MULTISCREEN MUSIC

The Video Installations of Steina Vasulka

By Gene Youngblood

For Steina Vasulka, who began her life in art as a violinist, the different channels of image and sound in multiscreen video are equivalent to musical polyphony, each functioning like a voice in a musical ensemble. This is an artform she pioneered a quarter of a century ago, and from the beginning she approached it as would a composer. Think of the installations in this exhibition as quartets and a trio in which Steina plays on the visual equivalents of timbre, texture, rhythm, and tone. Her compositional strategies include recording scenes with her camera upside down, or with two cameras, or with camera movement controlled by computer or by manual remote-control devices. She slows down the images, reverses their direction, flips them left-right, mirrors them electronically and physically (with mirrored surfaces both spherical and flat, static and in motion). Each channel of image and sound is edited to integrate with the others in an audiovisual point/counterpoint organized around duration, interval, rhythm, repetition, and series.

PYROGLYPHS

Steina grew up in primordial Iceland surrounded by that terrible beauty which philosophers call the Sublime. The Aurora Borealis haunted the heavens above her family home. From her window she could see erupting volcanoes, and she could walk up to rivers of flowing lava. *Pyroglyphs* draws on the psychic imprint of that fevered landscape in Steina's youth. The video was recorded at the shop of Santa Fe metalsmith Tom Joyce, with whom she shares "an alchemical understanding of fire, as a medium of transmutation." There she recorded the activities of blacksmithing (manipulating fire, hammering, filing, welding, compressing, cooling), the phenomenology of fire (flames, sparks, smoke, combustions, glowing metals), and various improvised scenes -- a vise crushing a timber, a stack of books burning, paper and wood being scorched, plastic melting, a blowtorch held under water.

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segment about food, beginning with the vertiginous fisheye lens in a supermarket; and an emotionally charged meta-choreography of a dance troupe's performance and curtain call. Sometimes one screen is the melody in this quartet and the others are accompaniment, then another screen takes the lead. In one compositional strategy Steina begins by assembling a long single channel segment which represents the "melody" or what she calls the "ground track." She makes three copies of it and inserts new images into each channel as accompaniment. Sometimes she records the ground track in reverse motion, which, in her musical terminology, "breaks the line" (the linear progression) and makes it easier to start inserting other images. She often works on all four channels simultaneously, using timecode to bring them forward synchronously. They don't always have the same edit at the same point, but, like a musical canon, they progress simultaneously toward a unified conclusion. The scenes are flipped, reversed, and played at slightly different speeds before converging at the same speed. These strategies are especially effective in the final movement when the female dancer is bowing. Franz Lehar's *Gold and Silver Waltz*, which the dancers used in their performance, would be merely sentimental without the repetitions of Steina's visual matrix, which makes the spectacle both exotic and poignant.

VOCALIZATIONS

Since 1970 Steina has used sounds from live musical performances to modulate or deform video imagery in real time. Often the sound is her violin; in the case of *Vocalizations* it was the voice of experimental vocalist Joan La Barbara in a live multimedia performance with Steina in 1986. By singing, La Barbara created video "key" patterns on monitors on the stage. A video key is a figure, shape, or pattern that divides the screen into that which is inside and that which is outside of the shape; different images can be inserted electronically into the two areas. In *Vocalizations* there are two kinds of key patterns: five horizontal lines suggesting a musical staff, and fleeting irregular shapes and patterns that come and go with the fluctuations of La

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Barbara's voice. The bluish stream inside the staff is actually a lava flow in Iceland; outside (in the "background") is the New Mexico landscape seen from a helicopter and a moving car.

Three videotape machines were used in the performance -- two playing the scene described above and a third to record the results of combining them. In real time, the waveforms of La Barbara's voice were electronically deformed and used as key patterns for breaking up the landscape. Different patterns were generated depending on whether she sang harmonically or made sharp, raspy, or guttural sounds. After the performance, Steina slowed the tape considerably and transformed La Barbara's voice into something at once human and nonhuman. The result is a lush and painterly opera in which leaping, fluttering shapes -- now birdlike, now like flames, now like leaves or a hundred crescent moons -- dart and sweep across bands of textured color.

PTOLEMY

Composed in 1987, Ptolemy belongs to the ongoing project Steina calls Machine Vision, in which she explores camera viewpoints and movements that are beyond human capacity and control. The piece is named after the second century Greek astronomer who believed Earth was the center of a flat disc-shaped universe. Amused by how wrong Ptolemy was, Steina treats her Santa Fe studio as the center of a polychronic, polytopic, and polyphonic universe that is spectacularly and often hilariously decentered. *Ptolemy* is organized into six sections of increasing complexity that I shall call *movements with variations*. The structural paradigm is a kind of musical canon that falls apart -- identical voices, cycles, and repetitions, shifted in time and space, that chase each other but never quite converge as a true canon should. Steina's dizzy universe is at once synchronous and asynchronous, symmetrical and asymmetrical, centered and decentered.

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The first movement is the simplest: a slow 360-degree pan around Steina's studio, first in one direction, then in different directions on different screens. Then the camera begins rotating on the depth axis as the pan continues, first on one screen then another until all are rotating as they pan, but in different directions, as if they are rolling into each other. The screens are synchronized so that the rotating camera sees the same scene as the non-rotating camera. In contrast, the second movement is like a canon on amphetamines. Steina is swinging and jerking the hand-held camera around her studio with a humorous manic urgency, like a paranoid voyeur. The camera is connected to a sound synthesizer so that its movements generate sounds: the artist and her camera become a musical instrument, and her camera-dance a musical performance.

In the third movement the camera rushes nose-down across gravel, grass, and dirt in Steina's yard, lurching forward in staccato spurts, as if it were the subjective point of view of some cybernetic beast tracking blood spores. This manic run ends inside Steina's kitchen. The stuttering effect was produced by a computer program that freezes the motion every few frames; because the camera was moving rapidly the interlaced "fields" that comprise each video frame are not identical and they beat against each other in a jittering visual staccato when the frame is frozen; when this is repeated every few frames, the result (in this case) is a streaky textural blur, like a kind of fur. Displaced in time, the chasing screens stutter both between and within themselves.

In the fourth movement three mirrorized spheres are positioned in various ways on a turntable; their rotations are recorded by two video cameras mounted side by side on a remote-controlled platform that can be made to turn right and left, panning the cameras back and forth in parallel. Each camera records on a separate video recorder. The distance between the cameras, which see parallel views of the spheres, was precisely calculated so that when the two tapes were played back on adjacent monitors, the spheres would appear to move from one monitor to the next. Steina composed three variations with this

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arrangement. In the first two, the three spheres are aligned on a crossbar at the end of the turntable arm. The views of the two cameras alternate between wide angle and closeup as the spheres move out of the view of one camera and into the view of the other. Sometimes a camera sees only the room and then a sphere moves into the frame. At first the cameras are static, then they begin panning back and forth, chasing the spheres. In the third variation, the spheres are centered on the turntable so that the two outer spheres circle around the middle one like planets around the sun. The four screens begin with the spheres moving in the same direction, then one moves in the opposite direction, then another and another, producing a matrix of counter-rotations. A single camera records this in closeup and wide-angle; its own image is reflected in the mirrored spheres, reproducing an early moment of cinematic reflexivity in Fernand Leger's 1929 cubist film *Ballet Mechanique*. Steina's camera is so close that the outer spheres graze its lens, making a sound that she has slowed down and altered in pitch. Invisible edits change the direction of the rotating spheres, the number of spheres, the number of cameras, their lens settngs, and whether they move or not.

The fifth movement begins with a rectangular mirror tilting serenely forward and back, then all hell breaks loose: the camera, mounted on a remote-controlled platform, begins panning and tilting around the space in frenzied geometric bursts. Again the camera is connected to a sound synthesizer so that Steina's control of it becomes a musical performance. The same tape plays on all four screens but each is shifted in time from the others by two ~~seconds~~ frames, so that the images chase each other like a hyperkinetic deck of cards while the camera's automatic focus, confused by the constantly changing depth of field, pumps hysterically in and out.

The subject of Ptolemy's sixth movement is a robot camera head designed and built by Steina's husband, the video artist Woody Vasulka. This deliberately massive device is driven by a computer-controlled stepper motor that can target any point on a spherical surface, smoothly executing commands like "tilt up 20 degrees, stop, pan left one-fourth of a second, stop, rotate 180 degrees, stop, reverse direction one-half second," and so on. Steina ran the program four times, making four videotapes from the robot's point of view; she also recorded each run with an external camera, generating four more tapes of the machine going through its moves. The idea was to alternate between views of the robot and views taken by it -- a cybernetic translation of the reflexive scene in Dziga Vertov's Constructivist masterpiece *Man With A Movie Camera (1929)*, in which Vertov alternated between an external view of his "Kinoks" filming a scene and their camera-view of that scene. But Steina went one step further: she altered slightly the starting angle or position of the robot camera for each run, so that it executes the same moves but sees slightly different views. She also changed the angle and position of the external camera each time, and occasionally zoomed in and out. Thus the eight views are synchronized in time by the computer program but visually they are not the same. The four screens move forward with a kind of skewed synchronicity, like a musical canon and jazz combined, rhythmic yet arhythmic. The dissonance of the whining, screaming motor is matched by an uncanny visual dissonance set against the tick-tock logic of the swiveling robot. At first the four screens display a wide angle view of the robot, then one screen is a medium view, another a closeup, another zooms. One screen switches to what the robot sees, then another and another until all four display swirling, vertiginous robot-eye-views of the floor and ceiling of Steina's studio, the epicenter of her endlessly creative universe.

Steina found that the images were similar or dissimilar in compatible ways but the sounds were often too similar or too strident, competing for attention. So sound determined the structure of this three-screen "trio." Only a few of the scenes are visually synchronized because the sounds of each are so dominant; there is often at least one quiet scene that provides background "filler" for the louder images. Steina processed the sounds through a digital harmonizer (which couldn't turn the random noises into harmonics, but produced interesting sounds anyway); a pitch shifter that moves sounds to the octave immediately above or below; and echo circuits. The sounds and rhythms are rendered *allegro con brio, pianoforte,* or *pianissimo*: there's a lot of percussive hammering, say, or thunderous rocket-like roaring, then all is quiet and we hear only crackling flame or the hollow whisper of the blowtorch.

Pyroglyphs is a spectacular meditation on fire. Steina has created a Sublime landscape illumined by the many-hued glow of fevered metals and showers of sparkling scintilla. Among the more mystical images are a blowtorch held underwater, played backward in slow motion; smoke that looks like milk; white-hot forms like nuclear isotopes; plastic melting into the image of a flaming vagina; the forge hallucinating a swarm of hellish fireflies. There is a devilish seduction here: Steina makes us feel the hypnotic pull of lambent flames even as our breath is caught by the preemptive ignition of the torch, our hearts quickened by the violence of the forge.

TOKYO FOUR

The four channels of *Tokyo Four* were culled from sixty hours of video Steina shot in Tokyo between November 1987 and May 1988 on a fellowship from the US/Japan Friendship Commission. The sixth multiscreen composition in her career, *Tokyo Four* is organized around five categories of imagery: Shinto priests meticulously grooming their Zen garden on New Year's Eve; train conductors monitoring rush hour crowds; elevator girls bringing a superfluous but charming High Touch to the high tech world of the shopping malls as they remind passengers to watch their umbrellas and not forget their children; a

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