

Architecture in the era of environments

Benefitting from an unprecedented technical maturity, the urban infrastructure of the Earth's crust represents the "apparatus" of a civilization which, thanks to its building imagination and technical genius, is dedicated to deeply reconfiguring our living conditions. A global ecological, financial, social and cultural crisis is running parallel to this powerful remodeling and forcing us to redefine this new era with profound acuity. The climate disturbance brings out the interaction between the whole and the part: the collapsing of biodiversity brings us to consider the continuous feedback between what contains and what is contained. We are entering a new era that we will call the era of environments, which requires us to discover and take into account the interdependence between the encompassing and the encompassed.

Western modernity was built on the basis of unlimited development, assuming that space itself could be infinitely extended. This worldview of modernity largely contributed to initiating a conquering outward development to find the material, energetic and human resources for its deployment. The 20th century ended with the disappearing of this externality. While we inherited a modernity based on expansion, our world appears to be quantitatively limited. This issue brings us to consider other modes of development, to imagine an "intensive expansion," contrasting with the extensive expansion of Modern Times.

We therefore have to deal with what the 20th century has bequeathed to us, which is a profound and unprecedented transformation of our relationship with environment.

What, then, is the place of architecture in such a context?

New architectural experiences

It is at the heart of these questions and reveals a huge variety of achievements.

Some architectural works emphasize the operative virtuosity of our times. They present us with an unprecedented potential; taking advantage of both formidable technical inventiveness and global consumerism to propose an efficient and enjoyable design. However, other less numerous accomplishments focus on more timeless values like materials, light, body, community, context, etc.

Still fewer attempt to redefine the contours of the architectural act: they seek to implement a constructive ethic by using more local resources, by valuing vernacular expertise, but more particularly by weaving new contacts with nature and its elements.

Although dominated by standards in line with the neoliberal hegemony that is currently fashionable, global architectural production contains many nuggets that are open and inventive.

To present our assumptions on the potential role of architecture in this era of environments, we will start by showing a thematic approach of a few architectural works from around the world. They each give us access to an iconic architectural experience. We chose them because they seem to give our body the sensitivity of seismographs, to give us access to the qualities of reality which we would probably not feel otherwise but which foreshadow changes in our relation with the world, which we will discuss today.

A sense of “concretism”

Some contemporary architectural works offer unparalleled experience of the concrete aspect of the world. By the presence of substances which constitute them, by their "physicality," they show a sense of concretism¹. Swiss architecture for example frequently emphasizes this sensitivity: Peter Zumthor shows stunning instances of it in many projects. Through the texture and dryness of the wood, the grain and the

hollow density of concrete, the qualities of transparency of the glass but also their intrinsic physical reality, through the relation between sites and materials, he awakens the earthly aspect of stone, wood, concrete, iron or glass whose presence emerges as strange and intensely close.

His buildings express a particular vibration, an atmosphere whose conditions of production and reception are detailed in two of his books².

A sense of lightness

Another remarkable architectural experience emerges from the buildings created by the Japanese agency SANAA. They offer a white, desaturated and ethereal atmosphere. They reject the defining of strict architectural interiority, and blur the material marking of boundaries in a diffuse opalescence. They hence demonstrate situations of total fluidity and give the visitor a sense of atmospheric empathy. The thin and erased structure, combined with a fluid harmony in the arrangement and distribution of spaces removes the weight of the building to sketch a territory that does not seem to be victim of gravity. At the Learning Center of the federal polytechnic school of Lausanne (EPFL), Switzerland, one wanders between molded floors and undulating vaults, discovering a spatial continuum in which the incredible fluidity of spaces and paths offers an intense, strange and highly physical feeling of relief.

These places wonderfully echo the ideal of lightness that goes through our societies, the desire for a discreet and friendly connectivity, like an ideal flow of space that would be freed from the cumbersome nature of its infrastructure.

A more consistent and porous spatiality: from space to environment

Many thought-inducing experiments are proposed by types of architecture that extend the spatial work of modern adventure. Going beyond a rigid form, they are freed from the minimal geometry that used to accompany a strict subject-object relation, to deploy porous systems that greatly interrogate our opportunities of opening to the surrounding space.

Japanese architect Toyo Ito works towards this goal. Thanks to his genius conception of the Sendai Mediatheque, whose structure refers to floating sea weeds, he defines buildings that convey the consistency of real environments. His project for the Taichung Metropolitan Opera House in Taiwan proposes a "spongy" structure that invades all the directions of space, apparently drawing new resources from the laws of statics.

This continuity of matter, among floors, walls, vaults and ceilings, opens up new horizons in our ability to track and appreciate the notion of built space. It goes beyond usual geometry and uses almost synaptic methods of connection which feel surprisingly familiar to us.

A sense of scale, measure, and proportion

Architecture since its origin plays with scales and proportions, to provide dimensional familiarity between bodies and places as much as to impose itself through monumentality. This dimensional matter is used today with all the power and technical skill of our time. Excessive architectural works appear everywhere as a proof of success, or in emerging countries as the emblem of integration to Western development. This dimensional material is masterfully distilled by Rem Koolhaas in a poetic and theoretical way; in all his projects, as well as in his article *Bigness*³.

This question of the measure of things (or lack thereof) is fundamentally physical. It connects us with the underlying structural constraints of three-dimensional space that apply to all objects and living organisms⁴. But architectural know-how and technical engineering can both stretch and conserve this relationship of common conformation to the structural dictates of three-dimensional space⁵. Because of the fixed size and proportions of our bulk, feelings of familiarity, strangeness, appropriation or repulsion can appear depending on the use that is made of these dimension gradients.

In his urban works as much as in the defining of his buildings, French architect Christian de Portzamparc seeks a "quality of measure."⁶ He

aims for an appropriate spacing between things to allow a civility of uses as much as a sensuality of experiences.

Other creators, like young Japanese architect Sou Fujimoto, work on the founding parameters of architectural creation in a will of dimensional appropriation of places. His buildings propose very rich perceptive experiments around the notions of stability/instability, including/interlocking, protecting/opening.

Lacking too rigid conceptualizations, mostly connecting with the world in a festive way, his creations link us up with the archetypes that structure our primary interactions with space.

Immersing in a living environment

While in developed countries the urbanization rate is now 75%, our daily life takes place in the increasingly artificial context of megacities. Having the opportunity to connect with nature in a significant way is a vital issue for increasingly numerous city dwellers. The importance of this question is actually emphasized by recent works of ecopsychology⁷. The work of Finn architect Alvar Aalto has been essential for modern architecture in its paying attention to the living dimension of environments. Today, many works of architecture around the world share such sensitivity, and participate in the building of the particularly interesting entangling of human constructions and nature. Numerous constructions are in search of a symbiotic relationship between the cycles of nature and the functioning of human installations that wish to limit their ecological footprint.

Beyond an overly technicist model, many exemplary accomplishments claim a constructive form of frugality, an ecocentric attitude that echoes the work of Edward O Wilson on the concept of Biophilia⁸.

A capacity of symbolization

One of the most interesting aspects of architectural creation lies in the activity of symbolization that it allows. The history of world architecture is also rich with this symbolic appreciation of places, which post-modern architecture aimed to revitalize using often childish tricks and inefficient metaphors. Today functionalism, pushed to its climax,

and dematerialization may actually devitalize this symbolic appropriation of our living environment. In other words, it seems important that our real environment still exist as symbolic matter⁹, but in a new way, probably less codified and less collective than it used to. It is therefore the role of each individual, while appreciating the types of architecture that take this dimension into account, to notice the positive symbols that will allow an opening to a universe and sensitivity that thought and logic cannot reach.

In his school project in Manosque, Southern France, French architect Rudy Ricciotti has created large covered playgrounds connecting classrooms, enclosing playgrounds and drawing the shades of Mediterranean light. These covered playgrounds are held by trunk-pillars, sometimes trees, or legs, or almost human figures, which make places vibrate with strong sensuality, or even eroticism.

Initially a basic element of architecture, the pillar represents a straightforward and powerful symbolic activity which goes beyond the intellectual language focused on the place.

Architecture and philosophy of territorial arrangement

The works of architecture that we discussed are extraordinary. We can appreciate them with an expert eye, from the elitist standpoint of the tiny world of architecture, but that is not our purpose.

This short overview is worthy of interest in that it connects us with the multitude of physical, sensory, tangible, emotional, and symbolic dimensions of architecture. Any architectural design shapes up its environment. Any type of architecture creates experimental environmental conditions whose qualities challenge the multiple dimensions of our relation to space.

The works that we presented all engage us in dynamic relations with our body. They play with the physiological richness of our sensory apparatus and stimulate our perceptive behavior. They reveal how architecture offers concrete opportunities to awaken our contact with space and to deepen and enrich our relation with the environment

Sensory foundations and emphatic relation with the environment

To describe the special bond that any architectural achievement creates between space and men, let us focus on the concept of environmental empathy. This term evokes the physical dimension of our sensory foundation, while echoing the multiple characters of architectural perception as well as the multidimensional qualities of our belonging to the terrestrial space. This notion leaves us with the indefinite aspect of each human situation and highlights the ability of human beings to change points of view concerning their strategies to comprehend the environment. Recent studies¹⁰ have shown that our brain is always juggling several points of views, going from an egocentric to an allocentric, or even geocentric, reference point; as the inner ear gathers

the sensory characteristics that allow the brain to build flexible and responsive strategies of perception.

Thus we are physiologically equipped to precisely identify our environment in many ways. Reminding ourselves of some of our recent architectural inquiries is enough to make us aware of the performance of this sensory and perceptive apparatus and to detect the non-circumscribed aspect of our relation to places. This field of research is endless as architecture helps us, by linking scientific knowledge and perceptive sensitivity, question the richness and porosity of our connection with the world.

Because we are highly influenced by our environment, through various sensations and percepts, rather than by strict conceptual constructions, we feel the scale and density of materials, we perceive the dynamics of plants, the living aspect of places. While this may seem incongruous, we are able, by changing points of view, to forget ourselves in order to feel the non-human presences and movements with whom we share our living environment. In the classification of perception theories, the psychophysical approach¹¹ acknowledges that the numerous changes of our external environment help us discover the internal organs of reception.

And indeed, when visiting architectural works like those we just discussed, we are invaded by the immediate impressions of dealing with "raw" materials, preceding any conceptual construction, reinforcing our feeling of immersion and our environmental acuteness.

But which parts of our body make us perceive these sensations? Which internal systems do they call on?

Do we feel the density of materials and the weight of their assembling from the hard substance of our organism, from our bones? Do we feel their mass from our own body weight?

Does the structure of a building resonate with the arrangement of our skeleton?

In what way do our muscles, experiencing proprioception, represent a precious help in our perceiving the forces involved in building (tension, compression, dilatation...)?

Do we connect with the thermal and atmospheric reality of buildings with our bronchial tubes?

Can our cardiovascular system be the basis from which we perceive the tiny pulse of a lively place?

Do we receive the substantial movement of our planet with our autonomic system? Do we feel the dynamics of the life of our biotope from the life of each cell of our body?

Such hypotheses, which may look like simple links, resonate with the depth of our being anchored in places. Obviously, the physiological aspect of these questions remains hypothetical. However, there are echoes of such perceptions in literature (romantic literature in particular)¹², architectural criticism, and in artists' testimonies.

Anthropologists have also addressed these questions, in the portraying of civilizations that are based on other frames of reference that develop other sensory abilities. Such issues are also discussed when referring to the description of sensory and perceptive disorders. Unfortunately, we notice that our body capacities are often neglected when it comes to our connection with the environment.

That is why we would rather refer to our relation with the environment as empathic more than aesthetic: because it is porous, open to all the elements composing our daily surroundings.

We are working towards the opening of research in this direction, so that the importance of our acute sensitivity to environments in these times of crises takes its place. It is necessary to better calibrate our development but also to unmask the latent nihilism of our building imagination to avoid the risks of tautological confinement linked to this strange desire (increased by an unbridled attraction for artificiality), and

to overcome the concrete resistance of our surroundings by claiming de facto a kind of environmental denial.

Along with brilliant --although too rare-- achievements, architecture may find a new place here. It opens a field of experimenting, enunciating, and prospective defining for these new relations with the environment, which we must emphasize in the beginning of the 21st century.

We believe that such research, along with deep philosophical thinking, may launch architecture towards a new epistemological dimension so that it can in its own way contribute to the finding of a philosophy of territorial development, and also, since it draws external contours, so that it can help define the qualities of an "environmental man."

We will discuss these subjects before concluding this reflection with architecture itself.

The defining of the qualities of an environmental man

Does the will to define a new and better type of human being bring up a risk of eugenics? The question must be asked but our purpose is not to answer it. We believe that the very essence of men lies in "the self-expansion of their cognitive and cultural abilities, in their evolving capacity to perceive and express an infinite content through infinite situations."¹³

We simply wish to emphasize certain human skills, neglected by the dominating materialist-technical model¹⁴.

Indeed, by its encompassing ability, architecture underlines the entangling of internal and external conditions. It allows the linking of the degradation of our terrestrial conditions with the risks of inner erosion. In other words, architecture works as a revealer of the bond

between the world and men, helping us realize that the destroying of primary forests may cause inner uprooting and psychic deforestation¹⁵.

In his book *The Transformation of Man*¹⁶, historian, journalist and philosopher Lewis Mumford addressed these issues: he connected human constructions, cities, and urban and social organizations, with the historic specificity of the inner construction of man.

Basing our reflection on his, let us define some of the qualities of the environmental man:

1-In an essay titled *The Eyes of the Skin: Architecture and the Senses*¹⁷, Finnish architect and teacher Juhani Pallasmaa analyzes the significant influence of the visual sense on Western culture. He explains to what extent vision infiltrated the habits of perception, thinking and action of Western civilization, forming little by little an "oculo-centered paradigm," meaning an interpretation of knowledge, truth and reality through the spectrum of vision. His book gives us a sense of the measure of this imprisonment and encourages us to consider other sensory horizons.

This broadening of our modes of perception is essential to any rebalancing of our relation with the world. It is founded on the acknowledgment and promotion of our embodied condition, because our flesh and bone structure is at the basis of any perception.

2- French philosopher Maurice Merleau-Ponty stunningly emphasized the role of sensitivity and body in human experience. "Through our body, nature continues through us," he liked to say. He used to work at an "ontological rehabilitating of the sensible" to be able to dialog with the so-called objectivity of science which does not seem to be able to build a sustainable future. Throughout his work, he led us to acknowledge how much what we live influences what we know and how much it is important to open up to "an experiencing of the world, a contact with the world that precedes any thought on the world."¹⁸ This phenomenological basis is essential. However, to be fully mature, it must get rid of two drifts in the relation that it helps us build with the world: infantilization (the world exists only around me) and

naturalization (there is no other level than the immediate physical encounter that I experience with the world) should be ignored. But phenomenology allows us to consider the whole meaning of a commitment embodied in the world, it allows us to fearlessly go through the obvious meeting of the matter of our body with the matter of the world, and to open ourselves to a tremendous awareness potentiality and research of our environmental and ecological reality.

3- Hence, the environmental man can build a relation with the world that would be less exclusively conceptual. Along with rational and logic intelligence exist sensory, perceptive, symbolic and emotional skills that seem absolutely necessary to rebalance the excesses of rationalizing thinking.

The phrase "I feel therefore I am"¹⁹ expresses in a rather strong way this desire for a more concrete coexistence with the world, provided that we can protect our intellectual vigilance from the media, screens and digital tools that significantly model our relationship to reality. We can see how the omnipresence of commercials, information, and political communication in our life interfere with our relation with reality. They represent an on-going background noise that overwhelms the public sphere and mental horizon of each one of us, while transforming our presence in the world.

Walter Benjamin, when discovering the 20th-century world, had felt precisely that this risk of "experience atrophy" develops with an intense strength today.

4-But the lucidity of Walter Benjamin does not prevent the environmental man from enjoying the tremendous adaptation to the planet represented by the slow evolution process that man accomplished. Over more than 120,000 generations, our phylogenesis has continuously improved our physiological, genetic, anatomical adequacy to the Earth's environment.

This slow evolution in contact with the environment makes us tremendously adapted, permanently interacting with our terrestrial geography. Over this long history²⁰, these 4 million years of successful

adaptation, each one of us benefits from an incredible deposit of environmental jubilation. People who opted for progress seem to be lacking this dimension, as they are permanently mobilized by their constant quest for some new "creative destruction", and the continual transformation of their presence in the world.

5- Hence, the environmental man is interested in refining his internal perception tools, to build a precise perceptive culture, multiple and demanding in front of contemporary manipulations and sirens of Anthropotechnics²¹. Once again, while architecture has been taught, practiced, theorized and criticized as a form of visual art since the 18th century, new teaching methods and research may emerge.

Draft of a philosophy of territorial development

In order for the awareness of contemporary disorders to be useful, and for our development practices to change, a philosophical inquiry on the concept of development (understood here as the way men settle on planet Earth) is necessary. Let us then present a first reflection in that direction.

If you listen to the most eminent experts, in our large cities the physical reality of our society no longer lives "within the walls of stone fortifications, in the political boundaries of states, but in the endless buzz of electromagnetic vibrations.²²" People, territories and techno-industrial objects seem to assemble as new hybrid habitats. But as we already mentioned, what should have appeared as a possibility of breaking free from material constraints produces a great deterioration of the Earth's ecosystem, even altering the evolution of human adventure. This simultaneity must very precisely question the energy, determination and skills involved in the physical remodeling of our ways of living. We are the actors and witnesses of a surge of constructive power which does not fit with the geosphere. The massive investment of our knowledge and energies in this "overbuilding" of the

world produces both a level of confinement reinforced by technocosm²³ and a distance from the real constraints of our planet. Despite the rhetoric promises of a reorientation of the current patterns of development, a major distortion remains between human settlements and the physical and environmental constraints of the organization of environments. The atmosphere, but also zoosphere, hydrosphere, biosphere, lithosphere, in short, all the dimensions of our planetary presence, are mobilized in this artificial project of technosphere. Thus, juggling with a building desire that seems like a sports competition (larger, brighter, faster, more expensive, bigger, etc.), the overall balance of our planetary system is abused.

We must therefore question the enthusiasm for transformation and its corollary: technical manipulation. Capable of all possible developments, it is not evaluated enough in terms of the consequences of its evolution as this race seems legitimate despite its risky aspect.

Reflecting on the construction of an ecological vision of the world, Edward Goldsmith opposed naturalistic and artificiality-oriented ethics, which were based, in his opinion, on various ways to legitimize what we should do depending on our notion of what "is" or what "is not"²⁴. For thousands of years, the worldview of the first vernacular societies was based on two fundamental principles. The first one argues that the living world or ecosphere contains infinity of benefits and richness that it will only distribute to us if we preserve its specific order. The second one states that the role of these societies is to maintain the order of the natural world or of outer space. These two principles are of course contradicted by artificiality-oriented moral. For the modern man, going from what "is" to what one "has to do" equals the construction of an Eden which should succeed the natural world. The new scalability of a world in permanent and accelerated transformation should be substituted from the four billion years of terrestrial evolution.

The radicalism of such artificiality-oriented ethics confirms and promotes the fact that we should live in a radically new environment,

our own, one that we ourselves created. It establishes a general admonition to adapt to this "better world" that science, technology and industry aspire to create for us, even if to that end we have to behave in a way that is contrary to what ancestral history and nature have left us. Legitimizing what "should be" from what "is not" rather than from what "is", builds imbalance in terms of technological tools. "Eco-centric" ethics²⁵, which favors the preservation of natural substrate as a helper to improving men, is then different from that utopian/creationist aspiration.

As architects and city planners, we are highly invited to determine and implement a new philosophy of development based on a different relation with nature, and to, in the words of French anthropologist Philippe Descola²⁶, "be part of an ecocentric ethic as a solid philosophical foundation for engaging in a less confrontational coexistence between humans and nonhumans, and attempting to halt the devastating effects of our carelessness and greed on a global environment for which we are primarily responsible, since our means of acting upon it can not be compared with those of other actors in the earth community".

Architecture back again

Let me conclude by going back to architecture and to its precious form of contribution in the time of crises that we are experiencing.

-In the most successful architectural achievements, the adequacy between today's needs and the persistent archaic aspect of modernity reaches perfection.

-Architecture finds its basis in our sensory and perceptive apparatus, allowing us to refine our sensitive awareness and perceptive culture.

- It gathers, orders and makes available some knowledge regarding locations, positions and statuses that opens, beyond strictly functional aspects, skills for taming and symbolically modifying places.

It offers sources of wonder and the enjoyment of pleasant moments on a human scale.

- It gives cultural consistency to our ways of being in relationship with places and questions our relationship with environment.

- To conclude, I would say that it gives us the notion of enhanced reality. The quest for enhanced reality (which superimposes the real with non-perceptible content that is not physically co-present) should not remain linked to new digital technologies. On an intensely physical basis, hosting and magnifying the practical dimension of our human condition, architecture offers again an enhanced reality. It offers a myriad of experiences, free of constraints, open to all, independent of languages and standards of living, which culturally and anthropologically challenge our relationship with elements, nature, the world, and with others.

Footnotes

1 This term of concretism (in French “concrétude”) appears in the excellent book “Espaces d’espaces” by French novelist Georges Perec

2 *Atmosphere*, Birkäuser, 2007 and *Penser l’architecture*, Birkäuser, 2008

3 *S M L XL*, Taschen, 1998

4 Xavier Bonnaud, “De la Nature physique de notre environnement et de quelques réflexions qui en émergent”, in *Philosophie de l’environnement et milieux urbains*, éditions La découverte, 2010

5 D’Arcy Thomson, *Forme et croissance*, Seuil, 1994 , and Peter S Stevens, *Les formes dans la nature*, Seuil, 1978

6 *Architecture, mesure du temps, mesure du monde*, Fayard, 2006

7 Works on Ecopsychology are essential for those who care about the impact of the environment on our psychic balance: see for example

8 Biophilia *The Human Bond With Other Species*, Harvard University Press, 1984

9 See the excellent pages that Rudolph Arnheim wrote in *The Dynamics of Architectural Form*, University of California Press, 1977

¹⁰ See the works of Alain Berthoz, holder of the chair of physiology of perception and action at the Collège de France and in particular : *Le sens du mouvement*, édition Odile Jacob, 1997 or *L’empathie*, édition Odile Jacob, 2004, in collaboration with Gérard Jorland,

¹¹ James J. Gibson, American psychologist. *The Senses Considered as Perceptual Systems*. Boston: Houghton Mifflin, 1966, and *The Ecological Approach to Visual Perception*. Boston, Houghton Mifflin, 1979

¹² in particular in the extraordinary story, *Lenz*, written by Karl Georg Büchner (1813 –1837), German dramatist and writer of prose

¹³ Axel Kahn, *L’homme, ce roseau pensant, essai sur les racines de la nature humaine*, Pocket, 2008

¹⁴ On this topic the work of the Belgian philosopher Gilbert Hottois is clarifying, especially on *Philosophies des sciences, philosophies des techniques*, Odile Jacob, 2004

¹⁵ Robert Harrisson, *Forêts, essai sur l'imaginaire occidental*, Flammarion, 1994

¹⁶ Lewis Mumford, *The transformation of man*, Peter Smith Publisher, 1978

¹⁷ Juhani Pallasmaa, *The Eyes of the skin, architecture and the senses*, John Wiley & sons Ltd, 2005

¹⁸ *Sens et non-sens*, Gallimard, 1996

¹⁹ *La saveur du monde : une anthropologie des sens*, David Le Breton, éditions Métailié, 2006

²⁰ *Hominescence*, Michel Serres, edition Le Pommier, 2001

²¹ *Naissance de l'anthropotechnie*, Jérôme Goffette, éditions philosophiques Vrin, 2006

²² William J. Mitchell, *ME ++, the Cyborg Self and the Networked City*, MIT press, 2003,

²³ Xavier Bonnaud, *De la ville au technocosme*, éditions de l'Atalante, Nantes 2006

²⁴ Edward Goldsmith, *The Way: an ecological world view*. University of Georgia Press, 1998

²⁵ J. Baird Callicott, *Ethique de la terre et Philosophie de l'écologie*, Wildproject Editions, 2010 and, *Earth's Insights: A Multicultural Survey of Ecological Ethics from the Mediterranean Basin to the Australian*, Outback University of California Press, 1997

²⁶ Philippe Descola, born in holds the chair of anthropology and nature at the Collège de France. He is the author of the book *Par delà nature et culture*, Gallimard, 2005

References of cited buildings

1- A sense of “concretism”

Peter Zumthor, *Chapell*, Saint-Nicolas de Flue, Wachendorf, Germany, 2009

Edouardo Souto de Moura, *House*, Mashosintos, Portugal, 2003

Martin Rauch, *House*, Schlins, Austria, 2008

Anna Heringer and Eike Roswag, *School*, Rudrapur, Bangladesh, 2005

Marcel Meili, *School for Wood Technicians*, Bienne, Switzerland, 2002

Sou Fujimoto, *House Made of Wood*, Kumamoto, Japan, 2008

2 - A sense of lightness

SANAA, *Civic Center*, Onishi, Japan, 2005

SANAA, *Learning Center of EPFL*, Lausanne, Switzerland, 2010

3 - A more consistent and porous spatiality: from space to environment

Toyo Ito, *Multimedia Library*, Sendai, 2002

Toyo Ito, *Metropolitan Opera House*, Taichung, Taiwan, Competition 2005

4 - A sense of scale, measure, and proportion

Sou Fujimoto, *House*, Oita, Japan, 2008

Christian de Portzamparc, *Apartment Building*, Paris, France, 1984, Almere, The Netherlands, 2005 and Montpellier, France, 2006

Christian de Portzamparc, *Grande-Duchesse Joséphine-Charlotte Concert Hall*, Luxembourg, 2005

Rem Koolhaas, *Concert Hall*, Porto, 2003, *Multimedia Library*, Seattle, 2005, *Television Company Building*, Beijing, 2008

6 - Immersing in a living environment

Geninasca and Delefortrie, *Footbridge on Areuse*, Boudry, Switzerland, 2002

Carl Viggo Holmebakk, *Observation platform*, Sohlbergplassen, Norway, 2007

Atelier 5, *Apartment Building*, Thalmatt, Bern, Switzerland, 1974

Toyo Ito, *Parc Grin Grin on Artificial Island*, Fukoaka, Japon, 2003

7 - A capacity of symbolization

Rudy Ricciotti, *Elementary, Primary and Secondary School*, Manosque, France, 2010