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## Body and Mind in Herzog & de Meuron's Architecture

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### Abstract

*The aim of the article is to interpret the body-mind relationship in Herzog & de Meuron's architecture. We surveyed their architecture over the last twenty years, uncovering the parallel changes in buildings and writings, with the theoretical trends in the background. We found that a clear shift in their approach has been manifest. In the first phase, the architects' bodily and intellectual sensations were mediated through the building, whose subtle deviations from architectonic rules were perceivable more to the senses than to the mind. In the second period, the sensuality of buildings increased, while intellectually they referred to the present. The buildings still had their integral body, but they had lost a clear contour. In the last decade, the buildings operate with an arsenal of material and sensuous effects; the aim is intensity, which is often reinforced with direct formal analogies. The body of the visitor is put centre stage.*

### Keywords

Architectural theory · body · mind · Herzog & de Meuron

“The architectonic is, as the name says, a projection, an intellectual thought-projection from body to body.” [11, p. 182] This statement was made by Jacques Herzog and Pierre de Meuron in 1990, at a moment when these architects were at the beginning of their international career. They state that architecture is embodied mind; however, the text does not reveal a number of details. Does this body to body connection mean the relationship between the architect and the building, or that between the building and the human being who encounters it? Does the architect project his/her own perceptions via architecture? Does he/she intend to express something about the world, about men, about history? Or is it all about generating sensations and emotions? The use of the word *body* already assumes the materiality of the participants of this process – that they have a form, extension, material, that they have a sensuous reality – and the practice of Herzog & de Meuron has always been celebrated for its creative, even seductive materiality. The aim of this article is to survey their architecture over the last twenty years and to discover the parallel changes in buildings and writings, and, as a result, to answer these questions, that is to interpret the body-mind relationship in their architecture.

### Body

The connection between the human body and architectural form has a long history in the theory and practice of architecture, but when the problem of the body again came to the fore about twenty years ago, it appeared in a wider and different context than previously. In classical architecture, the human body served as a figural or proportional model in the way it was projected onto the plan, façade or details of the building: architectural order of columns with different proportions representing different characters, human figures literally applied as columns, the body in the façade or in the layout of a church, faces projected onto a cornice profile etc. Theorists explained the break with this anthropomorphic analogy for proportional and figurative authority either with the doctrine of New Objectivity or with the

<sup>1</sup> For the first approach see [25, p.375], for the second see [20, p. 63].

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influence of industrialization<sup>1</sup>, or both, as Anthony Vidler did. Beside the technological dependence of architecture, Vidler stated that “the rise of a modernist sensibility dedicated more to the rational sheltering of the body than to its mathematical inscription or pictorial emulation.” [29, p. 69] While the humanist ideal of anthropocentrism seemed to return in the postmodern restoration of the body, the short period during which classical architectural elements and metaphors were used could not hide the fact that the wholeness expressed in the classical body-to-building relationship was already impossible to bring back with any authenticity.

By the end of the 1980s, a poststructuralist interpretation of the body emerged which rejected anthropocentrism. In opposition to the ideal of man creating order in the world by projecting his bodily image onto the building, the direction of the projection was converted from interiority to exteriority. This exteriority was determined by the external world of institutions and conventions – a concept inspired by Foucault’s notion of exteriority, and by Jacques Lacan’s “mirror stage” idea, both of which were very popular at that time. The result was a distorted, dismembered body expressed in the form of a building. “It is the explosion, the fragmented unconscious where the ‘architectural body’ does not reflect the body of the subject as it did in the Renaissance, but instead reflects the perception of the fragmented body as the built text, a set of fragments of languages and texts, the city. The body cannot be reconstructed; the subject architect/man does not recognize itself in architecture as an entity in front of the mirror. The system has been broken; architecture cannot be recognized again as a whole.” [2, p. 551] The bodily analogy represented by the post-humanist view – buildings which form the distorted whole, bodies cut into pieces or fragments – can be interpreted, as the loss of meaning, hope and a future. But also as Anthony Vidler interpreted it, as the architectural criticism of the world of the uncanny, anxiety and shivering<sup>2</sup>. However the idea that the fragmented body and paranoid space should represent a broken whole, that the dismembered world should be embodied in an architecture of dismemberment, could not survive for long.

### Phenomenology

In parallel with the postmodern attempt to revive classical anthropomorphism, a new approach came to the fore in architecture, the paradigm of phenomenology, which also touched on the problem of the body. However, the phenomenological proposal has nothing to do with the formal representation of the human body as the shape projected onto the building. Instead the emphasis is put on the human being who experiences the build-

ing as a body through their own bodily perception. “The nature of the human body and its relation to architecture and the rest of reality, changes into one of embodiment. This is inevitable because the reality of the world is not structured around identifiable independent entities such as isolated human bodies or isolated architectural elements and their corresponding meanings. Rather, it is structured through degrees of embodiment, which represent a continuum of mediation between the human and divine, terrestrial and celestial, sensible and intelligible levels of reality.” – Dalibor Vesely reinterprets the whole classical tradition of corporeality from the point of view of phenomenological understanding [28, p. 32]. Other authors following the phenomenological line concentrate more on contemporary architecture facing the challenge of theatricality. The reign of vision and the flatness of images are both in contrast with the concept of multi-sensorial perception and the bodily character of a building, with its three dimensions and materiality. In contrast to the excess of spectacle, the phenomenological perception of architecture involves all the sensory organs: eyes, nose, ears, tongue, skin, and (as Juhani Pallasmaa includes) even bones and muscles. The activation of all the senses already presumes the materiality of the building, which is expressed in several other ways too. The construction of the building – or tectonics, which includes man as the creator – and the building’s close relationship to its location are the two crucial aspects of the phenomenological approach. Although considering tectonic performance to be only one among several other sources of architectural perception, Juhani Pallasmaa remarks that “the authenticity of architectural experience is founded on the tectonic language of building and the comprehensibility of the act of construction to the senses.” [22, p. 60]

However, architecture’s engagement with the earth is more than its construction, which resists gravity. Architecture is connected to its physical location, and to the environment that surrounds it, more than any other kind of art. David Leatherbarrow describes this nature of architecture as the “topography paradigm”. This means that a building has to work with ambient conditions, such as gravity, wind, sunlight and weather, but also has to work against them. This resistance, the play of forces and counterforces which are present at the site of the building are inscribed in its body. “The force-counterforce relationship results in alterations to the building’s physical body that demonstrates its ability to respond to ambient conditions. Stains on the buildings are evidence of its capacity for resistance. Cracks in the wall indicate limited success on this front.” [18, p. 58] Stains, cracks and the many other signs of a building’s performance will occur only with time, and as such may recall historical memories. Karsten Harries, another representative of the phenomenological approach, warns that to experience architecture requires the participation of the subject, who has to realize that a kind of former meaning can never be totally excluded from the perception. “What puts us in touch with

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<sup>2</sup> In his book [29], Vidler analyses several buildings and projects from the 1980s, admitting that disturbing, anxious forms and spaces are the result not only of formal architectural experiences, but of a conscious representation of a paranoid world.

this transcendence of the visible and sensible is first of all the body, where it is important to keep in mind that the embodied self is also an active, caring and desiring self. What such a self experiences, is an always already meaningful configuration of things to be desired or avoided.” [10, p. 93] The idea, that we approach architecture with every part of our body – that is, not only intellectually but with the body *and* the mind – may over-emphasize the importance of sensual experience, but the architectural aim is always more than just enhancing and enriching physical experience. The intertwining of sensual and intelligible, the synthesis of the material and spatial imagination should add something to what was already present – a well-known demand for ranking a building as architecture. “Yet it is our contention that architecture must be understood as the paradigmatic cultural product of *representation* after the demise of Renaissance illusionism. It is the fragmentary artefact par excellence that may allow us to identify our opaque nature under a linguistic ‘house of being’, while embracing use-values in our secular society. Architecture is the technological artefact that may reveal the horizon of beings that we recognize (in our wholeness), while we acknowledge that this horizon is never fully present.” [23, p. 391] Alberto Pérez-Gómez’s words express a kind of weak optimism that architects can recover a perceptual faith that affirms a capacity to perceive qualitative difference. “*Perceptual faith* alone allows for the discovery of exceptional coincidences we call order, discoveries through the making of effective connections that then may be shared with the Other.” [23, p. 393]

### The swiss connection

When the attention of the international community turned toward Swiss architecture in the middle of the nineties, the bureau of Herzog & de Meuron was already widely known. Their fame – and quickly emerging international success – surely helped to acknowledge Swiss architecture as a brand, while their emergence from the Swiss context gave them a strong background that also served as a reference point for their evaluation. The studio was appreciated as a true agent of Swiss architecture, characterized by refined details, the sensitive use of materials, and simple, geometric forms. They were enlisted into the Swiss minimalist movement, but from the beginning, they were regarded as dissenters because of their affinity to artistic expression. Presentations of Swiss architecture could not leave them out, or at least could not leave them out without some mention, but the authors had already created a new category for themselves. “Herzog & de Meuron are the leaders in the trend of expressionist materialization that is virtually baroque.” – Christoph Allenspach stated and added that this approach, which was being followed by others in the country, might put this architecture outside the peculiarities of Swiss architecture as defined by its dry minimalism [3]. Steven Spier’s and Martin Tschanz’s book on contemporary Swiss architecture already does not in-

clude their works, but at the same time Spier devotes three long paragraphs to their appreciation, including them in the story of Swiss architecture [26]. Herzog & de Meuron had really moved out of the Swiss scene and put themselves on an international level, but they did not deny their Swiss roots, or the impact of the ETH Zurich, Aldo Rossi’s courses, the cultural background of Basel and the effect of Joseph Beuys, nor phenomenology – at least in their early manifestoes and interviews. In the light of this, it is plausible to take the emergence of Herzog & de Meuron from Swiss architecture as a starting point. In what follows, their buildings are analysed from a number of different angles: the tectonic solution, the relation to location, the form, the relationship between interior and exterior, the materials, and the details. By now their works have become so numerous, that it makes it impossible to include many of them. As a consequence, this survey concentrates on selected works that represent the main tendencies and examines them with respect to the architects’ intentions and interpretations.

### Perception

The architectural office Herzog & de Meuron was founded in 1978, but the architects realized their emblematic works only a decade later. The Stone House in Tavole (1982-1988), the house for an art collector in Therwil (1985-1986), the Ricola Storage Building in Laufen (1986-1987), or the Goetz Collection Gallery in Munich (1989-1992), just to mention a few projects from the first decade, have several common features. They have a simple geometric, abstract shape; they are built from well-known building materials but with spare detailing, while their outer appearance seems to be more impressive than the interior.

The Stone House, above all, has a clearly expressed relationship with its environment: the house stands on a former stone terrace, the stone layers of the façade recall the retaining walls of the olive groves, and the natural stone came from a building in the neighbourhood. The rectangular construction of the house is made visible in the facades and emphasized in the empty concrete skeleton extending outside the house. The strict structural grid, which is used in plan and elevation and the compact mass of the building, at first glance recalls the ideal of tectonic design. However the massive outside impression of the Stone House is misleading; the dry masonry work is not a supporting wall, but the infill of the concrete structure. Even the rules of the framework are broken: the concrete columns are recessed at the corners, where the load-bearing function should be the most stressed. It seems that the roof construction has no thickness; it is only a thin slab that appears above the windows. However the obvious discrepancy between the apparent massive materiality, the exposed construction of the building and the real solutions, which acted more like a wrapping than a tectonic body, was celebrated by some reviewers. Kurt W. Foster appreciated the Stone House as a conceptual expression of construction,

[6, p. 48] while David Leatherbarrow interpreted it as a successful expression of ambiguity inherent in materials. “On each elevation a concrete frame subdivides, but does not contain, stacked limestone. I say the frame does not contain the stone, because at the corners the concrete columns have been recessed. Because of the apparent instability of this mode of construction, the building cannot be traditional, despite its use of local materials. Rather than structural, the stone is superficial. Yet as a cladding material, stone also acts as the building’s environmental barrier.” [18, p. 108] Natural stone is applied in an unusual way but it still acts as a barrier, and as a traditional building material refers to the environment, time and materiality in general.

The Goetz Collection Gallery in Munich also has a simple, abstract shape, it looks like a box (Fig. 1). It is situated on the outskirts of the town, in the front garden of a house from the 1960s, so that it can be used both as a public as well as a private gallery. The environment is defined by the surrounding small green area with birch trees and conifers. Due to building regulations, the building was lowered and a timber construction erected on the reinforced concrete base and on two tubes at ground level. There is no formal play on the façade; it is divided into three layers of glass-plywood-glass, while the grid of the cladding elements is apparently shown. The dominating materials applied on the façade are birch plywood and matt glass, completed with unfinished aluminium, all of which are well-known in architectural practice. Although the building can be interpreted as a closed volume or as “a wooden box that, resting on two trowels, has come to rest in the garden”, [8, p. 94] it gives rather a strange, a-tectonic impression. The body of the gallery sits on the matt glass strip and looks as if it is floating above the ground, the solid plywood cladding resting as it does on the immaterial glass. The roof construction is hidden from the outside, and on the top of the upper window strip appears only as a thin solid belt, so that the building appears to vanish into the Bavarian fog.

These buildings have a simple shape, apply traditional building materials, suggest constructional strength and more or less refer to the neighbourhood, but they do not have a real tectonic body. Their architectural power is based on perception, in accordance with the architects’ intention. “Architecture is perception; architecture is research without the demand for progress.” – Jacques Herzog expressed in 1988 [12, p. 207]. This standpoint accepts the importance of tradition but also reinterprets it. The source of architectural perception can be anything that has already been there, analogies, images, impressions, feelings, and sensuous memories. The architect observes and perceives the surrounding world, and then – transforming what he sees with his imagination – embodies it in architecture. But the intention is not personal; it is to reveal something common to all, to be even critical, as Jacques Herzog says about his architectural ideal: “Architecture whose limits I try to extend; architecture which I use as a thinking model for a critical perception of our whole culture.” [12, p. 210]



Fig. 1. Goetz Collection Gallery, Munich 1989-1992

### Venustas

Some significant projects from the second investigated period – the Ricola Storage Building in Mulhouse (1992-1993), the Central Signal Box in Basel (1994-1999), the Technical School Library in Eberswalde (1994-1999) or the Laban Dance Centre in London (1997-2002) – show a change in Herzog & de Meuron’s architectural effects and intentions. The emphasis moved from the architects’ silent perception to their active reaction to the surrounding world, resulting in buildings with enhanced sensual experiences.

The Central Signal Box, fifth in a row of such, differs from its predecessors in mass (Fig. 2). The clear geometric body of the former buildings is distorted: the trapezoid ground plan transforms into a square from bottom to the top. The resulting geometric shape is barely definable; it needs movement, walking around the building to perceive and to understand its form. The Signal Box appears as a simple box, it is more an object than a building. The impression is also strengthened by the special cladding: the narrow copper strips cover the whole façade like a bandage. In the daylight the Signal Box seems to be a solid mass, but in the dark, the light filters through the twisted strips, and makes it clear that the metal is only a cladding on the concrete construction, and does not even follow its shape. The separation of the constructional and the outer shape pushes the interpretation of the cladding towards that of being a wrapping, and gives a mysterious appearance to the whole building. The sensual impression is based on material and formal experiences, while the applied material, copper, is still well-known in building practice – only the way it is used and manipulated is unusual.

At first glance, the schema of the Laban Dance Centre is similar to that of the Signal Box; the body of the building is separated from the cladding, which acts like a flimsy dress (Fig. 3). The mass is rather simple, the walls are vertical, but the ground plan is already a distorted rectangle. There are no right angles at the four corners, and the front and the rear facades are curvilinear. The embracing gesture of the building connects it to the

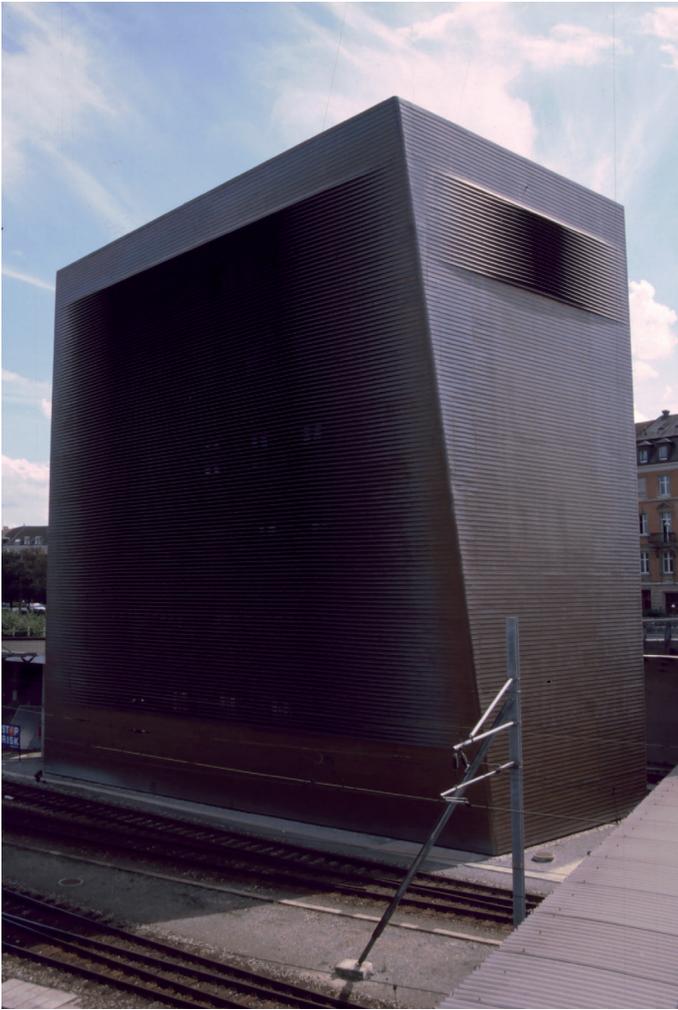


Fig. 2. Central Signal Box, Basel 1994-1999



Fig. 3. Laban Dance Centre, London 1997-2002

front garden, which is also involved in the play of inside-outside; the situation and the image invites the visitor to enter the building. The whole object is wrapped in modestly coloured polycarbonate tubes. Although some window-like, transparently glazed elements also appear on the façade, they do not break the unity of the cladding. There is no accord between what happens on the surface and behind, the cladding material

neither hides nor reveals the body. The surface interpenetrates space, but the shape of the building is still intelligible, even if the contours are dissolving. The intertwining spaces, transparencies and translucencies are also present in the interior, which is brightly coloured and appealing.

The shape of the Central Signal Box and the Laban Dance Centre are close to pure geometric forms, but they are in a way distorted, while some other examples keep to the strict cubic shape. However, in these cases the facades lose their impression as a barrier, they do not express the load-bearing or tectonic function. It may seem that the weakening of tectonic expression parallels growing immateriality, but it is just the opposite – materials and their manipulation have become more and more important for Herzog & de Meuron. Jeffrey Kipnis referred to their architecture as “the cunning of cosmetics”, but at the same time he acknowledged that in their essence their buildings still belong to the canon of the architectonic [15]. From the interview which Jacques Herzog gave to Jeffrey Kipnis in the same issue of *El Croquis*, it seems that Kipnis’s conclusion is not quite in tune with the architect’s intention, who stated that “the strength of our buildings is the immediate, visceral impact they have on a visitor. For us, it is all that is important in architecture.” [14, p. 9] Jacques Herzog also expressed his position in a paper delivered in 1996. “It is not the fact of stable materiality but the immaterial, spiritual quality that is communicated to our senses through the material solidification. ... We submit to *venustas*, not *firmitas*; it is beauty that enchants us, that makes us curious about life and ourselves, that shakes up and inspires us.” [13, p. 223] However, their announced separation from *firmitas* – that is, from the immanent constructional force of architecture – did not estrange them from the phenomenological approach of the world. As is revealed in the rest of the paper, they intend to leave behind tradition and turn toward a more active way of perception. “We are free and rely only upon ourselves. We can accept this challenge and design the images that approach us in an increasingly fast and strong way into new, symbolic architectural spaces.” [13, p. 224]

The bodily impulses that architects encounter no longer arrive from the past, from history; they come from the present and as a result of a conscious search. Even if Herzog & de Meuron made a big step toward spectacle, their impressive manipulation of materials still had enough strength to reveal some deeper content. Among the many theorists appreciating their architecture – while not everybody was so enthusiastic [7] – David Leatherbarrow and Mohsen Mostafavi, for example, interpreted their architecture as nonrepresentational, but still mimetic. They refer to the production process represented in the materials which anchors us to our existence [17]. Juhani Pallasmaa reveals the same, but in their use of contemporary glass structures: “a sense of matter and craft, and the touch of the human hand.” [21, p. 208]

## Intensity

Herzog & de Meuron won the Pritzker Architecture Prize in 2001, a plausible subsequent turning point in their career. Due to an increasing number of commissions, the firm set up offices all over the world, with many associates and employees. But the most important change was that the buildings designed became larger in scale. Typical projects from the last decade – Forum 2004 in Barcelona (2000-2004), the Caixa-Forum in Madrid (2001-2008), the Allianz Arena in Munich (2001-2005) and the National Stadium Beijing (2002-2008), just to mention a few – are different in their urban contexts, but similar in that the architects had to cope with the challenge of scale: how to make these huge masses attractive.

The site of the Barcelona Forum was a vague terrain, an abandoned industrial zone, bordered by the Mediterranean Coast and two main streets, which defined its triangular shape (Fig. 4). The main body of the Forum is also a triangle, but it is too large to be perceived as such by passers-by, the form is recognizable only from the air or from the upper floors of the neighbouring high-rise buildings. The visitor's first impression of the building is its striking blue colour, and the rough surface of the cladding, partially broken by sheets of mirrors or windows. The flat triangular mass is elevated from ground level, with the intention of opening up the space towards the coast and creating a meeting point, with restaurants, cafeterias and entrances to the public functions on the upper level. The floor of the covered area is undulating, which results in different heights within the space, receiving light through perforations in the building mass that is reflected by the metal sheets of the ceiling. The Caixa-Forum in Madrid is in many respects similar to that of the Barcelona building, although it seems to be somewhat cosier (Fig. 5). The building was created on the site of an old power station, with the removal of its base and roof, keeping only the brick shell between the two layers. The open but sheltered ground level connects the building with the square in front of it, enlarging its entrance space, while the former roof is changed into a much larger mass, containing offices and restaurants. It is the complex shape of this huge rusty cap on the top of the building, which most attracts us when we encounter the building.

What is common to both these examples is that the shape of the building is too extreme and shocking for us to be able to concentrate on the material details and joints. Mainly (but not solely) because of the elevated mass, they do not aspire to tectonic relevance, but to material and spatial intensity. These objects do not deny having a body, but they invite the visitor to go inside and to enjoy the different effects: colours, lights, reflections, transparencies and translucencies, and yes, also the hapticity of materials. Architecture is intensity, as Jacques Herzog stated in 2006: "It is the experience of a place where you can find renewed energy by reaching deeply into yourself. It is the same experience as standing in front of a painting, when



Fig. 4. Forum 2004, Barcelona 2000-2004



Fig. 5. Goetz Caixa Forum, Madrid 2001-2008

suddenly you see it as it truly is. It is not religiosity but that kind of intensity that can be achieved in architecture and it is our greatest challenge." [4, p. 36] However in the same interview he discovered some other aspects of their architectural intentions, not in general, but connected to certain projects. "The Beijing Stadium is a monument in an almost classical sense of the word. The Barcelona Forum was designed as a monumental element to establish contact between the city, the Avenida Diagonal and the sea. In both cases, we needed to create landmarks." [4, p. 37] The intensity of a landmark building may originate in its scale, in breathtaking structural or technical solutions or in its strange, shocking shape. The blue triangle of the Barcelona Forum belongs to the third kind, but the architects wanted to underpin it with a direct formal analogy. "To us the scholar's rocks are a conceptual model for some of our current architectural projects, like the Forum Building in Barcelona, the harbour in Tenerife, or Prada Tokyo. In these projects, a blend of natural and artificial elements results in configurations that clearly resemble certain natural forms and therefore often radiate great sensuality, while still eluding a fixed interpretation." [27, p. 84] It really needs some imagination to perceive the Barcelona Forum as a piece of blue mineral thrown up onto the beach, but in some other recent



Fig. 6. Allianz Arena, Munich 2001-2005

projects the references are clearer and they are explored by the architects themselves. For example, in the magazine *El Croquis*, the Allianz Arena project (Fig. 6) is illustrated by reference images such as a classical arena interior, a china pot, and a ball of string [1, p. 276]. In the same issue the images of the Beijing Stadium are paired with an ancient pot and with an archive photograph of the Eiffel tower, while the text tells us that: “The structural elements mutually support each other and converge into a grid-like formation – almost like a bird’s nest with its interwoven twigs.” [19, p. 350] The analogy was successful; the image of the bird’s nest became a recurring metaphor used in commentaries during the Olympic Games in 2008.

In the last decade, the intensified materiality and the redundancy of sensual effects in the works of Herzog & de Meuron were reinforced with some direct references: a wide range of possibilities, from the tiniest elements of pixels or tags to representational analogies or added explanations. The body is still in the centre of their architecture, but the emphasis is transferred from the architect’s perceptions to those of the recipient, who is hungry for sensual experiences, but even more thankful if they receive some intellectual instructions as well. Simple references or analogies can be very seductive [5, p. 47].

### Totality of senses

At the beginning of our survey, we took a Herzog & de Meuron citation from 1990 as a starting point – “The architectonic is, as the name says, a projection, an intellectual thought-projection from body to body” – and tried to interpret it in their works and writings over the course of time. We found that although Herzog & de Meuron emphasized perception, bodily sensation and even the concept of the building as a body in their architecture, during the last twenty years, a clear shift in their approach has been manifest. In the first phase, the immediate surroundings, memories of the past, and the personal impressions of the architects were transferred to the building, which had a well-defined body. The architects’ bodily and intellectual sensations were mediated through the building, whose subtle

deviations from architectonic rules were perceivable more to the senses than to the mind. In the second period the source of the architects’ impressions changed, they left behind history and the past, and instead they turned their interest towards new material effects coming from new uses and new modes of production, and towards new spatial effects. The sensuality of buildings increased, while intellectually they referred to the present, communicating a kind of mystery to visitors that was enchanting for the laymen and revealable for professionals. The buildings still had their integral body, but they had lost a clear contour. The last decade has presented another shift in projects, as the body of the visitor is put centre stage. The buildings operate with an arsenal of material and sensuous effects; the aim is intensity, which is frequently reinforced with direct formal analogies. Ornament, structure and space interpenetrate each other in buildings, which have a characteristic shape, but which act as appealing objects rather than bodies, they serve as a medium for transferring material and spatial effects, as well as definite or hidden messages.

At the dawn of the digital age, many theorists warned that in the new space of communication, the expressive body may be left out, with information technologies potentially leading to immateriality and impersonality. By now it has become clear that instead of immateriality, architecture has moved towards a kind of intensive materiality, a redundancy of sensuous effects. The architectural value of buildings based on this approach depends on the expectations of the critic, or to be more precise, on their relation to phenomenology. Jeffrey Kipnis denies both the phenomenological and critical effects of materials. He suggests concentrating instead on their mood-changing effects, where “the whole process of different forms of expertise coming together to produce material effects that produce meaning at the level of affect over and above signification.” [16, p. 99] Anthony Vidler on the contrary has doubts about the “apparent reduction of architectural experience from tectonic *effect* to surface *affect*” and diagnoses that the body dissolves into series of sensations [30, p. 229].

Herzog & de Meuron’s architectural practice is based on experiments involving new materials and effects, or, as some would say, on a kind of alchemy. On the basis of ongoing research and new technology they create surfaces and spaces which present unexpected effects, enchanting environments, and generate new feelings. Antoine Picon states that our material perception is always cultural to a certain extent. As a consequence, the new technology produces new material experiences, which may feel unusual, sometimes disturbing, and sometimes enchanting. “Our relation to tangible reality is indeed evolving rapidly. For instance, we tend to live in a world in which the abstract and the very concrete constantly meet. In this world, properties like the capacity to zoom in and out define a new relation to forms and patterns. Forms are no longer stable but always on the verge of dissolving into patterns.” [24, p. 79]

Technological advance can be breathtaking, shocking and inspiring for architects. It was back in 1928 that Sigfried Giedion praised new building materials - iron and ferroconcrete - which opened up a new aesthetic experience for architects: transparency, movement, change, that is an expression of modernity, the *Zeitgeist* [9]. He revealed the aesthetic potential inherent in these materials: a break with the heaviness and monumentality

of stone, the avant-garde experience of time, flow and immateriality. Giedion celebrated new materials and their immateriality as a symbol of progress. Now we appreciate intensive materiality, which sometimes seems like immateriality. We live in this enchanted world, but it still depends on the object-body whether – after the appeal of novelty has worn off – an intellectual thought-projection from body to body is revealed or not.

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