Manfred Mohr Plays The Machine, Turning Algorithms Into Visual Music

by Chris Newlove, December 4, 2012.

Manfred Mohr's first solo exhibition in the UK, *one and zero* at the Carroll / Fletcher gallery, gathers together works from over 40 years of the German-born, New York-based artist's practice. Influenced early in his career by the philosopher Max Bense and his call for a "rational aesthetic," Mohr abandoned the Abstract Expressionism mania of the time, turning to a systematic painting process, using set rules and restrictions to make abstract geometries in stark black and white.

These works from the late 1960s offer the appearance of rationality, but Mohr knew it was still his own subjectivity driving the aesthetic decisions. Rather than rational art, he says, he was painting "romantic geometry." To satisfy Bense's philosophy, there had to be rationality in all areas of the artistic activity, from conception to reception and through production and execution—logic imbued in each part of the process.

Mohr began using early computers and plotting machines to create intricate drawings, again based upon algorithms of his own devising. This technology was highly specialist at the time, expensive, unwieldy, and not available to the public, so Mohr struck a deal with the Meteorological Institute in Paris, allowing him to moonlight with their hardware outside of office hours. On these long nights a lifetime's professional relationship began, and Manfred Mohr had found his medium.

The plotting machine, or plotter, interprets the algorithmic script as simple operating commands—place pen on paper, lift pen from paper, move pen from here to there—turning a mathematical proposition into a drawing, what Mohr calls a "visual result." Setting the machine in motion is the only way to test the proof and see the work. Sometimes he'll tweak an algorithm to get a different outcome, applying an aesthete's eye. Other times he'll add a cadenza of sorts, freeing the procedure from deterministic predictability, giving space to chance within the limits of the proposition.

What's important is the visual result, the math and the machine are the means to that end. He invokes techno-sage Marshall McLuhan and the idea that machines are in our service, offering humanity a prosthetic extension of body and mind, making possible that which we cannot think or execute: "The wheel is an extension of the foot, the book is an extension of the eye; clothing an extension of the skin, electric circuitry, an extension of the central nervous system." says McLuhan. Computer processing is an extension of mind function, and allows Mohr to explore somewhat virgin conceptual territory for a visual artist: in his words, that which is "inconceivable, but computable."

The machine also produces a distinct visual quality, the plotter providing a character of line unlike print or human hand. There's a regularity to the distribution of ink, a severe flatness to the finished plane—the lines are evidently drawn, but such is the precision and purpose of the mark, with no clear beginning or end, point of entry or departure, that it appears as a trick of instant becoming.
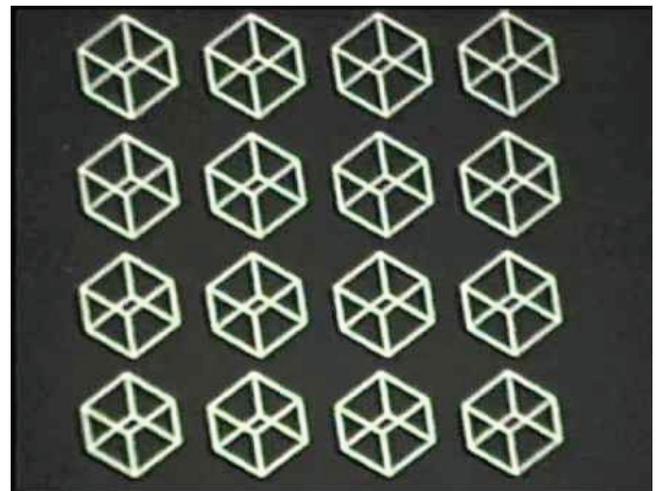

This completeness within each work acts in harmony with the mathematical process behind their making: a set of finite functions with a fixed eventual end, by definition an algorithm is always complete within itself. Despite there being a visual similarity between many of the plotter drawings—and later pieces also—the works don't allude to, or suggest, each other. It's a relationship, not a dependence. At the heart of this relationship is the cube, the familiar geometric shape that has been the artist's muse for the majority of his career.

A sax man in his youth, Mohr now refers to the cube as his "instrument," the algorithm his means by which to "play" it, and the result "visual music." Like a composer or player extemporizing upon a musical theme, he has expanded the materiality of his work, going back to painted canvas, using lacquered and painted laser cut steel, digital monitors and customized computers. While all the time, he's sculpting the script, finessing the code, adding aleatoric passages, making the computer meet his needs. One thinks of Steve Reich or Terry Riley, using tape loops and primitive electronics to explore rhythm and repetition, re-adopting traditional instruments when required, following the thought through the form.

Over time, Manfred Mohr has followed the cube into six and eleven dimensions—what are termed hyper-cubes—interrogating their structures and systems, the works resulting in two-dimensional expressions of these multi-dimensional objects.

To spend time in one and zero is really to spend time with the cube and its manifold aesthetic possibilities—to spend time with a philosophy that says art and expression can be converted into numerals and statistics. A philosophy Mohr has in many ways critiqued—and with the complex calculations that tie the two together. If anything, he has challenged the limits of objectivity, restoring some humanity to Bense's original mandate, while avoiding the creator-genius-man-myth so rampant across art history. And beyond the rationalist philosophy and esoteric mathematics, are striking and seductive art objects, abstract geometric images on paper, canvas, metal, and monitor, warmer than LeWitt, more rigorous than Riley—distinct visions of discipline and delight.

Manfred Mohr's 16mm computer generated film "Cubic Limit" is showing downstairs at the gallery

Manfred Mohr: one and zero
16 November – 20 December 2012
Carroll / Fletcher