REMAKING IN A POSTPROCESSED CULTURE

William Massie

In this essay, William Massie describes the digital revolution that has led to a new and richer process of "remaking," which he defines as "quite simply the ability to move directly from information to work, marking for the first time man's ability to use abstraction as more than simply a container or vessel of intent." Referring to theorists and philosophers like Marshall McLuhan, Paul Virilio, and Gilles Deleuze, Massie connects architectural innovations with larger ideas concerning evolving relationships between the virtual and the real. Among his arguments is an assault on the concept of the "prototype" and its ties to mechanical standardization.

> Viewed against the backdrop of epochal changes registered in industrial technology, architectural technology, since late modernism, seems to have ceased evolving. The development of new technologies, methods and materials, unrelated to existing ones, gives architects little recourse to historical techniques and representations. Despite the heterogeneity of current movements and theories, architectural discourse remains principally concerned with the ideology of all things retinal. Technology was long ago severed from the autonomy of architectural art. An abundance of practical and intellectual constructs have been erected around identical building techniques, producing in mainstream architectural culture an unbroken tectonic and representational tradition three decades old. Once again we see the institution of architecture dealing with arguably the most important spatial technology (the computer) in only a visual way. Some applications of computer technology have radically redefined how one sees and conceptualizes the making of space. Until recently, general use of the computer has been relegated to the world of the "virtual," as well as that of analysis. However, recent advances in electronics and computer processing found in computer numerically controlled technologies now allow us to move directly from a computer model/computer drawing to built form, This technology not only eliminates the distance between "virtual" architectural hypotheses and the physical test of construction, but also forces us to examine our roles as architects in a condition allowing greater potential input into the processing of building construction.
>
> —WILLIAM MASSIE, 1997

If one suggests that the inception of modern process coincides with the Industrial Revolution, the trajectory of modern process to date can be cleaved into three distinct political dispositions: making/information transfer/remaking. This body of modern process defines not only our political and sociological predicament, but also what we have understood as modernism in terms of architecture.

The first iteration of modern process occurred with the advent of industrialization. Industrial culture to postindustrial culture can be described as the process of abstraction transmuted into object or space via mechanical means, with a bifurcation implicit in the process and the political power structure, that is management and maker. A technological and sociopolitical gulf existed between abstraction and making.

The second evolution of the development of modern process is the postindustrial information culture or the information-to-information culture which is defined by the transposition of abstraction to abstraction. This period of information transfer results in the commutation

of ideas to ideas without transcending ones and zeros. Information is transposed from virtual to virtual. The flow and development of abstract ideas, through information systems and programming, provides the ability to redirect the mechanical to produce and maintain further abstraction. During this period corporations (dot-coms) were created simply to prove the capabilities of dispersing and retrieving information.

The third phase of this transformation is quite simply the ability to move directly from information to work, marking for the first time humanity's ability to use abstraction as more than simply a container or vessel of intent. Prior to the industrial era, architects were the purveyors of the built. As a result of the Industrial Revolution, industry itself became the purveyor of the built. In the progression toward the information culture, the practice of architecture was logically stripped from its base of technical expertise, transforming into an information-to-information politic—design to drawing. It is now individuals who are the purveyors of the built based on the power given to them by the infrastructure of remaking.

Remaking is based on the idea of multiple iterations of the process of "making." A construct is "made" digitally and then "remade" in the real—similar to the remixing of music. Drawing, space, or a body of text are constructed within a digital realm and then reissued into the physical world. These constructs can be altered within the digital and then preformed. According to Marshall McLuhan, "the consumer becomes producer in the automation circuit."[1] With the removal of traditional mitigating forces, the individual has direct access to information. If we use Home Depot as an example, the basis of the demystification of the construction industry is based not only on information transfer, but its result as a marketplace. Home Depot becomes the theater of operations for material comparison and experimentation because of its size and complexity of product. The individual moves through its aisles as though moving through a three-dimensional catalogue, attempting to synthesize difference in material options, unlike the traditional acquisition of material through specification. Paul Virilio in *A Landscape of Events* quotes Nicholas Negroponte of the Massachusetts Institute of Technology (MIT) and John Perry Barlow, president of the Electronic Frontier Foundation, as stating:

> We have entered the digital age, the age of a universal network with no one in charge, no president, no chief.... Because of the network's decentralized structure, it will be impossible to censor it without banning the telephone! And this is a good thing, for cybernetic space should reflect a society of individuals.[2]

Virilio goes on to state, "With the new means of transportation and transmission, the new virtual tools, it is man who gives himself wildly extravagant dimensions and the earth that reveals its limits."[3]

The information is the product, or to again quote McLuhan, "The media is the message."[4] The information culture has evolved into a "postprocessed" culture where information can directly result in the product via information systems. The virtual moves directly into the actual while the actual simultaneously reinforms the virtual. The relationship of initial abstraction has been processed to anticipate the real. Prior to this point information was processed only to produce a further abstraction—information systems, that is the internet. "Postprocessed" information exists simultaneously as a product because it can move directly into the "real." Information is temporally suspended within the virtual (latent information) until it is realized physically. Pushed from the world of physics, into the paradigm of making, "potential information" is transposed into "kinetic information." The very anticipation of the real is, in a sense, like a back eddy in a stream—although the energy of the water is moving predominantly in one direction, the pressure on an object within the stream produces a reverse flow—a perforation in the virtual that allows the actual to penetrate and move back into the system, folding in on itself or imploding, a type of endless loop unaware of its container, either virtual or actual, simply a blending of the two. The result of this blending of virtual and actual is not only embedded in itself, but causes the blending of virtual to virtual conditions—new transformations of existing power structures, technologies, and information systems. A traditional understanding of "job site" and the anticipation of "construction" can be drawn back into digital space where an object is not only drawn but is embedded with a series of activities, politics, and sequences. The infrastructure and intelligence of the office presents itself to the site. The scripting of assembly and the corporal choreography fold back into what could

have been considered drawing. When an author produces a drawing that becomes the information that drives the machine, it compresses the world of design and fabrication into a single process, thereby yielding efficiencies not realized in the industrial era. This concept is reinforced by McLuhan in *Understanding Media*, in which he describes the discourse that takes place between the two realms (virtual and actual) as a complex nervous system capable of receiving data from the outside and transmitting it for reprocessing—an "organic unity of interprocess."[5] McLuhan goes on to state that the "instant synchronization of numerous operations has ended the old mechanical pattern of setting up operations in lineal sequence... mechanical standardization is now past."[6]

With the end of standardization and the transfer of power to the individual achieved through the ability to move directly from information to construct, the idea of the prototype—the first in a series—becomes obsolete. Architect Bernard Cache has discussed this effect in *Earth Moves*, in the sense that an object, which exists within the virtual, is "malleable in real time" and has thus "lowered the status of the prototype" due to the ability to produce a series of continuously changing complex forms.[7] The new information systems and processes utilizing non-Euclidean geometries allow infinite variation and the development of a nonstandard mode of production. According to Cache, since design occurs as a 3-D simulation and this simulation can be milled, the simulation takes precedence over the physical object. It should be argued that in fact the virtual simulation and the physical object are one and the same with no hierarchy. Since the virtual exists simultaneously as the real, the concept of infinite variation replaces the model of the "prototype." The prototype is simply replaced by type—the death of "proto"—and the concept of standardization is no longer viable. As Gilles Deleuze writes in *The Fold*:

> The new status of the object no longer refers its condition to a spatial mold—in other words, to a relation of form-matter—but to a temporal modulation that implies as much the beginning of a continuous variation of matter as a continuous development of form.... The object here is manneristic, not essentializing: it becomes an event.[8]

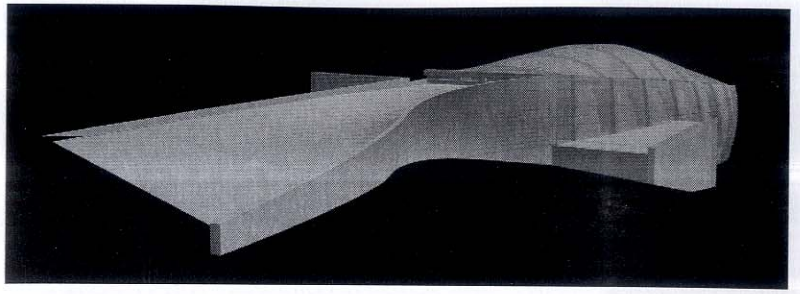

Fig. 1 / Through a global positioning survey, the foreground and background topographies were drawn together to produce the parent geometry of the Big Belt House, Willam Massie, White Sulfur Spring, Montana, 2000–2002

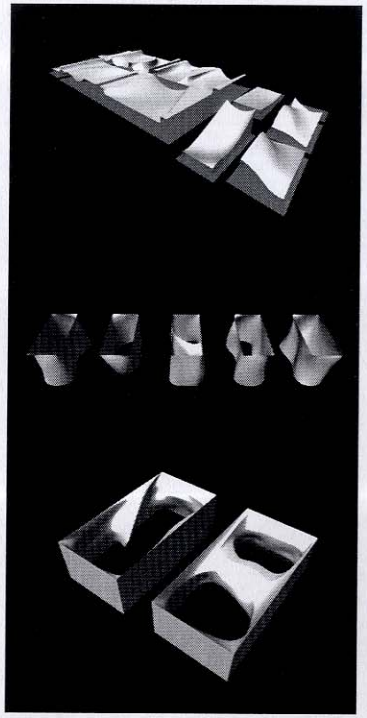

Fig. 2 / Big Belt House, Willam Massie, White Sulfur Spring, Montana, 2000–2002. Top: The transformation of mass as it relates to the reformation of light has no prototypical condition. It simply "is" and "projects." Middle: The hardening of light, that is the projection, aperture/container is tested, retested, and combined with other tests prior to its actual construction. Bottom: The dissection of the light container is the last step of the digital process and the first step in material negotiation.

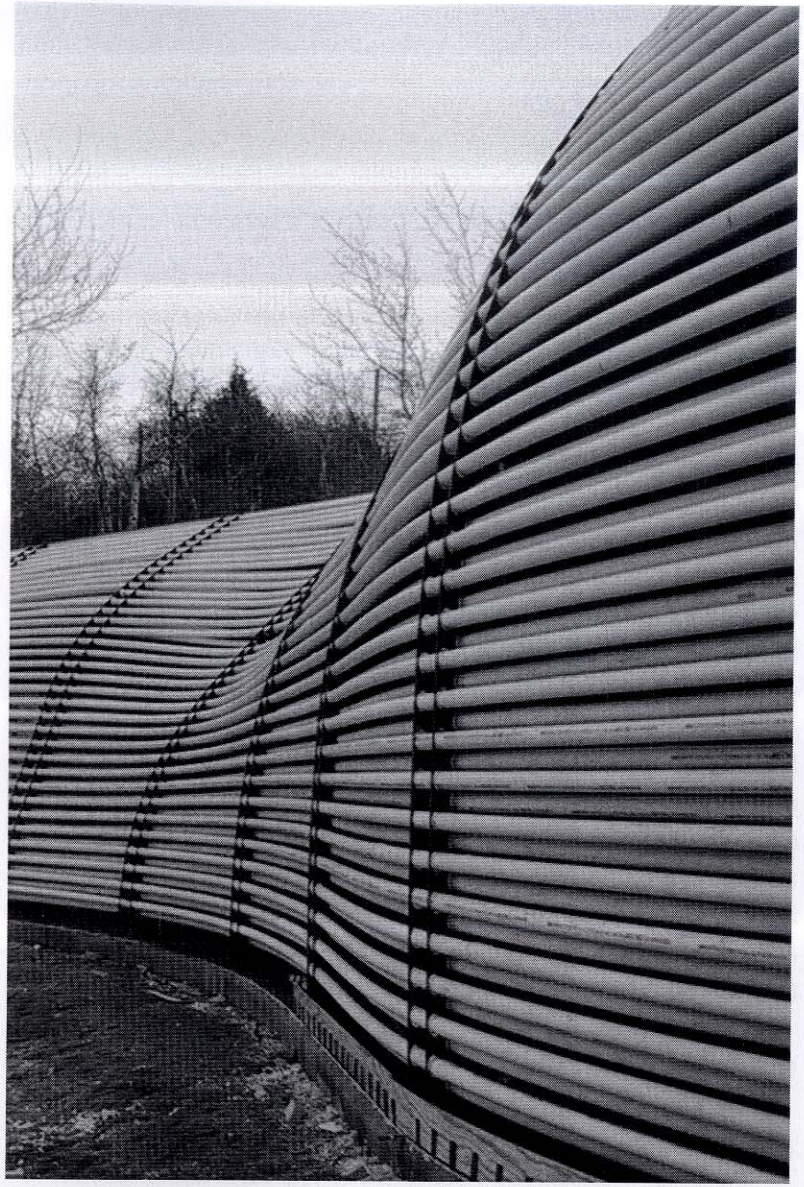

Fig. 3 / Detail view of aggregate PVC tube construction, steel sections of the actual construction are transposed from the original form as select nodes in a spline geometry. Big Belt House, Willam Massie, White Sulfur Spring, Montana, 2000–2002

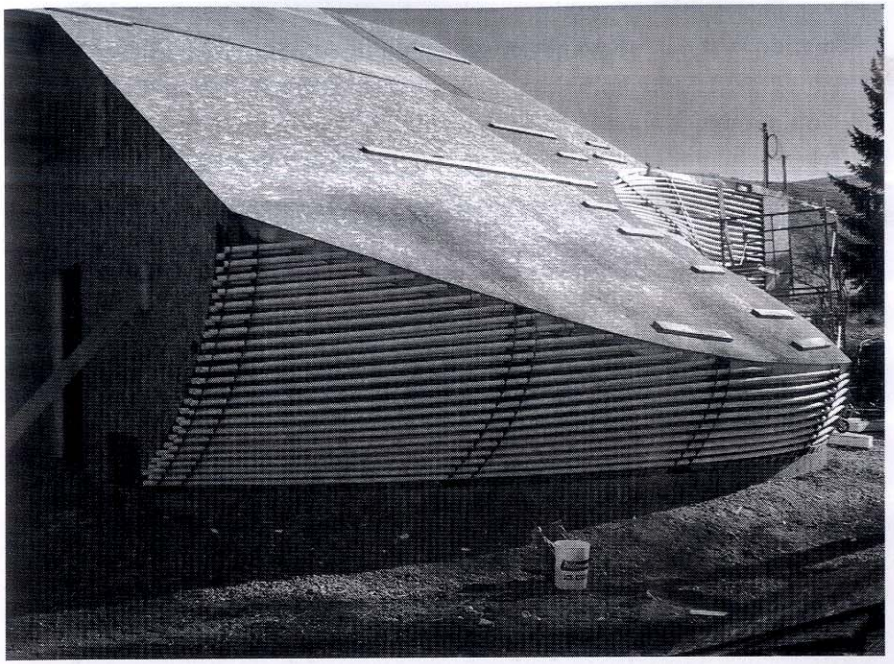

Fig. 4 / Aggregate PVC tube construction combined with overall stress-skin panel construction, Big Belt House, Willam Massie, White Sulfur Spring, Montana, 2000–2002

The practice of architecture is and will remain primarily an information system, but architecture within this given phase of modern process is transforming as a result of the radical shift in the conception, production, and communication of ideas and subsystems. The transformation into an electronic culture is as socially and politically significant as the development of written language. The advent of what McLuhan refers to as an alphanumeric system altered the political and social structure due to its ability to disseminate information and to create decentralized power structures. The utilization of digital information systems, the concept of information working through the use of numerically controlled processes—bits to atoms—allows the individual to move directly from abstraction to object without typical meditation.

Historically, to develop a system of a certain complexity, that is a spatial construct which is not easily described by Euclidean geometry or the juxtaposition of the rectilinear and the measured, required an unwieldy amount of information to be transmitted from designer to fabricator, making such projects economically prohibitive. Through the use of the computer and computer-numerically-controlled technologies, this complex information moves directly from idea to product. Due to these technologies the individual obtains increased control relative to the production of ideas. The ability for direct dialogue between virtual and actual provides a substantial increase in artistic autonomy. With the removal of traditionally mitigating forces in the logistics of architectural production, the onus of accountability received by the architect becomes greater. [Figs. 1–4]

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Notes

Epigraph William E. Massie, "The implications of corporal occupation of a virtual construct: a work in progress," *Architecture and New Geographies of Power*, ACSA Western Regional Meeting, Washington State University School of Architecture Publications and Printing (Pullman, WA), 1997, 37.

1 Marshall McLuhan, *Understanding Media: The Extensions of Man* (Cambridge, MA: MIT Press, 1999), 349.

2 Paul Virilio, *A Landscape of Events* (Cambridge, MA: MIT Press, 2000), 8.

3 Ibid., 10.

4 McLuhan, *Understanding Media*, 7.

5 Ibid., 348.

6 Ibid., 349.

7 Bernard Cache quoted in Alicia Imperiale, *New Flatness: Surface Tension in Digital Architecture*, (Basel, Switzerland: Birkhauser, 2000), 59.

8 Quoted in ibid., 90.