



Leo Villareal
Multiverse, 2008
 41,000 computer-programmed LED (light-emitting diode) nodes; Mac mini; and electronic circuitry along the 200-foot-long corridor at The National Gallery of Art, Washington, D.C.
 © Leo Villareal, courtesy CONNERSMITH

Works in the Exhibition

Amanecer, 2010
 Light-emitting diodes (LEDs) diffusion material, custom software, and electrical hardware
 7 x 240 x15 inches
 Collection: Javier Lopez, Madrid
 Photograph by James Ewing Photography
 Courtesy the artist and Gering & Lopez Gallery, New York and Madrid

Diamond Matrix, 2008
 3,600 light-emitting diodes; microcontroller; custom software; and anodized aluminum
 62.5 x 62.5 x 5 inches
 Collection of Hadley Martin Fisher, Miami

Big Bang, 2008
 1,600 light-emitting diodes; microcontroller; circuitry; and anodized aluminum
 59 x 59 x 8 inches
 Courtesy of the artist and CONNERSMTH, Washington, D.C.

About the Artist

Born in 1967 in in Albuquerque, N.M.

Raised in El Paso, Texas, and El Ciudad Juárez, Chihuahua, Mexico

Lives in New York

Villareal belongs to the first generation of artists who grew up with the personal computer as a fact of daily life. He began his studies in theatre (stage design), decided to become an artist and transferred to the visual arts department at Yale University (B.A. 1990), then completed his graduate studies at the Interactive Telecommunications Program at New York University's Tisch School of the Arts, N.Y. From 1994 to 1997, Villareal worked on cutting-edge virtual reality projects, 3-D environments, and programming languages associated with cyberspace at Paul Allen's Interval Research Corporation in Palo Alto, Calif.

Villareal's art is in the permanent collections of prestigious museums, including the Museum of Modern Art, N.Y.,

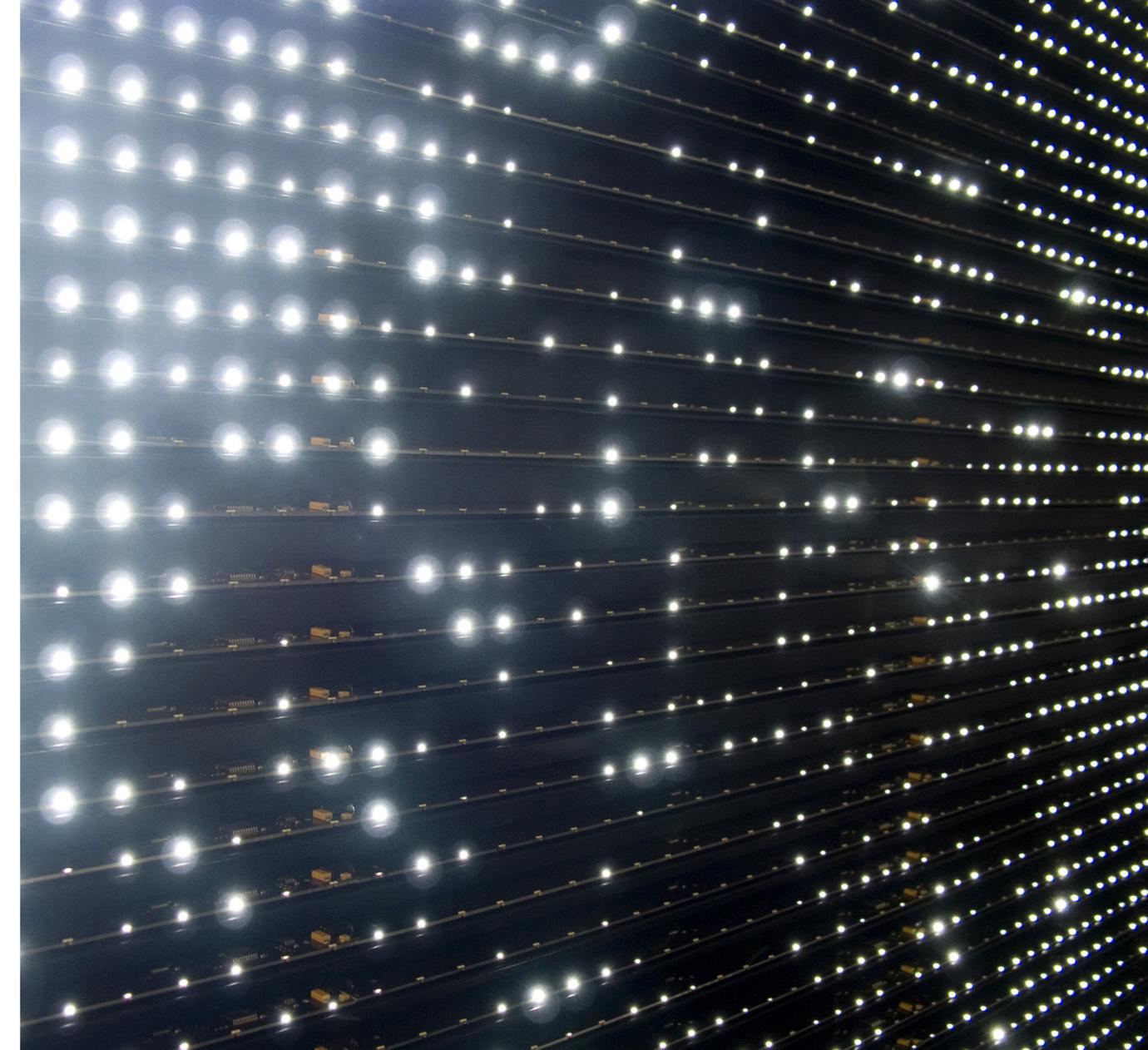


Villareal programming *Multiverse* at the National Gallery of Art in Washington, D.C.

and The National Gallery of Art, Washington, D.C. In 2010, a major exhibition of Villareal's works, organized by the San Jose Museum of Art, San Jose, Calif., was presented at several museums in the United States. Among Villareal's site-specific works are *Multiverse*, The National Gallery of Art, Washington D.C.; *Diagonal Grid*, Borusan Center for Culture and Arts, Istanbul, Turkey; and the illumination of the Bay Bridge in San Francisco, a project that will be in place for two years.

Endnotes

- ¹ Ralph Rugoff, foreword to *Light Show* by Philip Ball, Cliff Lauson, and Anne Wagner. (London: Hayward Gallery, 2013), 15.
- ² Susan Krane in foreword to *Leo Villareal*, by Joanne Northrop, Sara Douglas Hart, Michael Rush, Mark Van Proyen. (Ostfildern, Germany: Hatje Cantz Verlag, 2010), 10.
- ³ Artist statement on artist website, www.leovillareal.net.
- ⁴ Ibid.
- ⁵ The notion of the Sublime was first established by Edmund Burke, the 18th-century philosopher, who posited the Sublime as a transcendent experience of nature's vastness and divinity.
- ⁶ Stephen B. Johnson, "The Work of Art in the Age of Algorithms." In *Leo Villareal*, by Joanne Northrop et al. (Ostfildern, Germany: Hatje Cantz Verlag, 2010), 11.
- ⁷ Statement by the artist.
- ⁸ Peter Lunenfeld, "Jennifer Steinkamp: Light in Space," *Art/Tex* 58 (1997): 59.



LEO VILLAREAL
Digital Sublime

October 28–December 15, 2013
 Miles C. Horton Jr. Gallery and Sherwood Payne Quillen '71 Reception Gallery



Over the last five decades, light, as a primary subject and medium in works of art, has been explored by a number of prominent artists. In the mid-1960s, Dan Flavin began making light sculptures with fluorescent light bulbs. Among those artists who followed were James Turrell, renowned for his luminous light environments; Antony McCall, known for his volumetric light projections; and Robert Irwin, for his lightscapes and light installations. All of these artists explored the evocative and metaphoric power of light in their art.

D I G I T A L S U B L I M E

Following in this tradition, Leo Villareal, too, works with light as a primary medium. He uses, as the director of London’s Haywood Gallery, Ralph Ruggoff has noted, “the most familiar yet intangible medium—artificial light” as the basis of his sculptures and installations.¹ Motion, rhythm, computer code, and electronics are also integral components of Villareal’s art. His tools are those of the 21st century and his mindset comes out of the digital age.²

One of the pioneers in using light-emitting diodes (LEDs) and computer-driven imagery, Villareal is acclaimed for both his light wall sculptures and architectural, site-specific installations ranging from *Multiverse*, the remarkable installation in the Concourse Walkway connecting the east and west wings of The National Gallery of Art in Washington, D.C. (2008), to his most

recent public art project, the spectacular illumination of the Bay Bridge in San Francisco.

Using computer code and his own custom software, Villareal programs thousands of LEDs to produce abstract works of art. He essentially orchestrates, choreographs, and directs light to create the imagery in his work. “The essence of the piece is the code,” he says, and “colored light is the manifestation.”³ The results, ranging from luminous, hypnotic fields of expansive color to complex, mesmerizing patterns of light, explore not only the perceptual effects of light, but the effects of pattern and sequencing, as well as the underlying structure of systems.

A fundamental aspect of Villareal’s work was inspired by the mathematician John Conway’s *Game of Life* and the concept of cellular automata, a simulated program in which cells combine, multiply, and reproduce based

on algorithms or simple sets of rules. Likewise, Villareal puts into place sets of instructions and deploys zeros and ones in binary code to build sequences that move, change, interact, and ultimately grow into complex organisms. In a sense, Villareal takes thousands of electric diodes and transforms them into a thriving (but artificial) ecosystem of light. Though created with precise algorithms, the various sequences produced can evolve randomly, resulting in patterns that even the artist cannot predict. “My goal,” says the artist, “is to create a rich environment in which emergent behavior can occur without a preconceived outcome.”⁴ Chance,

Smaller, but equally mesmerizing in impact is *Diamond Matrix* (2008), a five-foot-square wall sculpture comprising a grid of white LEDs against a background of mirrored stainless steel. Alternately dense, ephemeral, or shimmering, the 3,600 points of white light in this work surge, retract, merge, and seemingly evolve in what seem like a vital, “living” sequence of patterns. Here Villareal’s work with “generative” art forms is realized in an object of spellbinding beauty within the eerie context of A-Life, or artificial life. “These works are explorations of the possibilities of surprise, the uncanny alive-ness that can emerge from elemental rules of code.”⁶

emergent behavior, and the underlying complexities of artificial life are thus central to Villareal’s work, as are the expansive notions of beauty, time, and the Sublime.⁵

This exhibition features three of the artist’s signature wall sculptures from major private collections and the artist’s studio. Spanning seven feet high by twenty feet long, *Amanecer* (2008) is an expansive, luminous “painting” or wall sculpture bathed in continuously evolving hues of reds, oranges, and purples. Its scale and rich, diffused coloration recalls the beauty, grandeur, and meditative power of Rothko paintings and the sweeping “all over” effect of mid-century Abstract Expressionist paintings. With its title derived from the Spanish word for “dawn,” the piece evokes notions of awakening, or coming into consciousness. Enveloping the viewer in a quiet, expansive field of suffused light, *Amanecer* engenders an experience akin to that of the Sublime. Beauty, awe, and wonder are key elements here.

The large circular wall piece, *Big Bang* (2008), features a dynamic, swirling mass of multicolored points of light. Energy, fusion, and evolution are all inferred here. As a work of art, it is also hypnotic and powerful in its perceptual effect.

While these works are all generated by code, computers, and electronics, they are, according to the artist, fundamentally not *about* technology.⁷ All three works, by their titles, reference natural, mathematical, or scientific phenomena, whether it be the beauty of nature, elemental forces in the universe, or a fascination with underlying structures like the matrix. Additionally, all three works are kinetic and they all unfold in time. Even so, as compelling as they may be, these ideas are all subtexts.

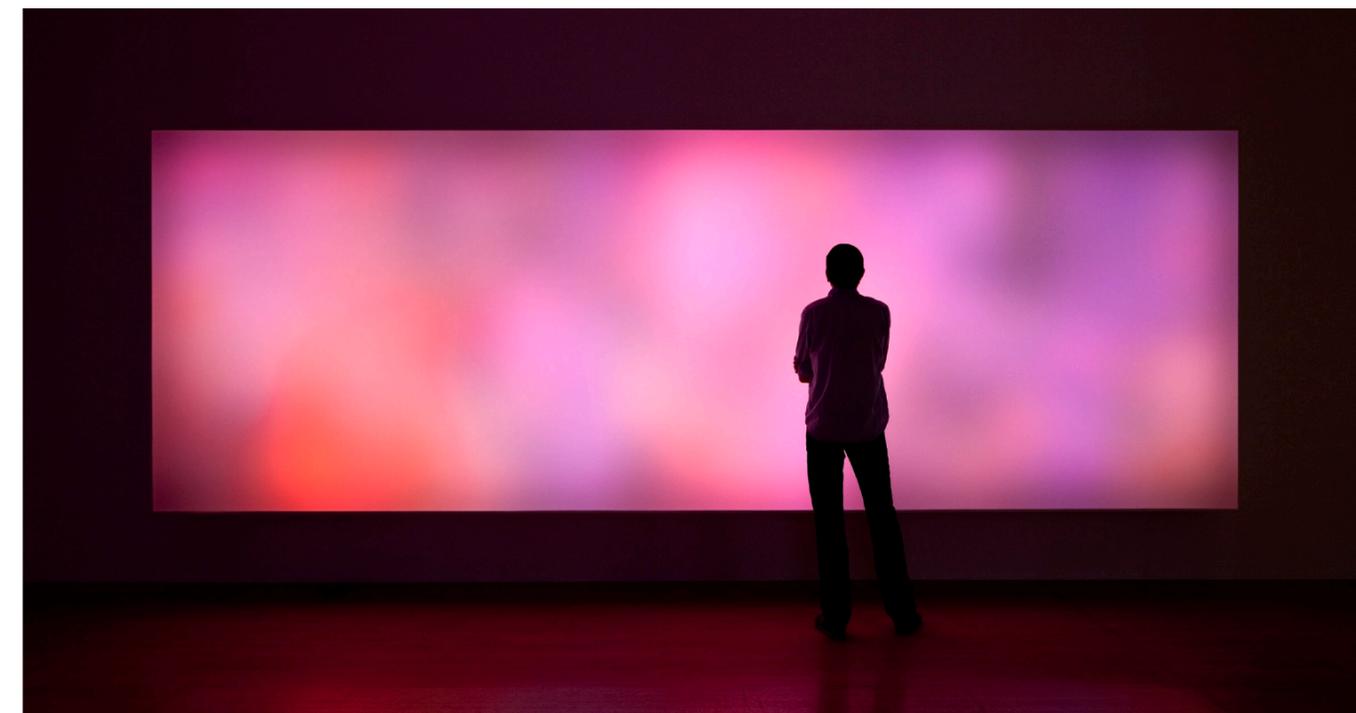
In the end, what Villareal ultimately explores with these works of art is the evocative and metaphoric power of light itself.

It has been said that “after Einstein, we know that the speed of light is the constant that relates matter to energy and vice versa, and therefore that playing with light is far more than an aesthetic gesture: it intervenes in our certainties about the materiality of matter and the flow of energy.”⁸

Whether or not we contemplate the profound implications of what light is, what its relationship to time and matter is, and how it defines our perception of the world around us and our universe, Villareal’s

light sculptures bring us closer to apprehending the Sublime—the beauty, awe, and sense of wonder that imbues existence.

Margo Ann Crutchfield
Curator at Large
Center for the Arts at Virginia Tech



Leo Villareal
Amanecer, 2010

Light-emitting diodes (LEDs) diffusion material, custom software, and electrical hardware
7 x 240 x 15 inches

Collection: Javier Lopez, Madrid
Photograph by James Ewing Photography
Courtesy the artist and Gering & Lopez Gallery, New York and Madrid

Front Cover:

Leo Villareal
Diamond Matrix, 2008 (detail)
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and anodized aluminum
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Image copyright Leo Villareal, courtesy CONNERSMITH