Art in America
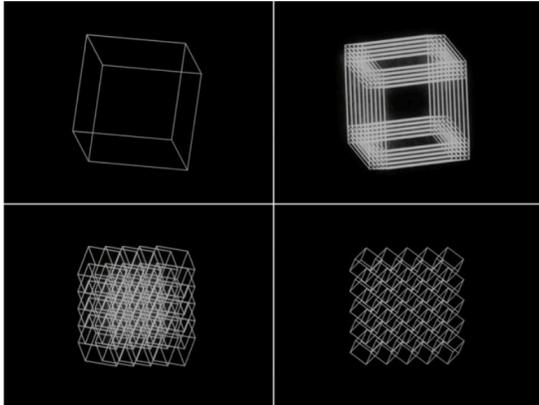
Surveying Manfred Mohr's Five-Decade Collaboration with the Computer

by Walker Downey

Manfred Mohr: Cubic Limit, 1973–74,

16mm film with digital transfer, 4 minutes; at bitforms.

"Manfred Mohr, A Formal Language" surveyed the five decades of work this foundational yet under-known computer artist has made since adopting algorithms as tools of artistic creation. Intermingling pieces from different phases of Mohr's career in a salon-style hang, the exhibition presented a dizzying array of strange geometries: densely plotted drawings tracking the tessellation of fractured cubes; shaped canvases and metal reliefs boasting brash angles; and planes of color delicately contorting themselves in computer-generated animations. At the center of the show, a vitrine bore a rich assortment of archival exhibition ephemera and worn programming manuals, indexing a career suspended between the space of the gallery and the glow of the screen.

Born in 1938 in Pforzheim, Germany, Mohr spent his teens and twenties occupied by jazz music before taking up painting in the early 1960s, shifting over the course of the decade from a loose, nervy style informed by Abstract Expressionism to one dominated by hard-edge glyphs evocative of technical iconography. Inspired in part by a 1967 lecture by pioneering computer musician Pierre Barbaud, Mohr soon began experimenting with the programming language FORTRAN IV, which allowed him to subject forms to automated transformations and randomize their appearance.

Because of Mohr's limited access to equipment, his first attempts found him plotting the computer-generated fruits of his algorithms by hand. He took steps toward a more expedient and reliable method in his breakthrough "P-018" series (1969), with the aid of a high-resolution light-beam plotter. This plotter could quickly register a range of forms derived from a single FORTRAN program on light-sensitive photo paper, offering Mohr a view of the computer's capacity for variation. For these works, four of which were included here, Mohr's algorithm used sets of line types and variables to stitch together circuitlike patterns. Subsequent series employed flatbed pen-plotters, in which mechanical arms move a pen over paper: in P-062-A (1970), nested, parallel curves are randomly arrayed on a polar coordinate system, the results, more refined than the aforementioned series, loosely suggesting tumbling leaves.

Since the mid-1970s, Mohr's work has largely revolved around the formal repertoires latent in the cube and its higher-dimensional analogue, the hypercube. In plotter drawings like P-201-25 (1977–78) and his "Divisibility" paintings and prints of the 1980s, Mohr orchestrates jarring collisions by projecting variable rotations of cubes into fixed quadrants, leaving them mangled and fragmented. In the "space.color" works of the late 1990s and early 2000s—which have taken the form of both inkjet prints on canvas and digital animations—diagonal paths weave deliriously between the nodes of six-dimensional cubes, which are translated into two dimensions and enlivened with uniquely determined color sets.

The forms seen in works like the 16mm film Cubic Limit (1973–74), in which a white cube is deli-

cately de- and recomposed on a flickering black ground, bear a striking resemblance to Sol LeWitt's Incomplete Open Cubes (1974). But while LeWitt believed that the artist's idea was "the machine that makes the art," Mohr grants the computer a quotient of creativity, locating the artistic "idea" in a give-and-take of agency between himself and a literal machine.

As this exhibition made clear, Mohr's work has remained focused on the computer as a source of generative formal parameters, shying away from any overt technological critique. Although the computer is no longer tainted in the public imagination by its military-industrial provenance, which cast a shadow over early computer art in the postwar years, the algorithm—the structural bedrock of Mohr's practice—has grown newly freighted in a media landscape plagued by the encoding of racial bias and the unwitting promotion of propaganda. That even Mohr's recent digital animations—in which custom software continually generates new permutations in real time—sit at a palpable distance from such concerns lent the exhibition an eerie, cloistered calm.