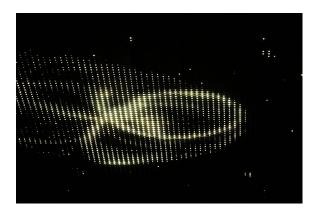
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BLACK HOLES AND RESOLUTIONS: LEO VILLAREAL'S COSMOS AT THE JOHNSON MUSEUM



It's a luminous Wednesday morning, and 30 feet below a constellation of 12,000 light-emitting diodes (LEDs) on the ceiling of the Johnson Museum's Mallin Sculpture Court, New York-based artist Leo Villareal is unhurriedly addressing questions from journalists. Villareal's characteristic generosity and composure are deceptive; he has spent several strenuous weeks on site with his team to get the technical details right for Cosmos, an installation two years in the making. In the meantime, he's also had to attend to other projects. In a few days, he is due to unveil Buckyball, a Carbon-60 molecule crafted from 180 LED tubes, at Madison Square Park in New York City. Hive, a tessellation of sanguine-colored light reminiscent of a honeycomb, recently opened at the rejuvenated Bleecker Street Station in Manhattan. The Bay Lights, a 1.8-mile long installation of 25,000 LEDs spanning the San Francisco Bay Bridge, is set to open next year to mark the 75th anniversary of the iconic bridge.

Cosmos appears industrial by day and celestial by night. In the morning glare, the installation looks like a maze of intersecting railroad tracks, held together by silver studs. In the evening, light migrates — it ripples, drifts, sashays and pulses — across the grid in randomized sequences.

Though computer-driven, these glittering sequences are "life-like." And that is precisely Villareal's goal.

"Organic" is a term that frequently surfaces in Villareal's descriptions of his art. His art respects the site, yet adds something to it. At the Johnson Museum, Villareal's work enhances space. The meditative flows of light mesh with the hushed nighttime bustle of the Arts Quad and Libe Slope. Cosmos compels passers-by to stargaze and consider the infinite. There is no clear beginning or end to the light patterns. This is deliberate, for Villareal does not want any viewer to feel anxious that he or she might have missed something by coming at a certain time, or by looking at the installation from a specific place. Villareal's work is about being there. Every time and position is right, and every viewer has a unique, complete experience of the work.

The road to Cosmos has been arduous but exciting. Villareal and project architect Walter Smith, alongside sponsors Lisa and Richard Baker '88, selected the site on a visit to the Johnson in 2010. Two years later, the stars have finally aligned. To a diverse crowd at Milstein Hall Auditorium on Monday, Villareal delivered a brief history of his work and philosophy. As a sculptor trained at Yale and New York University's Tisch School of the Arts, Villareal is fascinated by how computer programming allows him to manipulate the basic laws of physics to create complex works. A simple process — a point moving along a grid meets a boundary, and then something happens — that, when multiplied, can become something incredibly intricate.

Villareal is no stranger to the cosmic. Encountering the work of minimalist artists Dan Flavin (perhaps best known for Monuments to V. Tatlin, his series of sculptures made of fluorescent light tubes) and James Turrell revolutionized Villareal's work, imbuing it with a extraterrestrial and earthbound simultaneously character. In particular, visiting Roden Crater with Turrell taught Villareal that art could be stripped down and still remain potent (the trip was also memorable for Turrell's amusement with Villareal's fisheve camera). Roden Crater is an extinct volcanic cinder cone near the Grand Canyon. Inspired by splendid, sacred monuments of the ancient world like Borobudur and Machu Picchu, Turrell purchased Roden Crater in 1977, and set about shaping the site into an observatory into which light could flow, and about which visitors could wander.

Activating space through the play of light has since become a key theme of Villareal's work. This preoccupation is evident in Cosmos. At the National Gallery of Art in Washington, D.C., which, like the Johnson, was designed by I.M. Pei, Villareal's work resolves problems of space. The ambitiously-titled Multiverse, an installation of 41,000 LEDs, completes the "unresolved" passageway connecting the East and West buildings. The symbolism (at least some of it) is not hard to unravel. Visitors quite literally travel from one epoch to another as they leave the museum's classical and ancient collections and enter the modern and contemporary galleries. Evoking flight through space, Multiverse provides a fitting and stunning backdrop to this zone of circulation. Four years after its unveiling, Multiverse still remains a popular and enthralling photo stop for museum visitors.

On Monday, when asked if he has ever used sensors in his work, such that the light can respond to the people who encounter the work, Villareal replied that there are already sensors in his work; the artist is the sensor. Supercluster, a 2004 installation of undulating light patterns at the PS1 Contemporary Art Center in Long Island City, N.Y., was "inserted" into its site. The installation was Villareal's response to the site, which he perceived as a kind of wasteland overrun with flashy advertising. The bands of light were programmed to move in response to ambient sounds, like the roar of traffic. The work also subverted the notion of advertising; stripped of that commercial function, the public display of light had to be accorded with new meaning. Villareal was surprised that people in the vicinity came to be so familiar with the work that they could detect when the light pattern shifted.

There seems to be no end to Villareal's work, and that is a good thing. As an "editor ... working with ... tools to make selections," Villareal shapes landscapes that are dually ephemeral and eternal. Turrell's words concerning Roden Crater are similarly incisive when applied to Villareal's Cosmos, "... it is a piece that does not end. It is changed by the action of the sun, the moon, the cloud, the cloud cover, by the day and the season that you're there, it has visions, qualities and a universe of possibilities."