

**The Aldrich  
Contemporary  
Art Museum**

Penelope  
Umbrico  
—  
Shallow Sun

# Penelope Umbrico: Shallow Sun

To begin with, some facts...

In 1826, Joseph Nicéphore Niépce pointed the first camera to incorporate successful light-recording chemistry out of his window in Gras, France. The resulting image, which is generally accepted as the earliest existing photograph, records the adjacent rooftops and what looks like a copse of trees on the horizon. The photograph doesn't record an instant, however, as its exposure took eight hours. Niépce's primitive chemistry required a full day of bright sunlight to burn an image onto his plate.<sup>1</sup>

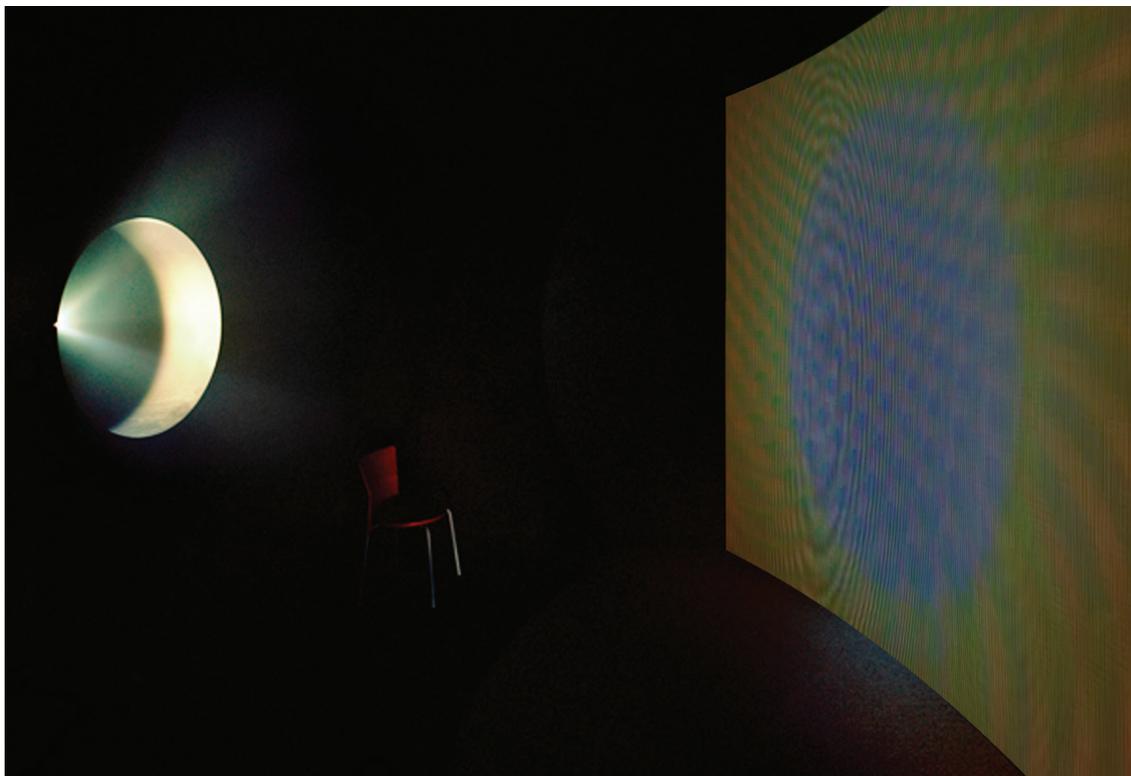
While Niépce (and subsequently Louis Jacques Mandé Daguerre) were working in France to make photographic chemistry more sensitive to the light of the sun, scientists in other disciplines were simultaneously developing artificial light. Up to the early nineteenth century, all sources of artificial light were based in flame—the burning of tallow or wax, oil, or gas—but none matched the brilliance of the sun. In 1800, British chemist Humphry Davy created the arc light, an extremely bright light source made by discharging an electrical current between two carbon electrodes.<sup>2</sup> Besides not being based in combustion, the arc light portended the future in another way: its light was generated by electricity, which silently coursed through wires to do its job—wires that could conceivably run for miles.

A chronic insomniac, Thomas Edison slept only a few hours each day, and believed that human inactivity at night represented inefficiency and

waste. In 1879, after years of research, he perfected a practical incandescent electric light bulb. Edison thought that the development of electric illumination would free mankind from the tyranny of sunlight and allow for an era of unprecedented productivity and economic growth.<sup>3</sup>

In the 1920s, flashbulbs were developed, creating a bright, white light by electrically igniting magnesium inside a glass bulb filled with oxygen, ushering in an era of practical indoor photography. In 1931, Harold Edgerton developed the electronic stroboscope, later shortened to strobe, a gas-filled tube that when energized emits an instantaneous flash of light.<sup>4</sup> With his "strobe light," Edgerton went on to produce his iconic stop-motion photographs, including the "coronet" produced by a splashing drop of milk. Later, using the high-speed camera that he developed to use with strobe photography, he successfully photographed the first microseconds of the detonation of an atomic bomb, a flash so bright that it was compared to the light of the sun.<sup>5</sup>

The rapid development of electrical technology that categorized the nineteenth century included the invention of the telegraph, which conveyed information using a simple binary code of dots and dashes. Suddenly, text could be sent great distances through wires. Telegraph wires were later replaced by phone lines, but images could not be transmitted. In the early twentieth century, analog "facsimile machines" were developed in order to send images



*Sun Screen (Camera Obscura)* (installation view), 2015  
 Courtesy of the artist and Mark Moore Gallery, Culver City, California

over wires. A photograph of President Calvin Coolidge sent from New York to London on November 29, 1924, became the first photograph reproduced by transoceanic radio facsimile.<sup>6</sup> In 1992, Tim Bernes-Lee, inventor of the World Wide Web, uploaded the first photograph on the Internet.<sup>7</sup>

The first cell phone to include a camera, complete with a miniature version of Edgerton's strobe light, was released by Samsung in 2000. Soon, high-efficiency light emitting diodes replaced the flash tube in most cell phone cameras, but many high-end phones still use strobes for their brilliance.<sup>8</sup>

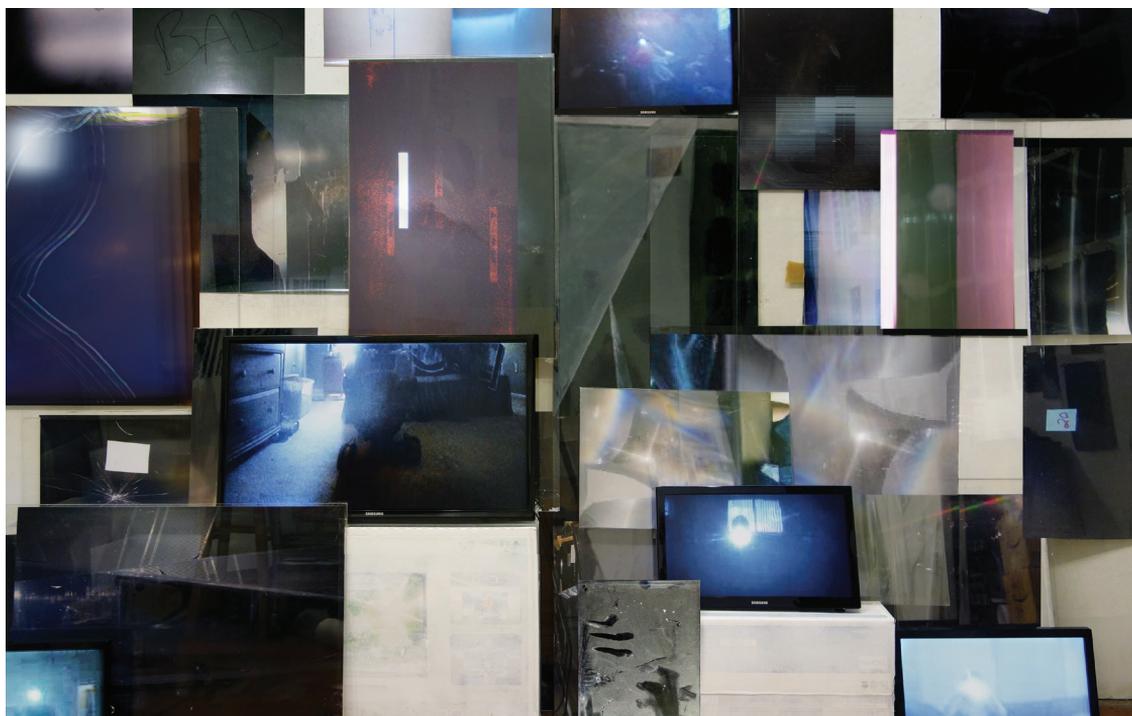
The early 1960s saw the development of the first practical light-emitting diodes, but it wasn't until 1977 that the first LED flat-panel TV display was created.<sup>9</sup> Its quality was poor, and it wasn't until the late 1990s that LED technology advanced to the point that it could be applied to consumer electronics, including TVs and cameras. LEDs are now replacing both incandescent and fluorescent lighting, as they are extremely efficient, turning electricity into light with almost no heat. Light has always been connected to warmth, but LEDs are the furthest technological step yet in detaching artificial light from the qualities of sunlight.

In 2008, The Hydreon Corporation began marketing Fake TV, a small LED device that simulated the changing color and light intensity levels found on a television monitor. Placed near a window, it serves as a burglary deterrent by giving the effect of someone being at home watching television. Appropriately, the digital algorithms that drive the device were developed by analyzing the light and color fluctuations of the film *The Incredibles*, a digital animation that was created without any natural light.

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*New York Public Library Picture Collection Photo-Copies: Eclipses (with Graphite)* (detail), 2014–ongoing  
 Courtesy of the artist and Mark Moore Gallery, Culver City, California





*Bad Display (eBay)* (studio installation, detail), 2015  
 Courtesy of the artist and Mark Moore Gallery, Culver City, California

## Shallow Sun

As the introduction on the previous pages indicate, the arc of photographic image production has been intimately linked to the larger history of technological change that has swept the world in the past two hundred years. Beginning with the invention of the camera obscura (literally “dark room”), in which an image is projected through a pinhole onto a white wall, the photographic image has traditionally been in varying degrees contingent with its subject: in a camera obscura, the subject is live and immediately outside the aperture; with a chemical-based photograph, light-sensitive film is in proximity to the subject at the moment the shutter opens and undergoes a physical chemical reaction in direct relation to the contingent light.

Chemical-based photography, however, set the course for the image to be severed from its source; the exposed plate (later film) allowed for the creation of optical doppelgangers—reflections that could be removed from their mirrors. The white paper of the resulting photographic print became a surrogate for the light that was present when the photograph was taken: looking at a traditional photograph we are not directly experiencing the light present when the shutter tripped, but rather the ambient light of the present moment bouncing off the print’s underlying white paper. Not just the image has been displaced, but also its light source.

In the footsteps of all these photographic developments and innovations comes artist Penelope Umbrico. For Umbrico, light, and our changing

relationship to it, has become one of the main subjects of a practice that challenges what normally constitutes ideas about photography and its presence in our lives. Umbrico is part of the first generation of artists to have participated in the transition from traditional photography to digital media and its attendant complexity. Rather than just swapping one technology for another, however, Umbrico has completely embraced the world in which photography now finds itself—a world where light is transformed into code and completely disassociated from its original context, and where even the sun has become a digital artifact.

Umbrico’s exhibition has at its center The Aldrich’s camera obscura, a feature that was included in the construction of the Museum in 2004. The basis for all photographic technology, the camera obscura incorporates the same principle found in traditional cameras, as well as today’s cell phone cameras: an aperture (usually with a lens) focuses incoming light on an interior surface. In the camera obscura, it’s a white wall; in a traditional camera, a piece of light-sensitive film; in a digital camera, a CCD (charged coupled device), a grid of tiny sensors that convert light into electricity.

Umbrico approached the camera obscura by interjecting into it crowd-sourced Internet images, subverting its fundamental nature, which is simply based on sunlight illuminating an exterior landscape. Outside the camera obscura’s aperture, on the exterior of the building, Umbrico has placed an enclosure that houses a flat-screen monitor. Playing on the monitor is a version of Umbrico’s piece *Sun*

*Screen*, a looped, digital animation composed of still sun images the artist has found on the Internet. But the video isn't a straight compilation of these images; Umbrico played the animation on a computer monitor in her studio and then rerecorded it with the video feature on her hand-held iPhone. Rather than refining the image and making it sharper, the pixel grid of the monitor has interacted with the pixel grid of the iPhone to create a changing psychedelic aura of moiré patterns that radiate from the solar disc. The patterns are in a state of flux due to the movement of Umbrico's unseen hand, interjecting her physical presence into what becomes ultimately an abstraction of the sun. *Sun Screen (Camera Obscura)* has taken the fundamental contingent nature of the image in a camera obscura and replaced it with information that comes from the Cloud: sunlight that was turned into code, uploaded onto the Internet, and downloaded as code, is then converted into screen light. The confusion that might be generated when considering these transformations is the point of Umbrico's exercise, as it manifestly reveals the relationship between signal and subject, or, as Marshall McLuhan wrote in the 1960s, "The medium is the message."

As if the transformations occurring in *Sun Screen (Camera Obscura)* were not enough, Umbrico has gone even further: inside the camera obscura, trained on the wall with its morphing sun image, is a low-light video camera that transmits its signal to a security monitor mounted in the adjacent gallery. The sun, now re-presented through eight separate steps, has become a pale ghost, an image that speaks of our accelerating detachment from nature.

Umbrico's working strategy resembles that of an archivist, as she primarily finds her subjects not through the lens of a camera, but through the sea of photographic images that already exist. Outside the door of the camera obscura are two series of works based on images of solar eclipses that Umbrico

discovered in the picture collection of the New York Public Library. Drawn to these pictures by the way they record the natural negation of sunlight (the moon is usually a reflector, here it's a mask), Umbrico photocopied them and, in the case of *Eclipses with Graphite*, hand-rubbed powdered graphite onto their surfaces. The graphite naturally "sticks" to the carbon black pigment of the photocopy, and the image develops a reflective metallic-like surface, resembling a nineteenth-century tintype. In the work *Eclipses (with Quadrant App Filters Phases)*, she utilized a camera app in her iPhone to photograph the eclipse photocopies, a technique that creates a cropped, sequential-like image. Even though solar eclipses are considered to be amongst the most spectacular of natural phenomena, the strange truth is more people view them on television or the Internet than actually go outside and experience them with their own eyes—a fact that hasn't escaped Umbrico's attention.<sup>10</sup> Although focused on images of eclipses, Umbrico's exploration of the Library's picture collection also has a documentary impulse: originally created as an aid to artists and illustrators, it is moving towards obsolescence because of the availability of images on the Web, and its future is uncertain.

Nostalgia for chemical-based photography and its attendant attributes lingers into the digital age. Anyone old enough to have taken pictures with a camera using film will recall the occasional photo "spoiled" by a light leak hitting the film when the camera was opened. These images, displaying bands of over-exposed film emulsion, could be quite beautiful, but were rarely greeted with approval as they ruined the underlying image. In the digital world, however, a series of camera apps have been developed to add fake light leaks to images. Created by designers using programs like Photoshop, these manufactured effects are made to contribute authenticity or interest to digital photos that are lacking in either. Detaching these apps from their original function, Umbrico used them to create a

*Milk Splashes (detail)*, 1989–2015

Courtesy of the artist and Mark Moore Gallery, Culver City, California



dialogue between analog and digital, and the worlds of natural light and simulated light. Compiling a collection of over sixty of these apps, Umbrico combined them to make *Light Leaks* (from smartphone camera app filters), an animated video where one simulated light leak morphs into another. Projected silently into a “black box” (a space that references both the camera obscura and the inside of a camera), the video takes these digital artifacts and attempts to return them to the transcendental quality that natural light has always held in the human imagination. If light is the essential quality of all photography, *Light Leaks* (from smartphone camera app filters) inverts its role: these effects were created and operate in the dark world of code and silicon, where there is no illumination.

Umbrico’s complex installation *Bad Display* (eBay), combines printed photos of damaged TVs for sale on eBay with looped video animations of photos of undamaged TVs also for sale on the site. The screens pictured in the animations have been illuminated by the flash of the camera that took them, and lurking in many of the pictured screens are reflected ghosts of the photographers and the interiors where the photos were taken. The damaged TVs don’t work and are being sold for parts; their dark and cracked screens can no longer produce light, only reflect it. The constellation of animations in the work creates a dazzling spectacle of reflected camera flashes that play off the dead and dark still photographs. Umbrico, by compiling these images, complete with their silent flashes, is acknowledging the sea of literally billions of digital images that have been created and uploaded onto the Web, in addition to wryly commenting on the obsolescence that accompanies the pictured technology. Generally, we look to screens for projected content, but in *Bad Display* (eBay) Umbrico has again revealed that content also



Used\_CRT\_Televisions\_634487864441161771.jpg (Alibaba) (detail), 2010–2015  
 Courtesy of the artist and Mark Moore Gallery, Culver City, California

resides in technology itself and that all of us, unwittingly or not, have truly become ghosts in the machine.<sup>11</sup>

Photography can be considered both a technology and an art. *Shallow Sun* presents a ricocheting trajectory through photographic history: sunlight, shadows, apertures, dark rooms, chemical-based photography, photocopies, mechanical and electronic hardware (Strobe lights, CRTs, ink-jet printing, pixel grids, LEDs), digital processing (image authoring software, video editing software, smart phone camera apps), and the infinite universe of images on the Internet. If art is ultimately about asking questions, Umbrico’s process probes deeply into the nature of both photography and light in our present moment, brightly illuminating the shadows that technology has cast over our lives.

—  
 Richard Klein, exhibitions director

Penelope Umbrico was born in Philadelphia in 1957. She lives and works in Brooklyn, New York.

#### Footnotes

1 Beaumont Newhall, *The History of Photography: from 1839 to the present day*, revised and enlarged edition (New York: The Museum of Modern Art, 1964), p. 16.

2 Andreas Blühm and Louise Lippincot, *Light! The Industrial Age 1750–1900, Art & Science, Technology & Society* (Amsterdam: The Van Gogh Museum; Pittsburgh, The Carnegie Museum of Art, 2000), p. 238.

3 David K. Randall, *Dreamland: Adventures in the Strange Science of Sleep* (New York: W. W. Norton & Company, 2012), pp. 36–41.

4 Harold Edgerton and Estelle Jussim, *Stopping Time: The Photographs of Harold Edgerton* (New York: Harry S. Abrams, Inc., 1987), p. 152.

5 Robert Jungk, *Brighter than a Thousand Suns: A Personal History of the Atomic Scientists* (New York: Harcourt, Brace, 1958), p. 201.

6 David Solomon, *A Concise History of Data Compression* (New York, Philadelphia: Springer Science & Business Media, 2007), p. 84.

7 The first photograph published on the Internet was a picture of Les Horrible Cernettes (“The Horrible CERN Girls”), an all-woman pop group founded by employees of CERN (The European Organization for Nuclear Research). [www.Wikipedia.org/wiki/Les\\_Horribles\\_Cernettes](http://www.Wikipedia.org/wiki/Les_Horribles_Cernettes), March 21, 2015.

8 Simon Hill, “From J-Phone to Lumia 1020: A Complete History of the Camera Phone,” [www.digitaltrends.com/mobile/camera-phone-history](http://www.digitaltrends.com/mobile/camera-phone-history), August 11, 2013.

9 LED display, [www.en.wikipedia.org/wiki/LED\\_display](http://www.en.wikipedia.org/wiki/LED_display), March 19, 2015.

10 An article in London’s *Daily Mail* newspaper on the total solar eclipse that was visible in Northern Europe on March 20, 2015, decried officials recommending that children stay indoors and watch the eclipse on TV due to safety factors: [www.dailymail.co.uk/news/article-3002239/Schools-children-inside-solar-eclipse-heath-safety-fears.html](http://www.dailymail.co.uk/news/article-3002239/Schools-children-inside-solar-eclipse-heath-safety-fears.html)

11 The phrase “the ghost in the machine” was first coined by British philosopher Gilbert Ryle in his book *The Concept of Mind* (1949) in reference to his critique of Descartes’s mind-body dualism.

# Works in the Exhibition

ALL dimensions h x w x d in inches

ALL works courtesy of the artist and Mark Moore Gallery, Culver City, California unless otherwise noted

## *Milk Splashes*, 1989–2015

Printed cardboard cereal boxes, cereal, acrylic medium, graphite

55 elements, varying between 2  $\frac{3}{4}$  x 4 x 1  $\frac{3}{4}$  and 7  $\frac{3}{4}$  x 13 x 3  $\frac{1}{2}$  each

## *Image Collection: Used Wires for Sale (eBay)*, 2008–ongoing

C-prints, Plexiglas

6 prints, variable sizes

## *Used\_CRT\_Televisions\_634487864441161771.jpg (Alibaba)*, 2010–15

Digital C-print

30 x 40

## *Detail of Photograph of a Falling Drop of Milk, S.N.L. August 27, 1932, #950 from the Smithsonian Institution Archives' Science Service Collection*, 2012

Digital C-print

40 x 30

## *Pirouette for CRT*, 2012

Looped digital video animation presented on LED monitor, color, silent; 4 seconds

Dimensions variable

## *Light Leaks (from smartphone camera app filters)*, 2014

Projected looped HD video animation of “light leak” camera app filters, color, silent; 21:41 minutes

Installation dimensions variable

## *New York Public Library Picture Collection Photo-Copies: Eclipses (with Graphite)*, 2014–ongoing

Photocopies made at the NYPL with hand-applied graphite

50 prints, between 6  $\frac{1}{2}$  x 8  $\frac{1}{2}$  and 8  $\frac{1}{2}$  x 11 each

## *New York Public Library Picture Collection Photo-Copies: Eclipses (with Quadrant App Filters Phases)*, 2014–ongoing

Digital C-prints

12 prints, 10 x 7  $\frac{1}{2}$  each

*Bad Display (eBay)*, 2015

Digital C-prints, variable sizes, of images of used TVs for sale on eBay and liquidation websites, used Plexiglas, mirrored Plexiglas, LED monitors, cardboard monitor boxes, Fake TVs, cabling; looped video animations of images of used TVs for sale on eBay and Craigslist, color, silent; variable ranging from 13 to 20 minutes

Dimensions variable

## *Black Box for Light Leaks*, 2015

Drywall, wood, paint, felt, carpet

114 x 144 x 144

## *Flat*, 2015

MDF, wood, paint

123 x 70 x 3  $\frac{1}{2}$

## *Sun Screen (Camera Obscura)*, 2015

Looped digital video animation of sun images found on the Internet, color, silent; 23:20 minutes, LED monitor in outdoor enclosure, two 70mm acrylic lenses

Interior of camera obscura: 96 x 118 x 137

## *Sun Screen (Live Feed)*, 2015

Live video feed of camera obscura image, color, silent

Low light video camera, LED security monitor

## *Sun Screens (stills) and Screen (video)*, 2015

Ink jet prints on film of photographs of a monitor screen playing *Sun Screen (video)*, Sony CRT monitor with *Screen (video)*, looped video of recording of blank white monitor screen, color, silent; 30 seconds

8 prints, 21 x 15  $\frac{1}{4}$  each; monitor: 20 x 21 x 27

Hydreon Corporation

Fake TV (Model FTV-11), 2015

LED burglar deterrent: simulates light of operating HDTV

2  $\frac{1}{2}$  x 2  $\frac{1}{2}$  x 3  $\frac{3}{4}$

Courtesy of Hydreon Corporation

Eden Prairie, Minnesota

## **The Aldrich Contemporary Art Museum**

Founded by Larry Aldrich in 1964, The Aldrich Contemporary Art Museum is dedicated to fostering the work of innovative artists whose ideas and interpretations of the world around us serve as a platform to encourage creative thinking. It is the only museum in Connecticut devoted to contemporary art, and throughout its fifty-year history, has engaged its community through thought provoking interdisciplinary programs.

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### **Cover**

Penelope Umbrico, *Sun Screen (Camera Obscura)* (detail), 2015  
Courtesy of the artist and Mark Moore Gallery,  
Culver City, CA

## **Penelope Umbrico Shallow Sun**

Curated by Richard Klein

May 3 to October 25, 2015  
The Aldrich Contemporary Art Museum

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258 Main Street  
Ridgefield, CT 06877  
203.438.4519  
aldrichart.org