

G. PARETI

LANDSCAPE AND BIOPHILIA

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da

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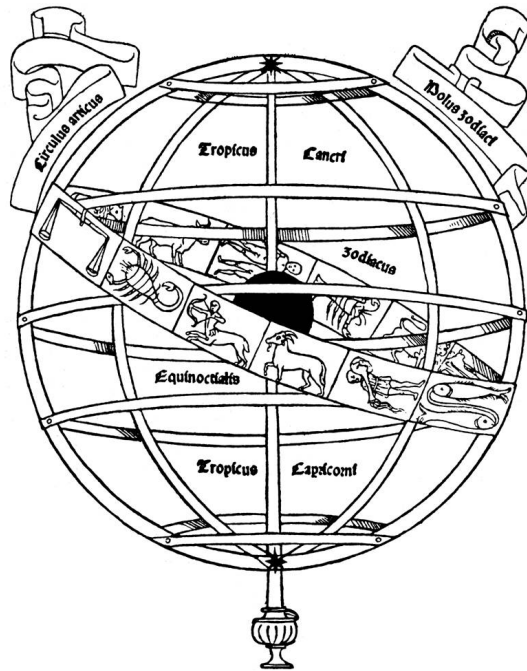
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LANDSCAPE AND BIOPHILIA

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ABSTRACT – Introduced in the 1980s by the biologist Edward O. Wilson, the concept of ‘biophilia’ aroused multidisciplinary interest from psychologists (evolutionists and cognitivists), neurobiologists, geographers, naturalists, etc. The scientific community came to the conclusion that humans make a ‘habitat selection,’ and tend to prefer natural scenarios as a living environment. The recent development of *Bio-architecture* aims to come up with a design approach that has beneficial effects on people’s health. The principle that human biological systems favour landscapes rich in water and vegetation, without ‘visual’ constraints, inspired English gardens since the 18th century appearance of landscapers such as ‘Capability’ Brown. The need for a natural environment (and the preservation of the *genius loci*) was also promoted by philosophers who, together with the forward-looking architects of the early 20th century, called for a departure from the ‘disfiguring’ metropolis that was in opposition to an empathetic relationship with nature.

SOMMARIO – Introdotta negli anni Ottanta del secolo scorso dal sociobiologo Edward O. Wilson, il concetto di ‘biofilia’ è il frutto di una disamina multidisciplinare, alla quale hanno contribuito psicologi evolucionisti e cognitivisti, neurobiologi, geografi, naturalisti ecc. Gli scienziati sono arrivati alla conclusione che gli uomini operino una ‘selezione dell’habitat,’ prediligendo scenari naturali come contesto delle proprie abitazioni. Queste idee hanno avuto una notevole ricaduta in architettura, dove si è sviluppata la *bioarchitettura*, che si propone di metter capo a una progettazione che assicuri benefici influssi sulla salute. Che il sistema biologico umano implichi la predilezione di un paesaggio ricco di vegetazione e acque, senza costrizioni ‘visive,’ ma anche tale da offrire riparo e protezione, era uno dei presupposti della teoria ispiratrice dei giardini all’inglese, nell’elaborazione dei quali, nel Settecento, fu maestro ‘Capability’ Brown. L’esigenza di un ambiente naturale (e, con essa, la salvaguardia del *genius loci*) era rivendicata dai filosofi che, insieme con gli architetti delle avanguardie del primo Novecento, auspicavano una fuga dalle ‘deturpanti’ metropoli che impedivano il rapporto empatico con la natura.

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THE CALL FOR NATURE

Within the Western gardening tradition, the English are renowned for their love of landscape and an informal garden style, a passion rooted in their remote past. It was already displayed by Alexander Pope in the early days of the 18th century, setting in motion a new approach to the art of gardening, which would lead to the so called 'English landscape style.' Starting in 1719, the poet was also responsible for creating one of the most famous gardens of his time: his own private garden in Twickenham, just a few miles from Chiswick House, the estate of Lord Burlington, which he praised in the verses of a famous *Epistle*.¹

To build, to plant, whatever you intend,
To rear the Column, or the Arch to bend,
To swell the Terras, or to sink the Grot;
In all, let *Nature* never be forgot.
Consult the *Genius* of the *Place* in all,
That tells the Waters or to rise, or fall,
Or helps th' ambitious Hill the Heav'ns
Or scoops in circling Theatres the Vale,
Calls in the Country, catches opening Glades,
Joins willing Woods, and varies Shades from Shades,
Now breaks, or now directs, th' intending Lines;
Paints as you plant, and as you work, *Designs*.²

But even before Pope, Lord Shaftesbury, in *The Moralists* (1709), had married the concept of 'Goodness' and 'Beauty' in his admiration of the 'landscape garden,' underlining the superiority of its natural, irregular and wild aspects when compared to the artificial nature of the 'formal' and geometric layout of French and even Dutch 17th century gardens.

The wildness pleases. We seem to live alone with Nature. We view her in her inmost Recesses, and contemplate her with more Delight in these original Wilds, than in the artificial Labyrinths and feign'd Wildernesses of the Palace [...].³

And a considerable number of critics and historians have traced the influence of Milton's description of Eden in *Paradise Lost* on the 'English

¹ SAMBROOK, 1972; AUBREY, 1983; MARTIN, 1984.

² POPE, 1731, pp. 31-42.

³ SHAFTESBURY, 1709, p. 205.

countryside,' a prefiguration of the idea of the landscape garden which was later to be developed in the 18th century.⁴ Horace Walpole, in his essay on *Modern Gardening*, viewed Milton as a prophet of the landscape garden. Milton was the first:

One man, one great man we had, on whom nor education nor custom could impose their prejudices; who, on evil days though fallen, and with darkness and solitude compassed round, judged that the mistaken and fantastic ornaments he had seen in gardens were unworthy of the almighty hand that planted the delights of Paradise. He seems with the prophetic eye of taste (as I have heard taste well defined by the great Lord Chatham, who had a good taste himself in modern gardening, as he showed by his own villas in Enfield Chase and at Hayes) to have conceived, to have foreseen modern gardening; as Lord Bacon announced the discoveries since made by experimental philosophy.⁵

In relation to the Eden, Walpole recalled the image of the river flowing underground, of the spring waters that in their countless trickles water the garden, the sylvan scenario of a wild, tangled and impenetrable nature, surrounded by brambles, teeming with towering firs, pines, palm trees and cedars.

Thro' Eden went a river large,
Nor chang'd his course, but thro' the shaggy hill
Pass'd underneath ingulph'd, for God had thrown
That mountain as his garden-mound, high rais'd
Upon the rapid current.⁶

In tracing its history, starting from ancient times, Walpole lingers on the French garden-orchard, on the tree-lined avenues that shaped to form shaded porticos, perfectly suited to the meanderings of a pleasure-seeking society that seemed to have stepped out of a painting by Watteau or one of D'Urfé's short stories. But then came the "pride and desire for privacy" and the courtyards that separated the homes from the fields were transformed into boundary walls, and gave rise to "the conclusion of nature and prospect;" this fashion led to a marriage between 'pomp and solitude' with a view to create with something that might enrich and enliven an insipid and unanimated estate. A merely decorative function was assigned to

⁴ KNOTT, 2005.

⁵ WALPOLE, 1904, p. 27.

⁶ Ivi, p. 29. See also MILTON, 1976, p. 223.

fountains, embellished with costly marbles and forced to toss waters into the air in spouting columns. While in the hands “of rude and wild man” art was no more than a *succedaneum* of nature, now – at a time of ostentatious wealth – it became a *means* of opposing nature. Canals measured by the line replaced meandering streams; traditional terraces flattened the slopes that imperceptibly united the valley to the hill. Staircases, balustrades, unnecessary balconies rising above the border walls were embellished with vases, statues and inanimate sculptures. Not to mention the topiary work: grotesque figures designed to replace the living beings excluded from these deserts. Walpole further viewed these French gardens as “the childish endeavours of fashion and novelty,”⁷ which bolstered his claim that “every improvement was but a step further from nature.”⁸ While ‘compass and square’ were used to trace perfectly straight sides naves, similarly the arrangement of trees in uneven rows, in quincunx arrangements or in star formations, symmetries not found in nature brought a bleak monotony even to the most noble of gardens.

Already by the end of the 17th century, in a famous treaty on gardening, the voice of the diplomat and statesman William Temple had sounded in his appreciation of the “beauty without any order or disposition of the parts,” the irregularity and imitation of nature of Chinese gardens that had already started to flourish throughout Europe beginning with the Netherlands. This was the *Sharawadgi* style, which did effectively shun rigid symmetries:

there may be other forms wholly irregular that may [...] have more beauty than any of the others. [...] Among us, the beauty of building and planting is placed chiefly in some certain proportions, symmetries, uniformities [...] The Chinese scorn this way of planting.⁹

Even the writer and diarist John Evelyn, Temple’s peer, in a letter written in January 1658 to Thomas Browne wrote that “caves, grottos, mounts, and irregular ornaments of gardens do contribute to contemplative and philosophicall enthusiasme [*sic*].”¹⁰ Although he considered these forms as being mostly ‘whimsical,’ Walpole also admired their irregularity compared to the monotony of European gardens.¹¹ Within a century, the at-

⁷ WALPOLE, 1904, p. 21.

⁸ Ibid.

⁹ TEMPLE, 1908, p. 54. On the origin and use of the ‘Chinese’ concept of *Sharawadgi*, cf. LIU, 2005; KUITERT, 2013.

¹⁰ TEMPLE, 1908, p. 176.

¹¹ WALPOLE, 1904, p. 45.

titude in favour of oriental landscape art, and, generally speaking, more spontaneous gardens, was by this time a given in gardening discussion, despite the literati being well aware that the vaunted disorder and the famed asymmetries were actually only *apparently* natural, as they were the product of artificial arrangements. If one considers 18th century literature, one must however recall that, besides Pope and Shaftesbury, the poet and essayist Joseph Addison must also be included among the promoters of an 'aesthetics of nature' that meant to reproduce the ideal of a liberated and irregular nature through the garden landscaping.

His contribution appeared in a series of articles in *The Spectator* between 1711 and 1712, dedicated to 'the pleasures of the imagination.' This said, Addison beat his own drum, seeing as in his discussion of the pleasures introduced by novelty, beauty and grandeur, he remarked that these features were to be found in an "agreeable mixture of Garden and Forest" mainly on display in France in Italy rather than England. And this mixture – he observed – certainly represented "an artificial Rudeness," but was much more charming than the "Neatness and Elegancy" of English gardens. On this point he referred to the opinion of the Inhabitants of China, who would "laugh at the Plantations of our *Europeans*, which are laid out by the Rule and Line; because, they say, anyone may place Trees in equal Rows and uniform figures." British gardeners, on the other hand, instead of 'humouring' Nature, "love to deviate from it as much as possible."¹²

Owing to the "romantic ideas with which he intended to amuse [our] imagination,"¹³ Addison was considered the forerunner of a 'sentimental' conception of landscape, that would take hold in the early 19th century, in step with the 'Sublime' concept of nature put forward by Edmund Burke. Burke's standpoint was based on the observation that man, having experimented with a 'commodius and firm' way of living when sheltered in regular structures, tended to transpose these concepts hinging on proportions onto the geometrical layouts of gardens. And they thus transformed trees into pillars, obelisks and pyramids, and paths were drawn out like "squares, triangles and other mathematical figures with exactness and symmetry." Man, after all, has the conceit, or rather the 'unfortunate propensity' to consider his ideas a 'measure of excellence.' In so doing, men believed that rather than imitating nature, they could actually 'improve' it, teaching it the ropes: but it often escaped from their discipline and their fetters. However,

¹² ADDISON, 1945, p. 286. Cf. BATEY, 2005.

¹³ See comment by Hugh Blair, in ADDISON, 1828, p. 148. On Addison and 'garden historiography,' see CHÂTEL, 2013.

as Burke pointed out, English gardens had gradually been transformed, thus providing proof that its creators had learned that mathematical concepts are not always “the true measures of beauty.”¹⁴

Now the time was ripe for a different vision of organic nature, which in German culture would lead to the *Naturphilosophie*. Ideas concerning the sublime would curry particular favour here, abetted by Immanuel Kant, who had at first discussed them in his *Observations on the Feeling of the Beautiful and Sublime* (1764), but even more poignantly in his *Critique of Judgement* (1790). Kant developed two distinct concepts of the sublime and linked the *mathematical sublime* to the contemplation of the grandeur of nature. So vastly superior to man, natural scenarios can be bewildering, but man – thanks to the sublime – knows how to react and recognises his superiority. It was predictable that the ideas born out of this cultural environment, which relied on comparisons between art and nature, would also catch on in the country where they had first taken hold, and sparked debate even among the lovers of the landscape garden and among *gardeners*. Burke’s views were thus opposed by the landscape designer Uvedale Price in an essay centred around the concept of ‘picturesque,’ wherein the ‘defects and absurdities’ of the ‘old’ style were compared to the beauty of the ‘new’ one, which was already making headway at the end of the 17th century.¹⁵ At the time, architects exploring the *scenery of the places* were inspired by popular schools of painting, which now favoured classical landscapes, a predominant and crucial feature of the new pictorial genre. Gardens thus began to reproduce the idyllic image of the natural settings depicted by the ‘great masters’ Nicolas and Gaspard Poussin and Claude Lorraine, the painters of so-called ‘ideal’ landscapes that merged traits taken from antiquity to rural and pre-romantic elements which were meant to imitate (in idealised form) the harmony found in nature. “Claude’s pictures have an *air of fête* beyond all others; and there is no painter whose works ought to be so much studied for highly dressed yet varied nature.”¹⁶ But it wasn’t until the middle of the 18th century before the pictorial approach to the art of landscape gardening came into its own thanks to the work of William Kent, a landscapist who, despite humbly considering himself nothing more than an ‘improver,’ was to engineer a revolution, a complete shift in paradigm. Of him Walpole said that “he was born with a genius to

¹⁴ BURKE, 1757, p. 184.

¹⁵ PRICE, 1796, p. 248.

¹⁶ Ivi, footnote, p. 23. The name of this French painter is also written as ‘Lorraine,’ which is a reference to where he came from.

strike out a great system from the twilight of imperfect essays. He leaped the fence, and saw that all nature was a garden.”¹⁷ During the course of his travels to Italy between 1709 and 1719 as an attendant to Lord Burlington, Kent had had the opportunity to appreciate the Palladian villas and had been duly impressed by the lush landscapes painted by Salvator Rosa and Lorrain, works in which the gardens were a transposition of embellished nature, which nevertheless remained ‘embodied’ and wilder.¹⁸ With a ‘capital stroke’ Kent brought about the removal of all fencing: the interior was at one with the exterior, the garden was freed of all symmetries and regularity, ditches ceased to be distinctive traits, no line of distinction remained ‘between the neat and the rude,’ as the contrast of hill and valley changed imperceptibly into each other, and ultimately the landscape’s charm would manifest itself as a gentle swell. With the days of straight canals, marble stepped waterfalls and circular pools now a thing of the past, the only interruption of the wild plains where the stretches of trees, shrubs and woods.

Kent had done nothing more than follow nature and had never erred. His legacy was taken up by Lancelot Brown, nicknamed ‘Capability,’ because he used to reassure clients that their estates “had the capability” to be improved.¹⁹ Given the scope of this essay, a description of any of the countless original creations devised by Kent and Brown is not possible, nor can a full account be provided of the criticisms levelled by the advocates of the picturesque style, primarily Price and Richard Payne Knight, who disapproved of Capability’s style, which they considered monotonous and insipid compared to the informal beauty of nature. They believed that “proper gardening ought to borrow its principles from the art of painting.”²⁰ Brown was inspired by the principle that “Nature abhors a straight line” (probably first quoted by Kent),²¹ and applied these philosophical tenets ever in his early works, which began in 1740 at the residence of Lord Cobham in Stowe in Buckinghamshire, where he soon became head-flo-riculturist. In this park, which had originally been designed by Kent and Charles Bridgeman, ‘Capability’ created the sinuous Grecian Valley which involved extensive engineering work and major earth moving to obtain a ‘curved bowl’ with densely planted slopes. From then on, he embarked on

¹⁷ WALPOLE, 1904, p. 55.

¹⁸ SICCA, 1986.

¹⁹ The literature about this legendary figure of gardening is endless, cf. CLIFFORD, 1974; PHIBBS, 2016; HINDE, 1986; TURNER, 1986; STROUT, 1984; RUTHERFORD, 2016; BROWN, 2011; BROWN, WILLIAMSON, 2016; HYAMS, 1971.

²⁰ ROSS, 1987, p. 273; see THOMPSON, 2014, pp. 5-6.

²¹ On this ‘motto’, see CLIFFORD, 1967, p. 154.

the design of a large body of landscape parks featuring vast meadows irregularly dotted with trees and shrubs and only partially surrounded by a perimeter fence. Having removed all walled enclosures and felled the trees lining the avenues, he would include winding waterways with very few ornamental buildings. At the time of his death in 1783, his *landscaped parks*, reproduced in hundreds of different versions (partly) by his imitators, were viewed as “the greatest contribution England has made to aesthetic theory.”²² The gardening historian Christopher Hussey referred to the emotional descriptions dispensed by Burke to picture the enjoyment to be had on a horse or carriage ride over grass or gentle slopes, and these emotions stood as the ‘physical basis’ to justify his penchant for waving and *serpentine* forms. “This will give a better idea of the Beautiful than almost anything else.”²³

At this point, scholars of ‘the history of ideas,’ could hardly avoid noticing the many political and philosophical implications behind a concept that promoted emotion over reason. And clearly the passion for Beauty and the Sublime revealed underlying issues regarding the contrast between Nature (the only true concept) that created the ‘originals,’ and Art, the mischievous producer of mere copies of ideas. For some this was a way of underlining the pre-eminence of gardening over agriculture, seeing as the picturesque gardens were the ones that permitted a ‘sequential transition’ from the Beautiful to the Sublime. And one may even glimpse a possible conflict between gardening and painting, seeing as the gardeners claimed that it was mainly the former that stimulated the imagination and creativity. However, ultimately, the main element around which the debate hinged hinted at a more fundamental issue: whether the model conceived by park architects was tethered to an idealised (and sterile) concept of nature, which philosophers were reluctant to forsake.

NATURAL HABITAT AND ORGANISM

A theory developed by Richard Neutra, an Austrian architect living in the States, stated that no organism can be segregated “neither physically nor biochemically nor sociologically” as a separate entity from the environment, to which it is connected starting from the same breathing pro-

²² As referred by the art and architecture historian Nikolaus Pevsner regarding the picturesque, this opinion was to be reiterated by many other commentators and extended to all of England’s art of landscape gardening. See PEVSNER, 1944, p. 146; RICHARDSON, 2011, p. 13.

²³ HUSSEY, 1967, p. 58.

cess, to the extent that it is literally immersed (in it, and) *live on and in one another*.²⁴ The biological sciences force us to recognize this fundamental unity with the environment, in a conception whereby physical, mental, emotional and social elements merge and give rise to constructions that are “technologically, environmentally and psychically sustainable.”²⁵ Recalling Goethe’s principle whereby “Nature has neither kernel nor shell, she is everything all at once,”²⁶ in the mid-20th century architects started to look towards the sciences of the mind, and this approach is particularly evident in the conception of space. The space to which Western masters were now referring was not just the ‘perceptive’ one couched in the traditional theories on vision, but also included the *espace physiologique* as previously coined by Le Corbusier, the ‘existential space’ introduced by the Norwegian Christian Norberg-Schulz, who was among the first to launch the intense phenomenological trend that has found so much breathing room in contemporary schools of thought. The concept of existential space was not a logical-mathematical term, but denoted the basic relationship between man and his environment. In his interpretation of space as an integral part of a ‘structured world’ that the child builds up over the course of its path towards knowledge, Norberg-Schulz was referring to Piaget’s developmental psychology, to the perceptual laws of the *Gestalttheorie*,²⁷ but also, and more poignantly, to Heidegger’s concepts of ‘place,’ ‘building’ e ‘dwelling,’²⁸ and transposed this set of ideas into architectural design. Norberg-Schulz believed that man ‘dwells’ when he identifies himself with an environment and a concrete term for ‘environment’ is ‘place,’ where life occurs. Although his primary aim was to investigate the psychic implications of architecture rather than its practical side, for Norberg-Schulz there was an interrelation between these two aspects.²⁹ In practical terms, this new conception spawned a surprise, or to be more precise, a rift between nature and construction. After all, although the ‘natural space’ embodied by the environment, made up of mountains, rivers and valleys, could lead one to think that humans choose these spaces for their dwelling, in actual

²⁴ NEUTRA, 1954, p. 12. On Neutra’s contribution, cf. CANEPA, 2009.

²⁵ ROBINSON, 2015, p. 156.

²⁶ “Natur hat weder Kern / Noch Schale, / Alles ist sie mit einem Male,” in GOETHE, 1827.

²⁷ NORBERG-SCHULZ, 1988, p. 29.

²⁸ It could be expected that the ‘Heidegger/Norberg-Schulz’ relationship (which also involved Merleau-Ponty and Bachelard) would become a very exciting issue, broadly debated in Heidegger’s historiography as well as in many Polytechnic degree and doctoral theses. For the sake of brevity, I only mention AURET, 2020.

²⁹ NORBERG-SCHULZ, 1979, p. 5.

fact nature does not offer many points of reference. The natural space does not suffice to create the existential space: “Mountains remain ‘distant’ and somewhat frightening, and do not constitute ‘insides’ where man can dwell.”³⁰ While in the past ‘fluid transitions’ had been created between interiors and exteriors, at a certain point it became clear that man is not at ease in the unlimited space provided by nature and that the inhabited environment must contain ‘places,’ hollows and ‘contents’ that can enable correspondences or even *isomorphism*, between spatial structures and life forms. According to Norbert-Schulz this need is linked to the development of consciousness and takes root ever since childhood. Men thus began to create enclosed spaces, and the distinction between inside and outside introduced a *new relationship* between interior and exterior space. Hence in architecture the ideal of “healthy and integrated design” took shape, with a view to fulfilling the human need for stability and a fully operational nervous system. While, on the one hand, humans are cognitive actors placed in physical and social contexts, engaged with ecological, cultural, social and architectural environments, on the other event buildings must also embody features of organisms, speak to our senses and spark our imagination.

The concept of the *embodied mind*, shaped by the sensorimotor capacities of the *entire* body (beyond the brain itself)³¹ in its interactions with the environment did not stem solely from the cognitive approach. The hypothesis behind *biophilia* was also responsible. This concept, first formulated in the Eighties by the sociobiologist Edward O. Wilson, who in his introduction to a famous work focusing on this trend – “a natural affinity for life, [which] is the essence of our humanity” – recalled the sensation he’d felt twenty years earlier in front of the spectacle of the white-sand coastal forest in Suriname, a moment that had been indelibly etched his memory.³² While it is undoubted that human beings display an “innate tendency to focus on life and lifelike processes,” one can well understand the irritation he must have felt towards the likes of Paul Theroux, whose travel narratives he nevertheless appreciated, and other ‘urbanophile’ authors, who viewed natural habitats as “troublesome barriers” when compared to human settlements.³³ For Wilson, on the other hand, jungles and grasslands were the logical destinations for human beings, while towns and farmlands were ‘labyrinths,’ which people had imposed on themselves in the past. On a personal level,

³⁰ Ivi, p. 22.

³¹ VARELA, THOMPSON, ROSH, 1992, pp. 172-173.

³² WILSON, 1984, p. 1.

³³ *Ibid.* and p. 5.

he made no mystery of his adoration for the green *enclaves* accidentally left behind and, wherever he travelled, his attention was drawn to forests: that was where his life lay. In the forest he could achieve a state akin to the 'Naturalist's *trance*' he'd experienced as a child observing ants: here, in this place, passions no longer had any meaning, history moved into a different dimension, one's breathing and heartbeat slowed and one became aware of just 'passing through,' "a transient of no consequence in this world."

These social and biological indications were treasured by *landscape theory*, an outcome of 'landscape science' which, with the help of psychology and evolutionary aesthetics, managed to formulate the principles of a true environmental *Gestalt*.³⁴ Humans engage in habitat selection, seeing as their biological system, mindful of its ancestral past, seem to prefer natural environments devoid of barriers, teeming with waterways with overlooking uplands and trees with dense foliage: places that could be both a shelter, but also offer broad views. In short: the spaces of the East African savannah.³⁵ And it is this *Savanna Hypothesis*, according to which men retain "genetically based preferences for features of high-quality African savannah where their ancestors lived."³⁶ So if men strive to recreate environments reminiscent of savannahs in public gardens or along the wide suburban avenues and even in unlikely locations such as cemeteries, wherever that the space, albeit open, is not a desert and the regular disposition of the trees is not perfectly geometric, may one not claim that landscape architects are fulfilling a genetic recollection of an ideal environment that is entrenched in humanity? Bioarchitecture has thrived on this input, born out of the intent to express a strict alliance between architect and nature with the primary goal of establishing a balanced relationship between buildings and nature. According to this point of view, its promoters have bolstered this multi-sensorial approach, whereby matter, space, shapes, colour, light, mood, even embracing scale and smell have holistically influenced perception and therefore the organism as a whole.³⁷ This triggered the special great attention paid to the materials used, by means of which the constructions should be healthy and comfortable, but also perfectly integrated in the natural environment.

On the one hand, bioarchitecture inherited the concept of 'space' from Husserl's phenomenology that had inspired northern architects in the mid-

³⁴ Cf. "Landscape theory," *Scenic Solutions. The Science of Scenery*.

³⁵ ORIANS, 1980, 1986, pp. 3-25.

³⁶ ORIANS, 2016.

³⁷ WALDEK, 2018.

dle of the 20th century. On the other, this led to an increasingly close-knit collaboration between art and the neurosciences, which resulted in the appreciation of values that were no longer exclusively visual, but also related to the sense of touch, taste and smell and regard for the so called ‘tertiary’ qualities of the perception of space and built environments.³⁸ Architects, art critics and neuroscientists ‘co-opted’ into aesthetics seemed to delve deeper into the examination of the expressive characteristics, that are so crucial in steering behaviours and our understanding of the universe of experience. These characteristics enable values to be assigned to things and events, the exploitation of opportunities and circumstances, establishing an isomorphism between activities of the mind and the emotional/aesthetic features (even of a formal nature) of the perceived objects, based on chromatic, kinaesthetic and other properties.³⁹ An additional contribution in support of these ideas was provided by *neuroarthistory*, one of the more recent fields of enquiry that have blossomed (along with neuroaesthetics) within the broader field of neuroscience.⁴⁰ Not only did the concept of vision as an essentially active process become entrenched, but slowly but surely neuroscientists and art critics came to realise that architects and artists are effectively ‘neurologists,’ in a position to study the brain with specific techniques that can establish an empathic relationship between the work of art and the viewer, and understand the influence of the environment on the organism.⁴¹ In recent decades, besides the legacy passed on by the *Gestaltpsychologie* in the study of visual perception, most of the weaponry afforded by the mirror neurons theory has ended up being applied to architecture and has influenced landscape theories. At the basis of this shift there were ideas that pertained to different fields, which had been subjected to major influences. Interesting examples of this can be found in the interrelations between art and linguistics, that had broached the idea of an essentially *visual* and ‘perceptive’ way of thinking,⁴² which also included *metaphor*, in the sense that – though we may not always realise it – we often resort to the use of metaphors in our speech.⁴³ Thanks to the broad introduction of the concept of ‘empathy’ in neurosciences, a throwback to philosophy and aesthetics where it had first seen the light, it wasn’t long before the hy-

³⁸ PALLASMAA, 2005.

³⁹ ARNHEIM, 1967.

⁴⁰ ONIANS, 2007.

⁴¹ ZEKI, 1998, p. 74.

⁴² ARNHEIM, 1969.

⁴³ LAKOFF, JOHNSON, 1980.

pothesis of an ‘embodied simulation’ could be formulated, automatically triggered in the observer’s neural circuitry up to the point where it ‘incorporated’ the environment within the organism. The human body would therefore appear to be able to set up a relationship with the architectural environment such that it ends up *simulating* its features internally.⁴⁴

One can therefore state that neuroscientists and architects have provided solid proof to back the principle that inspired the concept behind the metropolitan park adopted by Frederick Law Olmsted in 1868, when he was commissioned to create Central Park in New York. The opening statement of his first work claimed that

Dame Nature is a gentlewoman. No guide’s fee will obtain you her favour, no abrupt demand; hardly will she bear questioning, or direct, curious gazing at her beauty; least of all, will she reveal it truly to the hurried glance of the passing traveller, while he waits for his dinner, or fresh horses, or fuel and water; always we must quietly and unimpatiently wait upon it.⁴⁵

And however much this Dame ‘stood off,’ he was convinced he could still achieve a psychological effect that would result in a ‘greater enjoyment of scenery,’ which is the primary goal of the landscape architect. He personally sought to achieve this effect in his creation of *The Ramble* wood, where he intended to recreate the exotic natural surroundings he had admired at the Panama Strait.⁴⁶

After over a century has passed since that project, if one believes – now more than ever – that the architectural, and especially the landscape experience, should promote an empathic mediation between biological and psychological well-being and the sensations provided by nature, the question must be asked as to how this goal can be achieved in an age of depersonalising technological innovations. On their part, as we have noted, bioarchitects tend to shun certain types of materials and constructions (mirrors, glass, steel, cement, petroleum-based products) in favour of natural ones like wood, stone, water and even urban planners are calling for cities to be designed to evoke biophilic scenarios. Richard Neutra refers to the smells, flavours and warmth he felt as a child from the carpets, hearth and parquet

⁴⁴ The fundamental text on these issues is MALLGRAVE, 2013.

⁴⁵ OLMSTED, 1852, p. 155.

⁴⁶ Olmsted was so overwhelmed by the “superb and glorious” vegetation of the Isthmus of Panama which he crossed on a trip to South America that he wrote to his wife that its greenness was living proof of nature’s generosity to such an extent that it left him with “a strong moral impression through an enlarged sense of the bounteousness of nature,” cf. *Olmsted Papers*, Library of Congress online, letter dated 25 September 1863.



Kaufmann Desert House by Richard Neutra (twenty20.com).

floor of his late 19th century home in Vienna. For Neutra every wood essence had a different smell. He was particularly keen on redwoods and, once he reached California, in the emblematic modernist villas he designed in Palm Springs between 1936 and '47, handed down to posterity in thousands of photographs, he successfully managed to 'embed' his need to marry 'homes' and 'nature' in the mountain setting of San Jacinto, where the desert seems to flow into the stone and sand gardens.

No less iconic value can be assigned to the Vals Spa designed by the Swiss architect Peter Zumthor, which seems to spawn from the "mountains, stone, light, sound, and shadow," as it strives to capture the *original essence* by means of an architectural effort "that sets out from and returns to real things."⁴⁷

It's no surprise that in this history of Twentieth Century architecture, the first attempts to merge the human body with its natural environment, which clearly required sensorial 'explorations,' were attempted by masters from a German (and North European) cultural *milieu* – who had trained at the Bauhaus and subsequently moved to America – architects who were to some extent inspired by the thinking of Heidegger. Besides attempting to appropriate the concept of a Being that fills the space, they also brought on board his later considerations on building and the essence of habitation, which would then highlight the prevailing rootlessness of modern man, who "must ever learn to dwell."⁴⁸ Nor was it just by chance that Heidegger himself kept as far away as possible from metropolitan enclaves (primarily Berlin and, whenever he could, even from the more 'close-knit' and intimate Freiburg) preferring to spend time to study and meditate in his chalet in Todnauberg, in the depths of the Black Forest.

⁴⁷ ZUMTHOR, 2010, pp. 31-32.

⁴⁸ HEIDEGGER, 1971, p. 159.

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