

Spring
Works THE PULL OF KINETICS II

at the
New York
Hall of Science

ACKNOWLEDGEMENTS

I would like to thank the New York Hall of Science, particularly Director of Public Programs & Special Events Marcia Rudy, for this opportunity to bring kinetic art to families, school children and general public from the metropolitan New York area. It is an important part of Art & Science Collaborations' mission to bring this type of art to non-traditional art-viewing audiences and unusual settings. I particularly enjoyed the challenge of creating a concept and floorplan for this extraordinary exhibition space. The Great Hall is truly a place of dynamism and magic which parallels that of the work exhibited, and which was an inspiration to several of the artists.

I would also like to acknowledge the participating artists for their creations. They had to take the constraints setup by 50,000 anticipated viewers and the huge scale of the room itself into their design and installation plans. Giving each of these artists an opportunity to expand through the creation of a new work for this site was a curatorial thrill.

I would especially like to thank artist, Flash Light, whose work, *Anubis Studies Genetic Engineering* was exhibited at the entrance to the exhibition. This electronic painting (images painted in oil pigments on fiberglass with programmed LED back-lighting) was displayed with its backface exposed through plexiglass revealing the "guts" of the artwork. Also mounted next to the work were: the *New York Times* article which inspired the work, a statement on Aesthetic Theory, Process Notes, a numbered Key labeling the locations of component parts of the work, and a Maintenance Manual. This piece was exhibited as a teaching piece offering unusual insight into the many processes this techno-artist takes from the original conception to the final printing of the Maintenance Manual. Flash's cooperation and candidness gives us all a greater appreciation through understanding.

- *Cynthia Pannucci*
Artistic Director
Art & Science Collaborations, Inc.

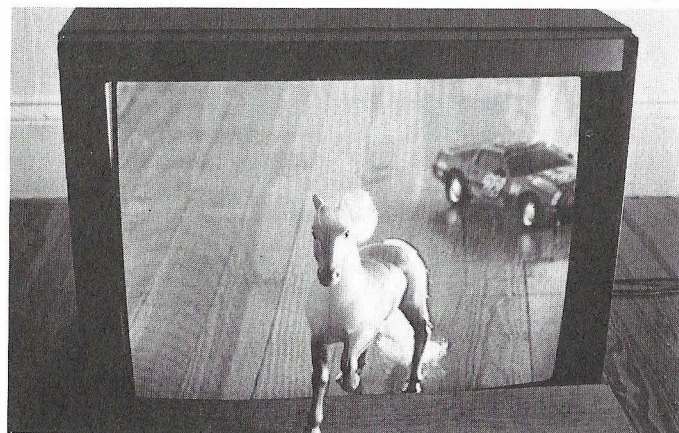
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INTRODUCTION

Why now, in the nineties, is it especially important to create and exhibit art that moves or is interactive? Perhaps it is that in this age of information and high technology, people have become increasingly detached from their physical sensibilities and intuition. In such a setting, the vitality, physicality and immediacy of kinetic art is both refreshing and needed. It is an egalitarian, humanizing form of expression, one that has a great potential to inspire the curiosity and imagination of our already over-stimulated public.



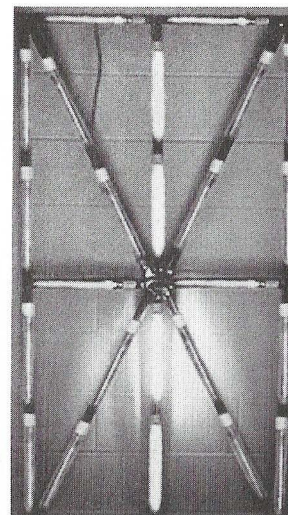
Detail, *Showtime*, Gil Rosen, 1993

In order for artists to create kinetic art, they must first understand and then effectively employ different aspects of various physical phenomena — gravity, magnetics, vortex, inertia, friction, balance, and evaporation, to name a few. After much experimentation (otherwise known as Research and Design), appropriate mechanisms and technologies are used by the artists as “new tools,” or as direct metaphors for communicating their particular vision. Whereas appearing and disappearing shapes and lights might be assigned more spiritual or cosmic meanings, the interruption of a cyclical path of a moving object, or the pointless repetition of an animated found object, comment directly on contemporary society.

Undeniably, much of the power of kinetic art lies in its motion. Where there is movement, there lies the possibility of anticipation, mystery, fear, excitement, growth, and surprise. Because it also can, and often does, incorporate elements of physical change, time, repetition, chance, chaos, and interaction, this art form can convey many layers of meaning. This “added dimension” is able to quickly trigger our stored sensorial memories, often creating a powerful impact.

It is this active rather than passive aspect of kinetic art which “pulls” its audience so universally, no matter what their age, gender, ethnic background or prior knowledge. The egalitarian accessibility of this art form in an age of increasing specialization, division, and alienation, is a definite advantage if we are serious about wanting art to remain a vital and necessary part of our society.

There may be an equally convincing reason for the accessibility of kinetic art — our society's long-term love/hate relationship with the machine. Since the industrial revolution, we have increasingly invited mechanical and technological “helpers” into our lives. We generally take them for granted, only recognizing our dependence on them when they are not working. And so begin our feelings of hate, frustration, and anger at these inanimate, utilitarian objects. Kinetic art is currently being used effectively by the Japanese to humanize and “put a friendly face” on technology. It seems that Western society has something to learn if we are to compete in



Detail, *Letter Box*, Kevin Daniel, 1993

the global market. The United States must eventually lose its well-documented fear of technology and welcome it with a positive, yet critical eye.

Education is an area in which the work of the artist/inventor can connect the fields of art and science in whimsical, mysterious and often unexpected ways. Kinetic art, even more than a photograph, diagram, or instructional video, holds great potential as a teaching tool for the physical sciences. One can encounter startling as well as subtle surprises that often seem magical, such as when a 2-dimensional surface looks like one can see around it, when forms and shapes metamorphose in front of your eyes, or when an artwork beckons the viewer to physically participate in order to complete the motion and the aesthetic intention. Once the viewer's imagination has been captured, there is a good chance he or she will ask the important questions of “how” and “why.” Activating a person's curiosity is the type of motivation for learning that lasts a lifetime.

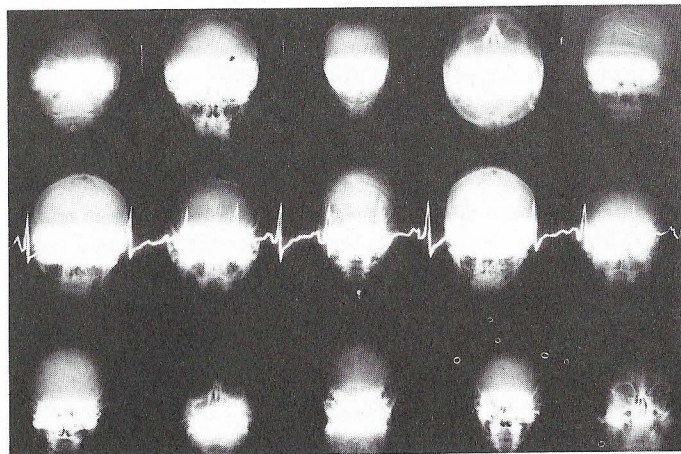
To fully appreciate kinetic art, the viewer must allow both body and mind to experience physical sensations — only then will the artworks' rich and varied meanings be revealed. Whatever you do, don't be afraid to feel the “pull.”

- Cynthia Pannucci, Curator

Spring Works

THE PULL OF KINETICS II

April 3 - May 2, 1993



Detail, *Recirculate*, Jeffrey Barron, 1993

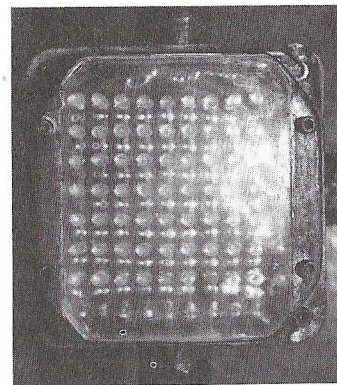
Long before Alexander Calder's brightly colored mobiles began spinning above museum-goers' heads, artists were fascinated with the subject of motion. In rendering the excitement of the hunt on a prehistoric cave wall, in capturing the billowing of a Catholic saint's windblown robe in solid marble, or in recreating the fleeting effects of sunlight on a canvas, artists have been united, across boundaries of space and time, in this common interest. Invariably, scientific and technological advances have provided a source

of inspiration and understanding – the Impressionists took their cue from new developments in the study of optics, while the Italian Futurists celebrated the speed and power of the motorcar.

As new technologies became increasingly available in the early twentieth century, modern artists shifted from simply representing motion to actually creating it. The year 1920 witnessed two important developments: Naum Gabo's *Kinetic Sculpture: Standing Wave*, a motorized, precisely vibrating metal rod, and Marcel Duchamp's impressive, inherently ironic *Rotary Glass Plate (Precision Optics)*, in which painted glass panes were set spinning by a motor, creating the simple illusion of a spiral, two-dimensional surface

that spoofed abstract painting. These two artists represent two dialectically opposed attitudes toward technology — celebratory and ironically critical — that have fueled the range of twentieth-century kinetic art. In the post-war period, these opposing attitudes prevailed in, for example, the bravura "lumino-dynamic" light spectacles of Nicholas Schöffer on the one hand, and on the other, the clanking, spluttering, self-destructing "machines" of Jean Tinguely. In today's post-industrial era of the microwave and the microchip, this modernist dialectic has spun into endless artistic permutations, ranging from nostalgic for an heroic, industrial age gone by, to enthusiasm for exploring the still largely untapped potential of computer technology.

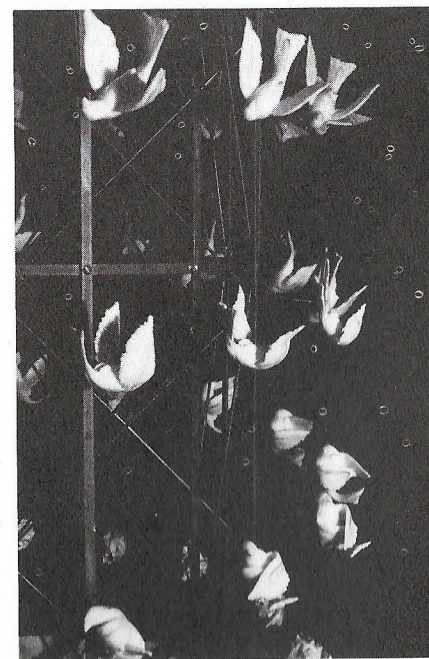
Although kinetic art has consistently played an important role in the context of twentieth-century art, it is often referred to by historians as merely an interesting footnote. This is due in large part to a persistent bias on the part of traditionalists, who dismiss the use of movement in art with such pejorative catch phrases as "novelty art" and "theatricality." Yet even the most open-minded art aficionado is likely to harbor a secret grudge against kinetic art, due mainly to lack of understanding. Fortunately, the arbitrary gap between kinetic and mainstream art is becoming increasingly obsolete. Some of the most significant artists of the past several decades have utilized motion as their primary medium—consider Nam June Paik's pioneering video installations, and Jenny Holzer's electronically conveyed messages. In the nineties, interactive art has become a



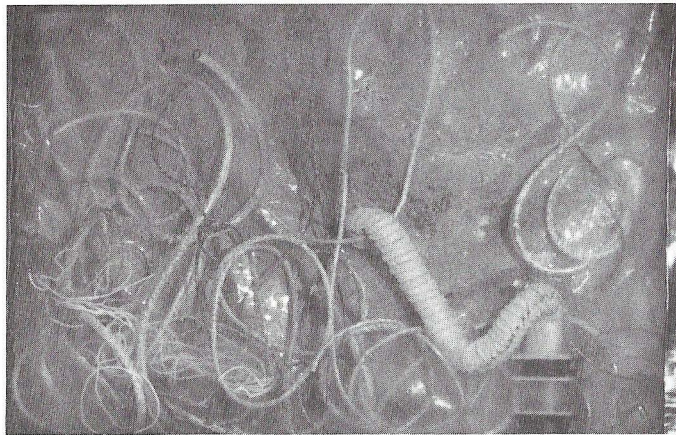
Detail, *Riddle*, Peter Terezakis, 1993

vital trend, placing kinetics firmly on the "cutting edge."

The sixteen artists participating in "SpringWorks '93: The Pull of Kinetics II," are therefore not emissaries of a distanced minority, but must be considered in the greater context of contemporary art. Representing a wide variety of aesthetic and conceptual concerns, they are linked by a commitment to motion and the use of technology. The types of motion represented here are many. Some works employ movement created by motorization, natural forces such as gravity and friction, or by the manipulation of a visitor. Others employ what is known as "virtual" or "optical"



Detail, *Pisa*, Gregory Barsamian, 1993

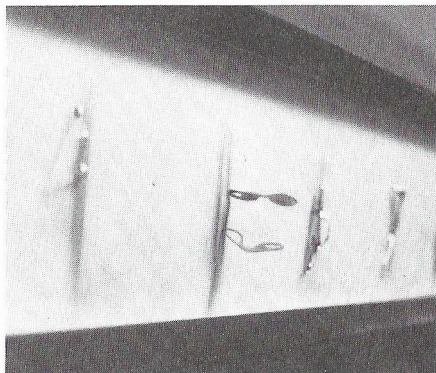


Detail, *Enclosing Landscape 2,3*,
Sara Garden Armstrong, 1993

movement ("Op"), in which static objects produce the illusion of motion — here the kinetic element is located in the viewer's own perceptual apparatus. A range of

technologies are in evidence: motors, experimental photographic techniques, sound and motion sensors, video, hydraulics, vacuums, and computers, among others. As one might expect, the questions raised by these artists are equally varied — some investigate the nature of vision itself, while others explore dream imagery. Some make serious social statements, while others seem preoccupied with play and whimsy. Yet one thing is for certain. More so than in any

midtown museum or Soho gallery, the artists in this exhibition invite viewers to become active participants, and even full-fledged collaborators in the creative process.

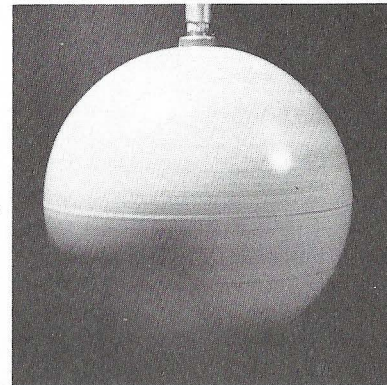


Detail, *Myomortem (I.g.)*,
Mary Ziegler, 1992

space on either side of a pathway that ends in the center of the Great Hall. Sydney Cash utilizes the principle of virtual movement in his patterned, double portrait entitled *Ivan and Elliot*. As the viewer moves past, the surface comes alive to the eye; this perceived

motion is due to the artist's use of the spectacular "moiré effect," created by the superimposition of multiple planes of patterned glass. Equally seductive to passersby is a raster barrier or three-dimensional photograph by Amy Fisch and Terry Maxedon, entitled *Public Communication Systems*. Initially drawing the viewer in with a vivid image of a red ribbon, the artists have added the familiar phrase "Silence Equals Death," thereby placing beauty in the service of raising AIDS awareness. Jo-Ann Castano also creates optical effects with her rotating, polarized sculpture *Bi-Light Dreams*, in which shapes swirl, disappear, and reappear between two circular pieces of a special, light-sensitive film. These mutating forms are actually pieces of light-refracting plastic that take on a variety of shapes and colors, effects that may be further enhanced by looking through a portable piece of film — each viewing experience is thus totally unique.

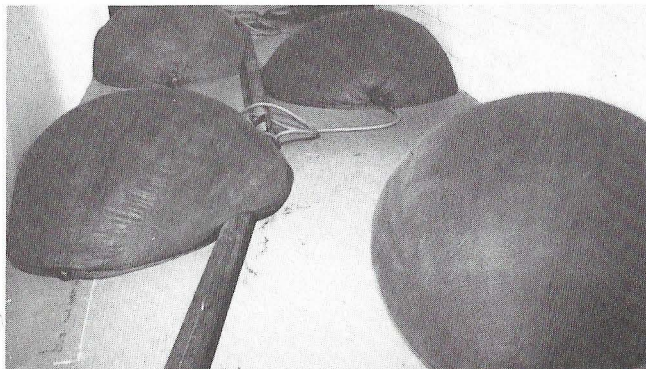
Both Jeffrey Barron and Sara Garden Armstrong use movement to create ambiguous metaphors. Armstrong's *Enclosing Landscape 2,3*, features drooping configurations of pulp-covered tubing and paper, eerily set into motion by fans. This organic-looking tableau might allude to either the human body or to the environment.



Detail, *Untitled Pieces*,
Ward Shelley, 1993

The body is the subject of Barron's *Recirculate*, which features illuminated, translucent X-rays. Embalming fluid stored in an adjacent tank is pumped by tubing through the X-rays, and back into the tank again. Not limited to the subject of death, Barron's work, which is an organism of sorts, cleverly plays with the ideas of regeneration and immortality.

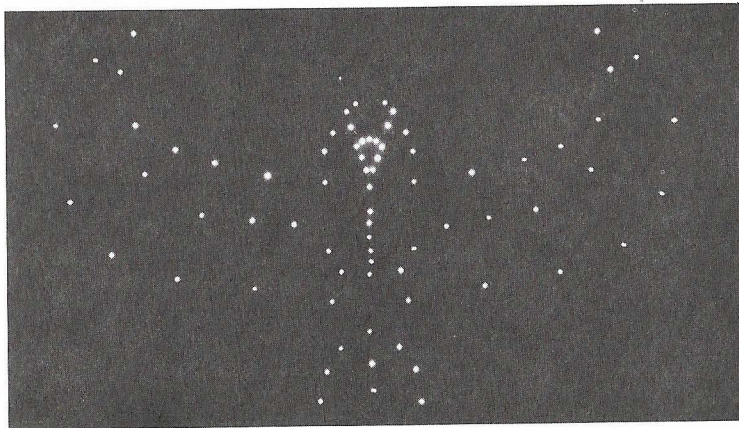
In *Riddle*, Peter Terezakis combines traditional sculptural media, such as steel, with computer technology in the form of programmed Light Emitting Diodes or L.E.D.s. In his work, these small, light-giving dots are activated by sound, blinking in response to the viewer's voice. By creating a user-friendly format, Terezakis deftly humanizes technology that can often seem inaccessible. Another artist who uses L.E.D.s is Flash Light. His playful *Anubis Studies Genetic Engineering*, on display at the entrance to the exhibition, is "animated" from behind by patterns of L.E.D.s that not only help convey a narrative, but which are also "icons" in his metaphysical lexicon.



Detail, *Untitled*,
Robert Chambers, 1993

For the lightbox format, Flash Light has created an exquisite, computer-generated light symphony that follows the principle of "lumia," which is the idea that light may be composed much the way music is. Finally, in *Letter Box*, Kevin Daniel uses computer technology to explore the way we perceive

language. By flashing the letters of the alphabet at varying speeds, Daniel invites us to reflect on the nature of something that is generally taken for granted. The investigatory nature of these computer works provocatively blurs the traditional boundary between art and science.

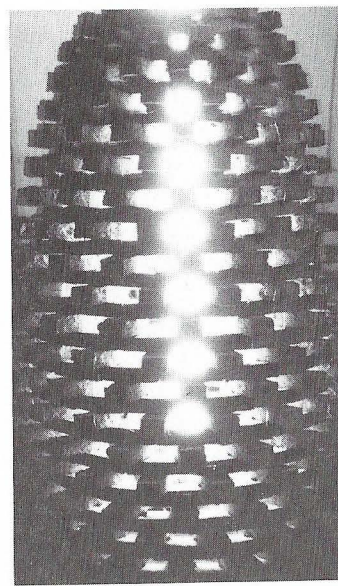


Detail, *Horus-Ibeben Reified*
Flash Light, 1993

Situated along the serpentine walls of the Great Hall are eight separate artworks representing a range of sensibilities. Dadaist wit is alive and well in the works of both Mary Ziegler and Ward Shelley. In Ziegler's *Myomortem (Ig)*, a horizontally stretched band of latex is the scene of a magical, quirky dance of thousands of tiny pieces of metal. Hidden from view behind the latex, motor-propelled magnets move up and down, lifting and then dropping the metal fragments in a Sisyphean exercise that is never predictable, effectively satirizing the repetitive and often pointless nature of our daily activities. Equally humorous and richly metaphoric is the mechanized environment by Shelley in which a variety of familiar household objects are

transformed by intermittent motion into strange, lurching creatures. A world globe spins above a lumbering barrel, while small appliances appear to dance with each other, or to nod to the viewer. If Ziegler and Shelley represent the spirit of Dada, then Tim Watkins is a Surrealist. In *The Dance*, a mechanized lotus form opens up to receive a dangling pod, which is lowered from the ceiling. This playful, obliquely sexual action lights up a number of surrounding, biomorphic objects, sending them into a whimsical ballet that is amazing to behold.

The installations by Robert Chambers and David Shapiro each incorporate viewer participation in a dramatic way. Cascading down the eighty-five-foot wall of one of the Great Hall's dramatic bays is Chambers' pseudo-organic cluster of inflatable "bladders" made of neoprene, fed by heavy industrial tubing. By means of a control panel, one may alternately inflate and deflate the bladders, or jiggle them at varying speeds. At the helm of this technological spectacle, the



Detail, *The Dance*,
Tim Watkins, 1993

viewer/participant is, if temporarily, both empowered and physically grounded — something that is rare in the art context. A similar bodily grounding is operative in Shapiro's *Flying Machine*, a marvelous cross between a Leonardo da Vinci sketch and a unit of exercise equipment. One is encouraged to sit and flap a set of wings repeatedly,

thereby getting a workout while being ironically trapped in a poignant metaphor for bodily transcendence.

Somewhat higher-tech are the video installations by Nancy Meli Walker and Gil Rosen. By placing ten televisions within a giant, mirror-studded "eye" configuration in *Blue Windows*, Walker both literally and figuratively returns the

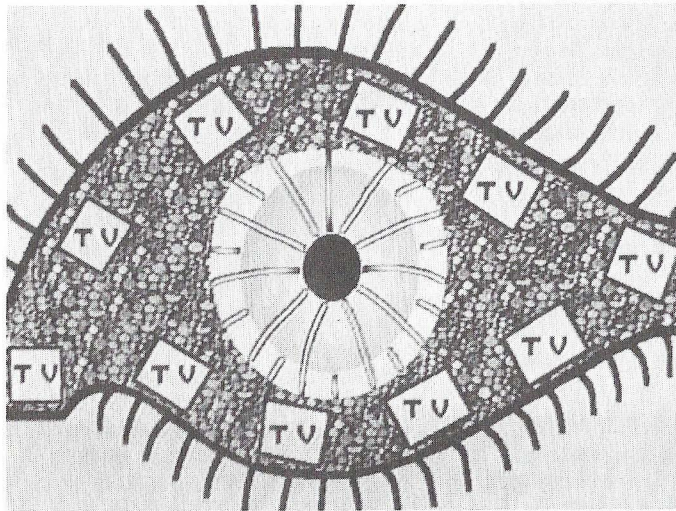


Detail, *Public Communication System*, Fisch/Maxedon, 1993

viewer's gaze. By playing continuous video scenes of urban life, the countryside, and cartoons that have all been colored blue by a computer process, the artist asks us to experience the world through a unified "window," if only for a while. *Showtime*, Rosen's provocative combination of freestanding T.V. monitors with kitsch dolls,

is a playful critique of television's seamless illusionism. Perched on the edge of one upturned screen is a tiny porcelain fisherman, whose apparent "reflection" is actually created by a deceptive video image of water. Rosen ruptures this illusion by means of subtle clues, warning us of the smoke-and-mirrors effects that fool us every day. Gregory Barsamian

offers a similar critique of visual seduction in his dizzying, baroque *Pisa*. Using cinema technology, he offers an animated narrative that traces the descent and dream-like metamorphosis of a hypothetically discarded book, an effect created by endlessly spinning, strobe-lit objects. At once deceptive and revelatory, this work is a sophisticated exegesis on the nature of visibility.

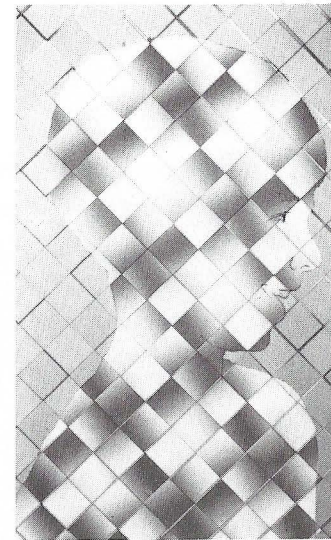


Sketch for *Blue Windows*,
Nancy Meli Walker, 1993

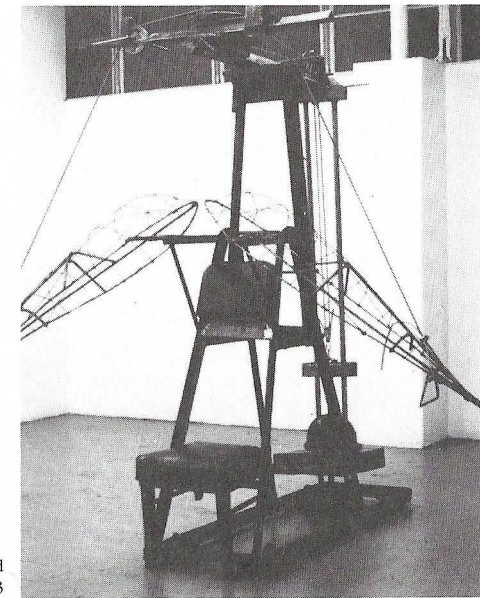
SpringWorks '93: The Pull of Kinetics II brings together disparate works of art that are nevertheless linked by the common denominator of kinetics. Seen in such a dramatic setting, they create a complete environment that is literally alive. While they engage some weighty issues and make a strong case for the viability of kinetic art in the contemporary scene, they are also fun to experience on a very basic level. Each one of the sixteen artists that comprise this exhibition stands with one foot firmly planted in science and the other in art, proving that when intelligently brought together, each of these disciplines is immeasurably enriched.

— *Jenifer P. Borum*

Jenifer P. Borum is a free-lance writer living in New York, who contributes regularly to *Artforum*.



Detail, *Ivan and Elliot*,
Sydney Cash, 1993



Detail, *Flying Machine*, David
Shapiro, 1993

EXHIBITING ARTISTS

Robert Chambers, New York, NY

"This installation is an interactive work in which the viewer experiments with a control panel that activates various functions within the installation. This and past works reflect my interest in experiential phenomena as well as the intersection of social and technological concerns."

Untitled, 1993, installation 85'x 16'x23'

Materials: Neoprene atmospheric testing bladders, latex hose, high tensile cable, power blowers and vacuums, pneumatic diaphragm pump, variable speed motors, repeat cycle relays, proximity switch, distribution timer switch, electrical control and distribution hardware, valves, acoustical convoluted foam, aluminum.

Technologies: Control switching devices, repeat cycle relays, cyclonic airflow system, vacuum deflation system, reciprocating motor motion system.

Selected Exhibitions:

- 1992 "The Gift", Dooley Lecapelaine Gallery, NYC
- "Six Sculptors", Long Island University, Brooklyn, NY
- "The Pull of Kinetics", Snug Harbor Cultural Center, Staten Island, NY
- "Inside an Idea", Hunter College, NYC
- "Morality Cafe", Postmasters Gallery, NYC
- 1991 Solo Exhibition, Sculpture Center, NYC
- "New York Diary", P.S.I, LIC, NY
- 1990 "Emerging Sculptors", Sculpture Center, NYC
- Socrates Sculpture Park, LIC, NYC
- 1988 "South Florida Seven", North Miami Museum, Miami, FL

Nancy Meli Walker, Brooklyn, NY

"We look through many windows in our daily life, but is each person really seeing the same view? Yes and no... There are many different cultures in the world, all with different views on life."

Blue Windows, 1993, installation 22'9"x10'6" x 3"

Materials: TV monitors, VCRs, blue mirrored glass, wood, rubber tubing.

Technologies: Video processing done with Amiga computer using Video Toaster and a programmable frame grabber.

Selected Exhibitions:

- 1992 Group Show, Snug Harbor Cultural Center, Staten Island, NY
- Solo Show, Fred/Alan-Chauncey Street Gallery, NYC
- 1991 Annual Group Show, Sculpture Center, NYC
- 1990 Seibu Loft Department Store, Tokyo, Japan
- 1988 Solo Show, Gallery Q, Ginza, Tokyo, Japan
- "Tokyo Transmission '88", Seibu Yurakucho Department Store, Tokyo, Japan
- 1987 Solo Show, Seibu Seed Department Store, Tokyo "Panorama", Tokyo, Japan

Gil Rosen, Brooklyn, NY

"The combination of video monitors with found or self-made objects within a directly controlled environment, reoccurs in my work of the last few years.

In addition to the images I create and their associative properties, I like to think of my work in terms of "Physical Television". By "Physical Television", I mean that there are processes, such as reflection, association, camouflage, and simulation which seem to be part of the way in which we experience and criticize cultural products. The attempt to physically realize such concepts, while using the medium of television, which is often received as an autonomous narrative, floating in the space of our living room, can be experienced as both awkward and seductive. I would welcome such an experience, as I believe that there is beauty in the mutation from the familiar and functional into the 'twisted' and 'unnatural'."

Showtime, 1993, installation 15'x6'x4'

Materials: VCRs with auto replay mode, TV monitors, plastic Dolls, custom-made electronic relay system, spot lights.

Technologies: Amiga computer with DiGi Paint program.

Exhibition:

- 1992 Group Show, lol Wooster, NYC.

Ward Shelley, New York, NY

"My sculpture includes active elements, mechanical or electronic technology. I am interested in the psychological and interpretive situations they produce... my work often looks at the pathos that pushes out between the cracks of culture and the black humor suggested by our final smallness."

Untitled Pieces, 1993, installation 10'x6'x10'

Materials: Copy machine, vacuum cleaner, ceiling fan, cafeteria trays, clocks, bicycle, globe, oil drum, zip cord, miscellaneous salvaged motors and scrap, vinyl rain drain, repeat cycle timer, gear motor, canvas webbing, markers, steel stock.

Technologies: Geared-down electric motors and mechanical linkages which drive blowers, shift centers of gravity, and create reciprocating and rotating motions.

Selected Exhibitions:

- 1992 "Selections, Southern Sculpture", Woodruff Art Center, Atlanta, GA
- Group Show, Muranushi Lederman, NYC
- Sculpture Show, New Gallery, University of Miami, FL
- 1991 Solo Show, Metro Dade Cultural Resource Center, Miami, FL
- Group Show, AC/Project Room, NYC
- Group Show, Stetson University, DeLand, FL
- "Southeastern Invitational", Museum of Art, Ft.Lauderdale, FL
- "Totem", Boca Raton Museum of Art, FL
- 1990 Solo Show, Olaf Clasen Gallery, NYC

David Shapiro, New York, NY

"We cannot endure the limitations of the human condition. Body language speaks volumes of coerced truth and conditioned image; of the blurred lines between exercise and torture; labor and repression."

Flying Machine, 1992, 9'x 14"x 8'

Materials: Found objects, pulleys, motors, button housings from electric hoists, metal cable, steel.

Technologies: An interactive sculpture utilizing pulleys, weights and the scientific principles of gravity and resistance.

Selected Exhibitions:

- 1993 "Out of Town: The Williamsburg Paradigm", The Krannert Art Museum, Kinkead Pavillion, University of Illinois, Urbana, Champaign, IL
- 1992 "Friends Indeed" (benefit) Bill Bace Gallery, NYC
- Solo Show, Herron Test-Site, Brooklyn, NY
- "The Temporal Image", S. S. White Bldg, Philadelphia, PA
- "The Salon of the Mating Spiders", Herron Test-Site, Brooklyn, NY
- 1991 "Lotto Diary", Hunter Galleries, Hunter College, NYC
- "Tweeking the Human", Minor Injury, Brooklyn, NY
- Group Exhibition, Momenta Gallery, Philadelphia, PA
- 1990 "Reconfiguring Bodies Reconceiving Selves", Hunter College Gallery, NYC
- 1989 "Gas Station: Look Back, Look Forward", Ward-Nasse Gallery, NYC
- 1988 "Garage Sale", The Gas Station, NYC

Mary Ziegler, Brooklyn, NY

"When I watch, I see life as a spectacle of balance, pitting intellect against gut, faith against knowledge and order against entropy. To walk these thin lines, we create an incredible array of systems... my metaphors are mechanized, based on the principle of these opposites."

Myomortem (Lg.), 1992, 10'x24"x29"

Materials: Electric motor, magnets, wood, latex rubber, steel wire.

Technologies: Motor-driven rotation; magnetism and friction.

Selected Exhibitions:

- 1993 "The Nature of the Machine", Chicago Cultural Center, IL
- "The Illusionists", John Michael Kohler Arts Center, Sheboygan, WI
- 1992 "The Music and Art Convergence", Germans Van Eck Gallery, NYC
- "The Pull of Kinetics", Snug Harbor Cultural Center, NYC
- "The Wall Project", The Sculpture Center, NYC
- 1991 "Mechanika", The Contemporary Arts Center, Cincinnati, OH
- "Why Did the Abstract Expressionist Cross the Road? (Highs and Lows in Contemporary Art, Bess Cutler Gallery, Santa Monica, CA
- 1990 "E-Motion", Ihara Ludens Gallery, NYC
- "Four Sculptors", The Sculpture Center, NYC
- "Tensions", The Rotunda Gallery, Brooklyn, NY

Gregory Barsamian, Brooklyn, NY

"For the past four years I have been working with three dimensional animation. Strobe lights are synchronized to revolving sequences of objects and confront the viewer with a series of rapidly changing images which the mind transforms into the illusion of motion or metamorphosis."

Pisa, 1993, 9'x5' diameter

Materials: Steel, motor, books, buckets, polyurethane foam rubber, paint, strobe light, electronics.

Technologies: Mold-making and casting; motorized, rotating armature; synchronized strobe light and the scientific principle of persistence of vision.

Selected Exhibitions:

- 1993 "In out of the Cold", Center for the Arts, Yerba Buena Gardens, San Francisco, CA
- "Montage '93", Visual Studies Workshop, Rochester, NY
- "The Illusionists", John Michael Kohler Arts Center, Sheboygan, WI
- "Images du Futur", La Cite des Arts et des Nouvelles Technologies de Montreal, Quebec, Canada
- 1992 "Music-Art Convergence", Germans van Eck Gallery, NYC
- "Beyond Glory", Maryland Institute, Baltimore, MD
- "Persistence of Vision", solo show, Nelson Arts Center, Arizona State University, Tempe, AZ
- 1991 "Animation, Dreams and Machines", solo show, BACA Downtown, Brooklyn, NY

"Behind the Iris", solo show, Bess Cutler Gallery, NYC

"The New Excentricity: Sculpture", Bess Cutler Gallery, NYC

Tim Watkins, Brooklyn, NY

"*The Dance* is a piece that celebrates the poetry of life and sexuality in a very whimsical and fanciful way. It is meant to entertain as well as inspire."

The Dance, 1993, installation 20'x20'

Materials: Expanded aluminum mesh, dacron, steel rod, lights, recycled newspapers, motors.

Technologies: Lever and spring action, reel and relay action and some forms of lighting.

Selected Exhibitions:

- 1992 "Last Stand", Solo Show, Lynwood Arts Center, Simcoe, Ontario, Canada
- "Last Stand", Solo Show, Glenhyrst Art Gallery, Brantford, Ontario, Canada
- "The Pull of Kinetics", Snug Harbor Cultural Center, NYC
- "China June 4th", Cleveland Art Institute, OH
- "Free Floating Ideas", Sculpture Walk, Prospect Park, NYC
- 1991 "The Last Stand", Solo Show, Petrosino Square, NYC
- "Metall and Licht '91", Handwerkskammer Koblenz, Germany
- "Matter Over Mind", Fermi Lab, Chicago, IL
- 1990 "The Dreaming", Solo Show, Mercer Union, Toronto, Canada
- "China June 4th", P.S.1, Long Island City, NY

Jeffrey Barron, Brooklyn, NY

"Arising from a series of works entitled "FUNERARIA SERIES", this work is based upon two disparate yet interconnected themes...one of preservation and rejuvenation and another of mourning and spiritual longing. The age-old vision of immortality... through preservation has long been a source of fascination and intrigue for me."

Recirculate, 1993, 63"x 41"x 5"

Materials: Fluorescent light fixture, x-rays, embalming fluids & dyes, polyethylene tubing, submersible circulating pump, plexiglas tank, various mixed-media elements.

Technologies: Re-circulating pump system and fluorescent lighting.

Selected Exhibitions:

- 1992 "Book, Box, Word", North Miami Center for Contemporary Art
- "The Gift", Dooley Le Cappellaine Gallery, NYC
- "Salon of the Mating Spiders" Herron Test-Site, Brooklyn, NY
- "One Hundred Under One Thousand", Estok/Lanza Fine Art, NYC
- 1991 "Barron, Carr, LaRiviere", Bill Bace Gallery, NYC
- "Artists At Home", Bill Bace Gallery, NYC
- 1990 "Hot and Cold" Pyramid Gallery, NYC
- 1989 "Duality and the Artistic Ego", 55 Mercer Gallery, NYC

Peter Terezakis, New York, NY

"Through the use of electronic sensors and associated circuitry, I imbue my works with an abstract electronic life... Like the viewer, some pieces are sensitive to changes in temperature, sound, light, touch, or human presence. Others combine one or more of these stimuli to initiate transformation while some live out their lives independent of external influences."

Riddle, 1993, 63"x 41"x 5"

Materials: Steel, copper, silicone polymers, light emitting diodes, analog to digital converter, microphone, amplifier.

Technologies: Electronics

Selected Exhibitions:

- 1992 "The Pull of Kinetics", Snug Harbor Cultural Center, Staten Island, NY
- 1990 "New Works", Susan Schreiber Fine Art, NYC
- "Small Works", Susan Schreiber Fine Art, NYC
- "The New Romantics", Archetype Gallery, NYC
- "Individual Style", Dan Broder Gallery, NYC
- 1989 "Summer Selections", Susan Schreiber Fine Art, NYC
- 1988 "Real Democracy", White Columns, NYC
- "Metal Alternatives", Archetype Gallery, NYC

Sydney Cash, Marlboro, NY

"My work is again in flux. The newest incarnations are optic-kinetic portraits... I believe that the kinetic patterns reveal an aspect of our fin de siècle experience. The hyper-kineticism of today's world needs to be seen, pierced, and reinterpreted through the artist's eyes."

Ivan and Elliot, 1993, 63"x 41"x 5"

Materials: Plate glass, epoxy inks, silicone, adhesives.

Technologies: Laser plotter, silkscreen, sand-blasting on glass; utilizes the principle of moire patterns and stereoscopic light.

Selected Exhibitions:

- 1993 Carpe Diem Gallery, Paris, France (solo show)
- 1992 Heller Gallery, NYC (solo show)
- Museo Rufino Tamayo, Mexico D.F.
- "Design Visions", Art Gallery of Western Australia, Perth
- "Computer Age Fine Art", Williams Gallery, Princeton, NJ
- "The Pull of Kinetics", Snug Harbor Gallery, Staten Island, NY
- "Contemporary Art NIKI", Tokyo, Japan
- 1991 Judy Youens Gallery, (solo show), Houston, TX
- "Le Verre: International Exposition" Rouen, France
- "ELArt: Electric Art Exposition", Retretti Art Centre, Finland
- "International Glass Biennial of Biot", Leger Museum, France
- "The Emerging Expression Biennial", Bronx Museum, NYC

Flash Light, New York, NY

"The Meta-Kinetic movement asserts that artists will continue to use energy as a medium for the next 10,000 years, just as they have used pigments for the last 10,000 years... Meta-Kinetic offers a vision of science in communion with the natural/spiritual world rather than science used to oppose it."

Horus-theben Reified, 1993, 63"x 41"x 5"

Materials: LEDs, digital circuits, formica and steel.

Technologies: Digital circuitry, software written by the artist, and Lumia (the term coined by Thomas Wilfred to describe the principle of using images the way musicians use sound), and Lumia Scale (unique to this artist's work).

Selected Exhibitions:

- 1992 "Issue of Choice", Los Angeles Contemporary Exhibitions, CA
- "Choice Histories: Framing Abortion", Artist's Space, NYC
- "The Pull of Kinetics", Snug Harbor Cultural Center, NYC
- 1991 "Tweeking the Human", Minor Injury/Brand Name Damages, Brooklyn, NY
- 1990 "Nature and the Machine", Hastings on the Hudson, NY
- 1988 "Attack Art", Stockwell Gallery, NYC
- 1985 "The Gathering of the Avant-Garde, 1948-1970", Kenkeleba Gallery and Henry Street Settlement
- 1984 "The David Bermant Collection: Color, Light, Motion", The Wadsworth Atheneum, Hartford, CT

Fisch/Maxedon, New York, NY

"Our backgrounds are in painting and sculpture, but we share a strong interest in new technologies and our collaborative work has evolved accordingly. Lenticular photography is a unique technology, rarely used for artwork. The photographs are shot in our studio using a specialized camera system we designed and built."

Public Communication Systems, 1993, 41"x51"x5"

Materials: Wood, fluorescent light fixtures, color Duratrans, kodalith, plexiglass.

Technologies: Specialized camera system built by artists, photography, scientific principle of raster barrier optics and back-lighting.

Selected Exhibitions:

- 1993 "Images du Futur", La Cite des Arts et des Nouvelles Technologies de Montreal, Quebec, Canada
- "Montage '93", Visual Studies Workshop, Rochester, NY
- 1992 Group Show, Limner Gallery, NYC
- "Contemporary Still Life", Limner Gallery, NYC
- "Small Works Show", 80 Washington Square East Galleries, NYC
- 1990 "In a Different Light", Gallery 7, Providence, R.I.
- 1989 Collaborative Project with Do While Studio, Boston, MA
- Group Show, Wenniger Graphics, Provincetown, MA
- "New Work, New Technology", Skylight Gallery, Boston, MA
- "3D: A Look in Depth", Boston Museum of Science, MA

Sara Garden Armstrong, New York, NY

"This work is part of a long investigation into the structures and process of living things, the relationship of the organic to the man-made, and the meaning of life in the age of modern technology."

Enclosing Landscape 2.3, 1993, 63"x41"x5"

Materials: Aluminum, lead, sandblasted plexiglass, vinyl tubing, abaca paper pulp, pigments and rust, silicon forms, optical lens, LEDs, EPROM, industrial fans, air blower, motion sensor.

Technologies: LED sequencing by EPROM, blower/vacuum air moving systems, and optical principles of reflection, refraction, diffusion and distortion.

Selected Exhibitions:

- 1992 Group Show, Istvan Kiralay Museum, Szekasfechevar, Hungary
- Group Show, Feszek Club Gallery, Budapest, Hungary
- "At the Intersection of Cinema & Books", Granary Books Gallery, NYC
- "American Art Since 1992", CB's 313 Gallery, NYC
- 1991 "Third Emerging Expression Biennial", Bronx Museum, NYC
- "Books as Art", Boca Raton Museum of Art, Boca Raton, FL
- 1990 "Airplayer XII", Solo Show, Souyun Yi Gallery, NYC
- "Multiples", Nexus and Chastain Galleries, Atlanta, GA
- "Four/Site", Philadelphia Art Alliance, Philadelphia, PA
- 1988 "Airplayer X", Solo Show, Souyun Yi Gallery, NYC

Jo-Ann Castano, Gloucester MA

"Polarized kinetic sculpture is a result of scientific innovation. My work links traditions of color and form with the application of new materials. Light, motion, bi-refracting plastics and polarizing films allow me to explore the forms, the imagery and the ambiguities of the visual dimension. When I carve into stone or cut into light, it becomes one in the same."

Bi-Light Dreams, 1993, 40"x 41"x13"

Materials: MDF fiberboard, acrylic laminated linear Polarizer, clear bi-refracting plastics, plexiglass, rotating disk, idlers, motor, circular fluorescent lamps.

Technologies: Back-lighting, polarized filtration of light, bi-refracting of light and rotating disk system.

Selected Exhibitions:

- 1992 Hynes Auditorium, Represented by Polaroid Corp., Boston, MA
- "The Pull of Kinetics", Sung Harbor Cultural Center, NYC
- 1991 Invitational, Silvermine Galleries, New Canaan, CT
- "EBAC 4th Annual Arts Festival", E.Bridgewater, MA
- 1987 Group Show, Montserrat College of Art Gallery, Beverly, MA
- 1984 Group Show, Printworks, Madison, CT

Kevin Daniel, Troy, NY

"As a sculptor, I am interested in several issues: persistence of vision, language as a serial event, and the written alphabet as a series of individual icons... *Letter Box* acts as a set of blinders, forcing the viewer to deal with the history of the text stream in order to decode it's content."

Letter Box, 1993, 63"x 41"x 5"

Materials: Steel, incandescent tube lamps, solid state relays, industrial relay controller, portable IBM-compatible computer.

Technologies: Light sequencing and switching system controlled by portable computer; software written by artist in BASIC; electronically controlled relays and switches.

Selected Exhibitions:

- 1991 Solo Exhibition, Vertical Gallery, Rensselaer Polytechnic Institute, Troy, NY
- 1990 MFA Thesis Exhibition, Art Institute of Chicago, IL
- "Built on Sound", Betty Rymer Gallery, Art Institute of Chicago, IL
- "Chips Off a New Block", Art Institute of Chicago, IL
- "Graphics Interface '90", Anna Leonowens Gallery, Nova Scotia College of Art and Design, Brunswick, Nova Scotia
- 1989 "Exchange:Cranbrook/SAIC", Cranbrook Art Museum, Bloomfield Hills, MI
- "The Eighth Annual Festival of Short Video Artworks, Seattle, WA
- "Field/Frame", Art Institute of Chicago, IL

Art & Science Collaborations, Inc.

A national, non-profit, members organization based in New York City. Art & Science Collaborations' mission is to champion interactive, kinetic and technology-based or science-inspired artwork and to encourage collaborations between the art and science communities. To receive information materials and newsletter, send a SASE: Art & Science Collaborations, Inc., P.O. Box 040496, Staten Island, NY 10304 or call: (718) 816-9796.