Reticulations
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The increasing pervasiveness of the computer in contemporary culture is ushering in many new ways of thinking about the world. One of these emerging worldviews that is making a conspicuous appearance in the sciences involves a new conception of nature—one that holds as its basic premise the view that nature itself is a form of computation whose complex pattern formations are generated by sets of rules or instructions acting on an ever-changing field of environmental conditions. On all frontiers of contemporary science, from physics to biology to neuropsychology, computation is being used to simulate natural systems in an attempt to understand how nature is able to produce the immense diversity and sophistication of form we are all witness to in and around us.

Whether or not we are willing to accept that nature is in some sense like a computer (in that what we observe in the natural world is really a process of the registering and processing of bits of information), the prospect of arriving at a greater understanding of the way in which complexity and diversity arise is intriguing. One of the most surprising and interesting ideas in recent science has been the discovery that very simple programs involving only elementary logical operations (i.e., binary decisions) can and often do yield complex patterns. The intricacy of so many organic forms—from the elaborate structures of molecules to the dynamic flow patterns of fluids to the markings on seashells—would seem to require programs of great complexity to generate, yet computer simulations are revealing that such complexity can emerge by combining even extremely simple programs with the element of time (i.e., by way of a process of numerous iterations performed at unimaginable speeds).

My current series, collectively called Reticulations, is a visual and experiential exploration of these ideas. Because the electronic computer operates at speeds beyond the capacity of the human brain, and because my aim is essentially to reify the process by which pattern complexity emerges, I use instead of a computer my own faculties of computation and construction. Common to all pieces in the series is one basic configuration of 52 points, which when laid out on a grid measures approximately one inch by three inches. This basic set of points, created arbitrarily with no forethought as to what kinds of patterns it might ultimately yield, functions as a kind of primary building block the replication of which generates the pattern of each piece. The "programs" for the separate pieces vary, but the basic process remains essentially one of executing mathematical transformations (rotations and translations) of the same 52 points (here by way of physically puncturing the surface of the panel) until the entire picture plane is covered in the exact manner dictated by the program.

Time is an essential component of this process. Often it takes weeks of work before a recognizable pattern begins to appear amid the chaos of the punctures. As the pattern emerges, the surface of the panel is transformed from the dense field of innumerable individual points it had seemed to the beginnings of a coherent structure in which each point plays a specific role. In these patterns, the mechanical and the organic seem to converge and become something *other* than either one. The title of the series, Reticulations, alludes not just to the netlike structure that is common to all the patterns generated by this process but also to the idea of weaving together into a coherent whole things that might seem different, or even antithetical.