The Crisis in Geometry
Published in Arts Magazine, New York Vol. 58, No. 10, June 1984.

Where once geometry provided a sign of stability, order, and proportion, today it offers an array of shifting signifiers and images of confinement and deterrence.

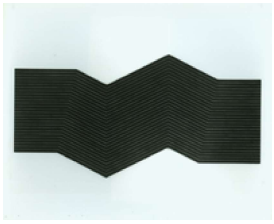

FIG. 1

The formalist project in geometry is discredited. It no longer seems possible to explore form as form (in the shape of geometry), as it did to the Constructivists and Neo-Plasticists, nor to empty geometric form of its signifying function, as the Minimalists proposed. To some extent, the viability of these formalist ideas has simply atrophied with time. They have also been distorted and bent to conform to the bourgeois idealism of generations of academically-minded geometric classicists. But the crisis besetting geometric art for the last two decades can also be viewed as characteristic of the crises that have beset formalisms of all kinds in the postwar era : those that precipitated the transition from literary formalism to structuralism and from structuralism to the post-structuralist re-examinations that have taken place in the work of such figures as Barthes 1 and Foucault2.

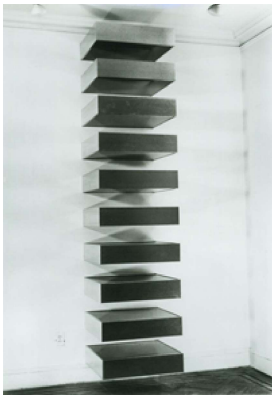

FIG. 2

For, like these crises, the crisis of geometry is a crisis of the signified. It no longer seems possible to accept geometric form as either transcendental order, detached signifier, or as the basic gestalt of visual perception (as did Arnheim). We are launched instead into a structuralist search for the veiled signifieds that the geometric sign may yield. These questions arise : to what purpose is geometric form put in our culture ?

Why is modern society so obsessed with geometric form that, for at least the last two centuries, we have striven to build and live in geometric environments of increasing complexity and exclusivity ? Why has geometric art been so widely accepted in our century, and why has geometric imagery gained an unprecedented importance in our public iconography?

FIG. 3

To answer these questions, we turn to an examination of the sociology of geometry in the modern era, to literally a sociology of formalism. Geometry will here be examined in relation to its changing role in cultural history rather than as an a priori ideal of the mental process. This essay will focus on two texts relevant to these questions, texts which have both influenced the production of geometric art and can be used to decode the geometric work produced during these years of "crisis". They are Discipline and Punish by Michel Foucault3 and Jean Baudrillard's Simulations 4. Foucault's work is most relevant to the geometric art produced during the 70s, while Baudrillard's text, which in many ways draws upon Foucault's, is crucial to an understanding of the geometric art that has appeared in the present decade.

FIG. 4

In Discipline and Punish, we find deconstructed the great geometric orderings of industrial society. The omnipresent unfolding of geometric structures in cities, factories, and schools, in housing, transportation, and hospitals, is revealed as a novel mechanism by which action and movement (and all behavior) could be channeled, measured, and normalized, and a means by which the unprecedented population of the emerging industrial era could be controlled and its productivity maximized.

FIG. 5

Foucault describes how this process took place through the deployment of the geometric. Space became geometrically differentiated and partitioned. Circulatory pathways, the omnipresent straight lines of the industrial landscape, were established to facilitate orderly movement. Panopticism combined with seriality emerged as the chief principle by which bodies and places could be most efficiently supervised and observed in such key locales as the prison, the hospital, the factory, and the school. Further, this geometricization of the social extended beyond the physical environment into organizational schema. The time clock, the chart, and the graph, by which bodies and their movements could be measured and categorized, emerged as omnipresent techniques in the industrial order. Twentieth-century artists

have often claimed legitimacy for their use of geometry by referring to both ancient and religious sources. Ironically, these same sources are cited by Foucault as the actual models of the geometric patterns of confinement and surveillance present in industrial society. First, ancient Rome provided for the nascent capitalist era not only a model of republican government, as is commonly said, but also a model of ideal discipline, one based on Roman military technology. Secondly, with the birth of the industrial order, the traditional pattern of monastic life, with its rigid supervision of time and activity, was suddenly adopted by the social body as a whole. Here then is an analysis by which the modern obsession with geometry (an obsession that any person living in the industrial world can confirm by simply stepping outside and looking around) is reinterpreted. But this reinterpretation also radically alters our perspective on the geometric mysticism practiced by such figures as Mondrian, Malevich, Rothko and Newman and calls into question the curious claim that geometry constituted neutral from, which was advanced by Minimalism and '60s formalism.

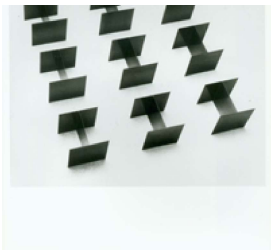

FIG. 6

Based on this analysis, we may come to see in the work of these geometric transcendentalists a classicizing mechanism at work in which the very object of discomfort, geometry, is transformed into an object of adulation. In the formalists' claim for geometry's neutrality, we may likewise see an effort to normalize, to accept as given, the omnipresence of these geometric signs.

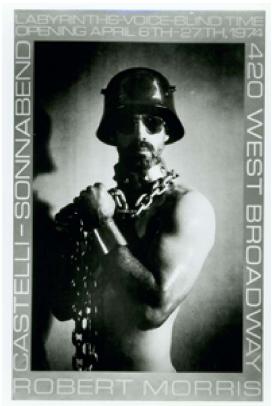

FIG. 7

We may also use this Foucauldian critique as the basis for a reinterpretation of the geometric art of the last two decades. First, in Minimalism the crisis in geometry can be seen as beginning. Minimalism claimed that it had achieved intellectual neutrality, Cartesian clarity, even Marxist integrity. But despite the shortcomings of this rhetoric, the Minimalist object itself can be linked to Foucault's critique, even if the conscious intents of its creators were otherwise. Minimalism first ideologically linked geometry to the material production of contemporary industry by employing industrial materials and finishes without endorsing them (as the Bauhaus did). Minimalism also abandoned the Renaissance idea of composition in favor of organization according to the principles of seriality and centrality (such as Noland's or Irwin's panoptical arrangements) that are characteristic of industrial geometry.

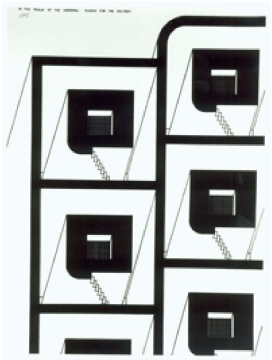

FIG. 8

The best work of Post-Minimalism further advanced this

critique on a more conscious level. In Robert Smithson's earth-works, for example, a confrontation was developed between idealist geometry and the actual geometries of the industrial landscape. Geometric configurations emblematic of the idealist tradition (circles, spirals, etc.) were branded almost arbitrarily on the ravaged industrial landscape- drawing attention to the stark contrast between the two.

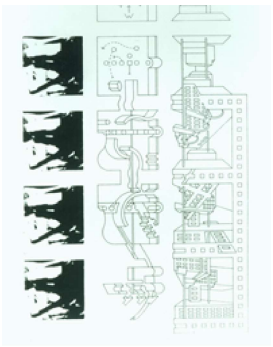

FIG. 9

Even more emphatically, in the essays A Tour of the Monument of Passaic, N.J. and What is a Museum ?, in which photographs of idealist, modernist architecture and interior design are juxtaposed with photos of factories and other industrial facilities, the use of an ideal geometric art to ideologically support contemporary geometric social organization is ridiculed5. Smithson's late drawings depict hellish island environements, bristling with fortifications and littered with smoking and flaming instruments of death, most of which are formed out of simple geometric shapes like cones, cylinders, and cubes. In these works, Smithson comes closest to an explicit Foucauldian critique: the geometric monuments of the enlightenment tradition are transformed into instruments of sado-masochistic confinement and torture.

FIG. 10

Richard Serra's work of the late '60s gives a similar resonance to the idea of geometry as threat In Corner Prop, a lead cubic solid that is simultaneously a Cartesian polygon and an industrial product is lifted precariously over the viewer's head. But while evoking the most immediate sense of anxiety and threat in regard to certain characteristics of geometric form, Serra's pieces are nevertheless ambiguous in their (and his) insistence on their "materiality". This constant assertion of materiality reinforces the premise that such forms and processes represent an immutable, transcendent reality. Alice Aycock's pieces have characteristically contained a variety of unenterable spaces and useless pathways that describe a kind of dead-end of the geometric. Her introduction of convoluted, irrational geometric configurations into her work of the late '70s further stresses the separation of the geometric from its identity with reason. Significantly, through the continuous suggestion of architectural and narrative signifieds in her constructions at that time, the work negated the idea that geometric form could function as detached signifies. Finally, Aycock's insistence on tying her constructions to her own fictive ideological programs draws attention to the presence of ideology in the geometric wherever it appears.

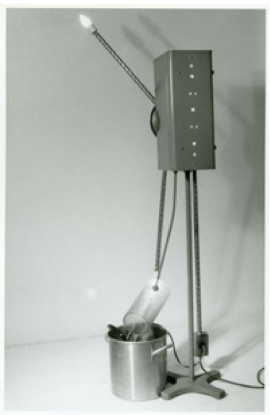

FIG. 11

By the late '70s, a number of artists had begun to directly address the issues raised in Discipline and Punish, whose English translation was published in 1977.
Robert Morris' work is paradigmatic of the process by which this took place. During the 70s, Morris seems to have reconsidered the meaning implicit in works like Untitled of 1967. Though created in an atmosphere of formalist and phenomenological thought, it bears strong resemblance to the partitioning structures used in hospitals and offices, especially when viewed from above (as it was at the Guggenheim Museum in this illustration, from the panoptical viewpoint).

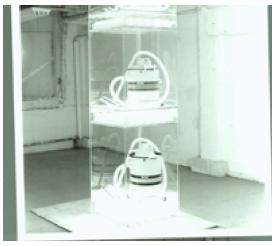

FIG. 12

Morris' photograph for an exhibition poster of 1974, in which he appeared in S & M garb complete with chains, collar, and a German helmet, constitutes both a response to the Smithson drawings discussed above and an announcement of his new awareness of the power relationships and even violence implicit in his own production.

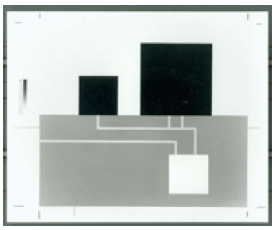

FIG. 13

By 1978, in his series of drawings, In the Realm of the Carceral, Morris was directly responding to the ideas set out in Discipline and Punish. In these works, an exquisite mechanical line is used to depict a denatured environment of total confinement and perfect discipline (Since that date, Morris' work, while committed to attaching increasingly complex layers of signifieds to form, has unfortunately lapsed into a point of view that is decidedly aligned with the metamorphic ambitions of liberalism). Also in the late 70s, the architect Bernard Tschumi also undertook a series of drawings, The Manhattan Transcripts, that explore Foucauldian themes. These drawings set about to track various kinds of human movement set against the architectural topography of New York City. Panel Three from MT4, The Block stresses the omnipresence of the grid in both section and plan, and the relationship between regimented human action, as seen in sports, and the gridded structures of the industrial city. In this drawing, precisely controlled human movement (the football play) is transformed into diagrammatic geometry which is, in turn, transformed into three-dimensional form rising out of the plan. These transformations parallel the way in which actual human movement is confined in the industrial domain where movement is constantly channeled through corridors and streets into apartments, offices, and arenas that can only be entered and exited at prescribed hours and speeds.

FIG. 14

Lauren Ewing's installation, "Auto-Plastique : The Prison", demonstrates how much ideas about geometry had changed from the abstract stance of Minimalism. Ewing retains Minimalism's formal vocabulary - its simple geometric structures, its industrial construction techniques, and its program of spatial interaction with the viewer - but here the Minimalist vocabulary is harnessed to make an explicitly Foucauldian statement. Ewing's installation depicts the conditions of panoptical space as Foucault describes them originating in the prison : "By the effect of blacklighting, one can observe from the tower, standing out precisely against the light, the small captive shadows in the cells of the periphery. They are like so many cages, so many small theatres, in which each actor is alone, perfectly individualized and constantly visible6".

In the tower, on the other hand, thick walls provide an atmosphere of shadow, so that inspector is not visible to the inmates.

By means of this arrangement a transformation of the social is indicated that has significance far beyond the specific example of the prison : "The crowd, a compact mass, a locus of multiple exchanges, individualities merging together, a collective effect, is abolished and replaced by a collection of separated individualities. From the point of view of the guardian, it is replaced by a multiplicity that can be numbered and supervised; from the point of view of the inmates, by a sequestered and observed solicitude 7". Ewing has added to her depiction of this situation her own invention, "the perfect speaker", a right-angled wall behind which someone may talk into a loudspeaker, addressing the panoptical situation, though not seeing it or being seen from it. This speaker can be seen as paradigmatic of individualism, of a perfectly detached position of protest. But the speaker's position is also that of an even earlier stage in the history of confinements - the dungeon in which a prisoner is hidden rather than observed, from which the prisoner shouts unheard to an unresponding captor. Since 1980, another generation of geometric work has appeared for which the relevant text is not so much Foucault as it is Baudrillard. This generation of artists is no longer connected to an industrial experience (compare Serra's insistence on his background working in steel mills or Aycock's use of construction-site lumber). Rather, this group of artists is the product of a post-industrial environment where the

experience is not of factories but of subdivisions, not of production but of consumption.

These artists describe an environment in which the panoptic system no longer holds sway, where, in Baudrillard's words, "the distinction between cause and effect, between active and passive, between subject and object", has ended 8. This is an environment in which Foucauldian confinement has been transformed into Baudrillardian deterrence, in which the hard geometries of hospital, prison, and factory have given way to the soft geometries of interstate highways, computers, and electronic entertainment9. In addition, this generation no longer attributes to art the role of privileged experience that artists like Serra did, who claimed that art could have a transformative effect on society. The geometric art of the '80s mocks the mechanisms of this art-response. For these artists, there can be only a simulacrum with "orbital recurrence of the models" (nostalgia) and "simulated generation of difference" (styles). One of the first to emerge with this point of view is R.M. Fisher. Fisher's sculpture masquerades as lamps, as furniture, bespeaking his own disillusionment with the idea of art as privileged object, separate from the realms of commerce and ideology. A few years ago, Fischer was seeking exhibition opportunities for his work in department store windows and in fashion-conscious shops like Fiorucci's, thereby dramatically placing his work -which itself deals with the question of how style is signified - within the context of the whirlpool of fashion and the market at its most sophisticated level, thus denying the illusion of neutrality that the atmosphere of the gallery seeks to create 10. The sculptures themselves are involved in the same critique. They take the form of either lamps (compromised domestic sculpture) or fountains (compromised public sculpture). Within those signs, they collect and arrange so many contradictory signs that the signifying function is itself made circular and cancelled out. In Half Past ten, a fountain sculpture of 1982, water flows down from a rectangular metal box (signifying perhaps a fuse box or even, because of the hidden light source, a futuristic fuse box) through a metal tube (signifying a gas conduit and thereby, again, industry), through a translucent glass cylinder colored with a pattern resembling candle drippings (signifying kitsch, domestic interiors, suburbia), into a stainless steel commercial kitchen pot (that signifies work, absence of signifying decoration). In addition two arms made from parts of decorative lighting fixtures are stuck on, further enriching the stew of signifiers and transforming the

fountain-sign into a clock-sign. Fischer's work thus demonstrates the complexity of layers that the contemporary geometric sign has acquired. In these sculptures, the sign takes on a circularity that Baudrillard describes as characteristic of meaning in contemporary society: "The whole becomes weightless, it is no longer anything but a gigantic simulacrum - not unreal, but a simulacrum, never again exchanging for what is real, but exchanging in itself, in an uninterrupted circuit without reference or circumference". Jeff Koons' work also deals with the state of things within this simulacrum. Koons' work, such as New Wet/Dry Triple Decker, takes as its model certain characteristics of Minimalism, reflecting the nostalgia for style, the circularity of signs, that defines the simulacrum. But in Koons' work, the production-oriented signifiers of Minimalism (steel, industrial paints, etc.) are replaced with elements (the appliances, the plexiglass boxes that are like display cases) that draw attention to consumption. While Minimalism sought to reveal structure, Koons displays appliances whose workings are hidden behind smooth plastic and enamel surfaces. Within these "display cases", Koons has created an environment of almost complete cleanliness and order. The vacuum cleaners themselves are completely pristine, and each plexiglass surface is perfectly cleaned and polished. Nowhere are there fingerprints, dust, or any other signs of usage. Koons' pieces have the same effect on the viewer that Baudrillard has described the space program as having on the public. Koons, like NASA, has created a universe "purged of every threat to the senses, in a state of asepsis and weightlessness," a universe in which we are "fascinated by the maximization of norms and by the mastery of probability," whereas in contemporary social organization, "nothing will be left to chance".

Viewing this work gives us an intensified experience of the simulacrum. The vacuum cleaners seem not real but "hyperreal". They are totally pristine (divorced from the chance occurences of reality); they are presented serially (without original), where they inhabit a universe "strangely similar to the original", where "things are duplicated by their own scenario".

My own Two Cells with Conduit and Underground Chamber emphasizes the role of the model within the simulacrum. Baudrillard states that "simulation is characterized by a precession of the model, of all models around the merest fact". The simulacrum is a place "where the real is confused

with the model"; it is a "total universe of the norm", a "digital space", a "luminous field of the code". In my work, space is considered as just such a digital field in which are situated "cells" with simulated stucco texture from which flow irradiated "conduits". This space is akin to the simulated space of the videogame, of the microchip, and of the office tower - a space that is not a specific reality but rather a model of the "cellular space" on which "cyberneticized social exchange" is based, which "irradiates the social body with its operational circuits". Here is depicted a system in which buildings are "like columns in a statistical graph", a system whose image "has passed from the pyramid to the perforated card". Further, my paintings are executed with a variety of techniques lifted from the Hard-Edge and Colour-Field styles. For, within the simulacrum, "nostalgia, the fantasmal parodic rehabilitation of all lost referentials, alone remains". For me, those styles, used as a reference to an idea about abstraction and an ideology of technical advance, replace reference to the real.

But it is in Sherrie Levine's recent work that the simulacrum's fascination with nostalgia is the most specifically communicated. In her recent watercolors, Levine has dredged up, one by one, textbook examples of twentieth-century modernism. In works like After Stuart Davis, modernist geometry s emptied of all content except for nostalgia for modernist geometry. As content is negated, the act of production is purified. Levine has produced geometric works in which geometry again, as it was in formalism, has been severed from any signified. In Levine's work, production is shown as entering a phase of "aesthetic reduplication when expelling all content and finality, it becomes somehow abstract and non-figurative". Levine's work "expresses then the pure form of production ; it takes upon itself, as art, the value of a finality without purpose". To what extent does this work using geometric form retain its importance in light of the ideology-sensitive work being done today by artists who are decoding images from advertising, television, and the cinema ? While the analysis of themes in the mass media is no doubt significant, an ideological exploration of geometry can be still more so, for despite the profusion of media images in contemporary culture, geometric signs still remain the most ubiquitous and influential in our society. At almost every instant, we are confronted by countless geometrical signs, even in environments that are free of media signs.

Additionally, if we can still believe in the distinction between capital and labor, and manager and worker, it must be emphasized that while media signs are primarily aimed at the mass, at the consumer and the worker, it is geometric signs in the form of art, architecture, and statistical analyses that the managerial class reserves to communicate with itself. For artists to address that ideology is an act of self-criticism rather than condescension. Finally, there are a great many artists today who both shun the attempts to critique geometry and the media, and who seem convinced that through intuition, the subconscious, and the traditional means of oil painting, they can restore "life" to this lifeless world. Baudrillard describes this desperate effort:

"There is a proliferation of myths of origin and signs of reality; of second-hand truth, objectivity, and authenticity. There is an escalation of the true, of the lived experience; a resurrection of the figurative where the object and substance have disappeared". These artists, and the art they produce, fail to recognize the complexity of the transformations that have taken place within the social. And they are oblivious to the cost of the romantic return they advocate, which Baudrillard also sets forth : "If we are starting to dream again, today especially, of a world of sure signs, of a strong « symbolic order », make no mistake about it: this order has existed and it was that of a ferocious hierarchy, since transparency and cruelty for signs go together".

Notes

1. See Michael Halley, "Argo Sum", Diacritics, vol. 12, n°4 (Winter 1982).

2. See John Rajchman, "Foucault, or the Ends of Modernism", October 24 (Spring 1983), on the rift between early and later Foucault.

3. Michel Foucault, Discipline and Punish : the Birth of the Prison, trans. by Alan Sheridan. New York: Pantheon Books, 1977.

4. Jean Baudrillard, Simulations, trans. by Pal Foss, Paul Patton, and Philip Beitchman. Semiotext (e), Inc., Columbia University, New York, 1983.

5. The Writings of Robert Smithson, edited by Nancy Holt. New York: New York University Press, 1979.

6. Foucault, op. cit.

7. Ibid.

8. Baudrillard, op. cit. This, and all subsequent quotations, comes from Baudrillard, Simulations.

9. These two systems can also be seen as functioning simultaneously, with deterrence reserved for the middle classes while confinement continues to be the rule for the underclass, in both the industrial countries and the third world.

10. Several artists emerging around 1980 can be seen as seeking "sites" in the urban rather than in the "natural" environment. Fischer "installed" work at Bloomingdale's while at the same time Keith Haring was using "sites" in the New York subways.

Illustrations

Fig. 1. Frank Stella, *Nunca Passa Nada, 1964*. Metallic powder in acrylic emulsion on canvas. Dimentions: 9 x 18 feet. Private collection, courtesy of Leo Castelli Gallery, New York.

Fig. 2. Donald Judd, *Untitled, 1967*. Galvanized iron and green lacquer. 10 units; each 9 x 40 x 31 inches. Leo Castelli Gallery, New York.

Fig. 3. Robert Smithson, *Entropic Landscape, 1970*. Pencil on paper. Dimentions: 19 x 24 inches. John Weber Gallery, New York.

Fig. 4. Richard Serra, *Corner Prop, 1969*. Lead antimony. Dimentions: 105 x 25 x 60 inches. Leo Castelli Gallery, New York.

Fig. 5. Alice Aycock, *Untitled (Ramp Sculpture), 1978*. Wood. Dimentions: appoximately 8 x 8 x 8 feet. John Weber Gallery, New York.

Fig. 6. Robert Morris, *Untitled, 1961*. Steel. Dimensions: 9 units; each 36 x 36 x 36 inches. Solomon R. Guggenheim Museum, New York.

Fig. 7. Robert Morris, *Poster for Castelli-Sonnabend Gallery Exhibition, 1974*. Leo Castelli Gallery, New York.

Fig. 8. Robert Morris, *In the Realm of the Carceral - Places for the Solitary, 1978*. Ink on Paper. Dimensions: 45 x 33 3/4 inches. Leo Castelli Gallery, New York.

Fig. 9. Bernard Tschumi, *M24, The Block*. Pen and ink photographs on paper. Dimensions: 15 panels; each 18 x 3 inches.

Fig. 10. Lauren Ewing, *Auto-Plastique: The Prison, 1981*. Painted wood, megaphone, painted wall, graphic. Dimensions: Approximately 28 feet x 35 feet x 12 feet 11 inches.

FIg. 11. R. M. Fischer*, Half-Past Ten, 1982*, Mixed Media. Dimensions: 72 x 28 x 18 inches. Baskerville + Watson Gallery, New York.

Fig. 12. Jeff Koons, *New Wet/Dry Triple Decker, 1980*. Plexiglas, fluorescent light and vacuum cleaners. Dimensions: 124 x 28 x 28 inches. Photograph Courtesy of International with Monument, New York.

Fig. 13. Peter Halley, *Two Cells with Conduit and Underground Chamber, 1983*. Day-glo acrylic and Roll-a-tex on canvas. Dimensions: 70 x 80 inches. Sonnabend Gallery, New York.

Fig. 14. Sherrie Levine, *After Stuart Davis, 1983*. Watercolor on paper. Dimensions: 11 x 14 inches.