

# Order in nature: Le Corbusier's early work and his city plans of the 1920s

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Surprisingly perhaps for an architect best known for his role in creating the stripped-down, rationalist aesthetic of the 1920s, Le Corbusier's training in the small Swiss town of La Chaux-de-Fonds was based on the Romantic ideas of such nineteenth-century figures as John Ruskin, Eugène Grasset and Owen Jones. During the first two decades of the twentieth century, the young Le Corbusier (born Charles-Edouard Jeanneret) developed an artistic and architectural style that was rooted in his reverence for nature in general and his feeling for the Jura landscape in particular. How, then, did his city plans of the 1920s, with their strongly orthogonal grids and decoration-defying façades, develop? What was the journey which took him from pattern and organicism to rationality and the 'call to order', and what does it reveal about his conception of the natural world? This article will examine the continuity of Le Corbusier's understanding of nature as fundamentally ordered from his early years to his mature career, and trace the parallel story of the far-reaching influence of the Garden City movement on his work in urban planning. Ultimately, although the dominant philosophical framework of his training was profoundly Romantic, Le Corbusier's concern with the urban realm, where man and nature can be brought into harmony rather than the human being subsumed by the natural, makes his engagement with Romanticism somewhat problematic, as this article will conclude by suggesting.

The most comprehensive account which Le Corbusier gave of his training at the art school in La Chaux-de-Fonds is found in the final chapter, entitled "Confession", of *The Decorative Art of Today* (1925). In it he emphasised the formative influence of the landscape in which he grew up:

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 were familiar.<sup>1</sup>

Earlier in *The Decorative Art of Today* Le Corbusier recalled 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.<sup>2</sup>

Charles L'Eplattenier, Le Corbusier's teacher at La Chaux-de-Fonds and the "master" referred to above, encouraged him and his fellow pupils in their devoted study of nature:

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.<sup>3</sup>

The bible of the art school at the time 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. 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 goes on to comment 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.<sup>4</sup>

Eugène Grasset, the Art Nouveau graphic and furniture designer who Le Corbusier describes as “the geometrician and algebraist of flowers”,<sup>5</sup> was another influential figure at La Chaux-de-Fonds. In the drawings which Le Corbusier made during this period, such as those of pine trees, 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 and Grasset very clearly, and in his first house, the Villa Fallet (1906), he used a geometric pattern evoking natural forms to decorate the façade. Le Corbusier’s early architectural designs in general attempt to coin a style appropriate to their Swiss mountain setting, with their deeply overhanging eaves, hipped roofs and rugged masonry; as he tells us in *The Decorative Art of Today*, “you see [...], quite a long time ago I too was a regionalist”.<sup>6</sup>

The focus of the art school at La Chaux-de-Fonds, then, seems to have been on those aspects of the Romantic tradition which saw nature as an inherently ordered entity, obeying a set of laws and characterised by an inner harmony. This, 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”.<sup>7</sup> Here we can see the origins of Le Corbusier’s idea of ‘type-objects’ and his enthusiasm for standardisation, which were so important in his early Purist painting and architecture. For him, the machine could bring to perfection the geometry inherent in natural forms and so reveal the divine:

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 steel, shaped with a theoretical precision and exactitude which can *never be seen in nature itself*. Our senses are moved, and at the same time our heart recalls from its stock of memories the disks and spheres of the gods of Egypt and the Congo. Geometry and the gods sit side by side! / Man pauses by the machine, and the beast and the divine in him there eat their fill.<sup>8</sup>

Le Corbusier, then, brought from his formative years into his Purist period a belief in the fundamental order of nature, a belief which would inform his work throughout his entire career.

John Ruskin, another early influence on Le Corbusier through L’Eplattenier’s teaching, also saw nature as inherently ordered and harmonious. As Harold Allen 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”.<sup>9</sup> Ruskin’s belief in the spiritual value of an art based in nature was also of great importance for Le Corbusier, who recalled in *The Decorative Art of Today* that in the “intolerable period” of the late nineteenth and early twentieth centuries, “a time of crushing bourgeois values, sunk in materialism, bedecked with idiotic mechanical decoration”, “Ruskin spoke of spirituality”.<sup>10</sup> The industrial capitalism which “poured out papier-mâché and cast-iron foliage in an unstoppable flow”<sup>11</sup> must be countered by the ideals of truth and natural beauty upheld by Ruskin. The conception of nature which Le Corbusier developed during his upbringing and training, then, brought together a belief in nature as ordered with a sense of its spiritual value: a combination of rationalist and Romantic ways of thinking. Nature, the supreme authority, is no longer subjected to human control and mastery, as it was in the Enlightenment; neither should we be overwhelmed by nature’s chaos and unpredictability, since beneath all its outward forms lies a fundamental order.

During Le Corbusier’s formative years the most innovative ideas about city planning were coming out of the Garden City movement, which emerged in England with the publication of Ebenezer Howard’s *Tomorrow: A Peaceful Path to Real Reform* in 1898. Howard proposed an alternative to the conditions endured by workers in the nineteenth-century industrial city, emphasising the importance of reconnecting people with nature by providing an unpolluted living environment with plenty of space, fresh air and greenery. Working in the Bibliothèque Nationale in Paris in 1910-11, Le Corbusier sought out books by Barry Parker and Raymond Unwin, the architects who put Howard’s plans for Letchworth into practice in the first years of the twentieth century, by Howard himself and by Georges Benoît-Lévy, the leader of the new French Garden City movement founded on the English model. He described his first urban design, made in 1914 for a property developer from La Chaux-de-Fonds, as a “cité-jardin”. With its curving streets following the slope of the site, pitched-roof houses and numerous trees, this “garden city” shows the

influence of Hampstead Garden Suburb by Parker and Unwin, which Le Corbusier had been studying in the Bibliothèque Nationale, very clearly. The new workers' community at Hellerau in Germany, which Le Corbusier had visited in 1910 and whose houses by Riemerschmid, Tessenow, Baillie Scott and Muthesius he had admired, would also have exerted an influence on this early urban plan.

A few years later, between 1917 and 1922, Le Corbusier was occupied with several schemes for workers' housing. One of the earliest of these, for a site at Saint-Nicolas-d'Aliermont, near Dieppe, is in a regional vernacular style: the few houses of the scheme which were built are of brick, with pitched roofs and dormer windows. This project 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, picking up on the way in which the scheme provided each house with a garden and the whole site with trees in the Garden City manner. 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".<sup>12</sup> There is also space for a small public square, following the Garden City emphasis on the importance of community life.

Although the Saint-Nicolas scheme is the most traditional of the workers' housing projects of this period, even as late as 1920 Le Corbusier was including enclosing walls, a motif taken from Hampstead Garden Suburb, and shutters in a housing scheme for a steel-works at La Grande Couronne in the region of La Seine-Maritime. By the mid-1920s, however, he had left all vestiges of tradition and regionalism behind. In 1924 Le Corbusier published *The City of Tomorrow*, which contained his plans for both the Contemporary City of Three Million Inhabitants (exhibited at the Salon d'Automne in Paris in 1922) and the Plan Voisin for Paris. Both have become notorious, the first for its huge, cruciform skyscrapers and the second for its proposal to raze a large area of the Right Bank to the ground. Nonetheless, these plans share with the earlier workers' housing projects a basis in the Garden City movement. In *The City of Tomorrow* Le Corbusier emphasises the access to green space, light and air that the inhabitants of his new city will have:

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.

The set-backs permit of vast architectural perspectives. There 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.<sup>13</sup>

Here Le Corbusier includes "garden cities" on the outskirts of the plan, beyond the concentrated city centre and the protected zone of "woods and fields";<sup>14</sup> by the mid-1930s he was using the term "vertical garden cities"<sup>15</sup> to describe his urban vision as a whole.

In his urban plans from the 1920s onwards Le Corbusier tried to combine a reconciliation between man and nature with a strict orthogonality, expressed in the grid plan. The 'Contemporary City for Three Million Inhabitants', for instance, is divided into sections of 400 square metres, which are occasionally subdivided into sections of half that area. Opponents of Le Corbusier's urban grids have seen them as denials of nature 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 suggest that Le Corbusier treated nature as nothing more than "an element in the machinery of circulation".<sup>16</sup> Catherine Ingraham, similarly, argues that, "orthogonality keeps culture hegemonically superior to nature and attempts to obliterate the trace of nature in culture".<sup>17</sup> Given the ideas which Le Corbusier absorbed during his upbringing and training about the innately ordered character of natural phenomena and the survival of such ideas in his mature work, however, is it more accurate to see his grids not as repressing nature but as reflecting it?

As we saw above, Le Corbusier saw nature as striving towards geometrical perfection; artists respond to this tendency in nature and, with the humanly-created tool of geometry at their disposal, bring natural forms to perfection, a process which he described, as we saw above, in *The Decorative Art of Today*. In a later

passage he refers to the “architecture of creation” as “the organising breath that animates all living beings from the roots to the tree that falls”.<sup>18</sup> Le Corbusier frequently used shells as examples of this “organising breath”, influenced by his reading of Matila Ghyka’s *Esthétique des Proportions dans la Nature et dans les Arts*, which he owned in its third and thirteenth editions (the first edition was published in 1927). Following D’Arcy Thompson’s *On Growth and Form* (1917), Ghyka devoted several pages of a chapter entitled “De la croissance harmonieuse” (“On harmonious growth”) to analysing the proportional rules governing the growth of spiral-form shells. For Le Corbusier, art must “guide us through time, from the moment when we are crushed by an immense and dominating nature, to that moment of harmony when we have learnt to understand her and work in harmony with her law”.<sup>19</sup> A city plan, then, should not impose human structures on nature, but rather bring out the order inherent in nature, an order which has come to be understood through painstaking study of the natural world. For Le Corbusier, order was not the exclusive preserve of humankind, a tool needed to discipline a natural world perceived as foreign and threatening, but what humankind has to learn from nature. It is useful, then, to rethink his grid plans with his understanding of nature as ordered in mind: viewed in this light, they begin to emerge as Le Corbusier’s way of paying homage to the natural world.

“The horizontal gaze leads far away [...] From our offices we will get the feeling of being lookouts dominating a world in order”, wrote Le Corbusier in *The City of Tomorrow*.<sup>20</sup> James Dunnett comments that each flat in one of his housing blocks

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.<sup>21</sup>

We are reminded here of Le Corbusier’s memories of his childhood, when “the long horizons were familiar”: he tried to recreate the open views which he had enjoyed as a boy from the tops of the Jura mountains in providing each apartment and office with a view of greenery. In later years he often added huge disembodied eyes to his sketch sections of housing blocks: the apartments themselves become viewers of the landscape. Nature becomes that which is looked at, a view from a window, rather than something to be

experienced. This explains why the parklands of the city plans often seem so curiously function-less: they appear on the plans as undifferentiated green spaces whose practical purpose is unclear. Le Corbusier’s emphasis on the distant view, however, recalls something of the Romantic desire to understand the mysteries of nature by contemplating them from a distance. Wieland Schmied describes the German Romantic painter Caspar David Friedrich’s attitude to nature as follows:

In Friedrich, an overwhelming Nature threatens to swallow up the human being, who becomes mere staffage within the landscape. Occasionally, by adopting the position of the meditative observer, he or she succeeds in maintaining enough detachment to apprehend Nature from a distance, in all its mysterious immensity.<sup>22</sup>

Wordsworth, too, saw the process of writing poetry as involving “emotion recollected in tranquillity”<sup>23</sup> – however overwhelming the sensations evoked by nature, they must be recalled in quiet and solitude, and tamed by their transformation into verse. Friedrich and Wordsworth had in common with many other Romantics this emphasis on the importance of solitary meditation, though which the self can be enriched by exposure to nature. While the Romantics revered nature, they nonetheless instrumentalised it to some extent by seeing it as an agent in the development of human selfhood and as a means to a richer experience of life. Le Corbusier, too, saw nature in this way. As he wrote in a letter to Moisei Ginsburg in 1930, “Intimacy with nature (radiant spring, winter storms) is a stimulus to meditation, to introspection”.<sup>24</sup> From early on in his career he used spaces such as balconies, hanging gardens and roof gardens as private spaces where such meditation can take place, an interaction between intellectual or creative meditation and the space in which it happens which culminated in his monastery of La Tourette (1953-61). In an interview given when the building was nearing completion, Le Corbusier stated that,

Suddenly it occurred to me to say 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 to as a distraction which could be fatal for their religious life, because this is a problem in your magnificent, courageous life. You have a very hard interior life: it is demanding. The delights of the sky and the

clouds are sometimes perhaps too easy. What if you go up there from time to time, when you have been allowed to climb the staircase which leads to the roof, that could be a privilege for those who have been good.<sup>25</sup>

In the same interview, however, he commented that,

I am certain that religious feeling, aside from in a one-to-one (in private, when one is calm), cannot come from paintings or other [visual] representations but only from an atmosphere – an architectural fact – generated by the countryside. One must be enveloped by it and not intellectually engaged.<sup>26</sup>

Le Corbusier seems caught here between the transcendent possibilities of losing oneself in nature and the importance of preserving the rigour of one's intellectual life by not doing so. This tension is also present in Romanticism: if nature is supreme and all-powerful, should painters and poets be attempting to capture and contain it through artistic representation? JMW Turner tried to deal with this paradox by concentrating on the depiction of extreme weather conditions in which nature seems careless of human life. Wordsworth approached the problem by making his poetic language as simple as possible, and so, as he explained in the *Preface to Lyrical Ballads*, reflective of that spoken by those people, the workers on the land, who lived closest to nature.<sup>27</sup> Le Corbusier, similarly, used motifs from vernacular architecture in his own work, arguing that they were the products of cultures that were based on close contact with the natural world.

In general, however, it is the intellectual life that wins out for Le Corbusier. Ultimately he rejected the idea that one should subsume oneself in nature and submit to its higher powers, arguing instead that man and nature should work in harmony with each other, and that this should be the starting-point for a new conception of the city, one which both reflected the order in nature and offered greater access for all to light, air and greenery. Although the projects which Le Corbusier undertook during his early years at La Chaux-de-Fonds look very different from the urban plans of the 1920s for which he is much better known, then, there is in fact a strong continuity between them, both in the abiding influence of the Garden City movement and his belief in the ordered character of the natural world.

## NOTES

<sup>1</sup> Le Corbusier, *The Decorative Art of Today*, James I Dunnett, trans., London: The Architectural Press, 1987, p.194. First published as *L'Art décoratif d'aujourd'hui*, Paris: Editions Crès, 1925.

<sup>2</sup> Le Corbusier, *Decorative Art*, p.132-33.

<sup>3</sup> Le Corbusier, *Decorative Art*, p.194.

<sup>4</sup> Le Corbusier, *Decorative Art*, p.133.

<sup>5</sup> Le Corbusier, *Decorative Art*, p.132.

<sup>6</sup> Le Corbusier, *Decorative Art*, p.194.

<sup>7</sup> Paul Turner, *The Education of Le Corbusier*, New York and London: Garland Publishing, 1977, p.6.

<sup>8</sup> Le Corbusier, *Decorative Art*, p.xxiv.

<sup>9</sup> Harold Allen Brooks, *Le Corbusier's Formative Years*, Chicago and London: University of Chicago Press, 1997, p.69.

<sup>10</sup> Le Corbusier, *Decorative Art*, p.132.

<sup>11</sup> Le Corbusier, *Decorative Art*, p.132.

<sup>12</sup> "Minimum de 800m<sup>2</sup> de terrain par maison, d'où potager, verger, cour, et fleurs", Le Corbusier to Georges Benoît-Lévy, 16 August 1917, FLC G1-6-3.

<sup>13</sup> Le Corbusier, *The City of Tomorrow*, Frederick Etchells, trans., London: The Architectural Press, 1987, p.177. First published as *Urbanisme*, Paris: Editions Crès, 1924.

<sup>14</sup> Le Corbusier, *City of Tomorrow*, p.166.

<sup>15</sup> Le Corbusier, *The Radiant City*, Pamela Knight, Eleanor Levieux and Derek Coltman, trans., London: Faber and Faber, 1964, p.57. First published as *La Ville Radieuse*, Paris: Vincent, Fréal et Cie, 1933.

<sup>16</sup> Diana Agrest, "The Return of the Repressed: Nature," in Diana Agrest, Patricia Conway and Leslie Kanes Weisman (eds), *The Sex of Architecture*, New York: Harry N Abrams, 1996, pp.49-68, p.58.

<sup>17</sup> Catherine Ingraham, *Architecture and the Burdens of Linearity*, Yale University Press, New Haven and London, 1998, pp.68-69.

<sup>18</sup> Le Corbusier, *Decorative Art*, p.121.

<sup>19</sup> Le Corbusier, *Decorative Art*, p.118.

<sup>20</sup> Quoted in Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media*, Cambridge, Mass. and London: MIT Press, 1994, p.306.

<sup>21</sup> James Dunnett, "The Architecture of Silence", *Architectural Review*, October 1985, pp.69-75, p.75.

<sup>22</sup> Wieland Schmied, "Faces of Romanticism: Friedrich, Delacroix, Turner, Constable," in Keith Hartley (ed), *The Romantic Spirit in German Art 1790-1900*, Edinburgh and London: Scottish National Gallery of Modern Art and Hayward Gallery, 1994 (ex.cat.), pp.28-35, p.31.

<sup>23</sup> William Wordsworth, *Preface to Lyrical Ballads* in R L Brett and R R Jones (eds), *Wordsworth and Coleridge: Lyrical Ballads*, London and New York: Routledge, 1988, pp.241-272, p.266.

<sup>24</sup> Le Corbusier to Moisei Ginsberg, 17 March 1930, quoted in Dunnett, "The Architecture of Silence", p.75.

<sup>25</sup> "J'ai eu en un moment l'idée de me dire: mettons la cloître là-haut. Mais si je le mets là-haut, ce sera si beau que les moines en feront une evasion peut-être périlleuse pour leur

vie religieuse, parce que il y a une question dans votre vie magnifique, courageuse. Vous avez la vie intérieure très dure: elle est forte. Les délices du ciel et des nuages sont peut-être parfois trop faciles. Que vous y aller 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". Interview transcribed in François Biot and Françoise Perret, *Le Corbusier et l'architecture sacrée*, Lyon: La Manufacture, 1985, p.48.

<sup>26</sup> "Ma certitude, c'est que le sentiment religieux ne peut pas, hors d'un tête à tête (chez soi, au calme) émaner de peintures ou autres représentations mais seulement d'une ambiance – fait architecturale – du paysage. On doit être enveloppé et non pas intéressé intellectuellement". Biot and Perret, *Le Corbusier et l'architecture sacrée*, p.102.

<sup>27</sup> Wordsworth, *Preface to Lyrical Ballads*, p.245.