

## 08

## Herzog & de Meuron: The (Renewed) Mimesis of Nature

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Nature was one of the models of premodern imitation. Its canon fell into disuse with the Enlightenment, when humans began to impose technical command over the natural environment. However, with the crisis of post-modernity, a new kind of rational, conscious and free imitation emerged. It is an intersubjective praxis that occurs between two subjects, not between object and subject as in the premodern era. The action of architectural design is based on different materials; these can come from architecture itself or from other aspects of reality, such as art, landscape or nature. Reality provides materials to be used over and over, which require an architect's skill to organize. This concept of 'design material' leads to the idea of a project as the construction of a new order from elements, models or time-tested examples through experience. When the design process is understood in this way, the abstract concept of nature as a subject can be considered a model – a dynamic and living subject oriented towards the future that, with its structural principles and rules, proposes a procedure: the desire and rational action of its use as reference material by the subject-architect. The thesis is not that the process of architectural design is an autonomous act or a consequence of a creation that emerges from a vacuum, but that architecture always refers to certain models, prototypes or memories that rise up in the architect to generate rational, free and conscious imitation. One of these models is nature, as Herzog & de Meuron exemplify in their work. This article analyses some of Swiss architects' projects as examples of this renewed mimesis. To support this point, it explains what this contemporary imitation consists of, why nature is a subject that provokes a desire for emulation and how it influences the practice of Swiss architects.



The technical superiority of man has resulted in nature being considered foreign, the 'other', a strange and alien element which must be conserved and protected, just like monuments from the past<sup>1</sup>. From the last third of the 19<sup>th</sup> century onwards, reserves which are home to the most outstanding natural spaces began to be created; parks and protected areas were delineated and placed under environmental protection with the aim of preserving extensive areas where nature abounded and human presence was scarce. These spaces were

rarely considered the sure result of human impact, which thus reinforced an adverse mind-set among industrial society<sup>2</sup>. At the same time, machinery became the expression of a new culture. In the early 20<sup>th</sup> century, machinery became the saviour to which everything should look, even artistic creation. Even in architecture, it was a fundamental reference model.

One hundred years later, that enthusiasm for machinery has been replaced by amazement at the footprint it has left on the landscape. It is a panorama in which man also exorcises the inevitable role that the transforming agent has had on the earth's crust, trying to disguise its doings, its work; as if human manufacturing were part of nature, like coral reefs or beaver dams. This camouflaging approach has at some times been fuelled by ecological motives and at others by technological advances; however, it has often not gone far beyond a mask concealing interventions in which –paradoxically– nature, which must be respected, continues to be consciously or unconsciously ignored to construct a landscape in which man becomes invisible.

Now, the concepts of subject and object, differentiated during the Enlightenment, have been rediscovered; these concepts are now immersed in a world characterised by complexity, interaction and interference. In different artistic fields and spheres of thought, nature makes a bold comeback as an inexhaustible model to be imitated, as is the case in some works by Herzog and de Meuron, transcending formal and superficial environmental approaches in order to create a new and renewed architecture which draws on nature as project material (fig. 02).

Since Aristotle introduced the known notion of *Ars imitatio naturae*, mimesis has been at the centre of Western culture, appearing throughout the ages and in all premodern humanistic and artistic disciplines. There were three types of premodern imitation: the imitation of nature, ideas and the by-gone. Imitation of nature is a concept that was behind thought until the 18<sup>th</sup> century. With enlightened modernity, mankind, with individual momentum and spurred on by scientific breakthroughs, freed itself from the ideal of thorough and complete perfection, which represented the timeless and static reality of a pre-existing model. Humanity replaced the model-copy relationship which had been around for centuries with an alternative structure based on the autonomy of the subject, in which the old relationship had no role. Having existed for two millennia, the concept of imitation suddenly disappeared from thought, and the idea came about that imitation was synonymous with literal, banal, simian or childish copying, erroneously identifying the action of emulation with the result obtained from imitative praxis.

However, unlike premodern imitation, contemporary imitation is free, conscious and rational, as upheld by the philosopher Javier Gomá in his general theory of imitation<sup>3</sup>. Presently, the imitator is capable of recognising an authentic prototype from among the myriad existing models, understanding their essences, communicating the rules laid out, and also deriving an experiment of imitation from them. Furthermore, this contemporary imitation is an intersubjective action between two subjects, rather than a subject and an object. Thus, this new mimesis is not associated with that premodern, dually structured imitation which presupposed the existence of a complete given reality which preceded mankind and which was also offered as something eternal and steadfast. The contemporary model is susceptible to evolution, change and progress. Rather than being viewed as perfect and static as it was in premodern times, nature is now perceived and understood in a completely different way.

The relationship between architecture and nature is demonstrated through the praxis of the architectural project, which today incorporates the contemporary concept of imitation. A plan is built on different materials, which can come from the architecture itself or from other aspects of reality. According to Helio Piñón, taking into account the idea of the 'material' on which the design revolves during the planning phase enables us to find the authentic principal purpose of the

project, helping to recover a defining process in which the authenticity of the structure is both a determining criterion and the real value of the architecture<sup>4</sup>. The landscape, art, nature and architecture itself all provide valuable materials for use and on which the ability of the architect can act to overcome a determined starting point.

This concept of 'project material' leads to the idea of the project as constructing a new order based on elements, models or examples which have been verified empirically through experience. The exact limit which configures how an architectural concept is approached lies in it being a subjective action, oriented toward achieving a consistency of form which gives the project object an aesthetic character and identity as a work of art. This identity may be found in the interaction of the formal primary material structure used -not in the mere nature of that material. An architectural work's identity, as a basic condition of its aesthetic quality, is associated with its 'meaning': how it positions itself in the historical and cultural context in which it is built and whether the work approaches conventions as an obstacle or stimulant in the context of the architectural proposal<sup>5</sup>. A work's identity is also associated with the 'consistency' which defines the degree of formal coherence that the object acquires in the context of a chosen aesthetic system, giving the newly created order precision and rigour. During an architectural project's design phase, the new order is conveyed through the confrontation of domains belonging to heterogeneous fields by means of an analogy which similarly derives from what is considered modern imitation.

Looking at the planning process in this way, the abstract concept of nature can be considered a model, a dynamic and living subject oriented towards the future which, with its structural rules and principles, proposes a course of action: the desire and rational initiative of the architect-subject using it as reference material. Having a reference neutralises chance and the unseen, and rationalises the novelty of an unexpected and strange situation by assigning it to a familiar, previously chosen and understood example (fig. 03). As the subject assimilates the prototype example, it can be repeated in new situations, putting accumulated experience into practice. The choice of nature as a model during architectural planning gives the final product coherence, meaning and identity, projecting it towards the future.

Jacques Herzog and Pierre de Meuron knew how to reconstruct the relationship between the natural world and architecture through projects, recognising and reconceptualising nature as a model and using it as material (fig. 04). These architects saw the artificial and natural worlds as a continuum in which there was no dialectical opposition between nature and society or between nature and the urban environment, a space wherein the subject and object blend into one. The emptiness left behind by the tradition lost in the premodern imitation of nature is now replaced with another approach, another vision: the reflection of the architect, artist and scientist who recaptures nature as a subjective model from which to create a new order.

Nature is continuous, made up of biological, physical and chemical processes which must be described and represented in order to be understood. The human consciousness individualises discrete units or figures with the aim of working on them<sup>6</sup>. Art and the artificial are also processes which work on the understanding of human beings, of their perception of the natural world and the effect which they have on it. Thus, 'artificial nature' is the concept underlined by Jacques Herzog as a project strategy. In his acceptance speech of the Pritzker prize, he states that<sup>7</sup>:

We look for materials that are as breathtakingly beautiful as the cherry blossoms in Japan or as condensed and compact as the rock formations of the Alps or as enigmatic and unfathomable as the surfaces of the oceans. We look for materials that are as intelligent, as virtuous, as complex as natural phenomena.

Scientific investigation explores reality, and there it finds images which, although invisible, are no less real; they are indiscernible representations of matter and the world. Scientists create models to recognise and understand the reality of nature in order to classify and describe it. Herzog & de Meuron use nature as a model when analysing and searching for the relationship between visible and invisible images; they are interested in the intangible image as it enables them to choose the tangible image as an aspect in their design, as one piece of a whole (fig. 05). They look at chemical processes and descriptions which compare microstructures with aspects and qualities that those materials reveal about everyday life. These processes, not discernible by the human eye, are important because they are responsible for the form, colour and physical stability of an object. All natural substances, all organic and inorganic matter, whether plants and stones, have a linked complex structure which is both visible and invisible and which makes a mound of granite and another of sandstone adopt different forms. The scientific research into this complexity in the work by Herzog & de Meuron goes so far as to look into those limits which appear unexplored<sup>8</sup>.

Studying the molecular structure of matter reveals that it is not the atoms which define the specificity properties of each element or substance, but rather the relationship between the atoms -their energy. This is also the case for art and architecture. The matter used in both fields lacks value on its own. The materials are incidental and can vary from one project to another; their value lies in the complexity and conceptualisation which binds them together and increases with each work (fig. 06).

The Swiss architects' approach to the project when using nature as a prototype is particularly felt in some of their projects and works, such as the competition for the Avenida Diagonal in Barcelona (1989), the Ricola Europe production and storage building (1994), the Dominus Winery (1998), the Prada Aoyama shop (2003), the Cottbus University Library (2004), the Young Museum (2005) and the Tenerife Art Space (2008), among others.

In the project for the competition on the Avenida Diagonal in Barcelona, the architects manifest their intention to propose a new natural order, without the practical rationale which expresses reality. In this plan, they present a scheme of vegetation and ponds which function simultaneously as a biological water purification plant and as a public garden organised attractively. The site forms a range of sinusoidal curves, like chains of DNA, positioned between the sea and the city (fig. 07). The implemented solution acts like a treatment plant but instead of chemical and mechanical systems, it uses ponds to offer the city's residents a visible and architectural structure (a public park), which is also productive and useful (purifying the air and water), without utilising the disguised architecture of conventional treatment plants<sup>9</sup>.

The Swiss architects find solid foundations for their projects in the essential relationships between the invisible elements, giving the conscious world validity and stability. There is a desire for imitation stemming from the logic of nature as the ultimate truth. In works such as the Prada shop in Tokyo, a crystallographic prism, they use architectural language to such an extent that it forces them to cover the building with a continuous rhomboidal mesh which holds the glass mass in place, calling to mind the wire cages of the stony gabions in the Dominus Winery in California. Herzog & de Meuron make new landscapes using an architecture in which nature is geologically echoed, whereby, contrary to the accelerated time of history, the slow pace of the natural world is used as another construction paradigm, forming an apparently immobile landscape, like the geological folds or the evolution of species which happen so gradually that they provide an almost timeless backdrop to the turmoil of human societies<sup>10</sup>.

Herzog & de Meuron's projects, more alchemical than organic, approximate and use nature as a model with caution, fearing the vacuous simulation typical of theme parks, thematic zoos and

nature parks<sup>11</sup>. Thus, the strata they propose are tainted with artificial geometric perforations, crystalline edges are softened with bubbles and creased skin is at times imprinted with pixelated images, just as pop art used oversized Ben-Day dots. Through the use of repeated and juxtaposed sequences, the appearance of emblematic nature is disfigured and becomes textural. Their geological and biological references avoid analogy and literal copy, colouring nature with the artifice of architectural design by means of rational imitation. Their architectural works are objects which reveal and transmit the hidden order of nature, its principles and values; they eloquently express the deliberated order of creation by creating a new artificial order (fig. 08).

The specificity of each project materialises in each of its elements or levels of organisation, which do not need to be subjected to any hierarchy to produce meaning. For this reason, they at times use a fractal concept in some buildings. This self-similar fractal system affects repeated elements and also spheres of different conceptual scales and levels. The elements are syntactically separated from the whole, becoming a summary of the body. This type of self-similar architecture, common in nature, is especially efficient when working on an unstable medium, as it not only gives the object extraordinary sturdiness in light of a possible disjoining or enlargement, but also makes it more independent in its relationship with the context from the moment in which scale is removed as an established root of the project.

Herzog & de Meuron's architecture is dominated by their perception of the world; however, it does not force the onlooker to assume their perspective in order to understand it. The attention dedicated to the perception and understanding of natural phenomena is one of the strategies by which their architecture is upheld. Their stance is phenomenological, and by approaching reality in this way, they combine ontological aspects which are strongly repeated in their works. As previously mentioned, the physical presence of the materials themselves is not important; they require a natural or artificial context to be seen in a specific way, to be converted into objects of human perception, to be named and become essences. It is necessary to have a 'spiritual quality' for their material organisation and to achieve the maximum ontological state of the matter, which is one of the objectives of these architects' architecture<sup>12</sup>.

Thus, the place is used by the Swiss architects as a type of 'quarry' from which the materials to be used, in an untraditional way, are extracted to form a new order. Their idea of context leads them to develop determined qualities with the objective of making them more apparent or specific. The materials found at the site can be of diverse nature; however, they are always subject to an intense analytical and critical study before use in the design process. Herzog & de Meuron's entire collection of work has the immediacy of the architecture's material qualities; an extraordinary tactile intensity which speaks directly to your senses, not wanting to limit its critical review to just one conceptual dimension.

In the case of the Dominus Winery, it can be said that the legitimate vehicle expressing the architecture is the way in which the materials are used. The building is a normal, rectangular solid, intensified and adapted to the context by its transformation of the material, an authentic invention whereby stone gabions, previously regarded only as opaque material to strengthen banks, are transformed into translucent walls by the Swiss architects<sup>13</sup>. Between the uniformity and the bareness, the power of this work does not come from revealing a body which is bare due to the absence of covering and the rough texture of the stones; rather, it comes from the internal structure of the supports and the appeal of the rocks (fig. 09).

In other works, the workings on the surface of the material are not used with the intention of achieving new effects, but rather to give the appearance of a stratified material. In efforts to produce a 'disfigured figuration'<sup>14</sup>, the surfaces of the materials are the object of serigraph processes, incisions or engravings. The idea of employing the image of nature as construction material is used in the Ricola Europe production and storage building in Mulhouse

(fig. 10). The model used is that of palms screen-printed onto the inside of u-glass panels positioned on large glass walls. Due to the repetition of the same motif, the image tends to disappear as a figure and is perceived above all as a specific quality of light which flickers when passing through the image filter. The entire façade acquires an almost textile-like quality as a large, semi-transparent marquee, creating a link between the interior and exterior. As a result, this façade is perceived as diametrically opposed to the intangibility and transparency of traditional stained glass, taking on thickness and also weight. This use of images to obtain ever-new perceptual effects, not to communicate semiotic messages, leads to experimenting with extremely innovative solutions. The ambivalence between figurative and abstract language profoundly shows the artistic dominance in the projects undertaken by Herzog & de Meuron in order to intensify the architectural object and create works invested with exceptional vigour, maintained by the work itself and not by the temporal power of fashion.

Herzog & de Meuron's works are identifiable as contemporary architectural work based on an aesthetic coherence and consistency which originates in a subjective initiative, using nature as a model in some projects. When designing, they look for references which, due to their properties, help them resolve the problem posed by each specific situation. In certain cases, among the multiple possible models, they choose nature, as together with their principles, rules and values, it provokes desire and suggests a course of action: the rational initiative of emulating nature through their recognition, knowledge and understanding of it. Furthermore, they do not use just one element in a unique experiment. Rather, throughout their work, they use a plurality of natural elements, choosing those which serve as examples and counterexamples and bringing together those which are most useful for their designs.

The collection of tested models is knowledge which contributes to building awareness of the concept of project material on which architectural thought acts; it provides criteria for the use of said materials, teaches about the nature of the project and allows the veiled order of nature to be reconstructed. The screen-printed concrete, the copper bands, the basalt gabions, the convex glass, etc., are materials which, with their expressive innovations and internal structures, give each of their works an exemplary and universal character, converting them into new models which generate an inchoative desire for emulation in other subjects and thus projecting them into the future.

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## Notes

**01.** Cfr. ARGULLOL, R., TRIAS, E., *El cansancio de Occidente*, Destino, Barcelona, 1992, p. 103.

**02.** Cfr. SCHAMA, S., *Paesaggio e Memoria*, trad. it. P. Mazarelli, Mondadori, Milano, 1997, pp. 7-15.

**03.** GOMÁ, J., *Imitación y Eperiencia*, Pre-textos, Valencia, 2003, pp. 329-395.

**04.** PIÑÓN, H., *El proyecto como (re)construcción*, Edicions UPC, Barcelona, 2005, p. 9.

**05.** Ibid., p. 10.

**06.** ZAERA, A., "Continuidades. Entrevista con Herzog & de Meuron", en *El Croquis*, 1993, n. 60, p. 8.

**07.** HERZOG, J., "El ideario de Monticello", en *Arquitectura Viva*, 2001, n. 77, p. 75.

**08.** One idea clearly expressed by the Swiss architects is that "most of the objects that we use in everyday life have for us a clear identity, which is defined only by their utilitarian value. [...] Here, the original form would not even be the natural one. [...] The culture in which we live today, especially the Western one, is a culture of blending and mixing substances until they are unrecognizable. [...] It is never lost. However, in innumerable products of our industrial age, these substances, this matter, can only re-enter a natural cycle with great difficulty. [...] There seems to be a connection between aesthetic critical perception resulting in physical discomfort and the real measurable destruction of the natural world. [...] Our interest in the invisible world is in finding a form for it in the visible world. That is, in breaking through the deceptive, visible and familiar guise to take it apart, to atomize it, before relating to it anew. The invisible world is not a mystic one, but it is also not a world of natural sciences, of invisible atomic crystalline structures. With

this we mean the complexity of a system of relationships which exists in nature, in an un-researchable perfection, and whose analogy in the realm of art and society interests us. Our interest is thus the hidden geometry of nature, a spiritual principle and not primarily the outer appearance of nature". HERZOG, J., "La Geometría Oculta de la Naturaleza", en *Quaderns d'Arquitectura i Urbanisme*, 1989, n. 181-182, pp. 96-109.

**09.** HERZOG, J., "Ideas de proyecto. Una conversación de José Luis Mateo con Jacques Herzog", en *Herzog & de Meuron. Catálogos de Arquitectura Moderna*, Gustavo Gili, Barcelona, 1989, pp. 7-8.

**10.** It is no coincidence that in an exhibition housed in the Canadian Centre for Architecture, the architects exhibited over eight hundred study models mixed with fossils and insects, minerals, ethnographic objects, photographs and daguerreotypes, games, product catalogues, sculptures and paintings, which together created a fascinating ambience characteristic of the encyclopedic collections of 19<sup>th</sup>-century museums. URSPRUNG, P. (ed.), *Herzog & de Meuron Natural History*, Canadian Centre for Architecture, Lars Müller Publishers, Montreal, 2002.

**11.** HERZOG, J., "Sui materiali", en *Domus*, 1994, n. 765, p. 75.

**12.** This conceptual strategy of using materials is summarised, as Fernández-Galiano states, in the known phrase by Nietzsche: "the stone is more stone than before", which the Swiss architects then transfer to the rest of their construction materials. FERNÁNDEZ-GALIANO, L., "Dionisio en Basilea", en *A&V Monografías*, 1999, n. 77, p. 14.

**13.** MONEO, R., "Celebración de la materia", en *A&V Monografías*, 1999, n. 77, p. 22.

**14.** As Alejandro Zaera states, figurative and abstract categories are produced within the realm of the representation; it is already a kind of abstraction of reality, a form of art. It is the crisis of the representation which leads to overcoming the figurative-abstract duality. The work by H&dM has a continuity which goes beyond the traditional artistic classifications of the abstract and figurative. Introducing figurative motifs occurs inversely to abstraction, which is necessary to produce order and intelligibility in chaotic material organisation. The representation is disfigured, turning into texture in order to abandon its representative nature. This is a process with a clear precedent in some works by Warhol. The ambivalence between abstract and figurative language distinguishes Warhol and Herzog and de Meuron from Oldenburg and Venturi, Rauch and Scott-Brown; while for the former, the figurative element tends to disappear into texture, for the latter, it is used as a recognisable and recontextualised element. The work by the latter still occurs within the linguistic-representative paradigm, whereas in the work by Warhol and Herzog and de Meuron, the figure becomes a rhythmic occurrence, producing the transfer between the mediums: the rhythm works by connecting social construct with material structure. ZAERA, A., "Entre el rostro y el paisaje", en *El Croquis*, 1993, n. 60, p. 36.

## Images

**01.** Leaf of *Achillea umbellata* increased 30 times. Herzog & de Meuron.

**02.** Herzog & de Meuron, Studies for the facade of the Young Museum, 2001.

**03.** Leaf of *Achillea umbellata* increased 30 times. Herzog & de Meuron. 1994. Images of Karl Blossfeldt's *Herbalist*, 1900.

**04.** Herzog & de Meuron, Detail of a sketch for the store Ricola Europe, 1997.

**05.** Herzog & de Meuron, Models of study of the University Library of Cottbus, 2002.

**06.** Herzog & de Meuron, Chains of DNA and sketches for the contest of the Diagonal of Barcelona, 1989.

**07.** Herzog & de Meuron, Facade studies, sheet of water and model of the interior space of the Tenerife Space for the Arts, 1997.

**08.** Herzog & de Meuron, Strata of land and studies for Schaulager for the Emanuel Hoffmann Foundation, 2002.

**09.** Herzog & de Meuron, Dominus Wineries, 1997.

**10.** Herzog & de Meuron, Xerographed panels with vegetal motif in the walls of the Ricola Europe warehouse, 1994.