Proliferation: 1980–1989

The growing prominence of computers in daily life transformed work, the economy, and visions of society. In the 1970s, corporations began experimenting with the design of smaller personal computers built with rapid processing power and user-friendly visual interfaces. By the end of the 1980s, compact, smooth screens and windows dominated the information economy. Meanwhile computing technology increasingly hid the various types of labor needed to build and maintain its expanding global systems.

In 1989, the World Wide Web and a distributed Internet became available for public use, and the ways in which we communicate irrevocably changed. One year later, in the MoMA exhibition *Information Art: Diagramming Microchips*, the mapping of microprocessors illustrated how computing logics had become embedded among everyday necessities. Artists and designers, who had long responded to emergent technologies, continued to emphasize and analyze their impact. As many of them recognized, the computer had become our mirror.

Experimentation: 1960–1969

Throughout the 1960s, artists experimented with complex computation in order to expand the conventional boundaries of the work of art. Working with ideas central to cybernetics—an evolving discipline focused on patterns of communication and control—they defined artworks as productive systems instead of as objects. This led critics to worry that computational art was devoid of the expression and intellectual labor traditionally deemed central to artistic production.

Artists often gained access to large mainframe computers by cooperating with scientists at institutions and corporations. The works that resulted from these fruitful collaborations were presented in exhibitions like *The Machine as Seen at the End of the Mechanical Age* (1968), at The Museum of Modern Art. As that show's title acknowledged, an era was waning, as machines were being replaced by the black boxes that would come to define computation.

Transformation: 1970–1979

New media fueled the creation of alternative networks, designs for living, and Conceptual art practices throughout the 1970s. Realizing that the increased volume of precise outputs that could be produced using a computer afforded unique possibilities, artists exploited this emergent technology to confront the limitations of human productivity.

At the same time, systems thinking catalyzed artists and architects to approach drafting, weaving, and building with innovative techniques and at greater capacities. MoMA's exhibition *Information* (1970) captured how changes in communication systems affected ongoing debates about the presence and value of art in the world. However, the historical legacies of art produced with computers remained obscure.