, dazzling with light, spread out, in front, to the left, to the right, and silhouetted with a delightful precision. Now you are on the ‘promised land’ of the [League of] Nations and you will dream of generous actions.¹⁹

Retreating from the city and immersing themselves in nature on the approach route through the trees, the delegates will be in an elevated state of mind, full of thoughts of the “generous actions” which will be performed within the building. They will then be reaffirmed in this state of mind through a reunion with nature on the roof garden, the culmination, as in the Villa Savoye, of the promenade:

We have followed this horizontal [the orientating axis of the design] along the entire roof terrace of the large chamber. And here we are at this extreme point, plunging suddenly into the lake and dominating the whole site in its unquestionable majesty. Let’s imagine, on this huge terrace, the crowds of the General Assembly of Nations, gathered from the four corners of the world, coming after the work of the sessions,

¹⁸ “Il est omnipotent: des futaies magnifiques et des pelouses vertes viennent se mirer dans les eaux étincelantes du lac.” Le Corbusier, *Une Maison – un palais*, Fondation Le Corbusier, Paris, 1989, p. 88. First published Editions Crès et Cie, Paris, 1928.

¹⁹ “Mais puisqu’une magnifique haute futaie couronne le parc à la limite de cette route, nous conserverons la haute futaie; des routes d’accès au Palais la traverseront, tracées dans les gazons, sous les arbres. Ainsi vous quittez la route; vous vous enfoncez dans la futaie aux troncs majestueux; vous oubliez la route; vous débouchez là où le terrain s’incline vers le lac; vous avez oublié la route, et Genève et Lausanne, car devant vous, subitement, c’est le site prestigieux, éblouissant de lumière, étalé, devant, à gauche, à droite, et silhouetté avec une précision ravissante. Alors vous êtes sur la ‘Terre promise’ des Nations et vous rêveriez à des actions généreuses.” *Une Maison – un palais*, p. 92.

simply *to see*. *To see* is enough here. Such a belvedere exists nowhere in the world in front of such a site. To see such things predisposes the soul. Even the soul of diplomacy.²⁰

Nature, Le Corbusier suggests, can act as a spiritual guide, “predisposing the soul” to make better decisions about the future of humankind. To encourage this process, the delegates must undertake a journey through nature in order to arrive at its contemplation from an elevated point. The building, moreover, has to be completely integrated with its site: the horizontal axis which determines the layout of the building takes its cue from its surroundings, of which, Le Corbusier tells us, “the horizon is the dominant factor”.²¹ It is in this way that “the architectural work” can “participate in the site which surrounds it”.²² Such integration seems a long way from his conception of the Villa Savoye as “an object placed on the ground”,²³ “without disturbing anything”²⁴ expressed in the *Oeuvre Complète*, but in *Precisions* we find Le Corbusier determined to take the same approach to the League of Nations site, on which he now proposes to build a “World Centre of Geneva”:

The plateau is in reality made up of softly rolling country, surrounded by immense sloping lawns, dotted with gigantic trees, the object of Genevan pride. Herds of cattle graze here and there. I do not want to disturb this moving rural site that recalls the sentimental pages of Jean-Jacques Rousseau.²⁵

²⁰ “Cette horizontale nous l’avons poursuivie sur toute la toiture-terrasse de la grande salle. Et nous voici à cette extrémité surplombant à pic le lac et dominant dans une majesté indiscutable le site entier. Imaginons, sur cette immense terrasse, les foules de l’Assemblée Générale des Nations, accourues des quatre coins du monde, venant après le travail des séances, *tout simplement voir*. Voir suffit ici. Un tel belvedere n’existe nulle part au monde en face d’un tel site. Voir de telles choses predispose l’âme. Même l’âme de la diplomatie.” *Une Maison – un palais*, p. 92.

²¹ “Le dominant est l’horizontale”, *Une Maison – un palais*, p. 90.

²² Le Corbusier introduces this phrase on p. 10 of *Une Maison – un palais*, referring to architecture in general; he repeats it on p. 155 as the caption of a drawing of the League of Nations roof terrace: “Ici, tout en haut, sur l’immense Toit-Jardin, les haines peuvent cesser et ‘jamais l’oeuvre architecturale, participant du site qui l’entourne, n’a dit son dernier mot’.”

²³ *Oeuvre Complète 1929-34*, p. 31.

²⁴ *Oeuvre Complète 1929-34*, p. 24.

²⁵ *Precisions*, p. 49. Having lost the League of Nations competition, Le Corbusier proposes an alternative use for the site, the “World Centre of Geneva”, consisting of “the World Museum, the World Library, the International University, the International Organisations; I even plan two skyscrapers for a business and financial centre, an airport, and a big radio transmitter and receiver.” (*Precisions*, p. 49.)

A building, then, needs simultaneously to integrate itself into its site and to leave that site untouched. These two positions are reconciled, as Adolf Vogt points out, and as we saw at Savoye, by the pilotis, which negotiate the sloping site and so allow the horizontals of building and landscape to come into a relationship with each other,²⁶ preserving at the same time the natural beauty of the site:

I conserve the grass and the herds, the old trees, as well as the ravishing views of landscapes, and above them, at a certain level, on a horizontal slab of concrete, on top of the pilotis descending to their foundations, I raise the limpid and pure prisms of utilitarian buildings; I am moved by a high intention, I proportion the prisms and the spaces around them; I compose in the atmosphere. [...] And thanks to the pilotis, on the acropolis destined for meditation and for intellectual work, the natural ground remains, the poetry is intact.²⁷

The pilotis also create a space underneath the building in which the delegates can park their cars, motorcycles or bicycles; “the route develops in these free spaces”,²⁸ Le Corbusier wrote, showing that they too were an important element of the promenade. At the Villa Savoye, too, the approach to the house by car is given particular emphasis:

So one arrives at the door of the house by car, and it is the minimum turning circle of a car which provides the actual dimensions of the house. The car enters under the pilotis, passes by the communal services, arrives in the centre, at the door to the hall, goes into the garage or continues on its way to leave again: such is the basic foundation [of the design].²⁹

²⁶ Adolf Max Vogt, *Le Corbusier, The Noble Savage: Towards an Archaeology of Modernism*, Radka Donnell, trans., MIT Press, Cambridge, Mass. and London, 1998, p. 133. Many years later, Le Corbusier would approach the sloping site of the monastery of La Tourette in a similar way, using pilotis to bridge the gap between the lowest floor and the ground and putting the garden, in this case a cloister, on the roof.

²⁷ *Precisions*, p. 49.

²⁸ “La route se développe sous ces espaces libres”, *Une Maison – un palais*, p. 94.

²⁹ “On va donc à la porte de la maison en auto, et c’est l’arc de courbure minimum d’une auto qui fournit la dimension même de la maison. L’auto s’engage sous les pilotis, tourne autour des services communs, arrive au milieu, à la porte du vestibule, entre dans le garage ou poursuit sa route pour le retour: telle est la donnée fondamentale.” *Oeuvre Complète 1929-34*, p. 24.

At both the League of Nations project and the Villa Savoye, then, we see the same sequence in operation: the approach by car, the transition from car to foot under the pilotis and the ascent to the roof garden. The pilotis, in both creating a space for the cars within the buildings and lifting those buildings above ground, reconcile the journey through the landscape with the transcendence of that landscape, the experience of nature at ground level with the view of nature from high up.

Le Corbusier's picturesque sensibility: Landscape gardening, Choisy and Purist painting

This combination of visual and experiential approaches to the natural environment first emerged in the picturesque landscape gardens of the eighteenth century. From the early 1700s formal gardens modelled on French and Italian examples began to be replaced in Britain by a new, 'natural' style, which used winding paths and apparently artless planting in an attempt to imitate 'real' landscape. Lord Burlington's garden at his villa in Chiswick, laid out by William Kent between 1715 and 1736, shows the moment of transition from the old style to the new (fig. 4.20). Avenues radiate out from the house in the manner of Baroque gardens, but between them paths wind through trees, tracing circuitous routes along which vistas open and close in response to the visitor's movement; monuments and mock-temples are carefully placed to provide moments of contemplation. The contrast is between a static condition, based on a single, fixed viewpoint, and a dynamic one, based on multiple viewpoints. While seventeenth-century gardening preserved the long-standing distinction between 'wild' nature and that which had been shaped by man, the picturesque style aimed to show nature as it really was, stripped of all formal conventions of representation. A friend of Lord Burlington summed up the new approach in 1734:

There is a new taste in gardening just arisen, which has been practised with so great success at the Prince's garden in town [Carlton House, by Kent], that a general alteration of some of the most considerable gardens in the kingdom is begun, after Mr Kent's notion of gardening, viz., to lay them out, and work without either level or line. By this means I really think the twelve acres the Prince's garden consists of, is more diversified and of greater variety than anything of that compass I ever saw; and by this method gardening is the more agreeable, as when finished, it has the appearance of beautiful nature; without being told one would imagine art had no part in the finishing, and is, according to what one hears of the Chinese, entirely after their models for works of this nature, where they never plan straight lines or make regular designs. The celebrated gardens of Claremont, Chiswick and Stowe and now full of labourers.³⁰

Such was the level of interest in 'natural' gardening that the new style spread rapidly across Europe and became particularly popular in France, where the results were dubbed "jardins anglais".

The reciprocity of movement and stasis in the picturesque garden finds a clear parallel in Le Corbusier's architectural promenade, as commentators have already noted. The connection has, however, recently been questioned by Jan Birksted, who argues that Le Corbusier had no interest in the picturesque whatsoever. While he is correct in saying that "the many plans and engravings of gardens and landscapes that Jeanneret copied from books when working in the *Cabinet des Estampes* at the *Bibliothèque Nationale* on his trips to Paris do not include picturesque English landscape gardens",³¹ he does not mention that Le Corbusier did make drawings of landscape gardens in Germany, which were closely modelled on English examples (figs. 4.21 and 4.22). Moreover, as we will see, he would include a "jardin anglais" in his plan for the Contemporary City ten or so years later.

The connection between Le Corbusier and the picturesque through Auguste Choisy is also well known. In his *Histoire de l'architecture* of 1899, which Le

³⁰ Sir Thomas Robinson to Lord Carlisle, 1734, quoted in John Harris, *The Palladian Revival: Lord Burlington, his Villa and Garden at Chiswick*, Canadian Centre for Architecture, Montreal and Royal Academy of Arts, London, 1994, pp. 196-97.

³¹ "Beyond the clichés of the hand-books", p. 59

Corbusier acquired in 1913, Choisy included a series of drawings which present the Acropolis as “pittoresque”. Birksted seeks to debunk this source as well, arguing that Choisy’s use of the term has nothing to do with the eighteenth-century notion of the picturesque, and that attempts to link Choisy with the English landscape garden are based on a linguistic “slippage” from “pittoresque” to “picturesque”.³² However, Birksted does not offer any alternative explanation of what Choisy *did* mean by “pittoresque”; further, he ignores the fact that the way in which Choisy drew the Acropolis is entirely picturesque, emphasising as it does the impact of the temples in response to movement and bringing out the powerful effects of their asymmetrical arrangement. Moreover, Birksted’s account of the usage of the term “pittoresque” in late nineteenth and early twentieth-century La Chaux-de-Fonds clearly has nothing to do with Choisy, and his argument that it was important for Le Corbusier’s promenade is no more convincing than the long-standing argument in favour of Choisy which he is attempting to disprove. Whether or not “pittoresque” is an exact rendering of “picturesque”, and whether the French term had currency in the eighteenth century alongside the familiar “jardin anglais”, the link between Choisy and the picturesque, I would argue, remains solid.

Le Corbusier follows Choisy closely in his own account of the Acropolis in *Towards a New Architecture*, to the point of reproducing his drawings without acknowledging their authorship (fig. 4.23). Le Corbusier opens with the general point that, “in actual fact a bird’s-eye view such as is given by a plan on a drawing-board is not how axes are seen; they are seen from the ground, the beholder standing up and looking in front of him”.³³ The picturesque garden designers worked from the same perspective, as Choisy identified: not from the single, elevated viewpoint assumed by

³² “Beyond the clichés of the hand-books”, pp. 57-59.

³³ *Towards a New Architecture*, p. 187.

the formal garden, but from the point of view of the moving spectator experiencing the landscape as it unfolds temporally and spatially. Le Corbusier goes on,

Because they are outside this forceful [central] axis, the Parthenon to the right and the Erechtheum to the left, *you are enabled to get a three-quarter view of them*, in their full aspects. Architectural buildings should not all be placed upon axes, for this would be like so many people all talking at once.³⁴

The reference to “axes” alerts us to Le Corbusier’s reason for bringing Choisy into play at this point in *Towards a New Architecture*: to support the argument which he has been building up in the previous few pages that modern architecture should rediscover the spirit of the ancient Greeks and Romans, whose understanding of meaningful axial planning far exceeds that of the Ecole des Beaux-Arts, in which

the plan, which is really a cluster of ideas and of the intention essential to this cluster of ideas, has become a piece of paper on which black marks for walls and lines for axes play at a sort of mosaic on a decorative panel making graphic representations of star-patterns, creating an optical illusion. The most beautiful star becomes the Grand Prix de Rome.³⁵

Le Corbusier contrasts this approach with the examples of the Green Mosque at Broussa and the Casa del Noce at Pompeii; in both cases he emphasises the changing views that are revealed in response to the visitor’s movement. His focus in the Mosque is on the manipulation of light and shade through variations in the spatial volumes:

In Broussa in Asia Minor, at the Green Mosque, you enter by a little doorway of normal human height; a quite small vestibule produces in you the necessary change of scale so that you may appreciate, as against the dimensions of the street and the spot you come from, the dimensions with which it is intended to impress you. Then you can feel the noble size of the mosque and your eyes can take its measure. You are in a great white marble space filled with light. Beyond you can see a second similar space of the same dimensions, but in half-light and raised on several steps (repetition in a

³⁴ *Towards a New Architecture*, p. 189.

³⁵ *Towards a New Architecture*, p. 180.

minor key); on each side a still smaller space in subdued light; turning round, you have two very small spaces in shade. From full light to shade, a rhythm. Tiny doors and enormous bays. You are captured, you have lost the sense of the common scale. You are enthralled by a sensorial rhythm (light and volume) and by an able use of scale and measure, into a world of its own which tells you what it set out to tell you. What emotion, what faith!³⁶

In his account of the Casa del Noce we find the same emphasis on effects of light and space, together with a sense of the building's fusion of internal and external space:

Again the little vestibule which frees your mind from the street. And then you are in the Atrium [...]; but at the far end is the brilliance of the garden seen through the peristyle which spreads out this light with a large gesture, distributes it and accentuates it, stretching widely from left to right, making a great space. Between the two is the Tablium [sic], contracting this vision like the lens of a camera. On the right and on the left two patches of shade – little ones. Out of the clatter of the swarming street which is for every man and full of picturesque incident, you have entered the house of *a Roman*.³⁷

In both these accounts we can see a clear link between Le Corbusier's readings of historical buildings as based on the principle of bodily movement and his attempts to shape his own buildings around the idea of the promenade. The gathering of nature into the confines of the Casa del Noce in the form of an enclosed garden was particularly influential for Le Corbusier's incorporation of terraces and roof gardens in his promenades; there is also an echo of his description of the roof garden at the Villa Jeanneret – “we flee from the street; we go towards the light and pure air”³⁸ – in the contrast which he draws between the cool interior and the “swarming street”.

Le Corbusier moves on from these examples to the Acropolis, reading it through Choisy's notion of the picturesque in order to reiterate that bodily movement is of crucial importance in the creation of richly harmonious and dramatic axial relationships and so to debunk the meaningless formality of Beaux-Arts planning. As

³⁶ *Towards a New Architecture*, pp. 181-83.

³⁷ *Towards a New Architecture*, pp. 183-84.

³⁸ “On fuit la rue; on va vers la lumière et l'air pur.” *Oeuvre Complète 1910-29*, p. 65.

we have already seen, he also saw the visitor's movement around the Acropolis as revealing the relationship between the temples and the surrounding landscape. In his account of the Villa Savoye in the second volume of the *Oeuvre Complète*, Le Corbusier drew on Arab vernacular architecture to make the same distinction between an architecture which lives only on the page, in the realm of the purely visual, and one which depends on movement and experience:

Arab architecture gives us a precious lesson. It can be appreciated only in walking, on foot; it is in walking, in moving from place to place, that one can see the essential elements of architecture developing. It is a principle contrary to that of Baroque architecture, which is conceived on paper, around a fixed theoretical point. I prefer the lesson of Arab architecture.³⁹

Baroque architecture also came in for criticism in *Towards a New Architecture*, on the same grounds of being "conceived on paper". Here is Le Corbusier's account of the building of Versailles:

At the foot of his throne, [Louis XIV's] architects brought to him plans drawn from a bird's eye view which seem like a chart of stars; immense axes, formed like stars. The Roi-Soleil swells with pride; and gigantic works are carried out. But a man has only two eyes at a level of about 5 feet 6 inches above the ground, and can only look at one point at a time. The arms of the stars are only visible one after the other, and what you really have is a right angle masked by foliation. A right angle is not a star; the stars fall to pieces.⁴⁰

This is in fact an unjust attack given that the Baroque was far from being merely a dry, formal style – rather, it was richly symbolic, in contrast to the approach of the Beaux-Arts. Le Corbusier chooses to concentrate on its reliance on fixed points of view in order to make his preference for an architecture based on the experience of a

³⁹ "L'architecture arabe nous donne un enseignement précieux. Elle s'apprécie à la marche, avec le pied; c'est en marchant, en se déplaçant, que l'on voit se développer les ordonnances de l'architecture. C'est un principe contraire à l'architecture baroque qui est conçue sur le papier, autour d'un point fixe théorique. Je préfère l'enseignement de l'architecture arabe." *Oeuvre Complète 1929-34*, p. 24.

⁴⁰ *Towards a New Architecture*, pp. 196-97.

person moving around at ground level clear; the same objection to the Baroque was the basis of the picturesque movement.

Le Corbusier's sense of the reciprocity between image and experience, as well as drawing from the picturesque through Choisy, also had its roots in developments in painting in the first couple of decades of the twentieth century. Colin Rowe and Robert Slutzky make the link between modernist architectural space and Cubist painting in their essay, "Transparency: Literal and Phenomenological". They read the Villa Stein-de Monzie as playing with notions of surface and depth in a manner analogous to that of a painting by Picasso, Braque or Léger, seeing the relationship between its façade and plan as governed by a series of advancing and receding planes which keep the real depth of the space ambiguous. "In itself", they comment,

each of these planes is incomplete or perhaps even fragmentary; yet it is within these parallel planes as points of reference that the façade is organised, and the implication of all is that of a vertical layerlike stratification of the interior space of the building, of a succession of laterally extended spaces travelling one behind the other.⁴¹

Similarly, they argue, a Cubist painting challenges our notion of how figures or objects relate to the pictorial space as a whole, breaking down conventional ideas of 'foreground' and 'background' and combining the illusion of depth in a painting with the assertion of the picture plane. Painting had been exploring such territory since Cézanne's experiments with the representation of depth on canvas in the late nineteenth century, without which Cubism could not have developed. Rowe and Slutzky do not, however, mention Le Corbusier's own Purist painting which, although it was critical of Cubism, drew much from its experiments in new ways of

⁴¹ Colin Rowe (with Robert Slutzky), "Transparency: Literal and Phenomenal", in *The Mathematics of the Ideal Villa and Other Essays*, MIT Press, Cambridge, Mass. and London, 1976, pp. 159-183, p. 168.

representing space. His *Composition with Guitar and Lantern* (1922; fig. 4.24), to take one typical example, takes up a common subject matter of Cubism, ordinary household objects, and renders them in multiple perspectives: the two bottles and the glass, for instance, are shown both frontally and as if from above in an attempt to approximate the experience of live vision. What we imagine to be a tabletop rises vertically rather than extending away from us, making the depth of the pictorial space uncertain. The spatial ambiguity which Rowe and Slutzky identify in Le Corbusier's early architectural work, therefore, results equally from his own attempts to rethink pictorial space as from those of others. Moving from painting to architecture, Rowe and Slutzky find the same ambiguity between two and three-dimensional space in the Villa Stein: "the reality of deep space is constantly opposed to the inference of shallow".⁴² The architectural promenade of the Villa Savoye, as we saw, operates in a similar way: the three-dimensional, experiential space of the house is suddenly transformed into the two-dimensional, quasi-pictorial space of the opening in the roof garden wall. The act of image-making implied in this framed view, however, is inseparable from the promenade which we have just followed to reach it: Le Corbusier does not privilege a two-dimensional experience of nature over a three-dimensional one, but offers us both simultaneously.

Frames, photographs and the right angle: the Petite Maison in Vevey

Two and three-dimensional approaches to nature also come together in the Petite Maison, or Villa Le Lac, which Le Corbusier built for his parents on the banks on Lake Geneva in 1923-24, both in the framing of nature within a promenade and in the use of photographs and sketches to make a revisionist reading of the house as an

⁴² "Transparency", p. 170.

expression of the right angle. The promenade here is much simpler than that of the Villa Savoye, but nonetheless there is a clearly delineated path through the house whose purpose is to engage us in the interaction between building and landscape that is at the heart of the design. From the street the house gives little away: a wall runs along the northern edge of the plot, and a gate cut into it gives access to the house. Between gate and front door is a small strip of garden, a prelude to the much larger areas of greenery to come. Once we have gone through the front door and turned left into the salon, we see the way in which the house opens itself to the south: a strip window runs the whole length of the south façade, giving views onto the lake (fig. 4.25). From the salon we move through an open sliding door into the guest bedroom, and from there through a glazed door, down a few steps and into the loggia which extends a short way into the garden. Le Corbusier has elongated the roof beyond the house and supported it at its end with two thin poles, using the simplest means possible to create a small covered area within the garden (fig. 4.26). The garden itself, walled on three sides, Le Corbusier described as “a room of greenery” and “an interior”,⁴³ implying that he saw it as a small piece of domesticated nature and, more broadly, that to take possession of contained areas of external space in this way, to make them comfortable and habitable, is part of the function of architecture. He emphasises the garden’s role as an extension of the internal spaces by making an opening in the south wall of the garden and installing a table in front of it, to which two chairs are drawn up. The landscape which is framed within the opening, as at the Villa Savoye, is treated as an image: again, the two and three-dimensional are fused. A photograph in *Une Petite Maison*, the book which Le Corbusier published on the house in 1954, illustrates this effect very clearly (fig. 4.27): we know that the view

⁴³ Le Corbusier, *Une Petite Maison*, Aux Editions d’Architecture, Zurich, 1993, p. 24. First published Editions Girsberger, Zurich, 1954.

through the opening has depth and distance, but, as in a Purist or Cubist painting, that depth becomes momentarily ambiguous and our perception of it confused. For Le Corbusier, this ambiguity points us towards a better, more intense way of seeing:

Have you noticed that under such conditions [uninterrupted landscape on all sides] one no longer ‘sees’? To lend significance to the scenery one has to restrict it and give it proportion; the view must be blocked by walls which are only pierced at certain points and there permit an unhindered view.⁴⁴

Here, again, the frame becomes a tool for seeing, a device which, by making spatial depth ambiguous and so playing with the tension between visual and bodily modes of perception, gives us a more intense experience of the natural landscape. The frame is, paradoxically, a way of paying homage to the beauties of untouched nature by containing and pictorialising them, by bringing them into the shifting canvas of architectural space.

In the book which he published on the house in 1954, *Une Petite Maison*, Le Corbusier recast the design of the house as an expression of the right angle, the symbol which he described as “not only the foundation of my being but also the very foundation of my architecture and of my art”.⁴⁵ For Le Corbusier the meeting of horizontal and vertical in the right angle signified the union of man and nature, as he made clear in section A3 of *The Poem of the Right Angle* (1955):

The universe of our eyes rests
upon a plane edged with horizon
Facing the sky
let us consider the inconceivable space
hitherto uncomprehended.
Repose supine sleep
– death
With our backs on the ground...
But I am standing straight!

⁴⁴ *Une Petite Maison*, p. 23-24.

⁴⁵ Le Corbusier to Marcel Levaillant, 21 April 1954, in Jean Jenger, ed., *Le Corbusier, Choix de Lettres*, Birkhäuser – Editions d’Architecture, Basel, Boston, Berlin, 2002, p. 376.

since you are erect
you are also fit for action.
Erect on the terrestrial plain
of things knowable you
sign a pact of solidarity
with nature: this is the right angle
Vertical facing the sea
there you are on your feet.⁴⁶

The image accompanying this passage shows a man standing on the ground, his body intersected at the genital area by the line of the horizon (fig. 4.28). In *Precisions* Le Corbusier recalls the moment of revelation when the figure of the right angle struck him for the first time:

I am in Brittany; this line is the limit between the ocean and the sky; a vast horizontal plane extends towards me. I appreciate the voluptuousness of this masterly restfulness. Here are a few rocks to the right. The sinuousness of the sandy beaches like a very soft undulation on the horizontal plane delights me. I was walking. Suddenly I stopped. Between my eyes and the horizon, a sensational event has occurred: a vertical rock, in granite, is there, upright, like a menhir; its vertical makes a right angle with the horizon. Crystallisation, fixation of the site. This is a place to stop, because here is a complete symphony, magnificent relationships, nobility. The vertical gives the meaning of the horizontal. One is alive because of the other. Such are the powers of synthesis.⁴⁷

In section C2 of the *Poem* Le Corbusier depicts this same Breton scene (fig. 4.29); here, however, the rock is positioned in such a way as to double as the oversized penis of a man lying on the sand, while a woman crouches nearby. The right angle is formed both by the intersection of the rock and the sea and by the fusion of man and nature; the potential for creativity in such a fusion is suggested by the naked woman, who stands for the reconciliation of opposites in sexual union.

Certain photographs in *Une Petite Maison* emphasise the right angles formed at those points in the design when house and landscape are interacting most closely.

⁴⁶ Le Corbusier, *The Poem of the Right Angle*, Kenneth Hylton, trans., Fondation Le Corbusier and Editions Connivences, Paris, 1989, pp. 29-30.

⁴⁷ *Precisions*, p. 75.

The strip window draws the interior of the house into a relationship with the horizontal line of the lake, much as we saw at the League of Nations, where the whole orientation of the complex also took its cue from the view of Lake Geneva (fig. 4.30). The verticals of the window frames intersect with the line of the lake, forming right angles which balance the dominant horizontal thrust. Another right angle is formed by the intersection of the pole supporting the loggia with the wall which divides the house from the lake. This occurs at the point at which the whole expanse of the view is visible, as if the assertion of human agency symbolised by the vertical pole can continue the work of the framing device of the opening in the garden wall further to the east, making sense of the open, dazzling view and ensuring that one continues to “see”. A photograph in *Une Petite Maison* emphasises this effect (fig. 4.31), while the adjacent text makes the connection with the right angle explicit:

A column carries the roof of the sheltered area: it is a metal tube six centimetres in diameter. / The place which it occupies in conjunction with the old wall of the lake establishes a signal fact: the cross of the right angle – co-ordinate of the water and the mountains.⁴⁸

To underline the importance of the right angle in his presentation of the *Petite Maison*, Le Corbusier ends the first section of the book, which contains the photographs discussed, with a sketch of a right angle in which an unidentified vertical intersects with a horizontal landscape (fig. 4.32).

This insistence on the right angle is further exemplified by a set of sketches which Le Corbusier made as instructions for the local photographer, Claudine Péter, whom he had commissioned to document the house for *Une Petite Maison*. The sketches show the exact compositions of the photographs which he wanted her to

⁴⁸ “Une colonne porte le toit de l’abri: c’est un tuyau métallique de six centimetres de diamètre. / La place qu’il occupe avec le vieux mur du lac, institue un fait insigne: la croisée de l’angle droit – coordonnée des eaux et des monts.” *Une Petite Maison*, p. 29.

take: each one has a frame drawn around it and is marked with the time of day at which it should be taken. The sketch of the salon shows the line of the lake firmly drawn in, intersected by vertical lines representing curtains (fig. 4.33); those of the loggia emphasise the strong vertical of the pole against the horizontal of the landscape, one in particular showing the pole as much darker and thicker than it actually is in an attempt to convey its importance as part of the right angle (fig. 4.34). Le Corbusier, then, conceived of the Petite Maison during its design and construction in the early 1920s as embodying the reciprocity of architecture and nature; in the 1950s he expanded this conception by means of the right angle, so that the house becomes not just an embodiment but also a symbol of the union of man and nature.

Nature, vision and experience in the city

As we saw at the beginning of this chapter, Le Corbusier's urban plans have been criticised for their reduction of the city to a purely visual domain. While this critique is certainly a fair one – the drawings of giant eyes attached to Unité-type blocks cited in the previous chapter could be used to support it, for instance (fig. 3.12) – it is not the whole story. The fusion of visual and bodily experiences of nature which we saw in Le Corbusier's villas is also present in his city plans, where nature emerges both as that which is viewed from above and that which is experienced at ground level.

In the earliest of the city plans, the Contemporary City, a large area on the western edge of the plan is given over to a “jardin anglais”⁴⁹ (fig. 4.35): rather than simply calling it a park, Le Corbusier used the eighteenth-century French term for a picturesque landscape garden. The Contemporary City gave him an opportunity to

⁴⁹ Le Corbusier, *The City of Tomorrow*, Frederick Etchells, trans., The Architectural Press, London, 1971, p. 170. First published as *Urbanisme*, Editions Crès et Cie, Paris, 1924.

revive his early interest in landscape gardening, perhaps in order to pay homage to a time before nineteenth-century industrialisation had brought about the alienation of urban man from nature. By including this *jardin anglais*, with its winding paths through greenery, Le Corbusier imagined a space in which nature will be experienced through bodily movement, at ground level. As we have seen, he saw Choisy's "picturesque" reading of the Acropolis as constituting an architectural promenade; in the Contemporary City he goes back to the source of that reading, landscape gardening, to emphasise the importance of experiencing nature through movement in an urban setting. The green space at the foot of the medium-rise blocks "with setbacks" and within the "cellular" dwellings is also traced with winding paths whose picturesque overtones imply once again an interaction between a moving spectator and the natural environment (fig. 2.7). Le Corbusier retained this form of landscaping in the Radiant City of 1933 and all of his subsequent plans based on it, such as that for the Paris International Housing Exhibition of 1937. In *The Home of Man*, this combination of medium-rise housing blocks joined together at right angles with winding paths and greenery underneath is still in place: as at the Villa Savoye and the League of Nations, the pilotis reconcile the experience of landscape at ground level with the elevated view from higher up. Here the paths are explicitly labelled as "pedestrian roads",⁵⁰ as if to identify the particular experience of nature available to someone travelling on foot and to reassert the importance of the "lesson of Arab architecture".

The same lesson is impressed on us in another series of sketches in *The Home of Man*. The subject is trees, the "companions of man".⁵¹ Each of the sketches is drawn from the perspective of someone walking through a wooded area, with the trees

⁵⁰ Le Corbusier and François de Pierrefeu, *The Home of Man*, Clive Entwistle, trans., The Architectural Press, London, 1948, p. 117. First published as *La Maison des Hommes*, Librairie Plon, Paris, 1942.

⁵¹ *Home of Man*, p. 90.

in the foreground larger than those in the background. There is a hint of the picturesque here, too: “broad paths wind among the lawns” (fig. 4.36).⁵² Architecture is, in fact, effaced by nature in this vision of life in a wooded grove: “great blocks of dwellings run through the town. What does it matter? They are behind the screens of trees” (fig. 4.37).⁵³ No buildings are visible from above, either; the aerial view presents an entirely pastoral scene:

To dwellings high above the ground is offered the spectacle of the sky and all its movements and its colours, its forms throughout the seasons. A distant hill appears. From below push the green domes of the tangle of trees. The town is ‘green’.⁵⁴

As with the Villa Savoye, Le Corbusier makes a distinction between the aspects of nature which most impress us from an elevated viewpoint – the sky, the distant landscape – and those which are apparent on the ground, the details of leaves and branches of the different species of tree. The series ends with another shift in perspective to that of a person in his or her dwelling, contemplating the trees outside through a large glazed wall (fig. 4.38); in this way, “nature is inscribed in the lease, a pact is signed with nature”.⁵⁵ Again, we have to engage with nature from both a bodily and a visual perspective; Le Corbusier’s vision of urban life, I suggest, aims at the possibility of such a combination.

The implications of aerial and ground level views are most powerfully laid out in an earlier book, *Aircraft* (1935). Le Corbusier was a great enthusiast of flight, seeing aeroplanes as supreme examples of the technological possibilities of the new machine age. He was also excited by the new, almost God-like way of seeing which they offered to human kind:

⁵² *Home of Man*, p. 92.

⁵³ *Home of Man*, p. 91.

⁵⁴ *Home of Man*, p. 93.

⁵⁵ *Home of Man*, p. 97.

The airplane, in the sky, carries our hearts above mediocre things. The airplane has given us the bird's-eye view. When the eye sees clearly, the mind makes a clear decision.⁵⁶

“Contemplation of the earth from above conduces to meditation”,⁵⁷ Le Corbusier tells us a few pages later: the studies or libraries in the villas, spaces consecrated to intellectual or creative effort and located on the highest floors, are, literally, taken to another level. His object of contemplation from the air is the nineteenth-century city, “bustling, heartless, cruel and money-grubbing”,⁵⁸ and for almost the entire length of *Aircraft* Le Corbusier extols the value of the aerial view in solving the problem of the traditional city. From above one can see examples of good and bad practice – the cities of the west are unfavourably compared to those of the M'Zab desert in North Africa – and observe the laws of nature which need to be followed in the making of the cities of the future. As David Leatherbarrow points out, however, there is a striking change in tone on the final page. Le Corbusier contrasts the “wilderness” which he sees from the air with the view from the ground in which “flowers and trees have dimension: a measure relative to human activity, proportion”. The elements have overwhelmed him and he longs to return to the domain of the “human scale”:

Everything escapes me. I no longer possess an instrument that gives dimension, which makes form finite, complete, entire: my feet on the earth and my eye five feet or so above the ground. / The non-professional who flies (and so whose mind is empty) becomes meditative: he can take refuge only in himself and in his own works. But once he has come down to earth his aims and determinations have found a new scale.⁵⁹

The air is the plane of meditation; the ground is the plane of action. The aerial view can help to formulate the correct course of action, but it cannot be the place from

⁵⁶ Le Corbusier, *Aircraft*, Studio Vista, London and New York, 1935, p. 13.

⁵⁷ *Aircraft* (section containing photographs with text unpaginated).

⁵⁸ *Aircraft*, p. 12.

⁵⁹ *Aircraft*.

which that action is taken. In order to put the new perspectives gained through his flight experience to use in the making of the new city, then, Le Corbusier must come back down to earth and relinquish the aerial view. Leatherbarrow sums up the passage as follows: “this last recognition of the need to return to the mundane horizon and for individual action, with its tangle of limitations, contrasts sharply with the secular transcendence of high-altitude thinking”.⁶⁰ He goes on to suggest that Le Corbusier thrived on such contrasts, making the reconciliation of opposites the crucible of all his creative activity.

In section A3 of the *Poem of the Right Angle*, which Leatherbarrow discusses elsewhere but does not connect with *Aircraft*,⁶¹ Le Corbusier equates standing “erect on the terrestrial plane” with being “fit for action”: a man, vertical against the horizontal line of the sea, makes a right angle, which, as we saw above, constitutes a “pact of solidarity with nature”.⁶² Le Corbusier chose the right angle as the ultimate symbol of such a reconciliation of opposites, standing for the limitless potential which can arise from man working in harmony with nature. He evokes the right angle, whether in the *Poem* or, as we saw at Vevey, in the presentation of much earlier buildings to show us that it is only at ground level that a true reconciliation with nature can be achieved. This takes us back to his use of Choisy as ammunition in his war against the tyranny of the aerial view in Beaux-Arts planning. Between *Towards a New Architecture* (1923), *Aircraft* (1935) and *The Poem of the Right Angle* (1955), then, Le Corbusier is consistent in his preference for the ground-level view and the experience rather than the visual consumption of nature which it implies. In his buildings, through the use of the architectural promenade, the two become

⁶⁰ David Leatherbarrow, *Uncommon Ground: Architecture, Technology, and Topography*, MIT Press, Cambridge, Mass. and London, 2000, p. 16.

⁶¹ David Leatherbarrow, *Topographical Stories: Studies in Landscape and Architecture*, University of Pennsylvania Press, Philadelphia, 2004, p. 129.

⁶² *Le Poème de L'Angle Droit*, pp. 29-30.

inseparable, as we saw in the conjunction of the ramp and the frame at the Villa Savoye and the integration of building and landscape in the promenade at the League of Nations. Built form transcends rhetoric; nature and architecture fuse and intersect; ways of seeing and interacting with the natural environment are gathered into one architecturally mediated experience. In the city plans, perhaps inevitably, built and natural domains are less well integrated with each other, so that the experience of nature at ground level and the view of nature from high up become separate and discontinuous. Nonetheless, even in the cities, when Le Corbusier is at his most schematic, nature still carries with it ideas of embodiment, movement and direct experience.

Chapter 5: Primitivism and nature

For Le Corbusier, the attraction of peasant or primitive societies lay in their relationship with nature, which he saw as encompassing a richness and authenticity entirely lacking in western industrialised culture. This view first manifests itself in *Journey to the East*, when, travelling outside western Europe for the first time, Le Corbusier refers to “men who do not reason”, who have “an instinctive feel for the organic line”:¹ he equates the absence of “high” aesthetic norms with a greater sensitivity to nature. Le Corbusier’s travels continued to furnish him with examples of such closeness to nature among non-western peoples. In *The Radiant City*, for instance, under the heading “Witnesses: the ‘Barbarians’ Speak” he captions an illustration (fig. 5.1) of two women on a terrace overlooking Algiers,

Oh inspiring image! Arabs, are there no peoples but you who meditate daily in the splendid sunset hours? [...] The Casbah is nothing but an enormous stairway, a lofty gallery where thousands come each evening to worship nature.²

Le Corbusier did not neglect the French peasantry, however, who, he claimed, “think with that special and precious quality found only in people who are in permanent contact with nature: her elements – the sun, the sky, the seasons; her flora and fauna; her laws”.³ The function of the city, for him, was to recreate this primitive condition of living in harmony with nature: in *The City of Tomorrow* he declared that, “an urban manifestation which completely ignored nature would soon find itself at odds with our

¹ Le Corbusier, *Journey to the East*, Ivan Žaknić, ed., trans. and annotated in collaboration with Nicole Pertuiset, MIT Press, Cambridge, Mass. and London, 1987, p. 16. First published as *Le Voyage d’Orient*, Jean Petit, ed., Forces Vives, Paris, 1966.

² Le Corbusier, *The Radiant City*, Pamela Knight, Eleanor Levieux and Derek Coltman, trans., Faber and Faber, London, 1967, pp. 230-33. First published as *La Ville Radieuse*, Vincent, Fréal et Cie, Paris, 1933.

³ *Radiant City*, p. 323.

deepest primeval instincts”;⁴ in *The Radiant City* he writes of “the communion that exists between man and nature”⁵ which, having prevailed since ancient times, has been severed by what he calls elsewhere “the birth pangs of the machine age”.⁶ Le Corbusier goes on to make a distinction between the “natural” conditions that prevailed in pre-modern times and the “artificial” existence of contemporary city dwellers:

[Who is observing and recording] that herds, consisting of millions of heads of men, have [...] strayed from the paths of nature and wandered into those of artificiality? And that these men, members of a species developed over thousands and thousands of years (both biologically and physically) according to established relations with the sky, with fresh air, with the sun, with greenery, with water, with physical activity, have now been torn out of that framework and are wasting away in an entirely unnatural environment?⁷

Where once man lived in a kind of pre-lapsarian harmony with the elements, his life balanced and ordered by natural forces, he now finds himself cast adrift, trying in vain to shape a satisfactory way of life in a hostile, “unnatural” setting. To reconnect with nature, then, would be to recover a lost condition, one that lives on only in surviving pockets of primitive culture.

While Le Corbusier was particularly concerned with the role of nature in primitive societies, an interest in the primitive more generally was ubiquitous among the avant-garde in the early twentieth century. Fundamental to artistic and architectural Modernism was a search for the original, the authentic and the mystical. The simple means and pure expressions of primitive art were held up as a challenge to

⁴ Le Corbusier, *The City of Tomorrow*, Frederick Etchells, trans., The Architectural Press, London, 1971, p. 237. First published as *Urbanisme*, Editions Crès, Paris, 1924.

⁵ *Radiant City*, p. 70.

⁶ Le Corbusier, *New World of Space*, Reynal and Hitchcock, New York and Institute of Contemporary Arts, Boston, 1948, p. 11.

⁷ *Radiant City*, p. 66. This antithesis of the natural and the artificial was also evoked by Edward Carpenter who was, as we saw in Chapter 2, a crucial influence on Raymond Unwin (see Mark Swenarton, *Artisans and Architects: The Ruskinian Tradition in Architectural Thought*, Macmillan, London and Basingstoke, 1989, p. 133).

the decadence and over-ornamentation of western artistic production, while primitive modes of thought were championed as alternatives to the all-dominating forces of technology and rationalism. Le Corbusier's interest in the primitive is firmly rooted in this general and long-established tendency; his particular brand of primitivism, however, is complex and multi-faceted, encompassing both an uninflected celebration of peasant or primitive culture and a refusal to idealise it. For him, the primitive both revealed the deeper, symbolic understanding that industrialised societies must recover and exemplified the use of standardised forms: it therefore united the primordial with the modern. Furthermore, although Le Corbusier enthused about the humble peasant's closeness to nature, he resisted all forms of nationalist rhetoric, seeking in primitive culture a universalism which transcended political expediency. This chapter will outline the more 'conventional' aspects of his primitivism – his celebration of primitive culture and his attempts to recreate its modes of expression – before going on to show that rather than being two distinct strands, his interest in the primitive and his commitment to the modern are inseparable in his work. Finally, I will examine the place of his primitivism in his engagement with the Vichy government.

Origins of Le Corbusier's primitivism

Le Corbusier's attraction to primitive societies was rooted in a long tradition in western culture. The dream of a simple life lived by simple people in close contact with nature can be traced back as far as ancient Greece, but it rose to particular prominence in modern times in the eighteenth century. In 1755 Jean-Jacques Rousseau entered his *Discourse on the Origin and Foundations of Inequality Among Men* for an essay competition launched by the Académie de Dijon; in it he proposed that life in the "state of nature" had been succeeded by "civilisation", a process, he

argued, of ruinous decline. Rousseau begins by describing man “as he must have issued from the hands of nature”:

I see an animal less strong than some, and less agile than others, but, upon the whole, the most advantageously organised of any: I see him satisfying his hunger under an oak, or his thirst at the first brook; I see him laying himself down to sleep at the foot of the same tree that afforded him his meal; and there are all his wants completely supplied.⁸

He goes on to explain that this original man was perfectly adapted to survive in a harsh environment and operated in peak physical condition:

Accustomed from their infancy to the inclemency of the weather, and to the rigour of the different seasons; inured to fatigue, and obliged to defend, naked and without arms, their life and their prey against the other wild inhabitants of the forest, or at least to avoid their fury by flight, men acquire a robust and almost unalterable constitution. The children bringing with them into the world the excellent constitution of their parents, and strengthening it by the same exercises that first produced it, attain by this means all the vigour that the human frame is capable of.⁹

It is notable that Rousseau imagines man in the state of nature as equal to all other animals and not destined to dominate them, in contrast to the account of human origins given in Genesis: he is simply one among many “wild inhabitants of the forest”. Rousseau then juxtaposes man’s original, healthy and robust state with that of “civilised” man: “in proportion as he becomes sociable and a slave to others, he becomes weak, fearful, mean-spirited, and his soft and effeminate way of living at once completes the enervation of his strength and of his courage”.¹⁰ Despairing of the society that he saw around him, Rousseau concluded that the current state of things must represent a fall from an original, ideal condition, a way of thinking that was to become deeply embedded in western culture over the centuries that followed.

⁸ Jean-Jacques Rousseau, *Discourse on the Origin and Foundations of Inequality Among Men*, in Susan Dunn, ed., *The Social Contract and the First and Second Discourses*, Yale University Press, New Haven and London, 2002, pp. 69-148, p. 90.

⁹ *Discourse on Inequality*, p. 90.

¹⁰ *Discourse on Inequality*, p. 94.

Le Corbusier was an avid reader of Rousseau – *The Social Contract* together with the *Letter to d’Alembert* and *The Confessions* can be found, all annotated, in his library – and he saw in primitive culture the survival of that untainted way of life which Rousseau had attributed to our earliest ancestors. His belief that the architecture of the Academy represented a perversion of primitive building traditions also finds a parallel in Rousseau’s depiction of the decline from life in the state of nature to civilisation. Rehearsing this belief once again in *Precisions*, Le Corbusier looks to Rousseau to point the way forward:

If I think of architecture as the ‘houses of man’, I become Rousseauist: ‘Man is good’. And if I think of architecture as ‘houses of architects’ I become sceptical, pessimistic, Voltairian, and I say: ‘All is for the worst in the most hateful of worlds’ (Candide). This is what the analysis of architecture leads to, architecture being the result of the state of mind of a period. We have come to a dead end, the social and psychological gears are disorganised. We are thirsty to be Montaigne or Rousseau undertaking a voyage to question the ‘naked man’. The reform to be undertaken is profound; hypocrisy reigns over love, marriage, society, death; we are entirely and totally falsified, we are *false!*¹¹

Le Corbusier’s argument that architecture must recover its origins in the buildings of primitive people also derives from another highly influential eighteenth-century essay: Marc-Antoine Laugier’s *Essay on Architecture* (1757). Laugier describes the process by which he imagines “man in his earliest origins” to have sought and found a satisfactory shelter. First he settled on the soft grass of a river bank, but the heat of sun became too intense for him; he then retreated into a wood, where soon the leaves proved inadequate protection against the rain; a cave provided shelter, but was too dark and dank for habitation. Finally architecture comes into play, as the man resolves to “compensate by his industry for the omissions and neglect of nature”:

¹¹ Le Corbusier, *Precisions on the Present State of Architecture and City Planning*, Edith Schreiber Aujame, trans., MIT Press, Cambridge and London, 1991, p. 10. First published as *Précisions sur un état présent de l’architecture et de l’urbanisme*, Crès et Cie, Paris, 1930.

Some branches broken off in the forest are material to his purpose. He chooses four of the strongest, and raises them perpendicularly to the ground, to form a square. On these four he supports four others laid across them; above these he lays some which incline to both sides, and come to a point in the middle. This kind of roof is covered with leaves thick enough to keep out both sun and rain: and now man is lodged.¹²

Unlike Rousseau, Laugier follows the quintessentially Enlightenment line that culture is superior to nature: in making a dwelling place for himself man can transcend nature's deficiencies and protect himself from her coarsenesses. Laugier then goes on to expound his central thesis:

The little hut which I have just described is the type on which all the magnificences of architecture are elaborated. It is by approximating to its simplicity of execution that fundamental defects are avoided and true perfection attained. The upright pieces of wood suggest the idea of columns, the horizontal pieces resting on them, entablatures. Finally the inclined members which constitute the roof provide the idea of a pediment. Note then what all masters of the art have confessed.¹³

Inherent in Laugier's emphasis on the authenticity of original form is a respect for those who created it, and a sense that modern culture must not depart too far from its primitive roots.

Romanticism continued this exaltation of primitive culture. Wordsworth, for instance, sang the praises of country folk while trying to evoke the natural cadences of their speech, giving, for instance, the narration of his first epic poem, *Michael*, to a shepherd. Mid nineteenth-century French painters such as François Millet and Jules Bastien-Lepage, whose success in their own day indicates how popular the evocation of peasant life had become, also depicted their subjects as noble and pure. Their contemporaries in the Barbizon School and, later, the Impressionists, set their vision of rural life against the unstoppable march of urban industrialisation. Michael Jacobs

¹² Marc-Antoine Laugier, *Essay on Architecture*, quoted in Joseph Rykwert, *On Adam's House in Paradise: The Idea of the Primitive Hut in Architectural History*, Museum of Modern Art, New York, 1972, p. 43.

¹³ Quoted in *On Adam's House*, pp. 43-44.

points out that these forerunners of Modernism were nonetheless firmly rooted in a Romantic tradition which idealised peasant culture:

The development of open-air painting in the nineteenth century is generally seen as part of a movement in the arts towards realism and away from romanticism. This is misleading. The naturalistic concerns of the open-air painters hid an attitude towards the rural environment and its people which was inherently romantic and bound by conventions no less rigid than those which in earlier periods had led artists in search of sun-drenched landscapes corresponding to visions of antiquity, or wild mountainous regions fulfilling notions of the sublime.¹⁴

From the peasants of France the avant-garde moved at the turn of the century to more distant and exotic cultures; the story of the role played by artefacts from Africa and Oceania, particularly masks, in the development of modern painting is a very familiar one, with Picasso's *Les Femmes d'Alger* (1907) as its critical moment or turning point.¹⁵ The parallel story, of what Gill Perry calls "going away",¹⁶ is also very well known: here Gauguin is the prime example, leaving Paris first for Brittany and then Tahiti in his search for a purer culture in which his creativity could find an outlet. In a letter of 1888 from Pont-Aven he wrote, "I find something savage, primitive here",¹⁷ adding, "when my clogs echo on the granite earth, I hear the dull, muffled, powerful note that I am seeking in painting":¹⁸ his aim was not to depict the Breton peasants naturalistically, but to find a way of painting which was in itself expressive of what he saw as the "primitive" element in their

¹⁴ Michael Jacobs, *The Good and Simple Life: Artist Colonies in Europe and America*, Phaidon, Oxford, 1985, p. 12.

¹⁵ William Rubin warns us against overstating the importance of the primitive in modernism, however, pointing out that the use of African masks by painters such as Picasso and Matisse reinforced innovations that were already underway rather than instigating them. (*'Primitivism' in Modern Art: Affinity of the Tribal and the Modern*, 2 vols., Museum of Modern Art, New York, 1984, vol. 1, p. 17.)

¹⁶ Gill Perry, "Primitivism and the 'Modern'" in Charles Harrison, Francis Frascina and Gill Perry, *Primitivism, Cubism, Abstraction: The Early Twentieth Century*, Yale University Press, New Haven and London, in association with the Open University, 1993.

¹⁷ Quoted in "Primitivism and the 'Modern'", p. 8.

¹⁸ Quoted in "Primitivism and the 'Modern'", p. 24.

culture. A year later Gauguin was seeking a more exotic version of what he had found in Brittany, declaring that,

As for me, my mind is made up. I am going to Tahiti, a small island in Oceania, where the material necessities of life can be had without money [...] There at least, under an eternally summer sky, on a marvellously fertile soil, the Tahitian has only to lift up his hands to gather his food; and in addition he never works. When in Europe men and women survive only after increasing labour during which they struggle in convulsions of cold and hunger, a prey to misery, the Tahitians, on the contrary, happy inhabitants of the unknown paradise of Oceania, know only sweetness of life.¹⁹

The Tahitians, in Gauguin's Edenic vision, live in such harmony with nature that even labouring on the land is unnecessary to bring forth its fruits. The passage echoes closely an entry in the journal of Antoine-Louis de Bougainville, one of the first Westerners to set foot on the island in 1767:

Nature has placed [Tahiti] in the most beautiful climate in the Universe, embellished with the most joyous aspects, enriched with all her gifts, covered with inhabitants that are handsome, tall, and strong. She herself has given them their laws. They follow these laws in peace, and form perhaps the happiest society that exists on the globe. Legislators and philosophers, come here and see, fully established, that which your imagination has not even been able to dream of [...] These people breathe only repose and the pleasures of the senses. Venus is the goddess one feels ever-present. The softness of the climate, the beauty of the landscape, the fertility of the soil everywhere bathed by rivers and cascades, the purity of the air...everything inspires voluptuousness.²⁰

Bougainville and Gauguin both hold up Tahiti as a model to the West, typifying the role which primitive culture is often made to play as a critique of the society that has been left behind. Ironically, as Kirk Varnedoe recounts, no sooner had Tahiti been discovered than it was overtaken by the "miseries of a swiftly increasing European presence: disease, depopulation, and cultural collapse": "in less than a generation little remained of the society Bougainville had praised, and by the mid nineteenth century

¹⁹ Quoted in "Primitivism and the 'Modern'", p. 29.

²⁰ Quoted in Kirk Varnedoe, "Gauguin", in *'Primitivism' in Modern Art*, pp. 178-211, pp. 188-89.

Tahiti was notorious among all the South Seas islands as the one most wretchedly debased by ‘civilisation’.²¹

Le Corbusier’s “journey to the east” of 1911 is part of this tradition of travelling into the unknown, the paradisaical and the primitive in search of an alternative to a debased western culture; he too, however, bemoaned the erosion of indigenous culture that he saw on his travels. In a passage in *Journey to the East* in which he despairs of primitive culture’s ability to resist the influx of over-decorated, mass-produced consumer goods, Le Corbusier writes of “that dreadful germ that is going to ruin innocent countries’ hearts, hitherto simple and believing, and the arts that were until now normal, sane and natural”:²² in what would become a favourite metaphor, he pits over-ornamentation and sickness against simplicity, health and the natural. Nonetheless, he continued to seek out those “tranquil refuges where – abating, and soon to be submerged – the great popular tradition survives” in defiance of “the invading and dirty ‘Europeanisation’”.²³ There is undeniably a trace of nostalgia here: Le Corbusier’s early primitivism, like Gauguin’s, attempted both to document a way of life and to capture it in the moment of its passing, for transmutation into the “high” context of western modernism.

Le Corbusier’s training prepared him for the experiences of the journey to the east by inducting him in the wisdom and value of primitive culture. Owen Jones’s *Grammar of Ornament*, which we have already seen him refer to as the “bible” of the art school in La Chaux-de-Fonds, exhorted its readers to imitate those “savages” who were better able to reflect God’s creation in their artworks since they were

²¹ “Gauguin”, p. 189.

²² *Journey to the East*, p. 171.

²³ *Journey to the East*, p. 16.

“accustomed only to look upon Nature’s harmonies”.²⁴ He saw in the art of children and primitive peoples a sensitivity to nature that exceeded that of the industrialised West, writing that, “if we would return to a more healthy condition, we must be even as little children or savages; we must get rid of the acquired or artificial, and return to and develop natural instincts”.²⁵ The stylised patterns of fir trees with which, following Jones, Le Corbusier decorated the façades of his early houses were, then, attempts to evoke a primitive mode of engagement with the natural world, much like the new pictorial language coined by Gauguin in Tahiti. Ruskin’s celebration of the craftsman, happy in his work and rooted in the land through his handling of materials and sculpting of vegetal forms, must also have contributed to this primitivist aspect of teaching at La Chaux-de-Fonds; Ruskin was later co-opted in *The Decorative Art of Today* as a counterblast to the inhuman advance of industrialisation.²⁶

Le Corbusier was also strongly influenced in his early years, as we saw in Chapter 2, by the Garden City movement in England and Germany. Since the turn of the century and the establishment of the artists’ colonies of Pont-Aven and Worpswede, groups of enlightened intellectuals had in seeking out rural idylls in which to work combined a dream of the ‘simple life’, with the local peasantry standing for the innate nobleness and purity of those who lived close to nature, with a collectivist spirit. This trend was particularly strong in Germany: numerous colonies followed Worpswede, including, as already mentioned, Hellerau. Alternative lifestyles flourished in such colonies, all based on the notion that embracing a more ‘primitive’ way of life could help recover a lost connection with nature. Dress reform, nudism, vegetarianism and growing one’s own food were all cornerstones of

²⁴ Quoted in Sarah Menin and Flora Samuel, *Aalto and Le Corbusier: Nature and Space*, Routledge, London and New York, 2003, p. 25.

²⁵ Quoted in *Aalto and Le Corbusier*, p. 25.

²⁶ Le Corbusier, *The Decorative Art of Today*, James I Dunnett, trans., The Architectural Press, London, 1987, p. 137. First published as *L’Art décoratif d’aujourd’hui*, Editions Crès, Paris, 1925.

these new colonies, as Barbara Miller Lane shows in relation to Diefenbach's colony near Munich, where the nudist artist Fidus "learned [...] to believe in a simple way of life, without formal attachments, without clothing, worshipping the sun and the bounty of the soil".²⁷ The English garden city of Letchworth followed in a similar vein: looking back in 1953, Charles Lee wrote satirically of the blend of back-to-nature-ism, mysticism and socialism in the typical inhabitant, who "wears far-and-near spectacles, knickerbockers and of course sandals", is "vegetarian and [a] member of the Theosophical Society" and reads Edward Carpenter and William Morris.²⁸ As the reference to Theosophy suggests, bound up with this concern to get back to nature was a search for spiritual renewal. For Rainer Maria Rilke, writing in his monograph on Worpswede in 1902, the countryside itself could help to bring this about: "the landscape is meaningful, it is without chance, and every falling leaf, even as it falls, is imbued with a part of the great universal law of the universe".²⁹

Reconnecting with nature, reviving oneself spiritually, living simply and pursuing creative work: these were all goals to be undertaken collectively, with the colony members supporting one another in their rejection of mainstream society. Primitivism and communal living were therefore closely bound up together at the turn of the century; this condition laid the basis for Le Corbusier's vision of mass housing blocks, such as the Immeubles Villas, in which a balance between individual and collective life would be achieved amid the natural elements of light, air and greenery. His attraction to monasticism, which, as we saw in Chapter 3, inspired his preference for a private experience of nature, is also at the root of Le Corbusier's interest in the intersection between communal life and primitivism. His description of a meal at the

²⁷ Barbara Miller Lane, *National Romanticism and Modern Architecture in Germany and the Scandinavian Countries*, Cambridge University Press, Cambridge, 2000, p. 141.

²⁸ Quoted in *Artisans and Architects*, p. 152.

²⁹ Quoted in "Primitivism and the 'Modern'", p. 37.

monastery of Simonas Petras on Mount Athos, which he visited on the journey to the east in May 1911, is a hymn to the simple life:

After the prior has [...] blessed the food, we sit down on the white wooden benches. The monks' hands are rough and calloused, swollen from working the fields, and their robustness is at one with the plates and enamelled earthenware common to the country and implying the soil. Before each guest are three earthen bowls containing raw tomatoes, boiled beans, and fish, nothing else... a joyous atmosphere.³⁰

The land, the hands which have tilled it, its products and the vessels which contain them all merge in Le Corbusier's evocation of the joys of communal living close to nature: a vision of a physically and spiritually rewarding life which would, several decades later, find its fullest expression at his own monastery of La Tourette.

Le Corbusier's celebration of primitive culture

As I outlined in the introduction to this chapter, much of Le Corbusier's engagement with primitive culture was dedicated to a rather uninflected, uncritical exaltation of its representatives and their way of life, in a manner typical both of the contemporary avant-garde and its forerunners. Le Corbusier believed himself to have a particular affinity with the native peoples of the countries to which he travelled, as he explained in *Precisions*:

Important Brazilian personages are furious to learn that in Rio I had climbed the hills inhabited by blacks: 'It is a shame for us, civilized persons'. I explained serenely that, first of all, I found these blacks basically *good*: good-hearted. Then, beautiful, magnificent [...] 'The blacks will kill you in those awful neighbourhoods, they are savages; there are two or three murders every week!' I answered, 'They only kill the thief of love, he who wounded them profoundly in their flesh. Why do you want them to kill me, who look[s] at them with perfect understanding? My eyes, my smile protect me, don't worry.'³¹

³⁰ *Journey to the East*, pp. 184-85.

³¹ *Precisions*, pp. 10-11.

Le Corbusier sets himself up here as the great defender of primitive culture, the only person truly able to understand and value its traditions. Perhaps in part because it pleased him to think of himself in this noble capacity, he continued throughout his career the practice which he had begun on the journey to the east of seeking out unspoilt holiday locations where he could immerse himself in a simpler, more natural way of life. Towards the end of the 1920s he found such a place in the fishing village of Le Piquey in the Bassin d'Arcachon, where he made several prolonged visits. Out of these visits came such paintings as *Woman with Cat and Teapot* (1928), *Arcachon Fisherwoman* (1928) and *The Daughter of the Lighthouse Keeper* (1929), which show solidly proportioned local women. The *Arcachon Fisherwoman*, additionally, displays the traditional markers of her trade: the large hood-like hat which gave protection from the sun and the basket with which to collect the fish (fig. 5.2). *Composition with Moon* (1929; fig. 5.3) depicts a collection of such objects: the glove used by oyster fishers to prise the shells from the rocks, a fishing boat and, in an echo of the Purist still lives, a wine bottle, perhaps an allusion to the social life of the village. On a flattened plane representing a second glove, there is a small line drawing of a building with a tower, a photograph of which would later make its way into *The Radiant City*. Le Corbusier has brought together the tools used by the villagers, the landscape which surrounds them and the things they consume in a celebration of a simple and harmonious way of life, much as he did in his description of the monastic meal at Simonas Petras several years earlier. Beyond this, the placing of the objects against the background of the moonlit sea represents an attempt to locate the everyday life of the villagers within a wider cosmic context and to point to the natural forces with which they are uniquely connected through their work as fishermen and women: they must harmonise their activities with the primordial pull of

the tides (we saw in Chapter 3 Le Corbusier's confession of how much "the admirable clock which is the sea" meant to him), which are themselves governed by the moon.

Le Corbusier returned to similar territory when he began spending his summers at Cap Martin-Roquebrune on the Côte d'Azur, where he built his *cabanon* in 1952. On the small, isolated patch of land that represented his property there, he built up a kind of primitive world from which the irritations and excesses of modern society were excluded. The *cabanon* itself is extremely, almost punitively, simple in its means: it is essentially a log cabin, faced with black-painted timbers on the outside and lined entirely with wood within (figs. 5.4 and 5.5). There is one living space, square in plan and comprising areas for washing and sleeping. Given the extreme restrictions of space in the *cabanon*, Le Corbusier found it necessary to build himself a separate studio about ten metres away. This was an even simpler, shed-like structure, containing a desk with a view over the Mediterranean and a bookshelf on which he placed a small collection of bones (figs. 5.6 and 5.7). Nonetheless, Le Corbusier endowed even this tiny space with meaning beyond itself: in a letter to Alvar Aalto, he described its dimensions, two metres by four metres, as constituting a "double sacred square".³² The interior space of the *cabanon*, similarly, was organised according to Modulor dimensions, which, as we saw in the first chapter, were connected for Le Corbusier to the mathematical order of the cosmos.

The *cabanon* shares one wall with the next-door restaurant, the *Etoile de mer*, where Le Corbusier and Yvonne took their meals each day. This was an arrangement which brought them into close contact with its proprietor and chef, Robert Rebutato, whom Le Corbusier transformed in his paintings into the quintessential representative of primitive culture, much as he had done with the fisherwomen of Le Piquey twenty

³² Le Corbusier to Alvar Aalto, 5 August 1954, quoted in *Aalto and Le Corbusier*, p. 22.

years earlier. On the terrace of the *Etoile de mer* he painted a large, semi-abstract mural depicting Robert and his wife; to it he attached a painting on canvas also showing the couple, but in a more naturalistic style (fig. 5.8). The mural reduces Monsieur and Madame Rebutato to silhouettes: she is in white on a red background, he in black on a white background. The only object painted in any detail is the yellow oyster glove, familiar from the Le Piquey paintings and now achieving the status of a *leitmotif*, which Madame Rebutato appears to be holding. It reappears in the canvas above on each of her hands. In this smaller painting, Robert and his wife are depicted as broad-shouldered, solidly framed individuals to emphasise their peasant stock; they are even superimposed on white rectangular shapes. The couple are standing in a wide-bottomed boat and each holds the tools of their trade: she has the gloves and a basket, while he has a pestle and mortar. As if to underline that both figures are essentially archetypes, Le Corbusier has given Madame Rebutato a halo, elevating her to the status of a holy figure.

As well as celebrating peasant life in exalted depictions of its representatives, Le Corbusier also attempted to recover something of the symbolic, mystical cast of primitive thinking in his own modes of artistic production. One way in which he did so was through what he called “objects evoking a poetic reaction”, which he described as

those [objects] which by their shape, size, substance and durability are worthy of a place in our homes. A pebble polished by the ocean is one example, another might be a broken brick rounded smooth by lake or river waters, or bones, fossils, tree roots or algae, sometimes almost petrified, or whole shells smooth as porcelain or carved in Greek or Hindu fashion. Broken shells reveal their amazing spiral structure to us. All these seeds, flints, crystals, pieces of stone and wood form the vast panoply of spokesmen who speak the language of nature. They are caressed by your hands, your

eyes gaze upon them, they are evocative companions... By means of them friendly contact between nature and ourselves is woven.³³

Artefacts from primitive cultures could also be “objects evoking a poetic reaction”: alongside his large collection of bones, shells and stones, Le Corbusier owned a number of such artefacts which he positioned carefully in his houses, often making special niches or shelves for them. Peter Carl has shown that such art objects were important in the architectural promenade at 24 rue Nungesser-et-Coli, where a recess containing two sculptures and a vase marks the point at which the staircase leaves the dark space of the entrance hall and rises into the light and airiness of the glass pavilion which gives access to the roof. They represent “memento[s] of the cave-museum”³⁴ and remind us that active creativity is nurtured by a period of semi-hibernation in which ideas gather and gestate in the darkness. The objects therefore give an opening into a world in which systems of meaning are constructed through symbolism and mysticism and not through rationalism or empiricism; they are messengers from a richer mode of understanding, one which does not look to explain and demystify all human and non-human phenomena. Where clients possessed similar “objects evoking a poetic reaction”, these appear to have been taken into account in the design of their houses. At the Villa Sarabhai (1952-56), for instance, Le Corbusier placed a thick, free-standing wall at a right angle to the main entrance and cut two apertures into it which hold wooden figurative sculptures (fig. 5.9); because of the highly deliberate way in which they have been incorporated into the villa’s entrance sequence, they take on the status of guardian deities or protective

³³ Le Corbusier, *Le Corbusier Talks with Students from the Schools of Architecture*, Pierre Chase, trans., Princeton Architectural Press, New York, 1999, pp. 70-71. First published as *Entretien avec les étudiants des écoles d’architecture*, Denoël, Paris, 1943.

³⁴ Peter Carl, “Le Corbusier’s Penthouse in Paris, 24 rue Nungesser-et-Coli”, *Daidalos* 28, June 1988, pp. 65-75, p. 71.

spirits, in a similar way to the shrines to the household gods which Le Corbusier would have seen in the Roman houses he visited at Pompeii in 1911.³⁵

The “objects evoking a poetic reaction” appear in photographic form in the *Oeuvre Complète*. Beatriz Colomina has drawn attention to the objects in certain images of the Villas Stein-de Monzie and Savoye, reading them as signs of a moving human presence: “we are following somebody, the traces of his existence presented to us in the form of a series of photographs of the interior”.³⁶ She does not consider that the objects in the photos may be presences in their own right, pointing beyond themselves to an ideal of habitation which gathers into itself all the essentials of human life. In the image of the Villa Savoye kitchen reproduced in *Privacy and Publicity* (fig. 5.10), a loaf of bread and a coffee pot sit in the centre of the composition, as if to suggest that amid the uncompromising modernity of the villa’s architecture lies a conception of dwelling which carries the primordial quality of primitive habitation, one based on the sustaining of life through the sharing of food.

The same process is at work in a photograph of the Maison de Weekend (1935; fig. 5.11). The photographer has positioned himself behind the dining table in the salon and captured the two main bays of the space, the fireplace, the entrance door and the view into the garden. Within this architectural framework Le Corbusier has once again included a number of objects, whose careful placing demands equally careful attention. On a diagonal stretching across the lower right-hand part of the image are a bowl placed on the table, a flowerpot and a vase on a shelf within the brick housing of the fireplace, and two glass vases on a windowsill. From the bowl in the foreground another diagonal extends to a basket placed on a shelf in the middle

³⁵ Dagmar Weston makes this link in her essay “The Lantern and the Glass” in Iain Boyd Whyte, ed., *Modernism and the Spirit of the City*, Routledge, London and New York, 2003, pp. 146-77, p. 159.

³⁶ Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media*, MIT Press, Cambridge, Mass. and London, 1994, p. 289.

distance; the basket in turn intersects with the frame of the gazebo in the garden, which is the focal point of the composition. From foreground to background, then, there is a progression of objects which embodies what one might call ‘primitive essentials’: eating, keeping warm, being in the garden. The photograph expresses Le Corbusier’s intentions for the house: to create a small, modest space where his client could retreat from city life and discover a sense of living in harmony with nature. To do so is to recapture what Le Corbusier saw as a primitive condition of dwelling:

[Folklore] lovingly teaches the profound, natural needs of man as they are revealed to us in solutions that have stood the test of time. Folklore shows us ‘man naked’, dressing himself, surrounding himself with tools and objects, with rooms and a house, reasonably satisfying his minimum requirements and coming to terms with the surplus to permit him the enjoyment of his great material and spiritual well-being. All this has been tested and proved over centuries, and results in a feeling of unity and a sense of profound harmony with the laws of site and climate.³⁷

Le Corbusier also attempted to recapture the non-rational, mystical mode of primitive thought by creating a personal symbolic language. In the chapel at Ronchamp this manifests itself in part in a play on words: painted onto one small stained glass window are “mer” and “mère”: the linguistic closeness of the two words allows for a metaphorical equation of the elemental forces of the sea and motherhood.³⁸ This kind of allusiveness reaches its fullest expression in the *Poem of the Right Angle*, where words and images intersect to create a rich world of meaning, presented in a deliberately elusive or opaque manner to propel the reader into an interpretative journey to uncover those “hidden masses of implications, a veritable world” which “reveals itself to those whom it may concern, which means: to those

³⁷ *Le Corbusier Talks with Students*, pp. 60-61.

³⁸ The possible symbolic meanings of the Ronchamp chapel have been discussed extensively elsewhere, and need not be rehearsed here. See, for example, Robin Evans, *The Projective Cast: Architecture and its Three Geometries*, MIT Press, Cambridge, Mass. and London, 1995, William Curtis, *Le Corbusier: Ideas and Forms*, Phaidon, Oxford, 1986 and Flora Samuel, *Le Corbusier: Architect and Feminist*, Wiley Academy, Chichester, 2004.

who deserve it”.³⁹ Daphne Becket-Chary writes in the introduction to her study of the *Poem* that,

The double alienation of the artist, in a world dominated by technological and bureaucratic procedures and in a fragmented cultural field, is therefore manifest in the *Poème*: first, in Le Corbusier’s attempt to formulate a semi-sacred domain which would overcome the instrumentality of technological culture, and, second, in the vision of meaning as a cultural field governed by ‘fixed points’, or an ‘algebra of signs’.⁴⁰

This “algebra of signs” was drawn from the personal iconography that Le Corbusier had been building up over many years. Through images of shells, the sea, open and clasped hands, the female body, the “Licorne” or unicorn and other mythological figures, to give just some of the most prominent examples, he presented nothing less than his way of understanding the world and its implications for his architecture.

Becket-Chary’s painstaking analysis, together with those of others such as Richard Moore,⁴¹ brings out the complex and multi-layered quality of the *Poem*; one theme that emerges very clearly, however, is the inextricability of human and natural worlds and the need for all creativity to be rooted in natural forces. Mircea Eliade has written of symbols in traditional culture that,

For primitives, *symbols are always religious*, since they point either to something *real* or to a *World-pattern*. Now, at the archaic levels of culture, the *real* – that is to say the powerful, the significant, the living – is equivalent to the *sacred*. Moreover, the world is a creation of the Gods or of supernatural Beings: to discover a World pattern amounts to revealing a secret or a ‘ciphered’ meaning of the divine work.⁴²

³⁹ Le Corbusier, *New World of Space*, Reynal and Hitchcock, New York and Institute of Contemporary Arts, Boston, 1948, p. 8.

⁴⁰ Daphne Becket-Chary, *A Study of Le Corbusier’s Poème de l’Angle Droit*, unpublished M.Phil thesis, University of Cambridge, 1990, p. 14.

⁴¹ Richard Moore, “Alchemical and Mythical Themes in the Poem of the Right Angle”, *Oppositions* 19/20, 1980.

⁴² Mircea Eliade, *The Two and the One*, J M Cohen, trans., Harvill Press, London, 1965, p. 202.

Le Corbusier's expression in the *Poem* of the reconciliation of man and nature could be said to constitute a "world pattern", since it describes a fundamental principle by which the universe is organised. Moreover, such a reconciliation certainly implied the sacred for him: he saw living in harmony with nature as a means of connecting with the most profound level of meaning offered to human beings, as we have seen. Thus far, then, Le Corbusier's symbolic language would seem to equal those of primitive cultures and achieve a depth and resonance which succeeds in "overcom[ing] the instrumentality of technological culture". His attempts to introduce this symbolic mode of expression into his buildings, however, tell a different story. Work on the *Poem* was still ongoing when Le Corbusier received the commission to design the new capital of the Punjab, Chandigarh, in collaboration with Maxwell Fry and Jane Drew. He was quick to seize on Indian culture as an example of an unspoilt, peasant society, a primitive idyll in which people still lived close to nature:

At the end of 1951, in Chandigarh: the possibility of getting in touch with the essential joys of Hindu principles: a brotherhood of relationships between the cosmos and all living things: stars, nature, sacred animals, birds, monkeys, and cows, and in the villages, children, adults, and still active older people, the pond and the mango trees, all present and all smiling, poor but in proportion.⁴³

They must find a way, Le Corbusier wrote to his colleagues, to build a modern city in India which maintained a link with these ancient traditions:

India has an age-old peasant culture which is still alive today (peasants' houses, villages) [...] But India has not yet created any architecture for modern civilisation (offices, factories, housing). India is jumping all at once into the second machine age. Rather than sinking into the gropings and mistakes of the first, we will be able to respond to a mission which has implicitly been conferred on us: to give to India the architecture of modern times.⁴⁴

⁴³ Le Corbusier, *Mise au point*, in *The Final Testament of Père Corbu: A Translation and Interpretation of Mise au point* by Ivan Žaknić, Yale University Press, New Haven and London, 1997, p. 89.

⁴⁴ "L'Inde a une culture paysanne millénaire vivante encore aujourd'hui (maisons de paysans, villages) [...] Mais l'Inde n'a pas encore créé de l'architecture pour la civilisation moderne (des bureaux, des

For Le Corbusier, charged with designing the government buildings of the Chandigarh Capitol, the solution lay in the use of symbols. To apply a symbolic system to the Assembly door, which he painted in enamel as a gift to the Indian government, was work in an ancient Hindu iconographic tradition;⁴⁵ the symbols themselves, however, could represent the condition of modern India, and in 1961 Le Corbusier applied to Nehru for suggestions:

I had tried to gather information at Chandigarh concerning the symbolic signs which it could be useful to have represented on this door. I obtained little information and, generally, of signs exclusively dating from a hundred or a thousand years ago. Finally it seemed to me better for this Parliament to have signs of our actuality and it is you, Mr. Nehru, who knows them and can express them. A mass of signs is not required but only some of those concerning the ethics, the social and politics of the present times.⁴⁶

Bemused, Nehru passed the request on to others, one of whom responded by saying that he “did not see how a few symbolic signs [could] express these things”.⁴⁷ Le Corbusier’s hopes that the richness of Indian culture would mean that a set of contemporary symbols was there for the taking – a hope born of his conviction that primitive modes of thought always function at a deeper, more symbolic level than their western counterparts⁴⁸ – were dashed and he was left to fall back on his own

fabriques, des logis). L’Inde saute d’un coup dans la deuxième ère du machinisme. Au lieu de sombrer dans les tâtonnements [sic] et les erreurs de la première ère nous pourrions répondre à une mission qui nous est implicitement confiée: doter l’Inde de l’architecture des temps modernes.” Le Corbusier to Maxwell Fry, Jane Drew and Pierre Jeanneret, 12 December 1951, FLC P2-11-149.

⁴⁵ Le Corbusier was interested in Hindu symbolism; an undated sheet of sketches in his archives shows him trying to clarify its central principles, such as the representations of the three main gods Brahma, Vishnu and Shiva (FLC P2-5-292).

⁴⁶ Le Corbusier to Jawaharlal Nehru, 25 September 1961, FLC P1-6-264. Reproduced in Mogens Krustup, *Porte Email*, Arkitektens Forlag, Kunstakademiets Forlag, Copenhagen, 1991, p. 153.

⁴⁷ Copy of a letter from an unnamed friend of Nehru, attached to Nehru’s reply to Le Corbusier, 17 October 1961, FLC P1-6-208. Reproduced in *Porte Email*, p. 154.

⁴⁸ This way of thinking has its roots in the *Esprit Nouveau* years, as will be seen below. In an article in *L’Esprit Nouveau* 20, for instance, Drs Allendy and Laforgue argue that the symbolic representation of nature in the art of primitive peoples shows their close connection to the natural forces which govern their world and define their belief systems. They give the example of the art of ancient Egypt: “Certain hieroglyphs are so striking in their simplicity that they achieve a metaphysical significance and become religious symbols. If the circle is the Absolute, the triangle becomes the image of the fundamental organisation of the world, of its balance, its functioning, its creation. The cross represents the division

resources. The Assembly door represents the fusion of man, nature, the cosmos and numbers (the four sections into which it is divided) through the use of some now fairly well worn motifs such as the passage of the sun over a twenty-four hour period (fig. 5.12).

Returning to Eliade, we learn that, “symbols are capable of revealing a *modality of the real or a condition of the World which is not evident on the plane of immediate experience*”.⁴⁹ By this definition much of Le Corbusier’s symbolism must be said to fail: the symbol of the twenty-four hour day, for instance, does not point to any deep or hidden truth but simply illustrates in diagrammatic form a phenomenon which is easily observable each and every day. His symbols could more accurately be described as signs: they are a form of shorthand, appearing time and again in his work like a set of hieroglyphics. As Mogens Krustup admits in his exhaustive study of the Assembly door, “most of the individual motifs [...] are immediately recognisable, like traffic signs”.⁵⁰ Part of Le Corbusier’s attraction to the primitive lay in the possibility it offered that everyday, immanent reality could be elevated to the level of the sacred; this may account for the simplistic level at which much of his symbolism remains. In trying to represent the sacred quality of everyday life – for instance, the fact that the sun sets and rises each day – Le Corbusier can only deal with what already reveals itself “on the plane of immediate experience” and which therefore does not need to be brought to the surface through symbolism. Eliade concludes, however, that,

of the circle, the phases of the continually revolving cycle, the seasons, the cardinal points, the climates, hot, cold, humidity and dryness; that is to say, the elements and, further, the whole of nature with her cycles of periodical change.” (“La Pensée Primitive”, *L’Esprit Nouveau* 20, Da Capo Press, New York, 1968 (repr.), whole number unpaginated.)

⁴⁹ *The Two and the One*, p. 201.

⁵⁰ *Porte Email*, p. 30.

Thanks to the symbol, the individual experience is ‘awoken’ and transmuted into a spiritual act. To ‘live’ a symbol and correctly decipher its message implies an opening towards the spirit and finally access to the universal.⁵¹

Translating his conception of a unified world in which man lives in harmony with nature out of a symbolic system and into built form required a rare vision; where Le Corbusier achieved this, on the roof of the Marseilles Unité, for instance, a unique and rewarding experience results. If we think of Le Corbusier’s built work as the tacit embodiment of those ideals of which his symbols are mere surface representations, then the inhabitants of his houses can be said to be “living a symbol”. The example of the Assembly door, however, shows that his attempts to recreate a primitive mode of symbolic expression were not always successful. One is tempted to agree with the implication in Nehru’s friend’s remark that any mission to draw up a complete symbolic system, at once ancient and modern, from scratch, must necessarily fail.

The modernity of the primitive

The “primitive” Le Corbusier is often presented as a creature of the 1930s, with his marriage to Yvonne Gallis prompting a shift in both his painting and architecture towards more curvilinear, “organic” forms. Charles Jencks sees a “nascent eco-hippy”⁵² emerging during this period, prompted by “a rediscovery of natural orders, primitive societies, and a sexual relation with women unconstrained by conventional etiquette, sophistication and snobbism”.⁵³ Mary McLeod also makes a clear distinction between Le Corbusier’s work of the 1920s and 30s, arguing that “his formal vocabulary shifted from the white, planar surfaces and simple cubic forms of the International Style to what might be termed a more organic aesthetic involving

⁵¹ *The Two and the One*, pp. 207-08.

⁵² Charles Jencks, *Le Corbusier and the Continual Revolution in Architecture*, Monacelli Press, New York, 2000, p. 189.

⁵³ *Continual Revolution*, p. 210.

texture, curvilinear forms, and a greater response to climate and geography”;⁵⁴ for her, any awareness of “emotion, nature, tradition, and regional differences”⁵⁵ emerged only in the 1930s. The previous section could be seen as supporting this way of thinking about Le Corbusier’s primitivism, concentrating as it does on his work from the late 1920s onwards. In fact, as I want to go on to show, the primitive does not emerge in his work at any particular moment; rather, it is present from the very beginning of his career, although it manifests itself in different ways over time. The 1920s should not simply be read as the decade of functionalism, the machine and the International Style; neither should the 1930s be seen as constituting an unmediated flow of primitive and organic forms. Much of the rhetoric of the 20s involved the primitive, while certain projects of the 30s show Le Corbusier trying to engage with peasant culture from an objective, practical and non-idealising standpoint. His approach in both decades can be summed up as an attempt to fuse the primitive with the modern and to encourage a rich interchange between them, rather than to treat them as parallel modes of expression.

By 1917, when Le Corbusier moved to Paris, the primitivist approach pioneered by Matisse and Picasso a decade or so earlier was firmly embedded in modernist artistic practice. *L’Esprit Nouveau*, which launched a few years later in 1920, was absolutely a product of its time and place in its publication of numerous articles on the art of primitive peoples. Nor was it the only journal to do so: Christian Zervos’s *Cahiers d’Art*, for instance, gave space to similar subjects. Le Corbusier was therefore indulging in pure personal mythologising when he wrote in *The Decorative Art of Today* that he was “always alone” in taking an interest in the

⁵⁴ Mary McLeod, *Urbanism and Utopia: Le Corbusier from Regional Syndicalism to Vichy*, unpublished Ph.D dissertation, University of Princeton, 1985, p. iv.

⁵⁵ *Urbanism and Utopia*, p. 95.

ancient and primitive.⁵⁶ Nonetheless, the range of material covered in *L'Esprit Nouveau* over its five year run is impressive. Number 4 contains articles entitled “On the Koran and Arab Poetry” by Henri Thuile and “Polish Poetry Today” by H Izdebska; in number 15 Ozenfant and Le Corbusier (signing himself Jeanneret) turn their attention to that favourite subject of the Parisian avant-garde, cave-painting, introducing the interpretation of primitive artistic production which would inform all subsequent articles on the subject: “in all the people of the world, the same primordial sensations, constants, standards, are released under the impact of the same physical facts”.⁵⁷ Allendy and Laforgue continue in this same vein in their article in number 20, “Primitive Thought”:

It is enough that the intelligence be unused or laid asleep, as in the young child, the savage, the dreamer or the madman, for primitive thought to appear in all its aspects and in all its fullness. Without concern for logic, its associations are based on the emotions which they arouse [...] We notice that these associations operate according to a spontaneous symbolism, perfect in its extreme precision. Furthermore, primitive thought has nothing to do with abstraction: all its workings present themselves as images, tableaux, scenes, etc., with a quickness of synthesis which analytical thinking could never equal.⁵⁸

“Primitive thought”, therefore, can “operate at the depths of our unconscious and shake the most intimate fibres of our being”.⁵⁹ In the following issue an article by Julien Saint-Quentin put forward the view that the art of “les nègres” was better at

⁵⁶ *Decorative Art of Today*, p. 198.

⁵⁷ “Dans tous les homes du monde, les mêmes sensations primordiales, constantes, standarts, se déclanchent sous le choc des mêmes faits physiques.” Ozenfant and Jeanneret, “De la Peinture des cavernes à la peinture d’aujourd’hui”, *L'Esprit Nouveau* 15, pp. 1795-1802, p. 1798 (erratic page numbering throughout series).

⁵⁸ “Il suffit d’ailleurs que l’intelligence soit inexercée ou endormie, comme chez le jeune enfant, le sauvage, le rêveur ou le fou, pour que la pensée primitive apparaisse dans tous ses caractères et dans toute son ampleur. Sans souci de la logique, ses associations se basent sur le sentiment produit [...] Nous constatons que ces associations s’opèrent selon un symbolisme spontané et très parfait dans son extreme précision. En outre, la pensée primitive ne connaît pas l’abstraction: toutes ses operations se traduisent en images, tableaux, scenes, etc., d’où une rapidité dans la synthèse que l’intelligence analytique ne pourrait jamais égaler.” “La Pensée Primitive”.

⁵⁹ “La pensée primitive qui opère dans le fond de notre inconscient et fait vibrer les fibres les plus intimes de notre être.” “La Pensée Primitive”.

evoking religious feeling than Christian art, because “the experience of an ancient and selective tradition has taught them that a symphony of forms and colours calls forth in man certain universal responses”. Here we can begin to see the considerable overlap between Purist and primitivist themes in *L’Esprit Nouveau*: primitive art works by refining its symbols and modes of representation over hundreds of years – a process analogous to that of modern standardisation – in order to evoke “universal responses”. Ozenfant and Le Corbusier therefore looked to the primitive to forward their own modernist agenda based on selection and the idea of the universal standard, writing in the same issue that,

The unanimity of a new feeling, one of a precise era in which the machine rules, establishes standards which will be our folk-lore. Enlargement of the problem. Rejection of regional forms in favour of international forms.⁶⁰

The primitive also provided them with evidence that such an endeavour could transcend both the vacuum of non-belief and the conventions of western religion: the universal emotions evoked by standardised forms pointed the way towards an alternative spirituality far richer than that offered by traditional Christianity. *L’Esprit Nouveau*’s interest in primitive culture, then, was not simply nostalgic or idealised: rather, the journal read primitive artefacts as forerunners of and inspiration for the standardisation which would underlie the modern technological revolution.

The same fusion of the modern and the primitive informs the argument of *Towards a New Architecture*. Le Corbusier opens the section “Regulating Lines” by describing the actions of a primitive builder in a manner strongly reminiscent of Laugier and Rousseau:

⁶⁰ “L’unanimité d’un sentiment neuf, celui d’une époque de précision où règne la machine, tend à établir des standards qui seront notre folk-lore. Elargissement du problème. Abandon du caractères régionaux en faveur d’un caractère international.” Ozenfant and Jeanneret, “Usurpation: Le Folk-lore”, *L’Esprit Nouveau* 21, unpaginated.

Primitive man has brought his chariot to a stop, he decides that here shall be his native soil. He chooses a glade, he cuts down the trees which are too close, he levels the earth around; he opens up the road which will carry him to the river or to those of his tribe whom he has just left; he drives in the stakes which are to steady his tent. He surrounds this tent with a palisade in which he arranges a doorway. The road is as straight as he can manage it with his implements, his arms and his time. The pegs of his tent describe a square, a hexagon or an octagon. The palisade forms a rectangle whose four angles are equal. The door of the hut is on the axis of the enclosure – and the door of the enclosure faces exactly the door of the hut.⁶¹

As Joseph Rykwert has pointed out in his survey of the idea of the first dwelling in architectural history, Le Corbusier credits “primitive man” with a natural tendency to organise his environment according to geometric rules, as the plan of a “primitive temple” over-traced with regulating lines reproduced in *Towards a New Architecture* shows (fig. 5.13).⁶² For Le Corbusier, therefore, mathematical or geometric principles must be at the root of all creativity in architecture:

But in deciding the form of the enclosure, the form of the hut, the situation of the altar and its accessories, he has had by instinct recourse to right angles – axes, the square, the circle. For he could not create anything otherwise which would give him the feeling that he was creating. For all these things – axes, circles, right angles – are geometrical truths, and give results that our eye can measure and recognise; whereas otherwise there would only be chance, irregularity and capriciousness. Geometry is the language of man.⁶³

There is no essential difference, then, between the primitive temple which Le Corbusier illustrates at the beginning of the section and the examples of his own work which appear towards the end: all have been conceived and constructed according to exactly the same principles. “There is no such thing as primitive man”, announces Le Corbusier, “there are primitive resources”.⁶⁴

⁶¹ Le Corbusier, *Towards a New Architecture*, Frederick Etchells, trans., The Architectural Press, London, 1987, p. 69. First published as *Vers une Architecture*, Editions Crès, Paris, 1923.

⁶² *On Adam's House in Paradise*, pp. 14-15.

⁶³ *Towards a New Architecture*, p. 72.

⁶⁴ *Towards a New Architecture*, p. 70. Le Corbusier imported his belief in the natural tendency towards mathematical organisation among primitive builders into *The Modulor*, together with the argument advanced in *Towards a New Architecture* that primitive man based all his measurements on

The rhetoric of the 1920s, then, shows the impossibility of dividing Le Corbusier's interest in primitivism from his passionate commitment to modernity. The same is true of the architecture of these years. The rubble walls and absence of pilotis in certain houses of the early 1930s, such as the Villa de Mandrot (fig. 5.14) and the Maison de Weekend, have been used to support a narrative of Le Corbusier the primitivist following in neat succession from Le Corbusier the Purist.⁶⁵ A house like the Villa Savoye, however, can equally convincingly be read as a primitivist work: the hand basin in the entrance hall evokes ideas of ritual cleansing; the architectural promenade also carries intimations of ritual and initiation; the house is itself a retreat, where the Savoyes could "find themselves far from Paris". In the Pavillon de l'Esprit Nouveau, a demonstration of Purist architecture at the Exposition Universelle of 1925, Berber carpets were displayed alongside simple modern pottery and glassware, all of which had been selected for their purity and universality of form (figs. 5.15 and 5.16).⁶⁶ Moreover, Romy Golan and Kenneth Frampton both point out that the Villa de Mandrot combines "the heavy untrimmed rustication of local Provençal stone and the immaculately smooth purist white wall":⁶⁷ it and other houses of the same period "seem to have served as sophisticated metaphors for a non-doctrinaire future in which men would be free to combine primitive and sophisticated techniques according to their needs and resources".⁶⁸

the human body. *The Modulor* contains various examples of the architecture of ancient or primitive cultures, and on 8 November 1956 André Maisonnier wrote on Le Corbusier's behalf to Georges-Henri Rivière, director of the Musée des Arts et Traditions Populaires in Paris, to ask for examples of French traditional architecture from the Museum's collection for inclusion (FLC E3-11-98).

⁶⁵ In, for instance, Jencks's *Continual Revolution* and Kenneth Silver's *Making Paradise: Art, Modernity and the Myth of the French Riviera*, MIT Press, Cambridge, Mass. and London, 2001.

⁶⁶ Le Corbusier, *Almanach d'architecture moderne*, Bottega d'Erasmus, Turin, 1975, pp. 168-71. First published G. Crès et Cie, Paris, 1925.

⁶⁷ Romy Golan, *Modernity and Nostalgia: Art and Politics in France between the Wars*, Yale University Press, New Haven and London, 1995, p. 75.

⁶⁸ Kenneth Frampton, "The Other Le Corbusier: Primitive Form and the Linear City 1929-52", in Victoria Wilson and Michael Raeburn, eds., *Le Corbusier, Architect of the Century*, Arts Council, London, 1987, ex. cat., pp. 29-34, p. 31.

In his response to his experiences at Le Piquey in the late 20s and early 30s, Le Corbusier tempered his celebration of its vibrant folk culture with regret for its passing. In *The Radiant City* he captioned a series of photographs (fig. 5.17) of fishermen and women on beaches, in boats and in the village lanes,

Forms taken by culture in scattered communities: 'folk art'. Perfect harmony achieved on a scale with *man*. Serenity of the pastoral life. Tools and equipment sufficient though precarious. But the locomotive is either on its way or already there... Death of 'folk art', dawn of a new culture and accompanying distress.⁶⁹

There is a certain irony here: the champion of technology mourns the incursion of the machine into the world of the pre-industrial peasantry. Le Corbusier's plans for the Radiant Farm and Radiant Village, initially conceived in 1930-31 and laid out alongside those for the Radiant City in 1933, try, however, to resolve this paradox by presenting a vision of rural life in which the peasant's traditional closeness to nature exists in harmony with new technology. Here Le Corbusier set himself up in opposition to the conventional idealisation of peasant culture in an attempt to respond to the problems facing rural people with the same forward thinking, optimistic modernism that had characterised his urban plans. The radiant farmhouse itself is a Citrohan-type house – that is, a standard form – a rectangular box raised on pilotis with a balcony at one end set within a productive landscape of kitchen garden, flower garden and orchard (fig. 5.18).⁷⁰ Amidst the absolute modernity of the forms, however, the age-old purpose of the farm is not forgotten. In Le Corbusier's drawing of the main living space in *The Radiant City* the eye is drawn to the view through the strip window of the vaulted barn in the centre of the composition: the farmers remain

⁶⁹ *Radiant City*, p. 137.

⁷⁰ There is an echo here of the much earlier plan for Saint-Nicolas d'Aliermont, discussed in Chapter 2, where the Garden City principle of small-scale food cultivation was applied in the form of a vegetable garden attached to each house.

absolutely connected to the livestock and the crops which represent their life-blood (fig. 5.19).⁷¹

The village, to which the farm is linked by a tree-lined approach road, also uses a modern typology: on either side of a street which connects the village to a nearby highway are laid out flat-roofed, glass-fronted communal buildings including an Unité-type housing slab containing forty apartments (fig. 5.20). In the accompanying text in *The Radiant City*, Le Corbusier emphasises the great benefits of modern living for the farmers and their families. Their houses will be hygienic, light and airy; they will have the same access to information as urban dwellers through “radio, phonograph, newspaper, magazines, bookcases”;⁷² high culture will be on their doorstep in the village library and the “auditorium for lectures, plays, speeches, etc.”⁷³ in the “club”. As for conditions on the farms themselves, the farmers will “walk into a farmyard that has a concrete floor, is well drained, and so completely free from damp and standing water. No muck, no puddles, no dung”.⁷⁴ Individually and through a collective system of ownership administered in the village, they will have access to the latest machinery which will reduce heavy labour to a minimum. Hygienic homes, “ethical” cleanliness,⁷⁵ labour-saving equipment designed to leave leisure hours free, intellectual pursuits to fill those hours: Le Corbusier has imported both the aesthetic and the ideology of his urban plans into a rural setting. He justified this approach by quoting extensively from the letters he had received from Norbert Bézard, a farmer in the Sarthe region. Bézard described the appalling conditions in

⁷¹ Whether the design of the farm is in any way practical is a different question. Traditionally, farmers would have stored their animals within the farmhouse itself in order to benefit from the warmth which they generated. In general the radiant farmhouse does not appear at all well insulated, with the space under the pilotis likely to have a dramatic cooling effect in winter. This, however, would equally be a problem for any inhabitants of a house on pilotis, such as the Savoyes.

⁷² *Radiant City*, p. 325.

⁷³ *Radiant City*, p. 329.

⁷⁴ *Radiant City*, p. 326.

⁷⁵ *Radiant City*, p. 326.

his village, which found itself flooded every winter and where a family had recently been killed when a rotten beam in their farmhouse had collapsed on them. Le

Corbusier paraphrased the farmer's appeals in typically dramatic language:

Every house here is threatened. The countryside is in the grip of tuberculosis. There is a fog of disease and despair eating away at our very hearts, out here in the country. The French countryside is sick and dying. Corbusier, you must build us the 'Radiant Farm', the 'Radiant Village'.

Bézard, in Le Corbusier's account, was infuriated by the vision of country life so dear to urban dwellers and eager to graduate from a "primitive state" to a modern one:

'We want to have the same kinds of freedom as the man in the city; rescue us from our sooty old farm fireplace, the sign of our primitive state: our faces broiled by the fire, our backs icy from the damp in the house; we want radiators, and we shall throw anyone out who comes here telling us how much he loves the picturesque countryside and babbling on poetically about our 'beautiful old fireplaces and quiet evenings in front of the hearth', without knowing a thing about it! We want houses on pilotis. Yes! Because we've had enough of standing with our feet in dung and mud, enough of damp beaten-earth floors that cripple us all with rheumatism. Give us windows, wide windows, so that we get sun in our farm. Take the dung away from in front of our table. Give us the means to be clean and healthy like people in the city. We want to wash!'

You see, Le Corbusier is saying defensively to his critics, I am not imposing my brand of cutting-edge modernism on these peasants, whose own traditions are so different and so unassailable: they have asked for it! They are crying out for it! He defended the apartment block in the Radiant Village in similar terms:

Why gather together these forty homes, formerly forty individual houses scattered through the old village, into a single apartment house? Because the peasants asked me to [...] We city folk insist on believing that every village cottage is a nest of happiness; but that illusion tends to fade when you have to live in one three hundred and sixty-five days of the year, every year of a long life.⁷⁶

⁷⁶ *Radiant City*, p. 328.

It would be tempting, then, to see Le Corbusier's Radiant Farm and Village as primitivist projects, simply because they were designed for a rural setting, but this is far from being the case: rather, he aimed to combine the modern with the primitive to produce something uniquely suited to its purpose.⁷⁷ His almost-mystical equation of rural dwellers with the forces of nature does break through in his description of farming as a "spiritual" activity, "in that the goals assigned to this work are to feed mankind, to do good, to succeed, to help in the miracle of germination and fructification", and of a peasant family as "an entity that will think with that special and precious quality found only in people who are in permanent contact with nature", but, guided by Bézard, Le Corbusier combined his instinctive primitivism with a pragmatic acknowledgement that rural life is tough and open to great improvement through technology. He approached the problems of urban life in exactly the same way: cities had become unliveable and modern techniques of building and planning held the answer to their problems. Rural dwellers do not need to be reconnected with the natural environment in the way that urban dwellers do, since they are already rooted in it through their work on the land, but nonetheless a close relationship with

⁷⁷ Le Corbusier was not the only person to take such an approach. Georges-Henri Rivière, according to Herman Lebovics, exhibited at the Grand Palais in June 194 a Normandy farmhouse containing a radio and telephone alongside traditional furniture (*True France: The Wars over Cultural Identity 1900-1945*, Cornell University Press, Ithaca and London, 1992, p. 136). The text on rural architecture which Rivière co-authored with Marcel Maget in June 1944 also shows strong parallels with Le Corbusier's much earlier writing on the radiant farm: "rejecting the attitude to rural life which wished to see the population frozen into miserable life forms of the past, Rivière and Maget refused 'the transformation of the peasantry into a kind of zoo for the pleasure of tourists' [...] They wanted to help the countryside adapt to modern life, and even – 'certainly the most important point' – to innovate culturally and aesthetically. Then 'a new beauty will come forth from the industrial revolution, finally freed of its contradictions'." (*True France*, p. 183.) As noted above (n. 61), Le Corbusier knew Rivière: writing in 1943 of the need to create a "new folklore", he explained, "I myself reached full agreement on these questions with Georges-Henri Rivière, the curator of the National Museum of Folk Arts and Traditions, as well as with Urbain Cassan. These men, assisted by a crew of young architects, are devotedly collecting from all over the country those elements we must have if we are to properly inform ourselves. Before we founder in despair or in destruction, waiting for this machine ago of ours to get around to the construction of a true culture of its own, these men want to catalogue and preserve, by scientifically classifying, whatever in our heritage is being threatened by the corrosion of time and the destructiveness of the accelerating machine age." (*Le Corbusier Talks with Students*, pp. 62-63.) This is a reference to Chantier 1425, a working party set up by Rivière and Cassan in October 1941 at the instigation of the Vichy government to document rural architecture in France.

nature is essential in both cases. In his editorial for the first edition of *Plans*, a syndicalist journal under his editorship in the early 1930s and in which the Radiant Farm and Village first appeared, Le Corbusier promised his readers,

The expression of real man, living in his natural surroundings, which allow for a state of plenitude. The blossoming of a more humane civilisation where man, dominating the tyranny of the machine created for his own good, would retrieve his place in the universe.⁷⁸

We cannot tell here whether he is speaking of rural or urban life: a revealing ambiguity, since his ambitions for both were interchangeable. For him, both a city and a farm could constitute “natural surroundings” in which man would live in a kind of cosmic harmony, his relationship with nature renewed through the medium of the machine.

Le Corbusier’s great enthusiasm for community life, long associated, as we have seen, with primitive culture, also emerges from his account of the Radiant Farm and Village. The activities of farming and the distribution of the products of the land will be managed on a co-operative basis, with large machines and storage facilities being owned in common. The village shops will sell back to their customers goods that they had bought collectively, replacing the traditional market. Le Corbusier’s conception of the Radiant Village as an alternative to the free market capitalist system comes through particularly vividly in his suggestion for the location of the petrol station:

One’s first reaction would be to set up one’s gas station not in the village, away from the main highway, but on the contrary actually on the highway, where our branch road from the village leads into it. Thinking in terms of profit, since the profit motive is the foundation of our economy as it is at present, the manager of the gas station will say: if I put my station out on the highway then I shall get all my customers from the village plus the ones who are just passing through. Result: a bottleneck on the

⁷⁸ *Plans*, January 1931, quoted in *Modernity and Nostalgia*, p. 76.

national highway and the necessity of setting up a home in a spot where it will be only partially productive from the point of view of the village: weakening of the village as a collective entity. The man in charge of the gas station must have other functions: he should also be the smith, or the repair mechanic. His job is not to waste his time on people driving past along the highway but to work for his fellow villagers [...] In the village, he will be fulfilling his proper function.⁷⁹

The good of the community must take precedence over the profit motive, even if it means that the petrol station manager loses his right to be a petrol station manager and nothing else. This collectivist thinking arises partly from the time that Le Corbusier spent in the Soviet Union – in the late 1920s he made several visits to Moscow in connection with the Centrosoyus project (1928) – but also from his involvement in the early 1930s with the regional syndicalist movement, which was based on the organisation of the workers into collective groups or *syndicats*. Syndicalism would abolish a class-based hierarchy in favour of an industrial one, with the leaders at each level – local, regional, national – being elected by their *syndicats*. It interwove this classless industrial reorganisation with the promise of a revived spiritual life, offering itself as an alternative to the empty materialism of capitalist culture: for the syndicalists, “the poverty of spiritual life, leisure time and living conditions testified to the failure of a materialistic world”.⁸⁰ Le Corbusier imported this combination of the rational organisation of labour, co-operative action and spiritual fulfilment into his Radiant Village. For him, working in a collective with others and not merely for oneself was a profound and meaningful act:

Spiritual: the combination of individual farm with co-operative village is one that will direct men’s thoughts toward others. Each peasant will be participating in the collective phenomenon: his community, the region, the nation, the world.⁸¹

⁷⁹ *Radiant City*, p. 328.

⁸⁰ *Urbanism and Utopia*, p. 105.

⁸¹ *Radiant City*, p. 324.

Beyond communism and syndicalism, there may be an echo here of the monastery at Galluzzo, which had so impressed Le Corbusier as a young man with its combination of the individual and the collective, and where living as a community was enacted within an explicitly spiritual context.

Le Corbusier, primitive culture and Vichy

There are therefore two ways of achieving spiritual fulfilment for the peasant living in the Radiant Farm or Village: maintaining a strong bond with the land and participating in community life. These were both qualities that, a decade or so later in 1940, the Vichy government would seek to revive. There is considerable crossover between the ideas of the regional syndicalists and the Vichy administration, and although many of Le Corbusier's associates from his syndicalist years did not go on to collaborate with the regime, others did. Le Corbusier himself was in the latter camp, using his connections from the 1930s to get himself appointed to Marshal Pétain's "Study commission for questions relating to housing and building", on which he served between May 1941 and June 1942. Although Pétain commissioned plans for the renewal of France's cities, however, his real passion was for the countryside. For him, the moral mainstay of France was her rural communities, with their folk traditions and close connection with the land: he featured in a children's colouring book produced as a piece of Vichy propaganda,

shaking the hand of a peasant at his plough with a tricolor flag waving behind them and the spire of a village church in the distance. Above the picture was the oft-used Vichy motto 'the earth does not lie' ('la terre, elle ne ment pas').⁸²

Christian Faure has commented that,

⁸² *True France*, p. 135.

The new order [...] was based on the rebuilding of an anachronistic rural society. Out of a reactionary and conservationist philosophy, the Marshal wanted to give birth to a new France, one whose provinces were the guardians of tradition.⁸³

Pétain used folklore as a popular art form in which “the myth of the land could take root”: “in the ideology of Vichy it became the dominant culture”.⁸⁴ So far, the links with the attraction to peasant culture that produced Le Corbusier’s Radiant Farm are obvious. Vichy, however, was not interested in the modern universal vernacular which Le Corbusier had proposed in there, preferring pastiches of traditional rural architecture which would serve the nationalist ideology of the state and evoke in their unchanging forms an essential French-ness needed to help the country recover from the humiliation of its defeat at the hands of the Germans. Le Corbusier’s plans for both rural and urban settings, by contrast, had nothing to do with either a revival of traditional architectural styles or a call to nationalist fervour: the section on the Radiant Farm and Village in *The Radiant City*, for instance, lacks any rhetorical exaltation of France over any other nation. Wherever Le Corbusier found people in their “natural” state, whether in the Balkans or Turkey in 1911 or in Arcachon or Algiers in the late 20s and early 30s, he celebrated them, irrespective of their race or nationality. Here there was a fundamental disjunction between him and the Vichy government which, in the end, made it impossible for them to work together. As well as promoting his 1937 plans for Paris, Le Corbusier was primarily occupied during his time at Vichy with plans for Algiers, and it was the rejection of the last in a series of these, the Plan Directeur, which marked the end of his association with Pétain’s

⁸³ “L’ordre nouveau [...] se fonde sur la reconstitution d’une société rurale anachronique. D’une philosophie réactionnaire et conservatrice, le Maréchal veut faire naître la France nouvelle, celle des provinces gardiennes des traditions.” Christian Faure, *Le Projet culturel de Vichy*, Presses Universitaires de Lyon, Lyon, 1989, p. 16.

⁸⁴ “La promotion du folklore en fait une réalité culturelle au sein de laquelle peut s’enraciner le mythe de la terre. Dans l’idéologie de Vichy il devient culture dominant.” *Le Projet culturel de Vichy*, p. 17.

regime. Le Corbusier responded in typically lyrical fashion to the topography, climate and vegetation of Algiers, writing in *Poésie sur Alger* that,

Poetry shines on Algeria [...] We are in Africa. This sun, this expanse of blue and of water, this greenery have been the setting for the gestures of Salambo, the actions of Scipio and Hannibal, as well as those of Kheir-ed-dinn the Barbaric. The sea, the chain of the Atlas mountains and the heights of Kabylie give out their strong blues. The ground is red. The plants are palm trees, eucalyptus, gumtrees, cork oaks, olive and fig trees; the scents, those of jasmine and mimosa. From the foreground to the farthest horizon, the symphony is clear.⁸⁵

Le Corbusier greatly admired the vernacular architecture of the Algiers Casbah – “a masterpiece of architecture and urbanism”⁸⁶ – but felt that the last fifty years of colonial building had ignored the magnificent landscape and turned the city into “a desert of stone”.⁸⁷ His own interventions, by contrast, would be in harmony with the natural surroundings; the Casbah, moreover, would be left untouched (figs. 5.21 and 5.22). This respect for vernacular tradition did not recommend his plan to the municipal authorities, however, who saw the Casbah as a slum fit only for demolition:⁸⁸ the colonial outpost of a nation obsessed with its own vernacular heritage had no respect for that of a foreign culture. *Poésie sur Alger* ends with the bitter admission that “in its session of 12 June 1942, the Municipal Council unanimously rejected Le Corbusier’s Plan Directeur”.⁸⁹

⁸⁵ “La poésie rayonne sur Alger [...] Nous sommes en Afrique. Ce soleil, cet espace d’azur et d’eau, ces verdure ont entouré les gestes de Salambô, les actes de Scipion et d’Annibal comme de Kheir-ed-dinn le Barbaresque. La mer, la chaîne d’Atlas et les monts de Kabylie déploient leurs fastes bleues. La terre est rouge. Les végétations sont de palmiers, d’eucalyptus, de gommiers, de chênes-lièges, d’oliviers et de figuiers de Barbarie; les parfums, de jasmin et de mimosa. Du premier plan jusqu’aux confines de l’horizon, la symphonie est immanente.” Le Corbusier, *Poésie sur Alger*, Fondation Le Corbusier and Editions Connivences, Paris, 1989, pp. 14-16. First published Falaize, Paris, 1950.

⁸⁶ “Chef-d’oeuvre d’architecture et d’urbanisme”, *Poésie sur Alger*, p. 16.

⁸⁷ “Un désert de pierrailles”, *Poésie sur Alger*, p. 16.

⁸⁸ Robert Fishman, *Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright and Le Corbusier*, Basic Books, New York, 1977, p. 250.

⁸⁹ “Dans sa séance de 12 juin 1942, le Conseil Municipal, à l’unanimité, rejetait le plan-directeur de Le Corbusier.” *Poésie sur Alger*, p. 48.

Le Corbusier, painter of fisherwomen at Le Piquey and champion of the farmers of the Sarthe, looks at first like an ideal collaborator for Vichy; his interest in traditional culture went far beyond the obvious primitivism of his paintings, however, and the more nuanced vision that he brought to his rural and urban planning was incompatible with the straight-forwardly revivalist, nationalist agenda of Vichy. This fusion of ancient and modern, of the locally distinctive and universally applicable also characterised his attitude to vernacular architecture both in France and abroad; the next chapter will look more closely at his engagement with vernacular building and examine his attempts to coin a kind of “vernacular modernism”.⁹⁰

⁹⁰ Phrase borrowed from Maiken Umbach and Bernd Hüppant, eds., *Vernacular Modernism: Heimat, Globalisation and the Built Environment*, Stanford University Press, Stanford, 2005.

Chapter 6: Nature and vernacular architecture

Le Corbusier's education in La Chaux-de-Fonds was directed by a search for a new style for the Swiss Jura, one which drew on regional vernaculars but was wholly of its time. The Villa Jeanneret (1912; fig. 6.1) exemplified this approach: it is clearly based on a traditional chalet form, but its white façade and strip window mark the beginning of something new. We saw in the previous chapter that primitive culture held for Le Corbusier the seeds of modern standardisation; similarly, a fusion of the traditional and the modern through the medium of long-established, traditional types formed the basis of his interest in vernacular architecture. He saw the dwellings that he encountered on the journey to the east in 1911 as types honed to perfection over many centuries; they also introduced him to a way of building based on extreme visual simplicity, whitewash and a fluidity between inside and outside space, characteristics which would find their way into his later high modernist style. The journey to the east also offered Le Corbusier a vision of a life lived in harmony with the natural environment: the inhabitants of the dwellings which he saw there were, he felt, in closer contact with nature than urban westerners. For him, bringing aspects of vernacular building into architectural modernism was therefore a way of reconnecting people with their natural surroundings, and part of his wider project of achieving a reconciliation between man and nature. This chapter will begin with a more general consideration of attitudes to vernacular architecture in the first half of the twentieth century; it will then examine the legacy of the journey to the east, before discussing the role of the vernacular in the Radiant Farm, the Chercshell project and various Indian buildings. Throughout the focus will be on the intersection of the vernacular and the modern in Le Corbusier's work: as with the primitive and the modern, his energy went not into maintaining them as two separate categories, but in finding a

means of fusing them. However, his attraction to both standardisation and diversity made this attempted fusion somewhat problematic, as I will conclude by showing.

Vernacular architecture in Britain, Germany, Switzerland and France, c.1900-1950

Interest in the vernacular was widespread during the early twentieth century, but was by no means the exclusive preserve of those pursuing conservative political agendas: as Maiken Umbach and Bernd Hüppant argue in their introduction to a recent collection of essays, the vernacular survived in different forms in many aspects of modernism.¹ Le Corbusier's attitude to the vernacular must be seen within the context of broader contemporary debates; it was, nonetheless, highly individualised.

In Britain, Patrick Geddes, the Scottish urban planner whose *Cities in Evolution* (1915) was to prove highly influential, was a strong advocate of housing solutions that had their roots in vernacular traditions. His interest in the vernacular owed much to Ruskin's belief in the continuing relevance of the medieval city for modern architecture and urbanism: Geddes argued, for instance, that an ancient city like Salisbury, with its generous provision of green space for every family, anticipated the Garden City movement.² Medieval urban layouts, he claimed, needed to be revived if cities were to become habitable once more; challenging the conventional idea that medieval cities were characterised by "poverty and misery and degradation",³ he argued that "what is to blame in them [...] has mainly been introduced in the centuries since the Middle Ages died – the very worst of it within

¹ Maiken Umbach and Bernd Hüppant, eds., *Vernacular Modernism: Heimat, Globalisation and the Built Environment*, Stanford University Press, Stanford, 2005, pp. 1-14.

² Patrick Geddes, *Cities in Evolution*, Ernest Benn Ltd., London, 1968, pp. 6-7.

³ *Cities in Evolution*, p. 10.

the industrial period, and much within our own times”.⁴ Geddes’s primary concern was with city dwellers’ access to nature, which had “already been three-fourths destroyed”:

The neighbouring great towns are rapidly linking up by train-ways and streets no less than by railways; while great open spaces which might have been not so long ago cheaply secured as unrivalled lungs of life, are already all but irrecoverable.⁵

He looked to the Garden City movement, with its provision of garden space, to restore a connection between people and nature:

It is still from Letchworth and Hampstead, from Woodlands and Earswick, and the like, as of course from the old-world villages they continue to renew, that we must best learn to house our people in moderate numbers to the acre, and with that most essential of conditions for children, wife and man alike – that is, of cottage and garden.⁶

There was a strong vein of regionalism in the style favoured by the architects of the Garden City: Parker and Unwin, for instance, used motifs drawn from the vernacular traditions of the English countryside, such as high pitched roofs, gables and enclosing walls, at Hampstead, although they also experimented with the more modern techniques of open planning and non-regular fenestration orientated towards the light. For Geddes, however, medieval domestic architecture best answered the human need for light, space and access to greenery – he points out, for example, that a kitchen half-open onto the street, as many were in the Middle Ages, is far more sociable, airier and better lit than one hidden in the basement⁷ – and it was on these practical rather than regional or nationalistic grounds that he called for a revival of the medieval vernacular.

⁴ *Cities in Evolution*, pp. 12-13.

⁵ *Cities in Evolution*, p. 34.

⁶ *Cities in Evolution*, p. 206.

⁷ *Cities in Evolution*, p. 9.

Vernacular architecture can, nevertheless, easily be co-opted into a nationalist agenda when a particular socio-political climate makes it advantageous to do so. In pre-First World War Germany, for instance, debates over the vernacular did not take place exclusively within a framework of regional or national identity; it was only after the war, during the Weimar years and the rise of National Socialism, that Germany's vernacular heritage became a full political and, later, racial issue. The war divided into opposing camps those who had previously held very similar views about vernacular architecture and who had found it possible to work constructively together; two prominent figures from this period, Hermann Muthesius and Paul Schultze-Naumburg, serve as illuminating examples.

Schultze-Naumburg was one of the most prominent spokesmen on architectural and urban matters during the first decade of the twentieth century. The nine volumes of his *Kulturarbeiten*, published between 1901 and 1917 in Munich, which set out to instruct Germans in the location of buildings in landscape and the planning of towns, were extremely popular, and in 1904 he helped to found the Bund Heimatschutz, an organisation dedicated to preserving Germany's cultural and natural heritage. "Membership [...] grew to include Germany's leading architects", Barbara Miller Lane tells us, making the important point that before the war the Bund was not isolated from other, more progressive groups such as the Deutsche Werkbund but, in her words, "drew close" to them.⁸ The Bund may have been primarily a conservation organisation, but it was "by no means altogether anti-industrial or anti-urban".⁹ It acknowledged that Germany must move with the industrial and technological drift of the times, but argued that incursions into the landscape, whether factories or houses, should be as unobtrusive as possible and harmonise with nature: Christopher Tunnard

⁸ Barbara Miller Lane, *National Romanticism and Modern Architecture in Germany and the Scandinavian Countries*, Cambridge University Press, Cambridge, 2000, p. 143.

⁹ *National Romanticism*, p. 143.

notes Schultze-Naumburg's belief that, "man has the power to enhance, damage, or destroy nature" and his assertion that "anything man-made should be a harmonious part of the landscape, an organic entity with nature".¹⁰ Schultze-Naumburg dedicated many pages of the *Kulturarbeiten* to examples of where this had been achieved or, conversely, where the landscape had been mutilated by insensitive development. As for the style of any new buildings, he, like Geddes, favoured models from the Middle Ages; town layouts should also be medieval in inspiration. Behind this lies a vague sense that medieval architecture is particularly suitable for a rural setting, and that its "farms, villages, and small towns are all part of the landscape, from a distance".¹¹ For Schultze-Naumburg, however, new buildings did not have to be straight-forward medieval pastiches: as Lane points out, his own Steinhorst House (1910) was "completely free of surface ornament of any type, and [...] was thus reduced to a bare-surfaced cubic mass, tied to tradition only through the use of casement windows and a hip roof".¹²

Schultze-Naumburg saw the forms of vernacular buildings as generated by the gradual honing of type-solutions, a view which emerged from and contributed to a vigorous contemporary debate over the role of quasi-industrial processes of standardisation in architecture. As Francesco Passanti puts it,

While conscious of changing conditions, Schultze-Naumburg and his friends insisted on the continued relevance of traditional types, which they held should be adapted, not reinvented anew. They saw these types as solutions perfected anonymously and

¹⁰ Christopher Tunnard, *A World with a View: An Inquiry into the Nature of Scenic Values*, Yale University Press, New Haven and London, 1978, p. 119.

¹¹ Quoted in *A World with a View*, p. 121.

¹² Barbara Miller Lane, *Architecture and Politics in Germany, 1918-1945*, Harvard University Press, Cambridge, Mass., 1968, p. 17. One could make a comparison between this house and the Maison Jeanneret; such a comparison would tend to make the young Le Corbusier's judgement of Schultze-Naumburg seem rather unfair: "see as well in Germany how ridiculous they have become [...] Schultze-Naumburg has completely capitulated and copies Louis XVI *detail for detail*." ("Voyez aussi combine en Allemagne ils sont tournés en ridicule [...] Schultze-Naumburg, lui, a tout à fait capitulé et copie *textuellement* Louis XVI jusque dans les moindres details.") Le Corbusier to Charles L'Eplattenier, 16 January 1911, FLC E2-12-54.

collectively over many generations and representative of their society precisely because of the anonymity of the process that embedded the collective identity of the form.¹³

For Schultze-Naumburg, then, building form should be

clean and pure; and this can only happen if each copies the other and makes it a little bit better [...] This is only possible with the *entire* store of human knowledge, and when [the artist] has created something from this store, he cannot think that it is his *private* property.¹⁴

Hence Schultze-Naumburg's objection to copyright law, against which he cited the example of the building of the great Gothic cathedrals:

Imagine such legislation in a time of truly healthy artistic development. Think for example of the twelfth century when the first Gothic cathedrals were built. If they had immediately been placed under copyright, and the author had patented them so that they alone would have the rights to build further Gothic cathedrals, then the development of the Gothic style would have looked pretty silly.¹⁵

His Steinhorst House, then, represents a fusion of these two positions: it is both a product of tradition and an expression of standardised form.

Hermann Muthesius's enthusiasm for vernacular architecture began in England, where he was based between 1896 and 1903 as the cultural attaché at the German Embassy in London. He was drawn to the simplicity and authenticity of the many Arts and Crafts houses that he visited, and was equally impressed by the vernacular buildings which were their inspiration, synthesising all this for a German readership in his book *The English House* of 1904. In 1907, a few years after his

¹³ Francesco Passanti, "The Vernacular, Modernism and Le Corbusier", in *Vernacular Modernism*, pp. 141-56, p. 150. Amos Rapoport argues that this typicality is one of the defining features of vernacular architecture: "almost all observers of primitive and peasant societies have commented on the typical lack of differentiation in the use of space and labour which also permeates other areas of life and thought." (*House Form and Culture*, Prentice-Hall Inc., Englewood Cliffs, 1969, p. 8.)

¹⁴ Quoted in Frederic J Schwartz, *The Werkbund: Design Theory and Mass Culture before the First World War*, Yale University Press, New Haven and London, 1996, p. 195.

¹⁵ Quoted in *The Werkbund*, p. 195.

return to Germany, Muthesius co-founded the Deutscher Werkbund with the intention of reconciling traditional building styles with the needs of a modern industrial society. His travels in England had convinced him that “domestic vernacular architecture embodied the spirit of English national identity”,¹⁶ a concept which he applied to the German vernacular on his return; he argued at the same time, however, that vernacular buildings could be types, since they had been honed by generations of nameless builders until the ideal form had been found. Debates over types dominated the 1914 Werkbund conference in Cologne, which the young Le Corbusier attended. Muthesius argued for “the concentration of design effort on a limited number of generally useful forms”, claiming that “the main task [...] was not to invent ever new forms but to refine those already in existence”.¹⁷ The similarity with Schultze-Naumburg’s position is striking, although, ironically, it was at this point that Muthesius began to draw away from the Heimatschutz movement in an attempt to convince his opponents that he was not a reactionary intent on crushing artistic individualism.¹⁸ Muthesius brought vernacular architecture into the debate at Cologne, “bestow[ing] on the products of industry the same ability to embody organic culture that preindustrial types were deemed to have”:¹⁹ we are reminded here of Le Corbusier and Ozenfant’s argument in *Purism* that, “if blind nature, who produces eggs, were also to make bottles, they would certainly be like those made by the machine born of man’s intelligence”.²⁰ According to Passanti, a supporter of Muthesius rose from the floor at Cologne to bolster his argument with the example of

¹⁶ Maiken Umbach, “The Deutsche Werkbund, Globalisation and the Invention of Modern Vernaculars”, in *Vernacular Modernism*, pp. 114-40, p. 124.

¹⁷ Joan Campbell, *The German Werkbund: The Politics of Reform in the Applied Arts*, Princeton University Press, Princeton, 1978, p. 58.

¹⁸ *The German Werkbund*, p. 59.

¹⁹ “The Vernacular, Modernism and Le Corbusier”, p. 150.

²⁰ Charles-Edouard Jeanneret (Le Corbusier) and Amedée Ozenfant, “Purism”, reprinted in Robert Herbert, ed., *Modern Artists on Art*, Prentice-Hall, Englewood Cliffs, New Jersey, 1964, pp. 58-73, p. 64.

the Greek temple, which, he claimed, had been “perfected anonymously over two centuries before Ictinus designed the Parthenon by slightly inflecting the type”.²¹ The same example found its way into Le Corbusier’s famous comparison in *Towards a New Architecture* of the development from a temple at Paestum to the Parthenon and that from a 1907 Humber to a 1921 Delage Grand-Sport, from which he concluded that “the Parthenon is a product of selection applied to an established standard”.²² Muthesius’s approach, as well as the Werkbund debates more generally, therefore, laid the basis for Le Corbusier’s co-option of vernacular architecture into a modernist aesthetic founded on the idea of the universal standard.

For Muthesius, then, as for Schultze-Naumburg, the vernacular was both an expression of national identity and an example of standardisation in action, and, as such, a starting-point for a new universalism in architecture. After the war, however, the two men found themselves moving in drastically different directions. Schultze-Naumburg’s assertion of the importance of national identity and its reflection in traditional vernacular architecture hardened in the face of what he saw as the universalist ambitions of the new modernist style being developed by younger Werkbund members such as Walter Gropius and Bruno Taut. For him, a perfectly valid discourse about the need for types in architecture based on existing forms had been overtaken by a crushing universalism and the denial of both individual creativity and cultural heritage. This he blamed on the pernicious influence of Bolshevism and the depraved life of the metropolis. Schultze-Naumburg evoked nature and the idea of rural life in support of his plea for artists and architects to return to a healthy, truly German style, writing in *The Face of the German House* (1928) that,

²¹ “The Vernacular, Modernism and Le Corbusier”, p. 150.

²² Le Corbusier, *Towards a New Architecture*, Frederick Etchells, trans., The Architectural Press, London, 1987, p. 133. First published as *Vers une Architecture*, Editions Crès, Paris, 1923.

[The] German house gives one the feeling that it grows out of the soil, like one of its natural products, like a tree that sinks its roots deep in the interior of the soil and forms a union with it. It is this that gives us our understanding of home, of a bond with blood and earth, for one kind of men the condition of their life and the meaning of their existence.²³

In *Art and Race*, published in the same year, Schultze-Naumburg's argument became explicitly racial: he claimed that only those of pure German blood could produce legitimate, healthy, un-perversed art forms. This intertwining of land, national identity and the purity of a true German art would become cornerstones of Nazi policy in the ideologies of "blood and soil" and "degenerate art". Schultze-Naumburg's assertion that the traditional German house appears to be rooted in the soil is an implicit criticism of those nomadic urbanites who, not being of pure German stock, have no sense of place or connection to the land and should not therefore be building on German soil.

Muthesius, too, opposed the new architecture after the war, but for very different reasons. After his presidency of the Werkbund ended in 1916 he found himself increasingly marginalized in an organisation dominated by a younger generation bent on developing a wholly modernist aesthetic. To him, the modernism of Gropius and the Bauhaus was just another style, comparable to the *Jugendstil* that he had so vigorously opposed before the war, and not the true expression of functionality that it claimed to be. This comes across most clearly in his criticism of the Weissenhof Siedlung, built under the aegis of the Werkbund in Stuttgart in 1927, as Joan Campbell's account shows:

Muthesius, in a critique written on the eve of his death, welcomed the exhibition as a significant experiment, but argued that the solutions offered were not the product of functional considerations at all. Rather, they reflected a new formalism to which considerations of rationality, economy, and constructional requirements had been

²³ Quoted in *Architecture and Politics in Germany*, p. 139.

ruthlessly subordinated. Thus at the very time when some of its opponents deplored the Weissenhof's cold and alien functionality, others were denouncing its alleged failure to conform to the demands of true *Sachlichkeit*.²⁴

The pre-war doctrine of standardisation, based on a synthesis of type-form and function, had, it seemed to Muthesius, now been abandoned, and with it any role for the vernacular in modern architecture.

The careers of Muthesius and Schultze-Naumburg from the turn of the century to the rise of National Socialism, then, demonstrate clearly the very different ideologies into which vernacular architecture can be drawn: a progressive functionalism on the one hand and on the other a dangerous nationalism. So what of Le Corbusier in all of this, whose visits to Germany in 1910-11, when he was working for Peter Behrens, and in 1914, when he was sent to report on the Werkbund conference by the journal *L'Art de France*, put him very much in the same milieu? In 1910-11 Le Corbusier met Muthesius several times; through his brother Albert he was a frequent visitor to Hellerau, where he received an offer of work from Heinrich Tessenow.²⁵ His five months in Behrens's office at Neu-Babelsberg, near Berlin, moreover, put him at the heart of the most progressive Werkbund circles. As he recorded in his *Study of the Movement in the Decorative Arts in Germany*, which was commissioned by the art school at La Chaux-de-Fonds and published in 1912, he was impressed by what he saw as the German genius for organisation and the Werkbund's positive attitude towards industry, while maintaining at the same time that the French

²⁴ *The German Werkbund*, pp. 187-88.

²⁵ Reyner Banham claims that Le Corbusier actually worked for Tessenow at Hellerau (*Theory and Design in the First Machine Age*, The Architectural Press, London, 1960, p. 72), but, as Harold Allen Brooks shows with reference to a letter to William Ritter dated 14 January 1911, he is mistaken: "Jeanneret was offered a job to help with [Tessenow's plans for his Festival Hall at Hellerau], and, though tempted, he set the condition that his role be truly significant – which Tessenow naturally declined." (*Le Corbusier's Formative Years*, University of Chicago Press, Chicago and London, 1997, p. 245.)

were the real creative artists.²⁶ However, after reading Alexandre Cingria-Vaneyre's *Interviews at the Rouet Villa* (1908) in October-November 1910, Le Corbusier's focus shifted back to the question that had preoccupied him before his departure for Germany: the need to find a new regional style for the Jura. Cingria-Vaneyre's argument was a broadly nationalistic or even racial one: in his view, the Mediterranean origins of the Suisse-Romande had been obscured by the "perverting influence"²⁷ of the German-speaking world, and he called for Swiss architects to revive those origins by propagating a new, pared-down, classical style. His belief that a particular race must mark its superiority to others through its art and architecture is very close to Schultze-Naumburg's pre-war evocation of the "Nordic spirit" which had concentrated "the intelligence of humankind [and made it possible for] our era to find its own style",²⁸ and, indeed, to Le Corbusier's own sense of the different natural talents of the Germans and the French. Le Corbusier's move from this point away from medieval building styles was, therefore, in part an attempt to find a new regional vernacular, but also a search for a more abstract, universal aesthetic in which the emphasis was on primary forms and unadorned surfaces.

His search for a modern style of architecture particular to the Jura needs to be seen in a wider context, however. His efforts reflect the concern throughout the Suisse Romande that its buildings should express the specific identity of the region, caught as it was between French and German-speaking cultures; Cingria-Vaneyre's book was only one manifestation of this broader debate. Pierre Vaisse summarises the cultural climate of French-speaking Switzerland around the turn of the century as follows:

²⁶ Charles-Edouard Jeanneret (Le Corbusier), *Etude sur le mouvement d'art decoratif en Allemagne*, Da Capo Press, New York, 1968.

²⁷ Quoted in Paul Turner, *The Education of Le Corbusier*, Garland Publishing Inc., New York and London, 1977, p. 85.

²⁸ Quoted in *National Romanticism*, p. 144.

Le Corbusier was drawn to Mediterranean culture, while repelled by the Germanic. The two responses were inseparable, like two complementary aspects of the same vision. The opposition between north and south, between the Germanic world and the Latin world, dominated his mind just as it had dominated European thought for generations. Confronted with it at the start of the twentieth century, however, the Swiss architect found himself in a special situation. The Helvetic Confederation of cantons – that is, Switzerland – as shaped and defined by the Constitution of 1848 was still a young country in search of a national identity. In French Switzerland, in the first years of the century, this led to the adoption of an architectural style, later baptised *Heimatstil* (homeland style). It was strongly influenced by the traditional architecture of the old cities of Alemannian Switzerland – an aspect of the international regionalism to which Le Corbusier made concessions in the villas he constructed at La Chaux-de-Fonds between 1906 and 1908. / Around the same time, French Switzerland reacted against Germanic culture, which was also that of Alemannian Switzerland, and began to favour the Mediterranean world, the cradle of Latin culture.²⁹

Within the “special situation” of the Suisse Romande, the Jura had its own particular status and identity. While French-speaking Switzerland sought to emphasise its Latin roots, a necessary gesture of self-assertion as a minority within a German-speaking majority, the Jura also contained the mountainous landscape so important in the formation of pan-Swiss identity, and the building type inseparable from it, the chalet. For Le Corbusier, the chalet was a type-form, representative, as Judi Loach points out, of Switzerland both at home and abroad.³⁰ That, however, was precisely its limitation: it evoked the nation as a whole, not the Jura in particular. While Le Corbusier’s first houses, the Villas Fallet, Stotzer and Jacquemet (1905-09), were therefore modelled on traditional chalets, he began from around 1910 to try to combine this type-form with a classical emphasis on order, rationality and simplicity, and thus to fuse elements of Germanic and Latin culture into something uniquely

²⁹ Pierre Vaisse, “Le Corbusier and the Gothic”, in Stanislaus von Moos and Arthur Rüegg, eds., *Le Corbusier Before Le Corbusier*, Yale University Press, New Haven and London, 2002, ex. cat., pp. 44-54, p. 52. Vaisse goes on to comment that “the return to classicism was actually very widespread in Europe beginning around 1910”: we can think, for example, of the Biedermeier style popular in Germany in the early twentieth century.

³⁰ Judi Loach, “Jeanneret Becoming Le Corbusier: Portrait of the Artist as a Young Swiss”, *The Journal of Architecture* 5, spring 2000, pp. 99-107, p. 101.

expressive of the Jura. The Villa Jeanneret (1912; fig. 6.1) exemplifies this approach: the roof remains hipped and the eaves deeply overhanging, but the façade is white, planar and unadorned; in the horizontality of the fenestration we see the origins of the strip window which would become one of the “five points of a new architecture” in the early 20s. The garden, moreover, is a Mediterranean dream of summer rooms and colonnades. The contemporaneous Villa Favre-Jacot retains the chalet-style roof but draws the eaves back; the massing of its “classically conceived geometric solids”³¹ and smooth white surfaces shows a move towards the pared-down abstraction which would become the hallmark of the villas of the 20s. Le Corbusier’s interest in the type-forms of vernacular architecture – in this case, the Swiss chalet – cannot therefore be separated from his impulse towards modernist forms, which found expression in the early 1910s in a simplified classicism. However, rather than his “conversion to classicism” being simply a means towards the ultimate end of modernism, as Brooks has it, it emerged within the context of a passionate debate over the identity of the Suisse Romande and how this should be expressed in its architecture.

In France in the first half of the twentieth century similar concerns about traditional and modernity were played out in discussions of vernacular architecture. A conservationist attitude prevailed in relation to the centre of Paris, with architects, planners and social commentators arguing that the improvement of living conditions in the city’s *îlots insalubres* must preserve the unique Parisian vernacular of these historic areas. This was an issue of national identity, as Rosemary Wakeman points out: “to rediscover the city’s urban heritage, the particularity of its neighbourhoods, its vernacular spaces and architecture, was to rediscover the essential qualities of

³¹ Deborah Gans, *The Le Corbusier Guide*, Princeton Architectural Press, New York, 2000, p. 156.

Frenchness".³² Architects such as Georges Sébille and Robert Auzelle were employed to make cautious interventions that left the essential character of the *îlots* unchanged. "Sébille's model project [of 1932] for the area between the Rue Saints-Pères and the Rue du Dragon", for instance, "'left the old streets tranquil' and instead concentrated on clearing out old interior courtyards, opening them to fresh air, as the basis for renewed public life".³³ In new housing, however, the influence from across the channel of the Garden City movement caused the adoption of an English vernacular style. Georges Benoît-Lévy, whose correspondence with Le Corbusier we have already encountered, was responsible for popularising the Garden City in France: his role was analogous to that of Muthesius in Germany, and his book, *The Garden City*, was published in the same year as *The English House*. Benoît-Lévy was introduced to the idea of the progressive workers' village by Patrick Geddes, whom he met in Scotland in 1901; in 1903 he founded the French Garden City Association and began campaigning for a better living environment for ordinary workers modelled on Bournville, Port Sunlight and Letchworth, the latter then only at plan stage. The other key figure in the French Garden City movement was Georges Risler, who made his preference for an English vernacular style clear in a conference at the Musée Social³⁴ in December 1909:

After a brief pastoral about the timeless need for greenery and fresh air, in contrast to the misery of popular housing, Risler sounded a familiar Musée Social refrain: France was falling behind [...] [He] praised the mining city of Douges, where the company had built 374 *pittoresque* cottages with individual gardens.³⁵

³² Rosemary Wakeman, "Nostalgic Modernism and the Invention of Paris in the Twentieth Century", *French Historical Studies* 27/1, winter 2004, pp. 115-44, p. 121.

³³ "Nostalgic Modernism", p. 121.

³⁴ The Musée Social was an organisation set up in Paris in 1894 to conduct research into all aspects of social reform. See Janet R Home, *A Social Laboratory for Modern France: The Musée Social and the Rise of the Welfare State*, Duke University Press, Durham and London, 2002.

³⁵ Paul Rabinow, *French Modern: Norms and Forms of the Social Environment*, MIT Press, Cambridge, Mass. and London, 1989, pp. 259-60.

A satellite organisation, the Society of Garden Cities of the Paris Suburbs, took a similar approach, declaring in a proposal of 1914 for a garden city on the outskirts of Paris its intention to “rival the beautiful creations which England offers us as models”.³⁶ The close connection between housing and nature achieved by the English Garden City movement was particularly to be emulated: in the city envisaged by the Society, “nature collaborates [...] with the architect; the great trees of the neighbouring forest live beside the little gardens which surround the home and enliven with flowers the charming dwellings”.³⁷

The idea of the Garden City was taken up by Henri Sellier, who as head of the Public Office of Affordable Housing of the Department of the Seine would oversee the building of sixteen garden cities in the Parisian *banlieue* between the wars. Looking back in 1937, he recalled the original aims of this massive project of suburban regeneration:

[The Public Office] has one very limited and well-defined object, which consists of building ensembles suitable to assure the decongestion of the city of Paris and of its suburbs, to serve as an example to developers [...] and to show that [...] it is possible to assure the working population, manual and intellectual, a dwelling presenting the maximum of material comfort, natural hygiene conditions [...] and styles notably contrasting with the hideousness of the formulas previously employed.³⁸

As Mark Swenarton has shown, one of the foremost influences on Sellier was Raymond Unwin;³⁹ Sellier also acknowledged a debt to Bournville and Port Sunlight,⁴⁰ with which he would have been familiar through Benoît-Lévy. It is not surprising, therefore, that one of the earliest of his garden cities, Drancy (fig. 6.2),

³⁶ Society of Garden Cities of the Paris Suburbs, 1914, quoted in Norma Evenson, *Paris: A Century of Change, 1878-1978*, Yale University Press, New Haven and London, 1979, p. 222.

³⁷ Société des Cités-Jardins, quoted in *Paris: A Century of Change*, p. 222.

³⁸ Henri Sellier, “L’Oeuvre de l’Office Public des Habitations à Bon Marché de la Département de la Seine”, *L’architecture d’aujourd’hui* 5/6, June 1937, quoted in *Paris: A Century of Change*, p. 222.

³⁹ Mark Swenarton, “Sellier and Unwin”, *Planning History Bulletin* 7/2, 1985, pp. 50-57.

⁴⁰ In “L’Oeuvre de l’Office Public”, quoted in *Paris: A Century of Change*, p. 222.

countered “the hideousness of the formulas previously employed” with an English vernacular style:

On the curving streets, the houses, aligned so as to avoid all monotony, and set back from the pathways, display the most picturesque aspects with the possibilities of sun and light dictating the orientation, with steeply pitched tile roofs, with many angles and breaks, they tend to resemble an Anglo-Norman architecture.⁴¹

By the late 1910s, however, the influence of the English vernacular was on the wane in France. Individual cottages were uneconomic to build; the need for higher density housing had made it “practically impossible to maintain the English picturesque and romantic conceptions”.⁴² Instead, suburban architecture turned back to more quintessentially French styles. The plan which Sellier drew up for Suresnes in 1919 retains a few English-style cottages, but the majority of the site is occupied by neo-Haussmannian residential blocks (fig. 6.3). In reverting to the most ubiquitous architectural style of nineteenth-century Paris, Sellier was in a sense reviving an authentically French vernacular form. The layouts of the newer garden cities reached back further in French architectural history, to the rectilinearity and axial planning of the seventeenth and eighteenth centuries. This was in evidence at Plessis-Robinson, as the American commentator Wells Bennett noted in 1935:

A grand boulevard provides a main axis and vista, intersected at right angles by more modest cross-streets [...] The formal ‘grand plan’ tradition has thus persisted, adapted to the economic necessities of low-cost housing.⁴³

The houses at Plessis-Robinson, however, were thoroughly modern, with flat roofs and unadorned façades (fig. 6.4). Châtenay-Malabry went further, introducing an eleven-storey tower block into the town centre (fig. 6.5). Sellier had taken note of the

⁴¹ “L’Oeuvre de l’Office Public”, quoted in *Paris: A Century of Change*, p. 223.

⁴² “L’Oeuvre de l’Office Public”, quoted in *Paris: A Century of Change*, p. 223.

⁴³ Wells Bennett, “The French Attack on the Housing Problem”, *Journal of Land and Public Utility Economics* 11/3, August 1935, pp. 278-89, p. 286.

plans which Le Corbusier had been drawing up for the centre of Paris since the mid-1920s, with their towers rising high above parkland, and asked, “why not take what is good in his idea and apply it to the suburbs?”⁴⁴ He sought to recommend this proposal by evoking traditional town layouts, as if a tower block were simply a modern interpretation of an existing vernacular:

There was no group of houses, not a city, not a village, so humble, that it did not have, in the past, its clock tower, its belfry, its watchtower, of which the architecture was the identifying sign of the city [...] An assemblage of low houses, without accent point, without architectural spirit, without an elevation which would be like a rallying centre, will remain a housing complex without character or soul.⁴⁵

Before long, five tower blocks had risen at Drancy-La Muette alongside lower-rise dwellings, all arranged in a grid with the spaces in between planted with greenery (fig. 6.6): Le Corbusier’s vision for Paris’s urban core had been as good as realised in the suburbs.⁴⁶

This turn towards the modern did not last long, however. The Vichy government of 1940-44 made city planning and urban renewal central concerns, but in a traditional vein that overturned the more forward-looking efforts of its Popular Front predecessors. The vernacular returned to urban discourse, both in debates over the preservation of central Paris and the construction of new suburbs; a plan presented at the 1943 *Salon des Urbanistes* proposed, according to Wakeman, to

open Paris to the healthy benefits of open spaces and the countryside. Around it, charming peasant-style cottages and apartments would await slum dwellers relocated

⁴⁴ Henri Sellier, “L’Habitation en hauteur”, *Urbanisme* 16, July 1933, quoted in *Paris: A Century of Change*, p. 223.

⁴⁵ “L’Habitation en hauteur”, quoted in *Paris: A Century of Change*, p. 223.

⁴⁶ There was in fact some contact between the two men: on 5 April 1935 Le Corbusier wrote to Sellier to remind him of a conversation they had had in which Sellier had raised the possibility of giving him some work (FLC R3-3-222). No reply from Sellier exists in the archives, so we can assume that the business went no further.

from the central districts. The garden-city ideal, now combined with a neo-rural pastiche, would be imposed on the discredited republican visions of the capital.⁴⁷

Before this vision could be implemented, the political climate changed again. The post-war government marked its absolute rejection of Vichy ideologies by refusing to engage in any rebuilding projects based on historic vernaculars. As Eugène Claudius-Petit, Minister of Reconstruction, announced, “we will not reconstruct the old France. French tradition is to create a new tradition based on man’s reconciliation with nature”.⁴⁸ Here was Le Corbusier’s opportunity: the Marseilles Unité, icon of post-war modernity, was commissioned by Claudius-Petit in 1945 and completed in 1952; three more Unités followed. At the same time, however, interest in the vernacular dwellings of old Paris was revived by the writings of Henri Lefebvre and Paul-Henry Chombart de Lauwe, who

rediscovered the *îlot* or quartier as the socially cohesive ‘lived’ experience of Parisian working class life that countered state decentralisation plans and the banality of the suburban *métro-boulot-dodo* life. The natural milieu of the quartier, Chombart de Lauwe argued, offered the structure of everyday life and work, providing not only economic and housing needs, but psychological ones as well. The vernacular space of the city was the arena of social reconciliation.⁴⁹

From the beginning of the twentieth century to the 1950s, then, French debates over vernacular architecture were highly politicised, as they were in Germany, with successive governments seeking to pursue progressive or traditional agendas through their housing policies. Standing outside mainstream politics, Le Corbusier approached the question of vernacular architecture somewhat differently. As we saw in Chapter 2, he was strongly influenced by the Garden City movement, adopting an English vernacular for projects such as the Cité-Jardin aux Crétets for Arnold Beck in

⁴⁷ “Nostalgic Modernism”, p. 133.

⁴⁸ Eugène Claudius-Petit, “Choses vécues”, quoted in “Nostalgic Modernism”, p. 136.

⁴⁹ “Nostalgic Modernism”, p. 141.

a very similar manner to that of Benoît-Lévy and Sellier during the 1910s. Although the influence of the Garden City persisted in his work well beyond his early years, as I have shown, Le Corbusier had completely abandoned its English cottage style by the early 20s. The pre-war debates to which he had been exposed in Germany were instrumental in bringing about this rejection of the traditional Garden City vernacular, but in 1914 Le Corbusier was turning towards a Frenchman, Tony Garnier, for inspiration. He was keen to identify a progressivism within his own cultural context which could rival that of the Germans and to prove that the fusion of German efficiency and French creative genius to which he had looked forward in 1912 was already underway within the Latin rather than the Germanic world. In a letter dated 9 October 1914 in which he recounted his impressions of the architecture exhibited alongside the Werkbund conference in Cologne, Le Corbusier wrote that his enthusiasm was more strongly directed towards “certain indications from Lyon”.⁵⁰ this is a reference to the Exposition Universelle Urbaine there, which he had seen on his way home to La Chaux-de-Fonds and which featured work by Garnier. What Garnier proposed for the residential quarters of his *Industrial City*, published a few years later in 1917 and a copy of which Le Corbusier acquired shortly afterwards, was effectively a modern garden city, closer to Plessis-Robinson than Drancy, Suresnes, or, indeed, Le Corbusier’s own Cité-Jardin aux Crétets, and it was Garnier’s drawings, rather than any by Benoît-Lévy or Sellier, that made it into *Towards a New Architecture* in 1923. They show the blocks à rédents, the generous tree planting and the flat roofs which Le Corbusier would later make into cornerstones of his own urban plans (fig. 6.7). Garnier’s example was undoubtedly important, then, in the development of Le Corbusier’s own conception of a modern garden city. By this

⁵⁰ Le Corbusier to William Ritter, 9 October 1914, quoted in *Le Corbusier’s Formative Years*, p. 371, n. 64.

time, however, Le Corbusier had discovered another source of vernacular architecture entirely, one which would have as strong an influence on his move towards modernism as a forerunner like Garnier: the buildings which he saw on the journey to the east.

The Journey to the East

Le Corbusier's first encounters with vernacular architecture were during his boyhood and early training, when he developed a great admiration for the farmhouses of the Jura. On his return from Paris in 1909, where he had been working for Auguste and Claude Perret, he moved into one with some art school friends and, a few years later in 1915, worked on a project to renovate another.⁵¹ At this stage vernacular architecture was inseparable for Le Corbusier from the region which had produced it; recalling his early work in *The Decorative Art of Today*, he confessed, "you see [...], quite a long time ago I was too a regionalist".⁵² The journey to the east, however, which he made between May and November 1911 and which took him from Germany to Austro-Hungary, Serbia, Romania, Bulgaria, Turkey, Greece and Italy in the company of his art student friend Auguste Klipstein, prompted a new direction in his thinking. It inspired Le Corbusier to think of vernacular architecture as a potential basis for a whole new architectural aesthetic, one which would not be regional, but universal.⁵³ His exposure to Muthesius and the Deutscher Werkbund had paved the

⁵¹ As Brooks points out, the farmhouse chimneys were still finding their way into his work of the 1950s, in the funnel-like forms of the Assembly building in Chandigarh and the church of Saint Pierre at Firminy (*Le Corbusier's Formative Years*, p. 186).

⁵² Le Corbusier, *The Decorative Art of Today*, James I Dunnett, trans., The Architectural Press, London, 1987, p. 194. First published as *L'Art décoratif d'aujourd'hui*, Editions Crès, Paris, 1925.

⁵³ Francesco Passanti argues in "The Vernacular, Modernism and Le Corbusier" that as well as providing some specific sources for Le Corbusier's later work – a house in Turnovo gives him the strip window, for instance – it was the "people and their relationship to their artefacts" which was the chief legacy of the Balkan part of the journey to the east. I want to suggest in addition that the Balkan houses, backed up by those he saw in Turkey and Italy, gave him the fundamentals of an entire architectural aesthetic.

way for this new departure. In *Journey to the East*, the account of his travels based on the journals and sketchbooks which he kept at the time, Le Corbusier gives “folk art” the status of a standard, claiming that it “outlives the highest of civilisations”: “it remains a norm, a sort of measure whose standard is man’s ancestor – the savage, if you will”.⁵⁴ The vernacular buildings which appear in Le Corbusier’s travel sketches were predominantly simple in form, white in colour and devoid of applied ornamentation: these became the basic principles on which he would found a new modernist aesthetic. Instead of copying nature literally, as he had done in the stylised pine trees on the façade of the Villa Fallet, Le Corbusier turned towards an abstraction of its essential geometric forms, which he saw reflected in the simple volumes of the vernacular buildings of the journey to the east.⁵⁵ When he came to publish the first volume of the *Oeuvre Complète* in 1929, Le Corbusier began not with examples of his student work or early projects from La Chaux-de-Fonds, but with a selection of sketches from the journey to the east, as if to state that the start of his career as a modern architect can be dated from this point.

The visual simplicity of the buildings that Le Corbusier encountered on his travels presented a powerful counter-blast to the over-ornamentation typical of the early twentieth-century western architectural mainstream, which was still groaning under the decorative excesses of the previous century. Francesco Passanti draws a parallel between the vernacular buildings which Le Corbusier sketched on the journey to the east and the mass-produced goods which he sought out later in his career,

⁵⁴ Le Corbusier, *Journey to the East*, Ivan Žaknić, ed., trans. and annotated in collaboration with Nicole Pertuiset, MIT Press, Cambridge, Mass. and London, 1987, p.16. First published as *Le Voyage d’Orient*, Jean Petit, ed., Forces Vives, Paris, 1966.

⁵⁵ Bruno Zevi, writing in 1950, would identify this tendency towards abstraction over literalism as an essential element of “organic architecture”. For Zevi, architects must avoid the mere imitation of natural forms: “this habit of enjoying extraneous associations may be legitimate in so far as it enables the critic to get closer to the poetic purpose of a design; but it has conferred on organic architecture the halo of romantic naturalism, of a mechanical return to nature in which a specific artistic value is attributed to naturalistic subject-matter.” (*Towards an Organic Architecture*, Faber and Faber, London, 1950, p. 73.)

arguing that both represented the “solutions of great elementarity”⁵⁶ that he was constantly seeking. Le Corbusier’s sketchbooks, drawings and watercolours feature small, white-painted houses, presented as the standard dwellings of the regions through which he was passing. His desire to find the most typical (and therefore standardised) examples of domestic architecture could lead him to misrepresent what he was seeing, however. A sketch of a building in Romania (fig. 6.8), for instance, is captioned simply “old house of a Romanian type”:⁵⁷ it is in fact a defensive structure, built as an adjunct to a nobleman’s house, to which the family could de-camp in the event of an attack, and by no means a typical dwelling.⁵⁸ Le Corbusier’s presentation of the Roman houses which he saw in Pompeii in *Towards a New Architecture* is similarly disingenuous: he tells us simply that in the Casa del Noce and the House of the Tragic Poet, “you are in the house of *a Roman*”,⁵⁹ neglecting to mention that these are the dwellings of some of the highest status members of society, and do not represent the living conditions of the average citizen.

Le Corbusier saw the whiteness of vernacular houses as an expression of their innate purity and simplicity. In his own private house commissions of the 1920s, similarly, he would use whitewash to evoke the purity, order and rationality which he saw as the essential characteristics of the modern age. The colour white represented for him the intellectual clarity and rigour necessary to tackle the challenges of twentieth-century living and to exploit the potential offered by its new technologies; in *The Decorative Art of Today* he declared that,

⁵⁶ “The Vernacular, Modernism and Le Corbusier”, p. 146.

⁵⁷ “Vieille maison type roumain”, Le Corbusier, *Voyage d’orient carnets*, Electa Moniteur, Milan and Fondation Le Corbusier, Paris, 1987, carnet 1, p. 62. Two further drawings of the same, or a similar, house follow on pages 64 and 65.

⁵⁸ I am indebted to Ruxandra Stoica, postgraduate student at the University of Edinburgh, for this information.

⁵⁹ *Towards a New Architecture*, p. 184.

In the confusion of our tumultuous times many have become accustomed to think against a background of black. But the tasks of our century, so strenuous, so full of danger, so violent, so victorious, seem to demand of us that we think against a background of white.⁶⁰

In the same book, which drew heavily on the experiences of the journey to the east, Le Corbusier claimed whitewash as evidence of the superiority of those cultures which had not embraced extraneous ornamentation over those which had:

Whitewash exists wherever peoples have preserved intact the balanced structure of a harmonious culture [...] In the course of my travels I found whitewash wherever the twentieth century had not yet arrived.⁶¹

Painting one's house white, then, is a truly authentic architectural act, one that reaches back to the origins of building culture itself. Adolf Loos, whose essay "Architecture" was written the year before Le Corbusier embarked on the journey to the east, saw whitewash in very similar terms. Loos describes the method by which a farmer builds his house by the side of a lake: after the foundations have been laid and the mason, the carpenter and the joiner have done their parts, the farmer "makes a large tub of distemper and paints the house a beautiful white". Loos then sums up the farmer's achievement:

He wanted to build a house for himself, for his relatives and livestock, and in that he succeeded. Just as successful as his neighbours or his ancestors were. Just as any animal succeeds that allows itself to be guided by its instincts. Is the house beautiful? Yes, just as beautiful as the rose or the thistle, the horse or the cow.⁶²

Le Corbusier's admiration of the white houses which he saw in the Balkans shows that if he was not already familiar with Loos – his earliest recorded encounter with

⁶⁰ Le Corbusier, *The Decorative Art of Today*, James I Dunnett, trans., The Architectural Press, London, 1987, p. xxvi. First published as *L'Art décoratif d'aujourd'hui*, Editions Crès, Paris, 1925.

⁶¹ *Decorative Art*, p. 189

⁶² Adolf Loos, "Architecture", Wilfred Wang, trans., in *The Architecture of Adolf Loos*, Arts Council, London, 1985, pp. 104-109, p. 104.

Loos's writings dates from 1913⁶³ – the two men were certainly thinking on very similar lines. Le Corbusier notes in his sketchbook the “exquisite little houses, all white” of Serbia;⁶⁴ he also praises the “sparkling white” facades and “perfect cleanliness” of the houses in Turnovo, Bulgaria, adding that such cleanliness is a sign of a pure and healthy society:

There is nothing I detest so much as the village that attracts the ‘literalism’ and the sentimentalism of so many painters just because dung invades the alleys and mud has splattered as high as the roofs. Such filth always betrays a base negligence, and one can be certain that the inhabitants who allow themselves to vegetate in such a place are poor and do not cultivate any art. When the blood is young and the mind healthy, normal sensuality asserts itself. Men work less and search for well-being. They take care of their dwellings with a solicitude that, to us, would appear exaggerated. They want them to be clean, gay and comfortable: they adorn them with flowers. They dress in embroidered clothing whose flamboyant colours tell of their joy of life. Their dishware is florid and artistic, and rugs, woven by the women following age-old tradition, cover floors that are scrupulously maintained. And each spring, the house that one loves receives its new coat: sparkling white, it smiles the whole summer through foliage and flowers that owe to it their dazzle.⁶⁵

While Le Corbusier does not go as far as Loos in referring to the makers of these houses as “animals”, he touches a similar vein when he writes in *Journey to the East* that, “fortunately, the peasant remains a real primitive man when he creates”:

It is an innate strength that bursts out in spite of or almost against itself. This is very strange, but it brings about art works full of awkwardness and barbarism which appeal to our sophisticated tastes.⁶⁶

Such works are, furthermore, made in harmony with nature: Le Corbusier speaks a few pages later of the “natural” arts which traditionally characterise the cultures through which he is travelling.⁶⁷ Loos’s “Architecture”, similarly, begins by

⁶³ Le Corbusier wrote to Auguste Perret on 27 November 1913 thanking him for sending some articles by Loos (*Le Corbusier's Formative Years*, p. 353).

⁶⁴ “Les exquisites petites maisons toutes blanches”, *Voyage d'orient carnets*, carnet 1, p. 60.

⁶⁵ *Journey to the East*, p. 59.

⁶⁶ *Journey to the East*, p. 163.

⁶⁷ *Journey to the East*, p. 171.

describing the “houses, farms and chapels” which stand on the “shores of a mountain lake” as if “they had never been built by human hands”: “they look as if they had come from God’s own workshop, just like the mountains and the trees, the clouds and the blue sky”.⁶⁸ Both Loos and Le Corbusier – and Schultze-Naumburg, who, as we saw above, reprised this idea of vernacular architecture as a natural product in *The Face of the German House* – saw the inhabitants of vernacular architecture as closer to nature than the city dwellers of Western societies and, as such, as examples to follow. For them, contemporary architects involved in the modern project of regaining architecture’s lost authenticity, purity and order had much to learn from these “peasants”. Writing to his friend Léon Perrin, Le Corbusier asserted that “we, we others from the centre of civilisation, are savages”,⁶⁹ a sentiment which he revived in *The Radiant City*: “we will learn more from the savages, from men close to nature whom the Academies have not touched”.⁷⁰ Le Corbusier saw the vernacular builder’s instinct for ideal architectural form as rooted in his connection with the natural environment: hardly surprising, then, that western civilisation, divorced from nature, should also have lost the ability to build in an authentic manner.

The buildings of the journey to the east very often incorporated spaces such as balconies, verandas, loggias and enclosed courtyards whose location as inside or outside is not precisely determined: a practical means of bringing their inhabitants into a close relationship with nature. Such spaces crop up frequently both in Le

⁶⁸ “Architecture”, p. 104. Le Corbusier quoted this passage, without acknowledging its source, in his 1914 article “Le Renouveau dans l’architecture”, in the *Revue mensuelle de l’oeuvre*, which Stanislaus von Moos describes as “the organ of the western Swiss section of the Swiss Werkbund, published in Lausanne.” (“Le Corbusier and Loos”, *Assemblage* 4, October 1987, pp. 24-37, p. 31.)

⁶⁹ *Journey to the East*, p. 23.

⁷⁰ Le Corbusier, *The Radiant City*, Pamela Knight, Eleanor Levieux and Derek Coltman, trans., Faber and Faber, London, 1964, p. 33. First published as *La Ville Radieuse*, Vincent, Fréal et Cie, Paris, 1933.

Corbusier's sketches and the text of *Journey to the East*, for instance in his description of courtyard houses in Baja, Serbia:

The houses are lined up, a little too narrow but very deep, each with its own low gable, but without a projecting roof, sitting like a pediment on an interminable wall where the crowns of trees brim over and branches of climbing roses fill with enchantment the courtyards behind them. Imagine these courtyards to be like a room, a summer room. Since all the houses are equally spaced from the enclosure wall, their windows open only on one side, behind an arcade. Thus each house has its own courtyard, and the intimacy in them is as perfect as in the gardens of the Carthusian Monastery of Ema, where, you may recall, we had a fit of spleen. Beauty, joy, serenity gather here.⁷¹

Later, Le Corbusier singles out the balconies of the houses in Turnovo as “charming small spaces” where “men sit on sofas and quietly smoke”.⁷² Still in Bulgaria, he drew a group of houses in Shipka with deep verandas at ground and first floor level (fig. 6.9); Turkey, too, offered plenty of opportunity for sketching such spaces, as his plan and drawing of a house in Kazanlık with a trellised walkway and an internal courtyard garden show (figs. 6.10 and 6.11).⁷³ Le Corbusier's writing on such spaces reaches new heights of lyricism when describing the domestic architecture of Mount Athos. He starts off in the main room of a café, which, he tells us,

opened out onto a wide wooden balcony, a true example of construction on piles [...] The vine branches over the ancient pergola [...] [which], like the painted trellis over the house illuminated from below by hanging lanterns, were rippling in the night air [...] The hill stretched down toward the sea, and from a high suspended terrace [...] we caught a glimpse of the sea, framed by the nervous architecture of a wooden trellis covered entirely with vines whose clusters of blue and golden grapes hung heavily down.⁷⁴

Le Corbusier clearly saw these inside/outside spaces as creating an extremely rich built environment. He had showed no particular interest in such spaces prior to

⁷¹ *Journey to the East*, p. 23.

⁷² *Journey to the East*, p. 62.

⁷³ Both of these sketches were among those published in the first volume of the *Oeuvre Complète*.

⁷⁴ *Journey to the East*, p. 179.

the journey to the east; after his return home in November 1911, however, they immediately begin to show up in his designs in the form of summer rooms, loggias and terraces. An early sketch from 1912 for the Villa Jeanneret (fig. 6.12) shows a loggia under the eaves in an echo of the nobleman's house which he had seen in Romania; this was retained in the final design, with the glazing behind transforming it into a proto-modern strip window (fig. 6.1). The same sketch envisages a covered walkway extending to a gazebo-like structure, in a very similar arrangement to that of the Kazanlük house; this eventually became a terrace terminated by an open-sided pavilion. In the same year Le Corbusier proposed remodelling an old farmhouse at Le Locle, a village near La Chaux-de-Fonds, by replacing the pitched roof with a flat one, covering it with a roof garden and installing a loggia beneath (fig. 6.13). The project most explicitly connected to the journey to the east came a couple of years later, when Auguste Klipstein's brother Felix commissioned a house. In a letter dated 15 July 1914 Le Corbusier sent Felix a wide selection of watercolours, drawings and sketchbooks from the journey to the east and invited him to comment on anything that he particularly liked.⁷⁵ On the evidence of the drawings for the house (figs. 6.14), which show a large courtyard garden and a walkway and gazebo or summer room very similar to those at the Villa Jeanneret, we can conclude that much of this material featured such inside/outside spaces.⁷⁶

The interpenetration of interior and exterior space continued to occupy Le Corbusier throughout his entire career. It was, as Sigfried Giedion noted in his 1941 classic *Space, Time and Architecture*, a defining element of architectural modernism and the result of new spatial conceptions in painting:

⁷⁵ *Le Corbusier's Formative Years*, p. 377.

⁷⁶ These drawings have been brought to light by H Allen Brooks from the archives of the Bibliothèque de la Ville at La Chaux-de-Fonds and a private collection and are published in his *Le Corbusier's Formative Years*, pp. 378-79.

The spirit of Le Corbusier's houses shows an absolute identity with the spirit that animates modern painting [...] Around 1910 Picasso and Braque, as the consequence of a new conception of space, exhibited the interiors and exteriors of objects simultaneously. In architecture Le Corbusier developed, on the same principle, the interpenetration of inner and outer space.⁷⁷

As we saw in Chapter 4, Le Corbusier conceived the architectural promenades which determined the spatial organisation of his villas of the 1920s as expressions of this new spatial fluidity, with terraces, roof gardens and hanging gardens creating a free interchange between interior and exterior. As well as arising from contemporary developments, however, Le Corbusier's fusion of inside and outside space drew heavily on the vernacular buildings of the journey to the east. The hanging gardens at the Villas Stein-de Monzie and Savoye, for instance, can be compared to the courtyards of the Balkan, Turkish and, indeed, Roman houses which Le Corbusier sketched in 1911. The Maison de Weekend in La Celle-St-Cloud (fig. 5.11) has a separate gazebo in the garden which, being the same size as one of the bays of the house, gives the impression of having become detached from the main body and floated out into the garden. The house was built as a semi-rural retreat for a Parisian banker, M. Félix of the Société Henfel; the gazebo is thus a retreat within a retreat, an expression of his need "to escape to a sheltered position in nature from the world he financed".⁷⁸ As in the gazebos of the much earlier Villa Jeanneret and the Klipstein project, there is an echo here of the summer rooms of the Balkans.

Such references persist in later projects. The layout of the apartments at the Marseilles Unité recalls Le Corbusier's sketch of the interior of a house in Turnovo, which shows the entirety of the far wall taken up by a window, beyond which, as he

⁷⁷ Sigfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition*, Harvard University Press, Cambridge, Mass. and Oxford University Press, London, 1967, p. 521.

⁷⁸ Gans, *The Le Corbusier Guide*, p. 80.

tells us in his description, is a balcony (figs. 6.15 and 6.16).⁷⁹ The monks' cells at the monastery of La Tourette are laid out in a similar but more modest way: the driving axis of each cell is towards the window and door to the balcony which take up the whole of the far wall (fig. 6.17). The balconies at Marseilles and La Tourette are intended to encourage contemplation of the natural landscape: once again Le Corbusier turned back to his experiences on the journey to the east in search of forms expressive of a close connection with nature, forms which he then incorporated into a universal aesthetic. Reading his later work against the sketches made in 1911, then, it becomes clear that Le Corbusier saw the journey to the east as a rich source of long-established type-forms designed to create harmony between built and natural environments, ripe for translation into his own conception of a new aesthetic based on universal standards.

Le Corbusier and the vernacular in rural France, North Africa and India

The fusion of the traditional and the modern which characterised Le Corbusier's response to the journey to the east also pervaded the project for the Radiant Farm. We saw in the previous chapter how Le Corbusier refused to idealise the dangerous, disintegrating houses of farmers in the Sarthe; nonetheless, he had a deep admiration for traditional French rural architecture on which he attempted to graft his commitment to building in a modern, standardised idiom. Avoiding examples of the local rural vernacular, presumably because Norbert Bézard had told him how appalling they all were, Le Corbusier illustrated next to the text on the Radiant Farm a building from a southern French farm (fig. 6.18) for which the caption reads:

⁷⁹ *Journey to the East*, p. 62.

The farms of the Toulouse region are built up from standardised elements combined according to local requirements. They are precise tools. Everything about them is strict and pure. They are *true* objects. The resulting architecture is a marvel to behold.⁸⁰

Moreover, he goes on,

A farm is not an architectural folly. It is a thing that resembles the products of *nature*, a thing that is rather like a humanised aspect of the earth itself: a kind of geometrical plant that is as intimately linked to the landscape as a tree or a hill, yet as expressive of our human presence as a piece of furniture or a machine. / So deeply is the farm's very being linked to the soil that even all on its own it can express and qualify the landscape it stands in.⁸¹

A farm, in Le Corbusier's view, achieves this miraculous synthesis of human and natural worlds simply by virtue of being a farm: its design is therefore of secondary importance to its function. He goes on to argue, however, that no mere copying of vernacular styles can bring about this same effect:

And the whole thing is so pure that any imitation of such a truth (a truth of yesterday) snickers like a filthy lie whenever people today content themselves, in the belief that they are being reverent, with copying the forms, or even the functions, of this thing *that is no longer of today*. Such make-believe, such face-pulling, such trumpery is immediately denounced by the country sky, by the realities of rural life, and by the verdict of *today*.⁸²

The only way to proceed, Le Corbusier concludes, is by working within "the technical and spiritual revolution of modern times"⁸³ and not by harking back to the past. He may have had in mind here the French regional pavilions on display at the Exposition Universelle of 1925, which eclipsed his Pavillon de l'Esprit Nouveau in both position and popularity. Romy Golan describes them as follows:

⁸⁰ *Radiant City*, p. 322.

⁸¹ *Radiant City*, p. 323.

⁸² *Radiant City*, p. 323.

⁸³ *Radiant City*, p. 323.

While the handful of modernist pavilions were scattered far and wide on the grounds of the fair, a prime spot on the south bank of the Seine was allocated to the pavilions of regional France: the Mas de Provence, the Maison Berrichone, the Berry, the Franche-Comté, the Clos Normand, and so on. Built in every conceivable vernacular, their reinforced concrete structures were camouflaged under ersatz rustication, thick white stucco, and limewashed walls topped by every local variation of pitched roof and gables.⁸⁴

We can easily imagine Le Corbusier sneering at these pastiches, despising them for concealing their modern construction beneath a public-pleasing skin of rural traditionalism. The real thing, however, was a different matter, as we saw in his description of the Toulouse farm: the simplicity and strength of its forms makes it traditional and modern at the same time. In order to build a new, radiant farm, then, a new vernacular must be coined, one which retains the innate purity of the original but which is wholly of its time. Le Corbusier declared that,

Farms are the expression of the folk traditions of a region. I have absolute respect for folk traditions [...] A rigorous programme [is needed], the basis of a modern endeavour, from which to establish the first milestone of a new rural folk tradition.⁸⁵

He had expressed the same view in the earlier *Almanach d'architecture moderne* (1925) in a section entitled "One standard dies, another is born". The Breton house, he begins, is "a type" which becomes a symbol of the region as a whole; as styles and materials of roofs change over time, however, this symbol is diluted. A new form then emerges, the flat concrete roof, which stands up well to being by the sea: a new standard is established.⁸⁶ Le Corbusier's own architecture, in other words, will become the new rural vernacular. How it will function as a regional symbol, given that he intended to use flat roofs throughout his work regardless of location, is

⁸⁴ *Modernity and Nostalgia*, p. 59.

⁸⁵ Quoted in Mary McLeod, "La Ferme Radieuse, le Village Radieux" in *Le Corbusier et la nature*, Fondation Le Corbusier/Éditions de la Villette, Paris, 2004, pp. 129-49, p. 141.

⁸⁶ Le Corbusier, *Almanach d'architecture moderne*, Bottega d'Erasmus, Turin, 1975, pp. 84-89. First published Editions Crès et Cie, Paris, 1925.

unclear. Regional diversity, it seems, will give way to international homogeneity.

Paradoxically, Le Corbusier made a plea for diversity in the way in which the land around the Radiant Farm was cultivated:

We must realise that in this matter of the countryside our concern must be, with only few exceptions, not to try and turn it into a sort of monopoly, to industrialise it according to some wholly theoretical formula, but to draw out of this rich and wonderfully varied land all sorts of products in all sorts of circumstances that are equally varied and particular. We must realise that individual initiative is the key to success here, and that though the steppes, or the pampas, or the savannah may be perfectly suited by nature to vast, one-crop forms of cultivation, the French countryside is much more suited to 'garden' cultivation.

It is abundantly clear from this, and from his endless documenting of the various local vernaculars and customs that he came across on his travels, from the journey to the east to India, that Le Corbusier greatly valued diversity of all kinds. He also valued standards, however, which are by their very nature the enemies of diversity and variation. His best efforts to reconcile the two, therefore, inevitably throw up uneasy ambiguities. Either a flat-roofed farmhouse or a vaulted silo, such as those of the Radiant Farm, is a new standard for a particular region or a universal solution to be applied internationally: it cannot be both.

This paradox is to some extent resolved in a later project for a house in Cherchell, Algeria (1942). In an earlier North African project, the Villa Baizeau outside Tunis (1928-29; fig. 6.19), Le Corbusier had imported the modernist style that he had been developing in and around Paris during the preceding decade, but on this occasion, fourteen years later, the same North African setting prompted him to employ a regional vernacular, as he documented in the *Oeuvre Complète*:

The construction is therefore conceived so as to be realised, by native builders, in stone found locally, making pillars, or walls or half-walls. / The whole combination is

based on this principle which can lead to a subtle play of solid and void, and to restate the problem in the most basic forms of the Mediterranean tradition.⁸⁷

For Le Corbusier, “Mediterranean” clearly included North Africa, whose vernacular forms he saw as contiguous with those of southern Europe. A sketch in the *Oeuvre Complète* shows a compound enclosed by low walls, containing a number of vaulted buildings surrounded by greenery, including three palm trees (fig. 6.20). Le Corbusier saw manifested in the vernacular architecture of North Africa a quasi-Edenic relationship with nature, rhapsodising in *The Radiant City* on the subject of “Arabian” gardens within houses in Algiers:

Whereas everything seemed to go against man: desert, stoniness, sun’s infernal blaze, suddenly the most lilting melody is heard: architecture and paradisiacal verdure, streaming waters, coolness, flowers and fruit: palm trees, olive groves, apricot and pomegranate trees, green shadow and starry nights to worship, filtered through the date palms.⁸⁸

By setting the ChercHELL buildings within an enclosed garden, then, Le Corbusier was responding to the harmony which he perceived between Arab peoples and their natural environment. Similarly, he often used vaults to express a closeness to nature or a sense of rusticity or retreat: they appear in the earlier *Maison de Weekend* and the later *Villa Sarabhai*, for instance.⁸⁹ However, Le Corbusier stressed that although the ChercHELL project used a vernacular style it was in no way retrogressive; on the contrary, the project countered “a passive, backward-looking regionalism, in an

⁸⁷ “La construction est donc conçue pour être réalisée, par des maçons indigènes, en pierre prise sur place, formant piliers, ou murs, ou demi-murs. / Toute la combinaison est basée sur ce principe qui peut conduire à un jeu subtil de pleins et de vides, et semble replacer le problème dans les formes les plus fondamentales de la tradition méditerranéenne.” Le Corbusier and Pierre Jeanneret, *Oeuvre Complète 1938-46*, Les Editions d’Architecture, Zurich, 1946, p. 116.

⁸⁸ *Radiant City*, p. 230.

⁸⁹ Manorama Sarabhai felt, however, they looked too industrial and insisted that they be covered with concrete panels on the outside (*Le Corbusier Guide*, p. 208).

extreme poverty of means, with the potential grandeur of architecture”.⁹⁰ He also emphasised the interaction between building and site: “this project [...] is deeply integrated with the landscape; it responds to the swell of the cliffs, to the solitude of the place, to the grandeur of the horizons”, adding that this was a scheme which would also “satisfy those with a taste for the most modern housing”.⁹¹ Le Corbusier claimed the project as both vernacular and modern, at once sensitive to cultural context and landscape, and as up-to-date as anything he had built in the West. Rather than exemplifying the imposition of western values on a non-western culture,⁹² the Cherchell project represents a striking example of the parity which Le Corbusier perceived between vernacular and modern forms. Both provide “solutions of great elementarity”, to return to Passanti’s phrase, whose basic geometries transcend concepts of style, period and location. In this North African context, the vernacular is not simply a vehicle for the modern: it is itself modern.

Le Corbusier declared that at Cherchell, “in building in a modern way, we have found an accord with the landscape, the climate and tradition”:⁹³ he faced the challenge of building in a hot climate once again in India during the 1950s. Here, however, issues of climate exposed once again the more problematic aspects of Le Corbusier’s relationship with the vernacular. The skill of adapting buildings to extremes of heat lies in managing nature, harnessing its benefits and deflecting its more damaging aspects. At the Villa Sarabhai Le Corbusier used vernacular or low-tech solutions to create a comfortably cool interior: the house is kept low, the vaults

⁹⁰ “Au régionalisme passif rétrograde il opposait, dans une pauvreté des moyens extrême, les splendeurs possibles de l’architecture.” *Oeuvre Complète 1938-46*, p. 116.

⁹¹ “Ce projet, qui satisfait aux goûts de l’habitation la plus moderne, s’intègre foncièrement au paysage; il tient à l’ampleur de la falaise, à la solitude des lieux, à la grandeur des horizons.” *Oeuvre Complète 1938-46*, p. 116.

⁹² See Sherry McKay, “Mediterraneanism: The Politics of Architectural Production in Algiers during the 1930s”, *City and Society* 12/1, 2000, pp. 79-102, p. 93.

⁹³ *Oeuvre Complète 1938-46*, p. 123.

channel air currents from the front of the house to the back and foliage on the roof acts as an insulator (figs. 6.21 and 6.22). When it came to the buildings of the Chandigarh Capitol (1951-62), however, Le Corbusier eschewed vernacular forms in his pursuit of a monumental architectural ensemble laid out majestically against the Himalayan foothills. Here he relied on the *brise-soleil*, applying it on a huge scale to the façades of the Secretariat, Assembly and High Court. What might have worked for the east-west orientation of the Marseilles Unité could not withstand the north-south axes of the Chandigarh buildings, which, coupled with the higher temperatures of India, caused the *brise-soleil* not to shade the interiors but to direct heat into them.⁹⁴ Today the beautifully sculptural facades are punctuated by scores of air conditioning units (fig. 6.23). The distances between the Capitol buildings, whose strong axial relationships across a large area add to the monumental effect, make the complex wearying to negotiate in the heat. According to Norma Evenson, Le Corbusier greatly admired the traditional villages which he visited during his time in India,⁹⁵ but he was not always quick to take on board what they had to teach him about climate adaptation. Maxwell Fry and Jane Drew, on the other hand, who worked out the details of the housing at Chandigarh, brought the benefit of their experience in Africa to the project, and designed dwellings which, far from being open to the sun, were as enclosed and well insulated as possible, with thick walls, few windows and verandas or roof terraces for sleeping on during the cooler nights. In his own *cabanon* at Cap Martin Le Corbusier applied this principle of the almost completely enclosed interior: the cabin has only three small windows, placed low down near the floor to allow cooler air to circulate (fig. 5.5). It is a strikingly simple project and has no monumental aspirations: tucked away above the sea, it is difficult

⁹⁴ *Le Corbusier Guide*, p. 208.

⁹⁵ Norma Evenson, *Chandigarh*, University of California Press, Berkeley and Los Angeles, 1966, p. 28.

to find and practically invisible from a distance. The high status of the governmental buildings at Chandigarh, together with the prestige of the project as a whole – the first new state capital in independent India – pushed Le Corbusier into grand architectural gestures in which practical solutions to issues of climate were not the first concern. Smaller projects, or those for more rural locations, seem to have been the focus of his attempts to create a kind of modern vernacular, while larger, more monumental commissions required a different form of expression.

Le Corbusier's conception of vernacular architecture, then, emerges as complex and, in some senses, contradictory. For him, the vernacular was both a way of tapping into ancient traditions and an expression of a modern purity of form, a timeless typology and a forerunner of twentieth-century standardisation. While certain projects blend these approaches seamlessly, others show the problems inherent in trying to reconcile the standardised or universal with the locally distinctive. Le Corbusier's understanding of the vernacular shifts in his work with context and location: from the regional vernacular of his early work in La Chaux-de-Fonds he moved to a pan-national sense of authentic or natural form which led him to apply Catalan vaults in locations as diverse as the Parisian suburbs, North Africa and India. Constant throughout, however, is his sense that vernacular architecture always implied harmony with nature, and that therefore to coin a new modern vernacular was to enshrine at the heart of standardised form a dream of an authentic connection with the natural world.

Conclusion

Le Corbusier's understanding of nature defies neat definitions and categorical conclusions: like almost every other aspect of his work, it is far too complex, contradictory and multi-faceted to be easily summed up. Nonetheless, examining the connections and paradoxes within different aspects of the subject brings a clear focus to bear upon it and allows us to appreciate its implications for our understanding of Le Corbusier. Nature, moreover, cannot be treated as a discrete category within a wider body of work: rather, it found its way into almost every facet of Le Corbusier's thinking. I have tried, therefore, to bring out connections between different phases of his career, such as the Purist and "primitive" periods, which are more usually considered separately, and to reconsider certain received truths, such as the innate anti-naturalness of the grid plan. I hope that a clearer sense of what Le Corbusier meant when he spoke of nature has resulted which begins to do justice to the full complexity of the subject. Nature, for him, was both evidence of a underlying, primordial order and a terrifying morass of disorder; it was both a static image and a realm of experiential possibility; it was expressible both as a symbol encapsulating man's relationship with the universe and an empty green parkland between buildings; it was both a repository of profound spiritual meaning and a justification for the supreme rationalism of the machine. Any attempt to prove that one aspect of his thinking about nature was dominant over another, then, must necessarily fail. Someone who thought as deeply as Le Corbusier about nature in the first half of the twentieth century was bound to find himself struggling to reconcile different positions: in some cases he succeeded in fusing seemingly disparate elements – such as the efforts of both machine-age and primitive man to create buildings based on nature's underlying order – while in others unresolved paradoxes remain. As I

suggested in the introduction, this arises in part from the mixed successes and failures of his attempts to transcend the modern instrumentalisation of nature and to recover an older, more symbolic understanding of the natural world.

No-one writing in the first decade of the twenty-first century about Le Corbusier and nature can fail to make a connection between his thinking and current debates over our effect on the natural environment. Revisionist accounts of Le Corbusier as an eco-pioneer or champion of sustainable design are to be avoided, since these cannot be anything other than over-simplified and a-historical: although he used green roofs, low-tech heating and cooling systems and emphasised urban density, the concepts of man-made climate change and the depletion of non-renewable resources would have been quite foreign to him. Nonetheless, the separation of culture and nature remains as pressing an issue now as it was for him. Susannah Hagan has written that, “it is our cultural constructs of nature that encourage or inhibit various behaviours towards it”:¹ how, then, in a culture which sees the natural world as an object, as something “out there”, an entity entirely separate from the human sphere, can we begin to rise to the challenge of forging a sustainable and non-exploitative relationship with our environment? Jonathan Bate has described modernity as “the march of culture away from nature”;² Richard Mabey puts it in starker terms: “the list of our disastrous failures, from forest obliteration and oceanic pollution and the raising of the extinction rate a thousand-fold, bears all the marks of a species which no longer believes itself to be part of the animal world at all”.³ If we seem unable to get to grips with the need to adjust to a more balanced and sustainable way of living, it is in part because at a very profound level we no longer have any

¹ Susannah Hagan, *Taking Shape: A New Contract between Architecture and Nature*, Architectural Press, Oxford, 2001, p. 18.

² Jonathan Bate, *The Song of the Earth*, Picador, London, 2001, p. 21.

³ Richard Mabey, *Nature Cure*, Chatto & Windus, London, 2005, p. 13.

conception of the inextricability of human and natural domains. Even to separate them linguistically in such a way is to illustrate the problem. Le Corbusier's exhortation that we return to a view of ourselves as part of nature remains, then, an urgent call. He also shows how difficult it is to bridge the gulf between man and nature in the context of a modern, instrumentalised, secular culture. An awareness of the profundity of his attempt to do so and its far-reaching implications, together with an acknowledgement of his failings, may, however, point a way forward.

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