

Gillian Young
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Critical Information: Mapping the Intersection of Art & Technology

LeWitt and the Machine

This paper is part of a larger project which investigates how the artist Sol Lewitt--whose minimal structures and drawings are seemingly neither technological nor political--negotiated a politically-informed mode of artistic authorship at the turn of the information age. I focus specifically on LeWitt's wall drawings and will begin with a little background on this practice.

The text and images arranged on this slide represent three moments in the life of **Wall Drawing 85**, one of over 300 wall drawings produced by LeWitt from 1968 until his death in 2007. The drawing is based on the permutational plan written at the top of the slide:

A wall is divided into four horizontal parts. In the top row are four equal divisions, each with lines in a different direction. In the second row, six double combinations; in the third row, four triple combinations; in the bottom row, all four combinations superimposed.

LeWitt's plan is both a document that describes the wall drawing and a set of instructions for others to carry out at different points in time (LeWitt did not intend the drawings to be permanent, but painted over after exhibited). Here are two such incarnations of the work. On the left, a typical example of **Wall Drawing 85** executed in colored pencil by a team of draftspeople at MASS MoCA in 2008, and, on the right, a screenshot of LeWitt's instructions translated digitally through Processing code by the artist and programmer Casey Reas in 2004.

Reas' use of a computer to replace the physical process of drawing with Processing--a programming language he developed for interactive, visual renderings--evokes LeWitt's well-known statement published in his "Paragraphs on Conceptual Art" in Artforum in 1967 that "The

idea becomes a machine that makes the art.”¹ In so doing, Reas’ project leads us to questions that have yet to be raised in the scholarship on LeWitt: namely, how does LeWitt’s conceptual dictum that the idea becomes a machine that makes the art relate to developments in information technology and the flurry of activity combining art and engineering in the late 1960s? How do his wall drawings, which engage both the instruction-based **technology** of software and the embodied **techniques** of drawing (an essential aspect of the work elided in Reas’ digital project) enact LeWitt’s analogy of the machine? At stake in raising these questions is an understanding of how LeWitt negotiated authorship and control over the work of art in the age of information, as well as a recognition of the political nature of his practice.

Unlike other artists in New York at the time, such as John Cage, Robert Rauschenberg, and members of the Judson Dance Theater involved in the production of **9 Evenings: Theater and Engineering** in 1966 and the establishment of Experiments in Art and Technology (E.A.T.) the following year, LeWitt did not explicitly engage new technologies in his work. Not only did LeWitt avoid mixing new technologies with art making, he appears somewhat critical of this practice. As Edward Shanken has observed, in “Paragraphs on Conceptual Art,” LeWitt “described conceptual art as a quasi-mechanical process...Several paragraphs later, however, he warned that ‘new materials are one of the great afflictions of contemporary art.’”² “Some artists confuse new materials with new ideas,”³ LeWitt continued.

Rather than working with technological materials, LeWitt devised serial structures in order to position his idea as a machine that makes the art. As Alexander Alberro has described, “the serial method adopted by LeWitt involves a matrix principle of relationships established in

¹ Sol LeWitt, “Paragraphs on Conceptual Art,” *Conceptual Art: A Critical Anthology*, ed. Alexander Alberro and Blake Stimson (Cambridge: MIT Press, 1999) 12.

² Edward A. Shanken, “Art in the Information Age: Technology and Conceptual Art,” *Leonardo* Vol. 25 No. 4 (2002): 436.

³ LeWitt 15.

advance...All of the operations within the composition are then mechanically subjected to that principle.”⁴ In *Serial Project No. 1 (ABCD)* (1966), for example, LeWitt devised a system of four nine-part structures on a gridded base that exhausted the variations of open and closed cubes containing and exposing one another. Like many of his minimalist contemporaries, rather than crafting the structures himself, LeWitt dictated his plans through written instructions and diagrams to foundries.

LeWitt made his first wall drawing at the newly opened Paula Cooper Gallery in SoHo in October 1968. Using hard graphite sticks, LeWitt executed the drawing directly on the back wall of the gallery for Lucy Lippard’s exhibition to benefit the Student Mobilization Committee to End the War in Vietnam. The drawing consisted of two parts, each measuring four square feet. The two halves were quartered, and the resulting grid was filled-in according to LeWitt’s instructions: “lines in four directions, each in a quarter of a square.”⁵ Though LeWitt drafted this first wall drawing himself, he would eventually devise plans for others to carry out. Theoretically, the artist’s instructions could be interpreted by anyone with an available wall. Multiple iterations of drawings were typically sanctioned by LeWitt, however, and his plans performed by a trusted network of draftsmen.

Shortly before he executed *Wall Drawing 1*, LeWitt began exhibiting his serial structures in the Netherlands. The permutational concepts which gave rise to these works allowed LeWitt to have them fabricated overseas. As Liz Kotz notes, LeWitt’s wall drawings are haunted by an ambiguous distinction between the models “of performance instruction and production instruction,” between the “musical score” and the “minimalist model of the

⁴ Alexander Alberro, *Conceptual Art and the Politics of Publicity* (Cambridge: MIT Press, 2003) 35.

⁵ Qtd. in Julia Bryan-Wilson, *Art Workers: Radical Practice in the Vietnam Era* (Berkeley: University of California Press, 2009) 145.

fabrication order.”⁶ Chris Cobb, an artist who served as a draftsman for *Sol LeWitt: A Wall Drawing Retrospective* at MASS MoCA, describes the technical knowledge possessed by LeWitt’s assistants and the physical interpretation required by LeWitt’s plans:

When a visitor asks us what we’re doing, I explain how, despite our adherence to written-out, formulaic instructions, LeWitt’s wall drawings are “performed” as much as they are drawn to his specifications. I also tell them what Anthony, LeWitt’s draftsman of almost thirty years, told me with respect to #343: “Remember to draw, not to color in”...it’s often not enough to read the instructions or even to explain them--you have to be enacting them to understand.⁷

Here, LeWitt’s notion of the machine was mediated by the individual touches and decisions of the performers he enlisted and trained to carry out his ideas. In reconciling performance instruction with production instruction to erase markers of artistic expression, LeWitt developed tasklike, bodily techniques which, as others began to execute his drawings, he transmitted along with his algorithmic instructions.

In this small drawing by LeWitt from 1972, the artist applies his wall drawing method to the architecture of the printed page. The text is shot through with colored lines, which converge on and constellate the word “art.” The marks follow the artist’s instructions written at the bottom of the page: “From the word ‘art’: blue lines to 4 corners, green lines to 4 sides & red lines between the words.” Though as far as I can tell LeWitt never disclosed the source of the printed text, the discourse anchoring his drawing is suggestively relevant to the purposes of this paper. The drawing was executed on top of a page from a feature on “Art & Technology” published by the artist and critic Douglas M. Davis in the January-February issue of *Art in America* in 1968 (the year LeWitt made his first wall drawing). On this page Davis is reviewing *9 Evenings*:

⁶ Liz Kotz, *Words to be Looked At: Language in 1960s Art* (Cambridge: MIT Press, 2007) 193.

⁷ Cobb, Chris. “A Perfunctory Affair.” *The Believer* Vol. 6 No. 9 (Nov.-Dec. 2008) 29.

Theater and Engineering, a series of collaborative performances by artists and engineers organized by E.A.T. at the Park Avenue Armory in October 1966.

9 Evenings is considered both a landmark experimental production and a disastrous spectacle. The ten projects included a tennis match organized by Robert Rauschenberg in which Frank Stella played tennis pro Mimi Kanarek with contact microphone-equipped racquets; a dance instructed via Walkie Talkies by Yvonne Rainer; and auditory experience devised by John Cage, with over fifty sound sources connected to a sound system through communication bands, telephone lines, and microphones.

As Brian O’Doherty recalls, these intriguing, well-publicized collaborations “received, on the whole, an appalling press--based mainly on the justifiable irritation of interminable delays, technical failures of the most basic sort, and long dead spaces between--and sometimes in the middle of--pieces.”⁸ In spite of critical press and “irate engineers” in the audience, O’Doherty argues that “The focus of ‘Evenings’--and the standard by which they were judged--was a wrong one. Technology was played up far too much, a residue of the idealization of the machine.”⁹ The “avant-garde performing arts community,” O’Doherty suggests, was wrongly beholden to standards of machine performance that equated technological malfunction with artistic failure.

In contrast to this spectacle marked by misfires and grumblings from the audience, a 1968 Hewlett Packard advertisement for the “Computing Genie” exemplifies the ideal of post-industrial machine performance. “Ready to slash through long routines and come up with answers in milliseconds,” the advertisement reads: “Willing to take your programming commands in mathematical language. No computer language or programming specialist required...Able to be your fast, responsive mathematical servant.” As Wendy Chun has shown, in

⁸ Brian O’Doherty, “New York: 9 Armored Nights,” 9 Evenings Reconsidered: Art, Theater, and Engineering, 1966, ed. Catherine Morris (Cambridge: MIT List Visual Arts Center, 2006) 75.

⁹ O’Doherty 77.

the drive to “move programming from a craft to a standardized industrial practice,”¹⁰ bolstered in the late 1960s, human--specifically feminine--labor was phased out of programming and replaced by software engineering. The Genie is a machine that directly serves its user with instantaneous solutions and obviates the work of code specialists: human computers and margins of error are phased out as the phantasmic digital Genie takes the place of the performing body.

In his *Art in America* article that undergirds LeWitt's 1972 drawing, Douglas Davis celebrates the “new combine” of art and engineering and vindicates *9 Evenings* for exhibiting an ethic of play in relation to new technology. “The machine is endowing art with an element of play,” Davis writes,

For the machine offers the best of all roads away from the self and its inherent limitations. Let the computer then provide us with tables of random numbers, let random sound waves light our dance...The more independence we can cede the machine, from a Cagean point of view, the more interesting, indeed the more fun, art becomes, for it takes forms no earthbound ego might imagine.¹¹

Davis recasts the failure of *9 Evenings* as a radical form of play, rewiring instrumentality in the pursuit of a “completely nonfunctional moment” that mirrors Cage's repurposing of technology for aleatory effects. However, his call to cede independence to the machine also echoes the advertisement for the Computing Genie, and he collapses the idea of composition or concept as an automatic, independent machine into a celebration of computers and sound waves. His affirmation of artistic performance is coupled with an idealization of technological performance.

In his drawing *From the word art...*, LeWitt responds to Davis' call to play by meticulously re-scripting the latter's words into his set of instructions, reprogramming the article into artistic statement. The words “art” become nodes in a networked image that is the result of a

¹⁰ Wendy Chun, “On Software, or the Persistence of Visual Knowledge” *Grey Room* 18 (Winter 2005) 37.

¹¹ Douglas M. Davis, “Art & Technology,” *Art in America*. (Jan.-Feb. 1968) 46. Parentheses his.

contingent yet rule-based performance. This document which overlays Davis' text may be read as an alternative formulation of art and technology at the turn of the information age--one that is importantly bound up with LeWitt's wall drawing practice and his negotiation of artistic authorship in the age of information.

By avoiding the "new materials" of information technology, LeWitt's instruction-based wall drawings engage algorithmic, interactive principles of new media while avoiding both technological spectacle and machine performance standards. In contrast to the spectacular failures of *9 Evenings*, LeWitt's wall drawings recall the French etymological root of the term "performance": *parfournir*, which means to "furnish forth," "to 'complete,' or 'carry out thoroughly.'"¹² "The process is mechanical and should not be tampered with. It should run its course,"¹³ LeWitt wrote one year after publishing his statement that the idea becomes the machine that makes the art: suggesting that the machine was an unstable signifier at the turn of the information age: a metaphor that could hearken back to pre-automated, mechanical industry as well as gesture toward high-tech information processing. LeWitt's "mechanical process" refers to the machine fabrication of his structures, but also the reenactment of mechanical production through the strenuous, tasklike interpretation of his instructions for wall drawings. Each drawing becomes a duration: a time-based activity that matches program with process.

Against the speed of post-industrial society and the increasing automation of information systems, LeWitt invited contingency and individual touches into his ostensibly mechanical systems for making drawings. This interplay between contingent, individual marks and instructed, collective tasks developed into embodied techniques incarnate in a network of draftspeople. So while LeWitt's instruction-based work participates in the critique of

¹² See Diana Taylor, *The Archive and the Repertoire* (Durham: Duke University Press, 2003) 3.

¹³ Sol LeWitt, "Sentences on Conceptual Art," *Conceptual Art: A Critical Anthology*, 107.

performance and new media practices on traditional notions of the artist's hand and the stable art object, LeWitt delegates authorship in such a way that he could maintain authority and control over the distribution of his artwork.

Though it may have undercut the potential for the radical distribution and exhibition of his wall drawings, this measure authorship LeWitt maintained through embodied technique allowed him to leverage his art politically. It is no coincidence that LeWitt's first wall drawing was made for for Lippard's exhibition to benefit the Student Mobilization Committee to End the War in Vietnam in 1968. Since that time, LeWitt turned down numerous commissions from manufacturers who were involved in the production of armaments and withheld his work from politically dubious ownership and sponsorship. LeWitt vetoed the sale of a wall drawing to Chase Manhattan because of C.E.O. David Rockefeller's failure to honor the anti-apartheid boycott in, for example, and rejected United Technologies Corporation's offer of sponsorship for his wall drawing retrospective at the Wadsworth Atheneum in 1981.

In contrast to the Abstract Expressionists, who, as Eva Cockcroft cogently argued in 1978, "refused to recognize or accept their role as producers of a cultural commodity," "abdicat[ing] responsibility" as their work was became instrumentalized in American "enlightened cold war tactics" following World War II,¹⁴ LeWitt's manipulation of gesture through mechanical, tasklike technique had the two-fold effect of destabilizing traditional notions of the artist's hand and creative autonomy while maintaining control over the use and distribution of the artwork. At a 1969 hearing of the Art Workers Coalition here at SVA, LeWitt stated that "An artist should have the right to change or destroy any work of his as long as he

¹⁴ Eva Cockcroft, "Abstract Expressionism, Weapon of the Cold War," Francis Francina, ed., Pollock and After: The Critical Debate (New York: Harper & Row, 1985) 125-9.

lives.”¹⁵ Now that the artist is no longer with us, it is crucial to consider how LeWitt’s practice not only lends itself to technological reanimations such as Casey Reas’ project, but how it is bound up with his friend and critic Lucy Lippard’s observation that “It’s how you give and withhold your art that is political.”¹⁶

¹⁵ LeWitt 172.

¹⁶ Qtd. in Julia Bryan-Wilson, Art Workers (Berkeley: University of California Press, 2009) 118.