01

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Architecture as Nature

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Architecture is in need of a global theory, a theory capable to explain architecture in the context of the whole earth. Against the backdrop of a looming ecological crisis that forces architects to reconsider once again the relationship between nature and culture, Scalbert explores a sweeping set of references ranging from architectural history, literature, science, geography or vernacular studies, all in an effort to set the parameters for a contemporary conversation that may reinvigorate once again the way in which architects take on nature as an intrinsic and necessary part of their work.

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How can one speak today about nature? **(fig. 01)** The concept is so vast, its history is so long, that the word itself has become a source of mild embarrassment. Nature is the domain of things which do not change, or of things which change at the invisible pace of evolution, or of things which recur with little or no variations according to the seasons. When we speak of the nature of things, we evoke a fundamental, unvarying reality. Nature is the opposite of fashion. It is not difficult to understand why in a time like the present, when unpredictable events associated with markets seem uppermost, when changes of all kinds are preferred to permanence, when fashion is reinstated as a legitimate force, the idea of nature can seem fey and old-fashioned. Nature is an inconvenience. But

Fig. 01
Irénée Scalbert in the forest in Gelderland, the Netherlands.

the more numerous humans become and the greater the effects of their actions upon their surroundings, the greater the insistence with which nature asserts her rights. Think for instance of the correlation between CO2 emissions and tropical storms. Nature is the reflection of our conscience, and increasingly of our bad conscience. We act, we build, and nature judges us.

In this situation, how can we delight in the idea of nature without being complacent? How could architects not wish to turn away from this cumbersome witness? Yet for now twenty years, neither architecture nor cities made headlines in the newspapers: nature did. In the first instance, there is of course climate change. But there are, too, pollutions of all kinds, pollutions of which Junkspace, the seminal idea of Rem Koolhaas, represents in the context of architecture the aesthetic equivalent.

In his text, Koolhaas said that if Junkspace appears like an aberration, it nevertheless defines commercial development in its essence. He was not the first to make the claim. Already in 1883, William Morris declared on the occasion of a lecture that "the very essence of competitive commerce is waste"[1]. According to Koolhaas, the landscape itself was submerged in a commercial logic, a golf course for instance being nothing but a mirror image of Junkspace, a site that has been cleared from commercial junk.

In what sociologists have called a risk society, nature concentrates almost all anxieties. Think of Chernobyl or Fukushima. At stake in nature is its perennity, its capacity to last, and therefore also our own. The fact is well-known but it bears repeating: buildings are responsible for about half the emissions of CO2. Not all buildings, it is true, are designed by architects. It is estimated that these latter are responsible for only 1% of the real estate worldwide.

But by the advantage coming from their education and their profession, they are in a pole position to influence the course of events. Architects are knowledgeable about both the environment and technology. They conceive simultaneously a construction detail and its effects on a site. Nevertheless, we cannot but observe that architects are far from having grasped the immense advantage of their situation. Worse still, they remained until now largely indifferent to questions which are close to them, not to say at the core of their vocation. Nature remains to them a foreign country.

How could one be surprised? For now forty years, the theoretical context of architecture has been the city, and more particularly what is known with more or less à propos as the European city. Looking at the illustrations in the books of Aldo Rossi, in his *Architecture of the City* or in his *Scientific Autobiography*, one could almost count the trees. Be it Milan, Lucca, Rome, Paris or Berlin, the city according to Rossi is almost exclusively mineral. It is an artifice, a creation of the mind which offers no hold for nature. There is not even evidence of wasteland where plants might grow out of sight from humans.

The situation is little different in *Collage City* by Colin Rowe. His elected city is not merely Rome but imperial Rome. The great model of it in the Museum of Roman Civilization at EUR shows an immense accumulation of objects between which, here and there, grow a few cypresses. At the end of *Collage City*, Rowe has added a series of images showing gardens, but make no mistake: the garden is for Rowe a test bed for the city and it has little or no value in itself. For Rowe, like for Camillo Sitte before him, the overarching aim was to give an artistic form

02

03

to urban space. The courtyard of the Ufizzi Gallery served as the exemplary counter to the limitless green space of the Moderns. Fifteen years later, the consensus on nature has barely changed. The *Generic City* is according to Koolhaas (he said so himself) a degraded version of *Collage City* in which the commercial centre replaces the Roman Forum[2].

Whether Rome, Paris or Atlanta, these cities are pure artifices. Their identity is wholly a matter of culture. For proof, one only needs to think about the Pompidou Centre, this extraordinary symbol to the regenerating power attributed to culture. Here like in all great world cities, there is space only for that which is human. In our conception of them, there are no plants, no sky, no weather. The only exception, curiously, is Venice, an atypical tropism of the European city where everything that is human –art, palaces, *campi*– marries in the most intimate with water, sky and climate **(fig. 02)**. Where but in Venice is the sight of plants so affecting?

In the circumstances, how can one address questions concerning the relationship between nature and culture? For instance those, until now mostly unanswered, relating to climate change. For sure there have been exceptions. Paolo Portoghesi, the postmodern architect responsible for the Strada Novissima at the Venice Biennale, tried to answer some of them. In his book *Nature and Architecture*, he looks for archetypes with which to express, through symbols, the origin of architectural forms in nature. Thus streets would have originated in canyons carved by rivers. "The house origins", he writes, "lie in the tree, the cave and the nest of birds, but it also relates to the archetype of prenatal life in the womb"[3]. Need one continue?

The Moderns went much further **(fig. 03)**. They have been accused of dividing the city in ways that were simplistic and arbitrary. Nevertheless they gave the lion's share to nature. In the Charter of Athens, Le Corbusier dedicated to it one of the four main functions attributed to urbanism: that of leisure. For its purpose, it was necessary to preserve the open spaces of cities (princely parks, bourgeois gardens, military promenades) and to make them accessible to the public. "The protection or the creation of open spaces", Le Corbusier wrote, "...constitute for the [human] species a matter of collective salvation".

The texture of settlements will be modified in order to become 'green cities'. Next to housing, collective facilities will be sited on lawns planted with trees. On the edges of cities, meadows, forests and beaches will be protected to guarantee leisure at week-ends **(fig. 04)**. Further away, natural landscapes will be taken into account: rivers, mountains, lakes, the

04

Fig. 02
Campo, Venice.

Fig. 03
The Kepa Potocka Park and housing blocks, Warsaw.

Fig. 04
Housing, Rusanivs'ka Naberezhna, Kiev, 1970s.

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Fig. 05
Frei Otto, Eco Houses, IBA, Berlin.

Fig. 06
Walden Pond, Concord, Massachusetts.

sea... The vast ambition of the CIAMs was to establish what Le Corbusier called a 'biology of the world'. Modern urbanism has been criticized for the adoption of a schematic conception of nature and for its disregard of geographical and historical particularities. But no-one could hold against it its neglect of nature and of its essential relationship to humans.

Almost nothing remains of this vision. The current understanding of nature by architects draws from the studies of Ernst Haeckel and d'Arcy Thompson on the genesis of natural forms. It is founded on the idea that the form of all organisms originates in the laws of Physics and geometry. It belongs to a tradition which is exclusively concerned with the world of forms and in which human agency has no place. The most striking instance of this fervent materialism is that of Frei Otto. For sure the forms and the techniques invented by Otto are extraordinary and often beautiful, but one struggles to see how, in the quasi-scientific process of 'Gestaltwerdung', or form-finding, humans can participate.

For proof, one needs only look at the "ecological" dwellings designed by Otto in Berlin **(fig. 05)**. Here the process of form-finding merely survives in the large tree which presides like a symbol at the centre of the project. Unless of course if society itself were conceived as being determined by physical properties, which is what Otto appears to claim in his odd essay on urbanism, *Occupying and Connecting* –a claim that in my view one must resist. Until we know better, humans and human societies are not reducible to physical laws. Yet such is the dominant tendency in green architecture. Questions concerning our relationship to nature are expressed as so many problems which science alone can solve. Thus the questions raised by climate change would be solved by insuring the squaring of the CO2 cycle in the biosphere. Likewise sustainable architecture aims to square the CO2 cycle in the dwelling. Fundamentally, it is reduced to a matter of chemistry, as demonstrated by the immense success of the book *Cradle to Cradle,* written jointly by a chemist and an architect. And it can be summarized in its organization as the management of fluids and temperatures, and in its design as the alignment between the chemistry of materials and human physiology.

This is what Philippe Rahm and Jean-Gilles Décosterd expressed poetically in the Swiss Pavilion of the 2002 Venice Biennale. In their *Hormonorium*, the effect of high altitude was simulated by a high light intensity and a reduction in oxygen, causing in the body a diminution of fatigue and apparently an increase in sexual desire. But can one really assimilate

architecture to physical chemistry? The later installations by Philippe Rahm and the designs of William McDonough (the architect who co-signed *Cradle to Cradle*) give one reasons to doubt. All too quickly, a point is reached when scientific analysis parts company with sensibility, and where the necessarily synthetic methods of the architecture project can no longer follow.

This limitation of green architecture is shared by ecology. The one like the other are caught in a virtuous circle. In green architecture, the aim is to recycle air and water so as to reduce, even cancel all external consumption, as if all exchanges could take place in isolation. Recycling in ecology is not merely an objective that must be reached: it is the very definition of ecosystems. If only ecosystems could function like well-integrated machines, the stability of nature could be guaranteed. But the difficulties are daunting. Diagrams representing ecosystems are often of such complexity that they recall, like green architecture, the comic inventions of Heath Robinson.

A common principle governs both ecosystems and green architecture: the conservation of energy. Green architecture is a compilation of inventions designed to reduce energy consumption. With it, it is the whole conception of nature which is made hostage to ecological scientism and its energetic strategies. Ecologists demonstrate this common principle with the microcosm of the pond. Here the links between living organisms and abiotic environment, between consumption, production and decomposition are easily visible. But there is a world of difference between the pond of ecologists and a pond as described for instance by Henri David Thoreau **(fig. 06)**.

A writer and a pioneer of the environmentalist movement, Thoreau built a hut on the edge of Walden Pond where for a time he lived. He looked upon a lake as the most expressive feature of a landscape. “It is earth’s eye”; he wrote, “looking into which the beholder measures the depth of his own nature”[4]. There is between the idea of ecosystem and lived nature, between the pond of ecologists and the pond of Thoreau, between an energy factory and a philosophical mirror, the same chasm that exists between sustainable architecture and architecture itself. So as to be creative, the relationship between architecture and nature requires an approach that is neither purely materialist as in biophysics, nor purely system-based as in ecology. Architecture is rooted in daily life and concreteness. Therefore it is here that one must start.

There exists a discipline –geography– which studies nature in toto as well as in detail. More than most scholars, Paul Vidal de la Blache contributed to the knowledge of the earth and its landscapes in connection with human societies. Rarely mentioned today among architects, it was nevertheless Vidal de la Blache who inspired the works of J.B. Jackson (today still, perhaps the most widely-read author in landscape studies). It was him who inspired the first scholarly studies of vernacular architecture. It was him again who inspired Fernand Braudel’s concept of ‘material life’. Today, he appears to be the necessary precursor to Bruno Latour’s ‘natures-cultures’.

Vidal guides the reader into what he called the labyrinth of forms on the surface of the earth. He describes in detail the physical forces which sculpt the landscape: water, wind, plants, animals. These in turn help in directing the invention and the efforts of humans: a mountain protects a village, a river is used for transport, an island serves as a refuge. Humans choose what is useful to them. By their continuous action upon nature, they elaborate specific “genres de vie”, or ways of life.

Assisted by plants, animals and machines, they redirect nature's faculties to their own ends and assert their geographical role.

At the same time, Vidal was conscious of the fact that space was playing an ever greater role in human life. Seen for a long time as an obstacle that kept people apart, the control of space was becoming an objective in its own right. It was encouraged by commerce and by the increasing mobility of people and goods. Its counterpart was a growing emancipation from local places and an expansion of cities. Vidal referred in this context to 'currents of general life', cutting across local ways of life bound to specific places. This conception of a general life anticipated the long-distance capitalism of which Braudel retraced the development in *Civilization and Capitalism* and, nearer to the present time, the generic city theorized by Rem Koolhaas.

It has become so pervasive that geographers have all but abandoned regional studies. For the last fifty years, they have been interested almost exclusively in numbers, space and cities, at the expense of the physical forms of landscapes. Of what consequence could peasants and their ancestral ways of life be for the passengers of a stage-coach making pace on the highway? Of what relevance could the few remaining Paiute Indians be to someone placing a bet in a Las Vegas casino? As Koolhaas famously said, "fuck context".

Yet unless we are flying or sailing, we are always somewhere, in a particular place. In a work that would deserve to be better known, the geographer Robert Capot-Rey has shown how certain laws preside over the layout of roads in a physical setting. He showed how in turn the layout of roads influenced the siting of houses and the forms of cities. The often-mentioned 'non-places' are a fiction of the man in the stage-coach. Non-places do not exist. The expression is a euphemism, a fig leaf which conceals a lack of care, indifference and waste.

Lacking today is a global theory of architecture, a theory capable to explain architecture in the context of the whole earth. A pupil of Vidal de la Blache, Albert Demangeon, made a first attempt in 1937 with the publication of *Les Maisons des Hommes*. Later in 1972, a disciple of Vidal, Pierre Deffontaines, published *L'Homme et sa Maison*. More recently, Paul Oliver edited an *Atlas of Vernacular Architecture of the World*, the ambition of which is to correlate architecture and natural resources.

In the task of connecting architecture and nature, vernacular architecture has become a necessary reference.

But the vernacular model has limitations. Firstly, it mostly ignores the mobility of people and of goods. According to Paul Oliver, vernacular architecture is an architecture "of the people, and by the people, but not for the people"; it belongs in a particular group of people, and it cannot be made by others on their behalf[5]. This definition precludes notably the participation of professional architects and commercial entreprises. Secondly, vernacular architecture is rooted in a local culture and a local tradition. It evolves slowly over a long period of time, and it is by nature distrustful of individual initiatives which would depart from this tradition.

Originally, the idea of vernacular architecture called not for tradition but for open-mindedness. Oliver mentions the "revolutionary" work of 1957 by Sibyl Moholy-Nagy, *Native Genius in Anonymous Architecture in North America.* Moholy-Nagy had no wish to exalt local cultures. Indeed her point of departure was the opposite. Referring almost exclusively to American examples, she observed that immigrants

who left Europe for the New World (with the notable exception of cities) showed no nostalgia for the traditions of the Old World **(fig. 07)**.

Indeed, why would immigrants wish to uphold traditions which, in many instances, prompted their decision to emigrate? Why would they wish to replicate ways of life by which they often felt betrayed? Instead they adapted ancient customs (what Moholy-Nagy refers to confusingly by the German 'Brauch') to their new environment. They took advantage of unfamiliar resources, she argues, with the care and the cunning of neolithic man. Moholy-Nagy described the architecture that resulted as 'native', meaning by this that it was innate, natural.

Moholy-Nagy begins her book with a tribute to Frank Lloyd Wright. The tribute includes a quotation by Wright in which he praises popular architecture, buildings which are to architecture what folk songs are to literature and music. Wright himself used the expression 'native architecture'. Indeed who better than Wright did succeed in building such an architecture, at once rooted in the geography and devoid of sentimentality.

Some architects in the nineteenth century met with comparable success, for instance Karl Friedrich Schinkel at Potsdam and the architects of the Arts & Crafts in Britain. All had a mentor who spoke in the name of nature: Schinkel had Goethe, the Arts & Crafts had Ruskin, and Wright himself had Ralph Emerson. The problem of our time is that nature has no such prophet. Nature may be invited to sit at what Latour called the Parliament of Things: without representation, nature cannot speak to us[6].

Which project better than Taliesin East represents this 'natural' architecture. I think in particular about the project of 1911, prior to the reconstructions of 1914 and 1925 **(fig. 08)**. In his exhaustive study of Taliesin, Neil Levine relates how Taliesin was for its architect at once a personal reinvention after his banishment from Chicago and a reinven-

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Fig. 07
Two Barns on the reservation of Fort Klamath, Oregon.

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Fig. 08
Frank Lloyd Wright, Taliesin East, Wisconsin, 1910s.

tion of his architecture[7]. The relationship of architecture to nature was no longer one of analogy but one of substance. There is nothing in its plan to suggest a formal or abstract order. The rooms hold to one another without rule, without symmetry, without alignments other than those which had been suggested by the landscape itself.

Wright said of the residence of Taliesin that it was "homemade". Everything had been conceived by him: the foundations, the garden, the orchard, even pasture lands and the pond. Taliesin was a complete living unit which included a house, a studio, a garden and a farm, encompassing everything "from pig to proprietor". The architecture itself seemed accessory, merely incidental in nature.

Wright's conception of an organic architecture does not do it justice. Organic architecture still hankers to analogy. It describes a mode of composition and of growth for which the ideal model is the tree. Like green architecture, it hides behind nature as if by mimetism. But the architecture of Taliesin makes no attempt to be a second nature. It does not feel self-conscious before a nature that judges it. To the contrary it maintains its prerogatives and it participates fully in the debate at the Parliament of Things.

No architect today accommodates nature in his work with the scope and the conviction of Wright. Not even a planner who must by necessity address not only the city but also the land which sustains it, speaks with the range of Patrick Geddes and the authority of Ebenezer Howard. By and large nature has become synonymous with 'green field sites' (as opposed to 'brown field sites'), a conception which says nothing about nature and merely designates a prohibition on development. It has not found in contemporary mentalities an expression which is concrete and rich enough to sustain the vision and the projects of architects.

At the beginning of the twentieth century, the Russian geographer Alexander Woeikof made an observation that will serve as a coda[8]. Woeikof (one of the first scholars to study the impact of humans on climate) noticed that humans have an almost negligible influence on their surroundings when they tackle natural forces head-on. On the other hand they have a considerable influence when they act upon what Woeikof called "corps meubles": upon loose material which has become detached from the earth crust by the action of wind and water. These materials include soil and subsoil, sands, gravels, dust and snow. Humans spontaneously settle in places where these bodies are plentiful and readily available. In such sites, they will find notably a ready supply of materials for construction. From a geographical perspective, the fundamental question of architecture is how to determine the relationship between these unstable materials to which erosion continuously contributes, and the stable constructions upon which architects lavish so much ingenuity. **RA**

Notes

01. MORRIS, William, "Art under Plutocracy", *Collected Works of William Morris*, Vol. 23, London, Longmans, Green and Co, 1910-1915.

02. KOOLHAAS, Rem, "The Generic City", in *S, M, L, XL*, New York, The Monacelli Press, 1995.

03. PORTOGHESI, Paolo, *Nature and Architecture,* London, Thames and Hudson, 2000.

04. THOREAU, Henry David, *Walden*, Boston, Ticknor and Fields, 1854.

05. OLIVER, Paul, *Dwellings*, London, Phaidon, 2003.

06. LATOUR, Bruno, *We Were Never Modern*, Cambridge and London, Harvard University Press, 1993.

07. LEVINE Neil, "The story of Taliesin: Wright's First Natural House", *Taliesin 1911-1914, Wright Studies*, Narciso G. Menocal ed., vol. 1, 1992, pp. 2-27.

08. WOEIKOF, A., "De l'infuence de l'homme sur la terre", in *Annales de Géographie*, vol. X, 15 mars 1901.