

## **The Impact of the Work of Sonia Landy Sheridan**

Imagine the electric odyssey across space: forty years ago, an artist sends images of herself through time and distance without the use of traditional cameras, motor vehicles, or the postal system. One hand becomes four hands in the transmission, redoubled echoes of the original; one face becomes five, the expressions changing, all captured in revealing moments, collapsing time and space. The images are then printed as a tangible record of the process-intensive experiment. From hand to machine, and out to new territory altogether, Sonia Landy Sheridan embarked upon many such journeys, cultivating a new way of seeing for both scientists and contemporary artists. If Muybridge clarified through his rapid photographic sequences created in the 1870-80s the many intricate moments that constitute motion, Sheridan has similarly revealed to the next century of curious minds a variety of ways to think about time, materiality, and systems through her interpretation of the scientific imaginary in everyday culture. Over the last fifty years, the artist has continually investigated a range of concerns regarding scientific and subjective notions of the body, space, and time itself.

Though widely known for her early and sustained relationship with scientists working with duplication machines at companies such as 3M beginning in the early 1970s, Sheridan in fact explored several important trajectories in contemporary art. Historians have sometimes viewed her studio practice solely as a body of work engaged with novel media, as an investigation into science, or as an example of art and technology investigations. Certainly she did use diagrams, homography, and ordered sets to help carry out the rules of the “generative systems” she created (a work of art that is “generative” is based on a systematic method of production, from cut-up poetry to computer algorithms. Generative artworks are highly processed-based and often are informed by ideas from information theory or complexity science).

Yet from the wide range of work in her oeuvre, themes emerge that complicate any adequate label. To appreciate the impact of Sheridan’s work on artists currently experimenting with new media and emerging forms, it is important to identify the set of the conceptual concerns that drove her investigations. The interdisciplinary interests of

the artist predate her contemporaries in almost every thematic area in which she has worked. In the field now called “bio art,” Sheridan was drawing and painting genes and chromosomes as early as 1963 (*Chromosomes*; see also *Gene Strips* [1965]). In her notebooks, drawings of tools become time machines, colors become dimensional, and images challenge the notions of repetition, precision, and representation. To understand how radical this work was, note that the historian/artists Nelkin and Anker trace the influence of genetics on contemporary art only to the late 1980s and early 1990s in their influential essay in *Nature*. To their recognition of work such as Tony Cragg’s sculptural helix of teddy bears called *Code Noah* (1988) or Susan Anker’s *Zoosemiotics* (1993)—enlarged chromosomes that resemble ancient letterforms—we would of course have to add Sheridan’s much earlier investigations, significantly expanding upon or reconfiguring the “canon” of art/science couplings.

Artists are always reflecting cultural change and new developments, including (and perhaps, in particular) those of science. Leonardo da Vinci, for example, was working with detailed representations of the human body while the field of anatomy was just emerging. Scientific discoveries such as the atom, X-rays, and other hidden aspects of the everyday informed Kandinsky, Mondrian, and Duchamp (Nelkin and Anker, p. 967). Sheridan’s art frequently draws upon her own experience of changing scientific times. In her notebooks, scientific discoveries are reworked as colorful records of fantasy; time is documented as a set of simultaneities. Her notebooks are full of formulae and thought experiments that reference, or capture a vision of, a technological sensibility, especially the documentation aesthetics of scientific processes. Yet unlike artists of the era such as Agnes Martin, Eva Hesse, and Sol LeWitt—for whom abstraction, formulae, serial drawings, and the grid were conceptual forms for both categorization and exactitude—Sheridan uses those tools to expose the *living aspects*, the dynamic aspects, of a system, even one that is unfinished. For her, a grid is not just a structure for calculating combinations but a conceptual premise of ongoing experiments. It is useful to consider her practice, like Marcel Duchamp’s, as “laboratory work,” though it is delimited differently. Likewise, while LeWitt’s work is mathematical and conceptually deterministic (a visual prescriptive equation that is executed), Sheridan’s work cultivates colorful, energetic, organic systems that are simultaneously forgiving and generous—a

very different perspective from those conceptual artists who favored the geometry, form, and abstraction provided by the grid.

In this way, perhaps we can read Sheridan as an artist interested in systems containing anomalies—an anti-scientist, or at least a scientist whose search for anomalies defines the norm rather than forms a basis for exclusion. In her 1969 drawing *35 Houses* the artist plays with slight differences in the human mark-- the line created through drawing an iconic shape. In her serial permutations, these houses appear almost as variations on a species, doubly loaded with meaning as they offer possibilities rather than an encompassing taxonomy. She would remain fascinated with multiples, photocopying bodies and body parts (faces, hands) in works comprised of a series of images that integrated repetition and variability into their process as well as their content.

In her experimentation with “machinic replication,” Sheridan innovated by employing duplication machines as cameras, exploring their light sensitivity, color capacities, perspective, and material limitations. In this she predated the conceptual and material concerns of those in new media today who investigate process and the material of data. The technology itself was not new: the process called Xerography was invented in 1937 by Chester Carlson, who devised a copying process based on electrostatic energy. Even when Xerography became commercially widespread in 1950, it did not make its way into the typical American office until the late 1960s and early 1970s. At that point in Sheridan’s career, these systems devised in science and business inspire a demonstrable shift in her visual aesthetics and relational thinking. Others of her generation would also pursue the mending of the artist/scientist divide, including Lillian Schwartz (animator and researcher in color/visual perception at Bell Labs during the 1970s) and Billy Klüver (electrical engineer at Bell Laboratories who founded Experiments in Art and Technology [EAT]). In fact, Lillian Schwartz’s sophisticated early digital animation titled *Pixillation* (1970, with MOOG music by Ken Knowlton) reflects these pioneers’ blend of art and science in its examination of both biological and computational forms, though still in the name of what we know as classical time-based art. Sonia Landy Sheridan’s imaging processes related to all of these research trajectories, though they would result in perhaps more esoteric or even spiritual outcomes.

Clearly, the exciting experiments in transmitted art were central concerns for

Sheridan, and they remain so today for other artists using technology. In what is now termed telematic art—referring to the earliest forms of networked art—Roy Ascott and Carl Loeffler, among others, have been recognized as founders, but Sheridan’s early 1970s work with the Xerox telecopier predates them as well. A bit of context is necessary for understanding the implications of telematic work, which was anticipated by the series *Telephone Paintings* of Laszlo Moholy-Nagy (held by the Museum of Modern Art in New York). In 1922, the Moholy-Nagy used the telephone to order five paintings to be produced in porcelain enamel from a sign factory. This act interrogated the notion of artistic intent and reflected on the generation of art through technological mediation. This first occurrence of telecommunication-related art was executed with the artist drawing the paintings on graph paper utilizing the factory’s color chart, while the factory supervisor followed along on graph paper, taking down the dictated shapes in the proper coordinates. Thus, the images were never “touched” by the artist; artistic intention was communicated through technology into action (Moholy-Nagy quoted in Kaplan 1993, p. 165). Later, Carl Loeffler and the arts group La Mamelie in San Francisco introduced the idea of distributed or technological art, showing an exhibition of their Xeroxed work in 1976. Loeffler and Ascott (and the three satellite-driven distributed works that happened in 1977) are often presented as the next telematic artworks after Moholy-Nagy, but clearly Sheridan’s late 1960s–early 1970s occurs first. In 1980, Loeffler organized the “Artists’ Use of Telecommunications Conference” at the San Francisco Museum of Modern Art in 1980, following an important decade of work from Sheridan’s pioneering “Generative Systems academic program at the School of the Art Institute of Chicago (Sheridan 1990).

Certain works clearly indicate her significance to the movements that grew up around her. Her experiments with machines such as the Thermo-Fax in the late 1960s and early 1970s, which led to her position as the first artist-in-residence at 3M (at a time when such things were quite novel), moved beyond the uses of the copy machine or telecopier as capture devices and toward the transmissive possibilities of this technology. In her work *Process: Telecopier (Xerox) (Ric Puls Stretched in Time)* (1972), she recorded the sounds created during the transfer of an image from one Xerox telecopier,

and replayed them over another telecopier. Adjusting the volume meant that the image itself would be modified. Here, data aesthetics are manipulated by the more familiar relationships inherent in sound. These process-oriented works focused on the machine and artist collaboration in both the mediation of the work and the transmissible nature of an image into other forms of data (and vice versa). Systems artists, and in particular those involved in other commuted art forms such as mail art, use location, transmission, and time as an element of the work's meaning and significance. In Sheridan's world, things occupy more than one plane, and time acts as a kind of filter system for the other elements of the work. In this way, her work takes on aspects of concrete poetry, physically morphing things through time, decay, and reconstruction. The artist becomes an alchemist of sorts—what she is looking for is always a process of becoming. Another example of this is her work *Hand and Wrinkles, Number One* (1974), where the images are *not* made by a machine but still reflect and are informed by the aesthetic of the machine. Despite her sustained relationship with the engineers and scientists working at 3M, her process remained altogether different from theirs. In Sheridan's work, her inner landscape forms its own diagrams of scientific concepts. While scientists like to fix anomalies and have the machine do just as it is intended to do, Sheridan looked for gaps, errors, and oversights—things that could be done that were *unintended* by the designers. Such artists attempt to subvert the systems they use.

Exhibitions with her students, such as *Mail In Mail-Out* at Southern Illinois University, Carbondale, in 1970, pushed the boundaries of distributed and communicated arts (Kirkpatrick 1980). Sheridan always included her students in her groundbreaking imaging research, in her publications, and in many exhibitions; Martha Loving Orgain recalled her time in the Generative Systems program in the late 1970s: “Our first classes were in physics . . . HOW images can be made from pressure, heat, light, magnetics, electrostatics, and so on. We went back to making images by hand to understand the processes. THEN, and only then, came HOW the machines were constructed, what physical properties did what kinds of processes to have the ‘magical’ image come out in the tray. It was the first place I had been where the ‘process’ was stressed more than the ‘product’” (Orgain 2009).

The emphasis on time is a significant thread running from Sheridan's sketches

right through to her innovations in transmitted art. It is as though she were creating a map for us to trace the areas that have now emerged as disciplines, from physics—theories of time and space, string theory—to biology, with the exploration of age, the body, and genetics, to conceptual work that examines cloning and notions of the copy, to transmitted art between artist and viewer, to how artists do not merely engage with a tool but rather attempt a “machinic collaboration.” In such collaborations, Sheridan herself likes to explore how the rules of a given system play out, aligning her with conceptual artists working in performance and other forms of artistic expression that deemphasize the object. The range of work in Sheridan’s oeuvre, from watercolor, to sketch, to formula, to transmitted work, is astounding, but her conceptual threads and advancements in process-oriented art and her striking integration of scientific developments remain her most significant contributions.

Lastly we must take into account the context of the early 1970s for women artists. Even given the progressive politics of the time, it was hard for women artists working in the experimental arenas of technological art or video art to succeed. Women engaged in this level of technical and conceptual work were frequently overlooked by organizers of exhibitions and festivals, possibly because of the kinds of questions they were asking *with* their machines, and *of* their machines. As an example from a related field, in 1972, Joan Jonas created her video work *Vertical Roll*, deconstructing both the *representation* of the female body in the relatively novel form of video, and the *material* of video itself, with its inherent property of degradation. Other video artists at the time, such as Vito Acconci and Bruce Nauman, used video to center the work and on themselves, as historian Rosalind Krauss noted in her groundbreaking essay “Video: The Aesthetics of Narcissism.” At the time, women artists were also engaged in political work questioning the role of women. One central form that emerged was performance, which could engage with gender, societal norms, and social relationships. Judy Chicago and Carolee Schneemann created examples of such works, and they were decidedly different from those of their male counterparts.

For Sheridan, in the end, the machine was a collaborator or co-conspirator in her investigations, not merely a tool for a singular, egocentric artistic vision. The gap between scientific intention and lived reality proved to be fertile ground for the artist as

she went looking for systems to speak through their own accidents.

## **BIBLIOGRAPHY**

Orgain, Martha Loving. "Thinking with the Heart: Generative Art." 2009. Available online at <http://www.lovingcolor.org/id13.html>.

Nelkin, Dorothy, and Suzanne Anker. "The Influence of Genetics on Contemporary Art." *Nature Reviews Genetics* 3:12 (2002), pp. 967–72.

Kaplan, Louis. "The Telephone Paintings: Hanging up Moholy." *Leonardo* 1:2 (1993), pp. 165–68.

Kirkpatrick, Diane. "Sonia Landy Sheridan." *Woman's Art Journal* 1:1 (spring–summer 1980), pp. 56–59.

Krauss, Rosalind. "Video: The Aesthetics of Narcissism." *October* 1 (spring 1976), pp. 50–64.

Landy Sheridan, Sonia. "Mind/Senses/Hand: The Generative Systems Program at the Art Institute of Chicago, 1970–1980." *Leonardo* 23:2/3 (1990), pp. 175–81.