

INTERACTIVITY

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Abstract

Scope of this paper is to discuss the issue of Interactivity. The specific problems that I want to address are: firstly, "why" interactivity is one of the crucial frontiers for a architecture that is able to respond to the challenge of Information Society and secondly, "how".

Background

A few info before starting. My work in the last years in CAAD moved mainly in the field of publication. In the 1996 I planned a new book series. After a very stimulating ping-ponging with Bruno Zevi the name of the series became "La Rivoluzione Informatica". Its scope was reflecting on the effects the virtual dimension was having on architects and architecture in general. Each volume examines a single topic, highlighting the essential aspects and exploring their relevance for the architecture of today. The series, published by Testo&Immagine (Turin), was very successful in Italy and in 1999 it was acquired for English translation

by the publisher Birkhäuser (Basel, Berlin, Boston) and named "IT Revolution in Architecture".

It is the first book series world wide to address the issue of Information Technology in the field of architecture. Titles of the books published so far are: 1. *HyperArchitecture: Spaces in the Electronic Age*, 2. *Information Architecture: Basics of CAAD and its future*, 3. *Digital Eisenman: An Office of the Electronic Era*, 4. *Virtual Terragni: CAAD in Historical and critical research*, 5. *Digital Stories: The Poetics of Communication*, 6. *Natural Born CAADesigners: Young American Architects*.

(For all info, authors and summaries in English and German please refer to www.birkhauser.ch or www.amazon.co.uk)

Three books are in press (*New Flatness*, *New Wombs*, *Digital Design*) and 15 authors are under contract right now to produce six new books every year.

My work as a editor is very intense. I have to pick a theme that I consider relevant in today cultural debate, find the best possible author to develop it, help structuring the book and naturally revise the text and the images.

In some book, I write a Preface that is of course

“an appetiser” for the reader but also a way to orient and direct the effort of the whole series. I intend IT Revolution in Architecture not a sum of individual point of views but a more general collective enterprise toward the comprehension of the impact that Information society has for architecture.

Scope of this paper, which summarises and reorganises some of my Prefaces, is centred on the issue of Interactivity. We could go very deep on this word, but let’s stop for a moment in order to be clear. The specific problems that I want to address are: firstly, “why” interactivity is one of the crucial frontiers for an architecture that is able to respond to the challenge of Information Society and secondly “how” this can be achieved. The fact that this is paper is given in a University that keeps the name of “Bauhaus” has for me a great symbolic relevance.

Two concepts: modernity as answer to crisis, metaphorization

First concept to consider is that the rechanneling of ideas and researches from different disciplines towards a common direction is characteristic of each age of change. The fact that art, literature, architecture, design and philosophical, scientific and economic thought are today closer and more interconnected than they have been for decades may be another proof that we are living a moment of “Revolution”. IT Revolution, in particular, has an impact that is comparable only to “The Industrial Revolution”. Here comes the theme of Modernity. Modernity, from my point of view, (in Baudrillard and Zevi terms), is the striving toward the transformation of world crises into aesthetic and ethical values at a tempo that architecture could cultivate and manifest. The Industrial revolution was a “crisis” that lasted, for architecture, at least for 12 decades.

Industrial Revolution started at the beginning of XIX, but architecture was able to find a coherent answer to the new “industrial” world only around 1925: at the forefront, as everybody knows, it was Germany with its experiences from Werkbund to Bauhaus. Question in front of us is: how can architecture of today face a shift from an industrial to an information paradigm? The only thing that we know is that a ponderous and collective effort is necessary, and also, from my point of view, that “Interactivity” is one absolutely key ingredient for this transformation.

Second concept that I want to address is that of Metaphorization and therefore that of rhetorical figures of speech. Information society changed the way we communicate, and it also changed the inner values we deal with.

The messages of our electronic age are ever more metaphorical and ever less assertive. It is the enormous mass of information that imposes links, though freer, more open links. An example? Advertising in the industrial world used to be assertive. This soap washes whiter; these jeans are more resistant. We know that advertising today sends out messages that are all figurative, all metaphorical. It induces, substantially through the use of rhetorical figures of speech, an association between a series of elements and the product; frequently without even showing the product and often without even describing it. The narration is bought first, the living utopia that the product promises, then its form, and it is absolutely taken for granted that this works. The container wins completely over the content.

But this process of metaphorization, induced by a sense which goes beyond industrial mechanisms to open up a freer and more multi-directional sphere of messages, this process based on the dynamic interconnections of the metaphor, permeates everything in our era. It is sufficient to look at the design and the sphere of architecture, itself more resistant to change.

A building is no longer good only if it works, is solid, spatially rich, livable, etc., but also because it recalls something other than itself. Libeskind traces a dramatic “Z” to tell the drama of the Holocaust; Eisenman, a dance of tellurian plates in his church; Gehry, a lotus flower in his auditorium; Domenig cracks and fissures which collide with one another in his house. We know that the process of metaphorization permeates a large part of the architecture of today and that its fundamental field is a new interiorization of the landscape and the relationship between man and nature. This has been learnt, or almost. In order to go further into still tough terrain, we must go to electronics and especially its center: interconnections. My point, that it will become clear at the end, is that we have to work not only to a first level metaphorical architecture, which is already here, but also to a second level of metaphorization that is indeed interconnected, inherently dynamic in a word “interactive”.

Let's make a step back to make two forwards.

The New Transparency and some hint on the “hows”

In Paris Ecaade 1998 I gave a speech called “HyperArchitecture” which lent its title to the first book of the series. We must now reconsider this line of thought.

HyperArchitecture means conducting a search for an architecture characteristic of the Information Age. Information is the greatest commodity of this age. The vegetable we buy at the supermarket is 90% information (research, marketing, and distribution). The same, only more so, goes for appliances or automobiles. In addition, more and more people are producing goods that are “pure” information. In other words, information is the key to this age and electronics are its main tool. But the crucial aspect is not the bits of information them-

selves, their immense number and continuing mutability, as much as their capacity to interconnect and interrelate.

The world of Information Technology is, in fact, like a mobile web, in which the fundamental elements are the inter-connections among the atoms or bits of information. If this fluidity describes it, then it is the dynamic quality which characterises this world. We can regroup units, one with the other, put them into a hierarchy of innumerable relationships and create models. And, with the variations of an atom, verify change in the entire system or, changing the sense, the order or interfacing of the connections, forming different worlds. The structure of the Hypertext is the key. There, the bits of information are connected by channels through which we can freely search, freely find, freely construct our own story.

Now, the question is: can we work on an architecture which is not only metaphorical (i.e.: an architecture that makes static information its value), but also an architecture that is a dynamic “creator of metaphors”, which leaves its own decodification open, free, structured/non-structured and suggests open and offers to the user the possibility of constructing “his/her own story”?

So the real challenge is not only how to create an architecture that is narrative and metaphorical, as is a part of all contemporary architecture, but how architecture itself can be *interactive*.

But just a moment; the problem here is not of a technical nature. We know that smart houses exist in which the environment changes depending on the situation. There is the “host” scenario in which certain lights are dimmed and doors opened, several sliding walls or double ceilings are moved, a temperature or air flow is created and then the DVD starts up with a certain film or musical selection. Perhaps, and this is already on its way to us with microfibers in wall coverings, the physical characteristics of the walls may also be able to interactively change in grain, porosity and their capacity

to absorb sound or color. And the opposite “house with children” scenario could also be obtained in which everything is changed, or even a “sleep” scenario or a thousand others. As in the house of William Gates, we can create a scenario for every situation. Furthermore, the architecture can interactively mutate with the external environment; with the wind, the light, noises the flow of visitors, and temperature.

The real problem, as always, is not of a technical nature, which is easy and almost banal - even if it well deserves our attention and admiration - but rather of an esthetic nature. In other words, how to construct an architecture that would have the “knowledge” to be capable of being interactive, of being able to have structures, spaces and situations that are as navigable and modifiable as a hypertext.

Using steel-reinforced cement in the new architecture of the Twenties did not require in itself a new esthetic. Old buildings could be made with support pillars and beams and then re-covered with a coat of stucco following the classic Renaissance perspective.

But through a collective effort progressing from the Glass Pavilion by Bruno Taut to the *Maison de verre* by Pierre Chareau and passing through Gropius, Mies and Mendelsohn, architects understood that perhaps the transparency permitted by the punctiform structure was the key to a different vision of the world. No more interior-exterior separation, but a freer way of relating to the environment. Transparency, precisely since it represented the fundamental esthetic of the new architecture, also became the ethic: the willingness to objectively open up toward the new world.

Today we not only have a very powerful method for conceiving, manipulating and building but are also faced with great, new theme: What is the esthetic sense of interactivity? Will the breakthrough role played by transparency in the new architecture of the Twenties be held today by

interactivity? Will the new architecture allow everyone to be both actor and protagonist? Will our children be able to interact not only with the monitor but also with the environment and the world and especially with the space of architecture in a new dimension of our being?

The readers of this abstract very rightfully asked me examples and proofs of this thesis.

First they are coming from the field of arts. We all experienced since Sixties interactive installations. We were not aware at the time that this research was one of the keys at the future of architecture. But the same happened with Cézanne: who understood in 1880 that is effort toward an “analytical” vision was the main force behind the abstract, elementary, industrial analytical way of *Neue Sachlichkeit*? I asked to Alicia Imperiale, who is publishing in my series a book entitled *New Flatness*, few names of today artists that are in this stream of thought. She mentioned Stelarc, Gary Hill, naturally Bill Viola, Tony Oursler, Mona Hatoum. Imperiale is very competent so I guess these are very precious advises for further researches.

In the field of architecture I want first of all make the name of Toyo Ito. His search of hybridation between an artificial nature and a natural building reaches its maximum in his interactive architecture such as Cupola A, Egg of Wind and the Wind Tower. I was also to mention Gianni Ranaulo, an Italian architect established in Paris which theorises and build many examples of “light architecture”. This is innovative strategy to find a way in which interactive architecture finds a way to deal with the inner city. Finally last but not least in the American scene should be pointed out the work of Diller+Scofidio and in Europe the work of Nox Group. Without the profound meaning of the word interactivity the work of these architects cannot be understood.

Mies Van Der Rohe, in closing the Werkbund Congress in Vienna in 1930, said, “The new era is

a reality; it exists independently of the fact of whether or not we accept it or refuse it. It is neither better nor worse than any other era; it is simply a given fact and is in itself indifferent of values. What is important is not the 'what' but purely and simply the 'how'". The how is ours.

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