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Architecture of "Bits and Bricks"

Physical objects are the first things that we get in touch with (at least until nowadays). They can be "handled, touched, smelled, placed on the self or in one's pocket, collected, traded and decorated." (Eisenberg, pp. 3) They are important to our existence. They help us learn how to deal and communicate with our physical environment. We create cultural links with the tangibility of the world around us and we perceive and respond to things accordingly. "We actively construct knowledge form experience" (Resnick, pp. 2). Our reactions are impulsive or desired but they are based on a world in which we easily operate.

With the emergence of digital technologies and the ability to create in digital virtual space, some of our notions of living experience have been altered. Intangible does not mean not–real. The "opaque black boxes" (Resnick, Berg, Eisenberg, pp. 2) of digital technology intruded into every aspect of human activity, enhancing capabilities and magnifying qualities. This intrusion proved for architecture to be the appropriate vessel for adapting itself to the emerging status quo.

This change was mostly evident in the representation and communication of the design idea through architectural models. Prior to the introduction of computation in the architectural discourse, the architectural practice was conducted only through physical means. It was (is) a process of forming a scaled model of a previously imaginary concept, from materials like chipboard or carton, after the conclusion of its representation on drawings. The procedure resembled an abstract way of erecting the construction. The general aspect could be seen and certain adjustments could be made by returning to the drawing tables and back to the model again. The serious drawback was (is) always the fact that the architect could only have an aerial view of the project but not a "user's" perspective.

The digital manipulation of the design process opened up a field of intriguing exploration. 3d animation programs allow the "inhabitation" of the fourth dimension, time, just like architecture has been for so long the medium for inhabiting the 3-dimensional Cartesian space. Their advantage is that space can be creatively manipulated and animated inside a time-based environment. Moreover, the ability to "walk" through the emerged but intangible environment offered the simulation of the living experience. The loophole of this process is the absence of boundaries that leads to exaggerations of an unleashed imagination in a field that pragmatic view is the only way to realization.

That being said, both ways today are considered essential for an accurate representation of a building project. When the programming reaches the level of simulating the numerous parameters involved in the design process then the digital may render the physical obsolete!