

From (Im)possible to Virtual Architecture

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Zero Gravity and Immaterial Material

Is there an architecture which in principle is impossible to build? In its form this question harbors a contradiction. Is it possible for us to think of such objects, and to form images of them? It would be an easy matter if possibility and impossibility in architecture were defined by the technological and economic limits of the age. At the end of the 18th century, the megalomaniac structures depicted by Etienne-Louis Boulees were too gigantic to be realized. In the 1920s, the architects of the Russian avant-garde imagined buildings floating in the air. At the time this was still only a dream, but when we come to Buckminster Fuller's geodesic domes we find that, even though they share Boulees's fascination with the gigantic, they are infused by a thoroughgoing technological logic that makes them entirely feasible technically. And of course floating buildings are no longer a fantasy. Fuller, it might be mentioned, made a number of drawings of gigantic geodesic domes floating in the sky.

It was precisely because gravity defined an essential limit for architecture that Heidegger could write of the Greek temple that rises up in a relationship of tension with the earth (*The Origin of the Work of Art*). On the other hand, architects have sought to be freed from this limitation, and have repeatedly dreamed of flying buildings. This tendency was especially pronounced around the times of the French and Russian revolutions. Now, architects who claim to be designers of cyber-architecture proclaim their freedom to design in a digital space that is free from the constraints of gravity. As cyberspace comes to replace actual space as a target for capital investment, it appears that the meaning of the word architecture is expanding to include the configuration of virtual space in computer displays.

However, there is actually nothing new about the concept itself. Certainly the principle has been repeatedly envisioned within the imaginations of architects. According to Marcos Novak, an architect of Trans-Architecture, which is built on the invisible scaffolding of information, the origins of cyberspace can be traced to the modernist abstract art of Malevich and others. Malevich recognized magnetism, gravity, radio waves and other invisible forces and pulses in a world of objectless paintings. Along the same lines, he imagined buildings floating without foundations, buildings that were built over nothing. El Lissitzky pursued imaginary or virtual structures by means of afterimages and other mechanisms of sight. Of course, since it is not possible to change the three dimensions of physical space, nor to make arbitrary modifications to the curvature of space, this is pursuit of an object that can never be expressed in reality. It is nothing other than the momentary appearance of a virtual space by means of the movement of objects, afterimages, and stereoscopic effects. In Lissitzky's words, "Proun is a transfer station from painting to architecture." This shows how tenaciously he pursued this ambiguous space between two and three dimensions—a sub-zone, an interval, a transfer station. Lissitzky termed it "immaterial material". According to Novak, this immaterial material, born from light and the motion of objects, has elements in common with the space of electronic media. The liquid architecture of cyber space is clearly immaterial architecture. It is architecture that is no longer satisfied with form, light and the other aspects of the real world. It is an architecture composed of changing relationships between a variety of abstract elements. [1_j](#)

Architecture Spanning Media

In any case, if the distinction between possible and impossible architecture resolves to the story of the evolution toward reality of what formerly could only have been fantasy, the status of "reality" as the dividing line between the possible and impossible has not changed in the slightest. But from the opposite perspective, all of the activities surrounding actually existing architecture are enclosed in a margin of virtual architecture, which is impossible and which exists nowhere. Would it be possible to discuss Western architectural culture since the 19th century without mentioning Piranesi's *Le Carceri* (The Prison)? The dreams of the visionary architects mentioned above are an essential memory in architectural history. "Reality" as the foundation of architecture has also been changed by the emergence of the mass media, by photography and other technologies of reproduction. In order to clarify his architectural concepts, Le Corbusier edited his own periodical, *L'Esprit Nouveau*, and extensively retouched many of the photos of his work published there. Of course the existing building is an important moment in the activities of the architect, but for Le Corbusier it is definitely not the final result. The photos and layouts in *L'Esprit Nouveau* articulate another architecture. The hierarchical order which accords a privileged status to the building as constructed is lost, replaced by a complex interaction between the concept of the building, the building itself, and reproductions of the building. With the overthrow of the hierarchical order, a situation develops in which Le Corbusier's buildings come to resemble the space of photos.

When the experiences obtained through a work of architecture are expressed in this way through photos, discourses, and a variety of other media, what is the level at which a judgment can be made concerning the possible and the impossible? Like Le Corbusier in the *L'Esprit Nouveau* period, it is not difficult for an architect today to engage in architecture by publishing drawings and discourses, without actually building very much at all. While it would be possible to write a positivist history of architecture by describing actually existing structures as things, this approach would fail to capture something which remains in the architect's imagination, refusing to become a thing.

One reason why Le Corbusier's work spanned so many media is that he was a propagandist for modern architecture. But another and more germane reason is that there was something in his concept of architecture that could find its expression only by means of differences in media. In other words, his architecture was unrealizable within each of these forms of expression alone. Of course there is nothing remarkable about building the structure that is depicted in an architectural drawing. But the drawing does not necessarily require it. Does that mean that architectural drawings are works of art? No. As objects architectural drawings are far more vague and unstable, with requirements that cannot be satisfied in the realm of art. The important thing is that Le Corbusier's architecture existed only in the expressive relationship and differences between drawings, photos, and buildings, or in other words in the process of translation from drawing to building and from building to photo. Precisely because architecture cannot be sufficient to itself in the form of a built work or in the form of a drawing, the possibility of its realization lies in the vague region of inter-media.

Virtual Elements in Architecture

It may be well for us to distinguish, with Gilles Deleuze, between possible things and virtual things. Possible things stand opposed to real things. Possible things undergo the process of realization. However, virtual things do not stand opposed to real things. They are already completely real in themselves. According to Deleuze, the process characteristic of virtual things is not realization but rather actualization. So what is the difference between realization of possible things and actualization of virtual things?

Possible things are produced after the fact.

By a trick, they are given to be real things which they resemble, as if they had existed from before. However the actualization of virtual things proceeds by differences, dispersion, and differentiation. This kind of actualization is in principle completely unrelated to identity. As a process it is no less unrelated to resemblance. Actual categories are completely different from virtual categories that these actual categories actualize.²⁾ Concepts are pure virtuality that is actualized through various modes of differentiation. They are a multiplicity that is developed as differences. Le Corbusier's concept of architecture is exactly this type of virtual thing.

This also transforms architecture into a question. According to Deleuze, questions are multiple and virtual, and they generate solutions that do not resemble their conditions. If this is the case, then the existence of virtual architecture is the existence of questions that should be answered. Of course the questions are not posed to elicit answers that exist in advance. The questions are not given in advance either, and they are not lost when answers are found. To conceive of virtual architecture is not find an answer to the problems posed by a given set of variables (for example the functions required, expenses, scale, and so on). Rather it is to move toward architecture as the question itself. To Le Corbusier, architecture was that sort of demanding question, and therefore he was forced to continue producing different answers in a variety of media.

Pirenesi's work and the drawings of the visionary architects were remarkable examples of virtual architecture as the questions of this sort. Therefore they can be considered to be essentially unrelated to the possibility of realization. In other words, they are not "possible things". On the contrary, their drawings are frustrating to conventional architecture thinking. They are a form of violence that exhausts the possibility of that kind of architecture. However, it is only when architectural thought is forced to do so by an irreconcilable question (as difference) that it is able to escape from the region of resemblance and identity.

As seen in the example of Le Corbusier, modern architecture exposed itself to these sorts of torturing questions in order to escape from the oppressive architectural culture of the 19th century. This meant the renunciation of all of the possibilities that architecture already possessed. The rich tradition of symbolism and the decorative vocabulary were consumed and rendered empty. In their place, modernism concentrated on the physical nature of the materials themselves. Precisely because the vocabulary was limited and exhausted, expression turned to the inherent strength of naked materials such as steel, glass, and concrete.

For example, Mies van der Rohe's glass skyscrapers (existing only in photo montages, not actually built) are exactly this kind of material expression of formless intensity as such. These glass skyscrapers as "exhausted things"(Deleuze) are what comes at the end of having completely used up all of the possibilities inherent in glass architecture. According to Deleuze, the result of this process of exhaustion is the image. It is rather at the finish, at the end of all every sort of possibility, that we notice that we have produced an image.³⁾ The self-dispersing process of concentrated virtual energy is an image in this sense. It is precisely the process of dispersion and exhaustion. For Mies, the primal experience of architecture was this kind of experience, of architecture as image. The process of exhaustion was directed to ward the image. He exhausted architecture to the point where it became an image of intensity only, representing nothing. The buildings which Mies repeatedly constructed were variations on an answer to the question posed by this image. In the many answers he produced, his glass skyscrapers tenaciously continue to hold fast to their virtual existence, remaining essentially different from the answers.

The Tactile Reality of Virtual Architecture

If so-called virtual architecture, as the architecture of virtual space as opposed to actual

space, were nothing more than a space that can be translated into the latter or something resembling the latter, then it would be merely a possible thing, unrelated to virtuality as discussed above. If it were simply a matter of designing an interface, such as the interface of a navigation system, then proximity to real space would be easy to understand and fully sufficient. One answer would be enough. In this case, the simulation of multi-dimensional space within the display could rely on techniques of perspective to achieve a three-dimensional space on the screen.

On the other hand, when the freedom of cyberspace with respect to real space is stressed, the result is merely to increase the formal variety of the design. Many of the images produced in this way are literally what Novak calls "liquid architecture", falling into a strange kind of expressionistic formalism. If virtual architecture is a field that permits this kind of arbitrary design, then it seems that the design must resemble some other existing thing, something fabricated as if it had existed before. It would be within the range of prediction. The prerequisite for virtual architecture becoming something truly virtual is perhaps to stop playing with this kind of arbitrary freedom and instead to exhaust it, use it up, deplete all of its possibilities. This could also be expressed as seeking not freedom but the lack of freedom. The question for virtual architecture is not how to present computers and computer networks as if they were the same sort of thing as real space, or a similar world. Just as photos changed architecture, virtual architecture will change architecture. It will become an act of violence toward architecture, and will do so by means of differentiation with respect to real space. In place of an easy to understand and easy to use interface, it is the discordant nature of the computer with respect to the human body, the feeling of resistance to it as to a foreign body, that will provide a hint for differentiation.

In David Cronenberg's film *Videodrome*, a man was swallowed into the television. The artist Stelarc attaches to every part of his body sensors and stimulators that are connected to the Internet. His performance is literally a fusion of technology and the body. In the same way, computers and other electronic media have a tactile dimension. We can feel them coming into contact with the skin of our bodies. Far from being a clean machine, the computer is a parasite that attaches itself to us, enticing and perverse. Clutching our notebook computers as we move about, we obtain unprecedented pleasure from this parasitic other. It may be that the reality of our daily life is already structured as cyberspace, with our bodies obtaining their tactile sensations from cyberspace, not the space of actual architecture and cities. At some point we have already become surrounded by virtual architecture and enclosed within its womb-like interior. In cyberpunk novels, cyberspace is often one half of a pair, the other half being a lawless, peripheral location in the city. In the same way, the expansion of virtual architecture is linked to the decline and decay of cities and architecture. While cyber architects resort to naive formalism in their attempt to clothe virtual architecture in the cloak of reality, the actual reality around us has begun to collapse. This collapse and the changes wrought on our bodies through contact with electronic media are ignored in most of the discussions of virtual architecture. The result is a formalistic pursuit of visual images.

Virtual architecture is not a design problem to which architecture and architects can offer any answer that they please. It is the condition, under which we have come to live in the late 20th century through the physical, sensual and erotic encounter with the computer. Very likely, it will be a threatening, tortuous question for architecture and architects. It is only as a violence of this nature that virtual architecture can become a virtual thing and have the power to change the architectural thought of the age.

Translated by Thomas Donahue

Footnotes

1) Marcos Novak (translated by NTT Human Interface Research Laboratories et al.): Liquid Architecture in Cyberspace. In: Michael Benedikt (ed.): Cyberspace; first steps (in Japanese). NTT Shuppan, 1994, p. 262

2_jGilles Deleuze: Diff_rence et R_p_tition. Presses Universitaires de France, Paris 1972, p.273.

3_jGilles Deleuze: L'_puis_. In: Samuel Beckett: Quad. Minuit, Paris 1992, p78