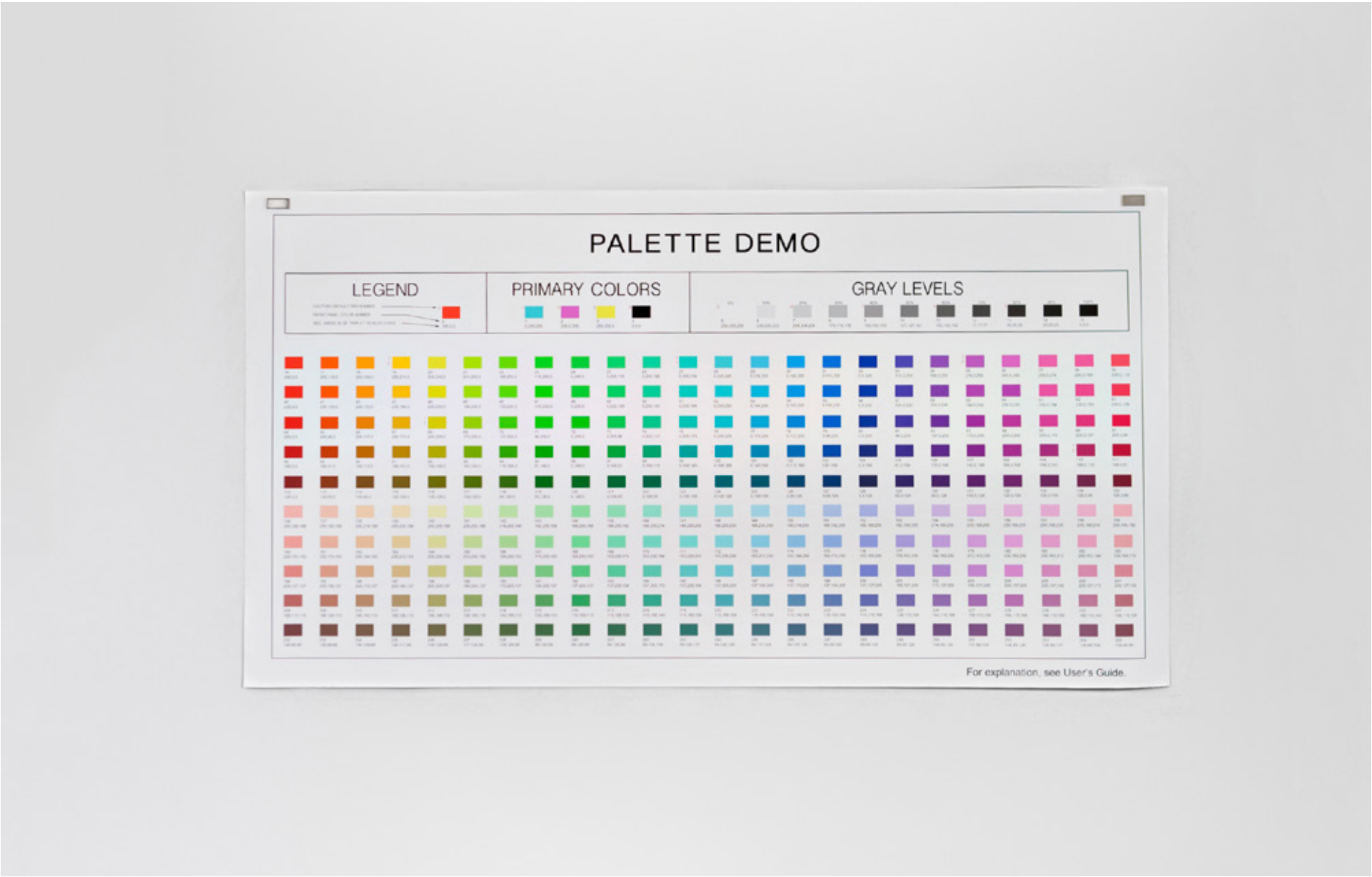
JORDAN TATE

2014



New Work #171, Pigment Print, 44”x80”, 2013.

NEW WORK

Jordan Tate's latest work wrestles with one of the key contemporary preoccupations of our field: photography qua photography. In other words: How do we see? What are suitable subjects for photography? And what are viable means of image-making?

Tate's work belongs to a growing group of photographers indebted to predecessors Christopher Williams and James Welling. Tate pushes the conversation beyond nostalgia and squarely into the present, however, by indulging in screen-based images and non-traditional output methods like lenticular screens, animated gifs, and 3-D anaglyphs. Take, for example, an image like *New Work # 50*, in which the "marching ants"—familiar to anyone with working knowledge of Photoshop—become embedded in the final image. These animated "selection" lines are usually a momentary visual reference or trace of an artist's working process—here, they are transformed into the raison d'etre for the image.

His images frequently focus on indicators of an image in the making—a photograph of a Polaroid that could easily be an exposure/lighting test for a studio shoot; the depiction of an iPhone screen filled with what appears to be a color bar; a web browser in the midst of download. All of these have become part of the familiar lingua franca of contemporary image making and image sharing, but usually are kept behind-the-scenes. Boldly, Tate features these elements front and center.

In another über-contemporary nod, Tate adopts a mode of working in which the traditional idea of a coherent style or artist series is dismissed, allowing room for seemingly disparate image-making modes to coexist within a single body of work. This series is titled, in an appropriately deadpan manner, New Work. However, it's not that the work is interesting just because it's new; it's interesting because it offers a compelling and quirky exploration of the work involved in new photography.

Lesley A Martin for *Aperture*

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New Work #196, Inkjet on Fabric, Stone, Stainless Steel, Wood, 44” x 48” x 7”, 2014.

New Work #197, Inkjet on Fabric, Stone, Stainless Steel, Wood, 24” x 48” x 2”, 2014.

New Work #197, Pigment Print, Marble, Ruler, 25” x 55”, 2014.

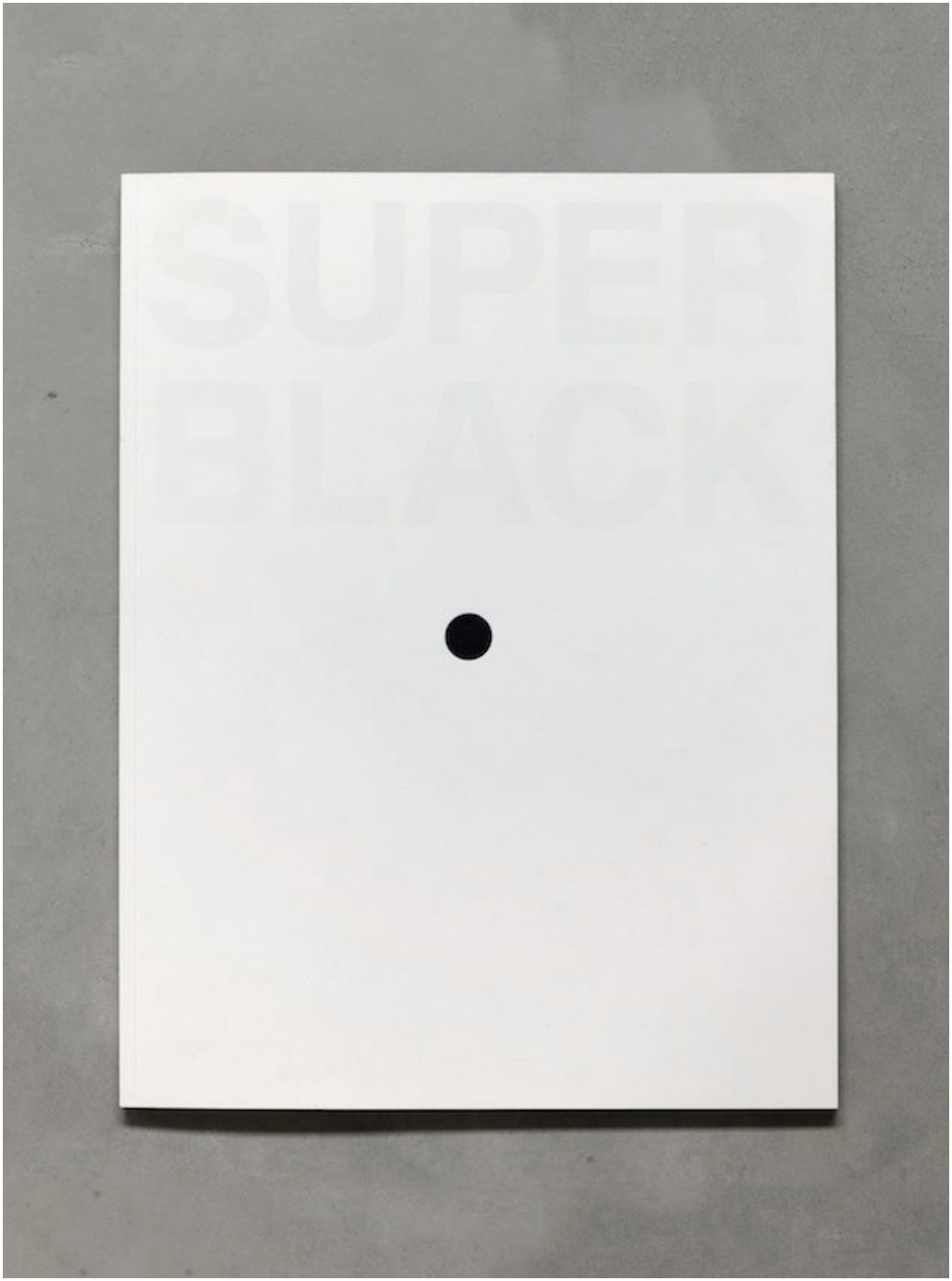
New Work #194, Inkjet on Fabric, 54” x 72”, 2014.

New Work #195, Inkjet on Fabric, 54” x 72”, 2014.

New Work #190, Toner on Paper, each 48” x 36”, 2014.

New Work #185, Pigment Prints on Canson High Gloss (left) and Hahnemüle Photo Rag (right), each 74” x 36”, 2014.

SUPERBLACK, Multi-Walled Carbon Nanotube Array, Ultra-diffusive Light Absorbing Foil, Cast Acrylic, Wood. 12” x 12” x 66”, 2014.



SUPERBLACK (monograph). First Edition, 58 Pages, 9” x 12”, Softcover with die-cut, and black edging
Design by the Laboratory of Manuel Bürger Published by the Fred and Laura Ruth Bidwell Foundation, 2014.

New Work #174, Pigment Print, Munsell Soil Color Chart, Aromatic Cedar Frame, Mylar Tape, 24” x 46”, 2013.

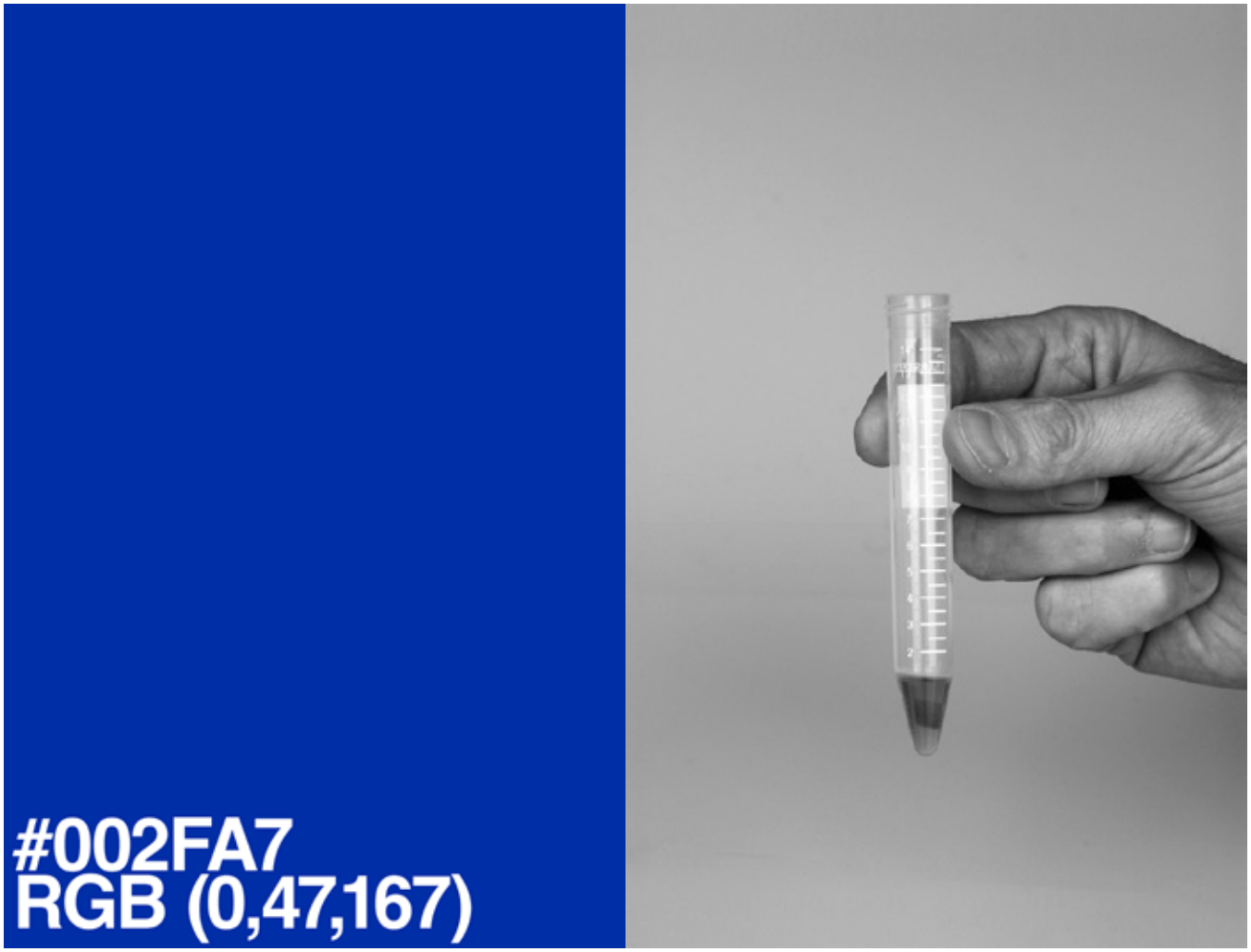
New Work #173, Pigment Print, Munsell Soil Color Chart, Aromatic Cedar Frame, Mylar Tape, 24” x 36”, 2013.

New Work #179, Provenience Drawing Square, Cast Plaster, Mylar Emergency Blanket, Level, Wood, Mylar Tape, 70” x 70” x 24”, 2013.

New Work #170, Pigment Print, 2013

New Work #150, Pigment Prints, 45” x 176”, 2013.

New Work #150 (detail), 2013.



New Work #150 (detail), 2013.

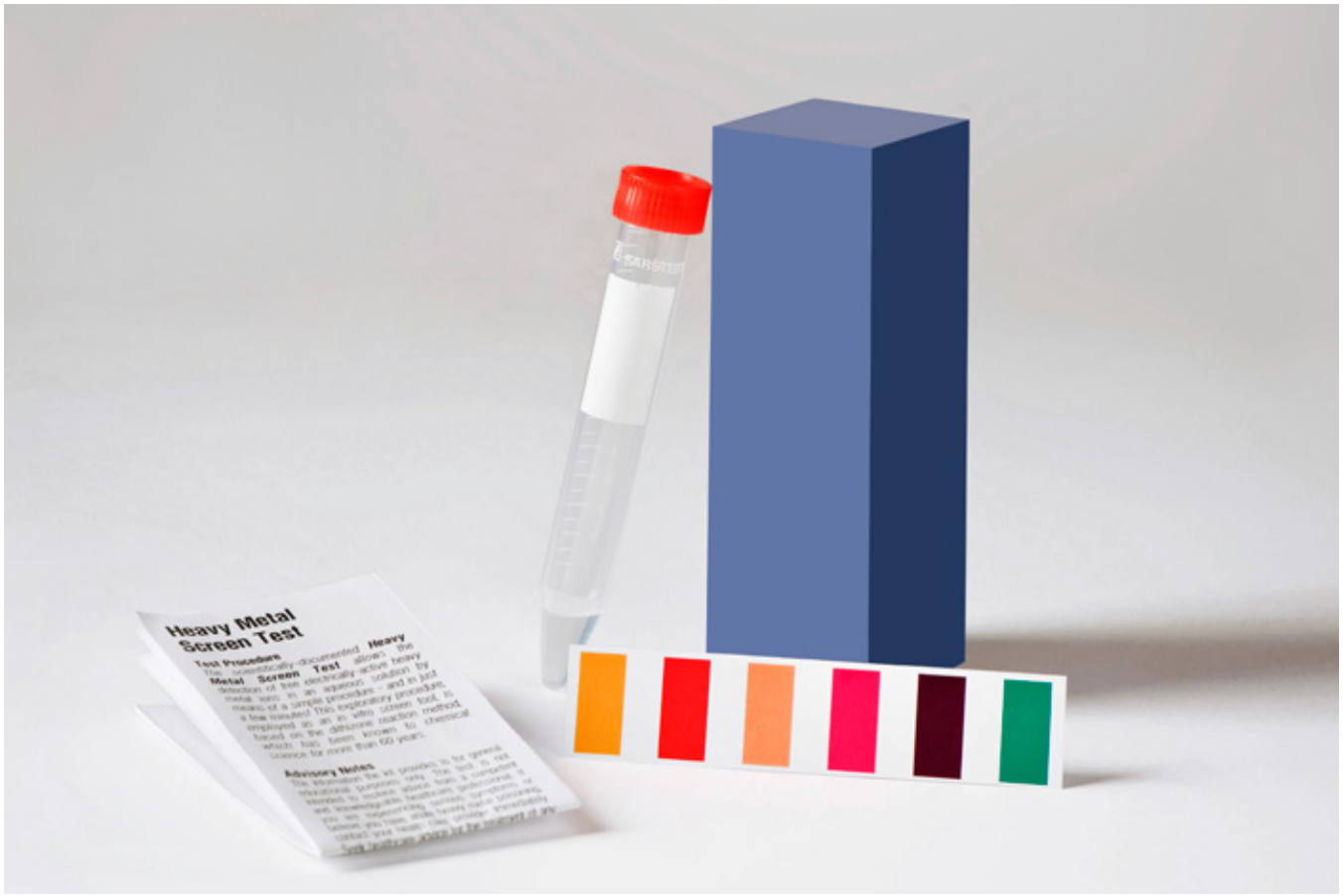
New Work #150 (detail), 2013.

New Work #150 (detail), 2013.

New Work #169, Pigment Prints, Roll Holders, each 24” x 15’, 2013.

New Work #141, Pigment Prints, 16” x 236”, 2011.

New Work #141 (detail)



New Work #141 (detail)

New Work #141 (detail)

SUPERBLACK

Transformer Station, Cleveland.
March 29th 2014—June 14th 2014.

SUPERBLACK is the result of a two-year research project in collaboration with scientists at the University of Cincinnati. SUPERBLACK is a physical body designed to absorb nearly all electromagnetic radiation (visible light, infrared light, ultraviolet light, etc.) and offer the experience of a localized, contained, and absolute darkness.

At its core, SUPERBLACK is an exploration of certain dualities – subject/object, void/full, black/white. Tate's larger photo-based practice further explores the nature of these dualities that inform, limit, and govern our experiences.

Within Tate's work, the photograph is used as an idea, as a metaphor for knowledge itself, rather than a physical object or even an image. Photography becomes a way of analyzing the interplay between culture, science, and technology that transforms individual observations into systems of knowledge.

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SUPERBLACK Installation Overview, 2014

SUPERBLACK Installation Overview, 2014

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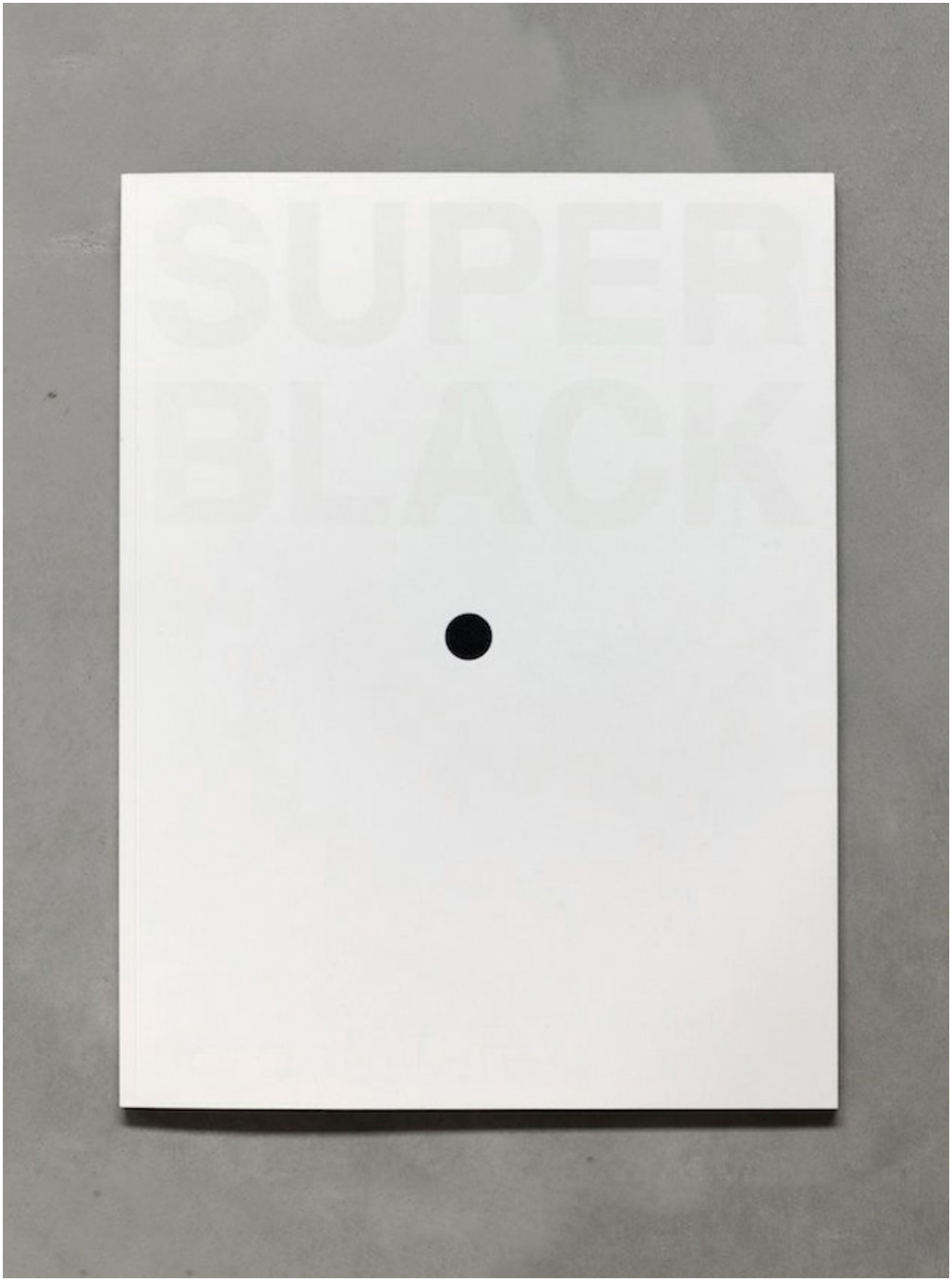


SUPERBLACK (monograph). First Edition, 58 Pages, 9” x 12”, Softcover with die-cut, and black edging
Design by the Laboratory of Manuel Bürger Published by the Fred and Laura Ruth Bidwell Foundation, 2014

NO/ THING

Ad Reinhardt, Abstract Paintings, 1960-1967

How can we envision nothing? Not an ending, or an absence, or even a vacuum, but really nothing: the absolute removal of matter, the void. *Nothing*, a 2011 BBC documentary hosted by physicist professor Jim Al-Khalili, sought out the methods of conceptualizing this phenomenon and stressed how difficult it is to conceptualize nothingness. In the program, Al-Khalilli presented a hypothetical scenario inside a glass box in which he removed "everything [he] possibly could from inside it. All the air, dust, every last single atom until there was no thing left." After doing so, he asks us "What then exists inside the space in the box? Is it really nothing?" [1] Throughout the program, questions like this continue to arise and befuddle "the furthest reaches of human perception."

As our known universe balloons in difficult to fathom proportions, our fascination with the complete omission of matter has taken an intriguing turn. [2] Contemporary digital imaging has significantly helped this process by simulating and representing what the physical world looks like when approaching the void. [3] The use of contemporary technology has augmented and amplified our natural senses - electron microscopes, the Hubble Ultra Deep Field image, Black Silicon CCDs - so greatly that previously understood notions of the void must be continually rewritten. As a result of these enhancements, the rapid rate of scientific discovery has posed a struggle for artists and scientific imaging engineers to find appropriate and faithful representations of nothingness.

This space - if one could even call it as such - is not merely a physical phenomenon, but also embodies a metaphysical experience [4]. The void is not just the space beyond depth, where the z-axis of our vision cannot find end or horizons - it contains, within that infinite

[1] Stacey Nic. "Nothing." Everything and Nothing. BBC. 2011.

[2] Whiting, A. B. "The Expansion of Space: Free Particle Motion and the Cosmological Redshift". The Observatory Vol 124 (2004): 174-189.

[3] P. Cowperthwaite. "Supercomputer Models of Merging Black Holes" Online Video Clip. Simulations Uncover Ripply Secrets of Merging Black Holes. NASA. gov. 27 Sep. 2012.

[4] In this sense, a hidden structure that makes reality perceivable.

CLOSE TO SUPER BLACK

[fig. 6]

uniformly heated opaque-walled cavity (let us call it an oven), viewed from outside, looks red, at 6000 K, it looks white. No matter how the oven is constructed, or of what material, as long as it is built so that almost all light entering is absorbed by its walls, it will contain a good approximation to black-body radiation. The spectrum, and therefore color, of the light that comes out will be a function of the cavity temperature alone. A graph of the amount of energy inside the oven per unit volume and per unit frequency interval plotted versus frequency, is called the *black-body curve*. Different curves are obtained by varying the temperature.

Although planets and stars are neither in thermal equilibrium with their surroundings nor perfect black bodies, black body radiation is used as a first approximation for the energy they emit. The term *black body* was introduced by Gustav Kirchhoff in 1860. When used as a compound adjective, the term is typically written as hyphenated, for example, *black-body radiation*, but sometimes also as one word, as in *blackbody radiation*. Black-body radiation is also called *complete radiation* or *temperature radiation* or *thermal radiation*.

4. THERMODYNAMICS:

All matter emits electromagnetic radiation when it has a temperature above absolute zero. The radiation represents a conversion of a body's thermal energy into electromagnetic energy, and is therefore called thermal radiation. It is a spontaneous process of radiative distribution of entropy.

Conversely all matter absorbs electromagnetic radiation to some degree. When a black body is at a uniform temperature, its emission has a characteristic frequency distribution that depends on the temperature. Its emission is called black-body radiation.

The concept of the black body is an idealization, as perfect black

[fig. 7]

bodies do not exist in nature. Graphite and lamp black, with emissivities greater than 0.95, however, are good approximations to a black material. Experimentally, black-body radiation may be established best as the ultimately stable steady state equilibrium radiation in a cavity in a rigid body, at a uniform temperature, that is entirely opaque and is only partly reflective. A closed box of graphite walls at a constant temperature with a small hole on one side produces a good approximation to ideal black-body radiation emanating from the opening.

Black-body radiation has the unique absolutely stable distribution of radiative intensity that can persist in thermodynamic equilibrium in a cavity. In equilibrium, for each frequency the total intensity of radiation that is emitted and reflected from a body (that is, the net amount of radiation leaving its surface, called the *spectral radiance*) is determined solely by the equilibrium temperature, and does not depend upon the shape, material or structure of the body. For a black body (a perfect absorber) there is no reflected radiation, and so the spectral radiance is due entirely to emission. In addition, a black body is a diffuse emitter (its emission is independent of direction). Consequently, black body radiation may be viewed as the radiation from a black body at thermal equilibrium.

BLACK MAGIC

1. DEFINITION:

Black magic has traditionally referred to the use of supernatural powers or magic for evil and selfish purposes.

2. BACKGROUND:

With respect to the philosophy of the *duality of magics*, black magic is the malicious counterpart of benevolent white magic. In modern times, some find that the definition of "black magic" has been convoluted by people who define magic or ritualistic practices that they disapprove of as "black magic". Like its counterpart white magic, the origins of black magic can be traced to the primitive, ritualistic worship of spirits as outlined in Robert M. Place's 2009 book, *Magic and Alchemy*.

Unlike white magic, in which Place sees parallels with primitive shamanistic efforts to achieve closeness with spiritual beings, the rituals that developed into modern "black magic" were designed to invoke those same spirits to produce beneficial outcomes for the practitioner. Place also provides a broad modern definition of both black and white magic, preferring instead to refer to them as "high magic" (white) and "low magic" (black) based primarily on intentions of the practitioner employing them. He acknowledges, though, that this broader definition (of "high" and "low") suffers from prejudices as good intentioned folk magic may be considered "low" while ceremonial magic involving expensive or exclusive components may be considered by some as "high magic", regardless of intent.

BRIGHTNESS

1. DEFINITION:

Brightness is an attribute of visual perception in which a source appears to be radiating or reflecting light. In other words, brightness is the perception elicited by the luminance of a visual target. This is a subjective attribute/property of an object being observed.

2. BACKGROUND:

The adjective *bright* derives from an Old English *beorht* with the same meaning via metathesis giving Middle English *briht*. The word is from a Common Germanic **berhtaz*, ultimately from a PIE root with a closely related meaning, **bherg-* "white, bright". "Brightness" was formerly used as a synonym for the photometric term *luminance* and (incorrectly) for the radiometric term *radiance*. As defined by the US *Federal Glossary of Telecommunication Terms* (FS-1037C), "brightness" should now be used only for non-quantitative references to physiological sensations and perceptions of light.

A given target luminance can elicit different perceptions of brightness in different contexts. In the RGB color space, brightness can be thought of as the arithmetic mean $\frac{1}{3}$ of the red, green, and blue color coordinates (although some of the three components make the light seem brighter than others, which, again, may be compensated by some display systems automatically).

Brightness is also a color coordinate in the HSB or HSV color space (hue, saturation, and brightness or value). With regard to stars, brightness is quantified as apparent magnitude and absolute magnitude.

CARBON NANOTUBES

1. DEFINITION:

Carbon nanotubes (CNTs) are allotropes of carbon with a cylindrical nanostructure. Nanotubes are members of the fullerene structural family. Their name is derived from their long, hollow structure with the walls formed by one-atom thick sheets of carbon, called graphene.

2. BACKGROUND:

Graphene sheets are rolled at specific and discrete ("chiral") angles, and the combination of the rolling angle and radius decides the nanotube properties; for example, whether the individual nanotube shell is a metal or semiconductor. Nanotubes are categorized as single-walled nanotubes (SWNTs) and multi-walled nanotubes (MWNTs). Individual nanotubes naturally align themselves into "ropes" held together by van der Waals forces,

[fig. 8] Advancing Panoramic Ice, Alaska Hawaii 2003, photo by Hawaii Volcano Observatory (CAS)
[fig. 7] Ebenezer Sibley, John Dee and Edward Kelly evoking a spirit

more specifically, pi-stacking. These cylindrical carbon molecules have unusual properties, which are valuable for nanotechnology, electronics, optics and other fields of materials science and technology. In particular, owing to their extraordinary thermal conductivity and mechanical and electrical properties, carbon nanotubes find applications as additives to various structural materials.

3. PRODUCTION:

The prevailing method for the mass production of Carbon nanotubes is Chemical Vapor Deposition (CVD). In CVD, a substrate is prepared with a layer of metal catalyst particles, most commonly nickel, cobalt, iron, or a combination of these materials. The diameters of the nanotubes that are to be grown are related to the size of the metal catalyst particles. This can be controlled by patterned (or masked) deposition of the metal, annealing, or by plasma etching of a metal layer. To initiate the growth of nanotubes, two gases are fed into the reactor: a process gas (such as ammonia, nitrogen or hydrogen) and a carbon-containing gas (such as acetylene, ethylene, ethanol or methane). Nanotubes grow at the sites of the metal catalyst; the carbon-containing gas is broken apart at the surface of the catalyst particle, and the carbon is transported to the edges of the particle, where it forms the nanotubes. The catalyst particles can stay at the tips of the growing nanotube during growth, or remain at the nanotube base, depending on the adhesion between the catalyst particle and the substrate.

4. OPTICS:

Within materials science, the optical properties of carbon nanotubes refer specifically to the absorption, photoluminescence, and Raman spectroscopy of carbon nanotubes. Spectroscopic methods offer the possibility of quick and non-destructive characterization of relatively large amounts of carbon nanotubes. There is a strong demand for such characterization from the industrial point of view: numerous parameters of the nanotube synthesis can be changed, intentionally or unintentionally, to alter the nanotube quality. Microscopy, optical absorption, photoluminescence and Raman spectroscopies allow quick and reliable characterization of this "nanotube quality" in terms of nanotubular carbon content, structure (chirality) of the produced nanotubes, and structural defects. These features determine nearly any other properties such as optical, mechanical, and electrical properties.

Carbon nanotubes are unique "one dimensional systems" which can be envisioned as rolled single sheets of graphite (or more precisely graphene). This rolling can be done at different angles and curvatures resulting in different nanotube properties. The diameter typically varies in the range 0.4–40 nm (i.e. "only" ~100 times), but the length can vary ~10,000 times, reaching 18.5 cm. Thus the nanotube aspect ratio, or the length-to-diameter ratio, can be as high as 132,000,000:1, which is unequalled by any other material. Consequently, all the properties of the carbon nanotubes relative to those of typical semiconductors are extremely anisotropic (directionally dependent) and tunable.

Whereas mechanical, electrical and electrochemical (supercapacitor) properties of the carbon nanotubes are well established and base immediate applications, the practical use of optical properties is yet unclear. The aforementioned tunability of properties is potentially useful in optics and photonics. In particular, light-emitting diodes (LEDs) and photo-detectors based on a single nanotube have been produced in the lab. Their unique feature is not the efficiency, which is yet relatively low, but the narrow selectivity in the wavelength of emission and detection of light and the possibility of its fine tuning through the nanotube structure. In addition, bolometer and optoelectronic memory devices have been realized on ensembles of single-walled carbon nanotubes.

5. BLACK BODY APPLICATIONS:

An ideal black body should have emissivity or absorbance of 1.0, which is difficult to attain in practice, especially in a wide spectral range. Vertically aligned "forests" of single-wall carbon nanotubes can have absorbances of 0.98–0.99 from the far-ultraviolet (200 nm) to far-infrared (200 μm) wavelengths, making them an ideal material for the construction of black bodies.

CHAOS

1. DEFINITION:

Chaos (Greek χάος, khaos) refers to the formless or void state preceding the creation of the universe or cosmos in the Greek creation myths, more specifically the initial "gap" created by the original separation of heaven and earth.

2. BACKGROUND:

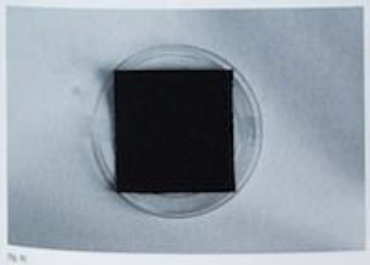
Greek χάος means "emptiness, vast void, chasm, abyss", from the verb χάσκω, "gape, be wide open, etc.", from Proto-Indo-European **ghen-*, cognate to Old English *grantan*, "to gape", whence English yawn.

Hesiod and the Pre-Socratics use the Greek term in the context of cosmogony. Hesiod's chaos has often been interpreted as a moving, formless mass from which the cosmos and the gods originated, but Eric Voegelin sees it instead as creatio ex nihilo, much as in the Book of Genesis. The term tohu wa-bohu of Genesis 1:2 has been shown to refer to a state of ruin being prior to creation rather than to a state of matter.

3. CHAOSKAMPF

The motif of Chaoskampf (German for "struggle against chaos") is ubiquitous in myth and legend, depicting a battle of a culture hero-deity with a chaos monster, often in the shape of a serpent or dragon. The same term has also been extended to parallel concepts in the religious

[fig. 9]



[fig. 9]

[fig. 10]

[fig. 11]

[fig. 8] Image of Carbon Nanotubes made with a Philips FEI CM 300 Scanning Electron Microscope in the Advanced Materials Characterization Center at the University of Cincinnati. Magnification: 300 X
[fig. 9] Sample of multi-walled carbon nanotube arrays produced by NANOCOR, Inc. Laboratories at the University of Cincinnati
[fig. 10] Carbon nanomaterial
[fig. 11] Same as above

GAMUT WARNING

Denny Gallery, New York.
September 14th 2013—October 20th 2013.

While technology has always been at the heart of photographic seeing, one of the consequences of the digital revolution is that once again (it happens every time we change the underlying platform), we are becoming acutely aware of how the machines we use for image making (namely camera and software) function. Several decades ago, we were down in the weeds exploring arcane darkroom and chemical techniques to create different visual outcomes. Today, we are adjusting and calibrating via increasingly powerful software tools, and bumping up against new limits we hadn't considered much in the past.

For the record, the gamut warning in the title of this exhibit is a software feature which highlights the color mismatches between the RGB of your screen and the CMYK of a commercial printer, helping you to understand that your image on your monitor is much brighter and richer than the inks used to make prints can generally match. By showing you which colors won't translate exactly, it highlights the further corrections needed to make an image ready for printing.

Jordan Tate's show is a riff on this idea of corner case color matching, and a meditation on the idea of the layers of technical mediation between object and photograph. Hung edge to edge across the surface of two of the gallery walls, the main work on view is a rebus-like frieze of imagery, starting with a printed approximation of Yves Klein blue and ending with a swirling black and white satellite image. The territory in between is filled with scientific still lifes (test tubes, slides, and other technical equipment), color gradients and test patterns, and ancient objects (marble statuary, constellations, rock specimens) being measured. Together, the images consider the nature of seeing from a variety of angles, applying scientific rigor to the underlying details of image making. In this world, we're light years from the decisive moment and instead buried in the technical minutiae of what photography has become. Tate makes this idea more explicit with a large printer palette demo hung across the gallery, a tangible manifestation of the limits of the printed color system and an emblem of the new constraints, helpfully adorned with a note to consult the user's manual if you're confused.

I think Tate's work fits squarely into the larger trend of bringing the mind of an engineer into the realm of photography. As more and more scientists, software developers, and hackers delve into digital photography, we are seeing the emergence of a different kind of artistic mindset, one that is perfectly comfortable with systems design and networked technical complexity. These artists are exploring photography's traditional limits using more structured, iterative strategies, and coming up with artworks that reconsider the underlying mechanical foundations of the image making process and that question what changes to those technical underpinnings might mean. It's an innovative way to deconstruct photography, and we're just at the beginning of seeing what this new approach might enable.
-Loring Knoblauch for Collector Daily

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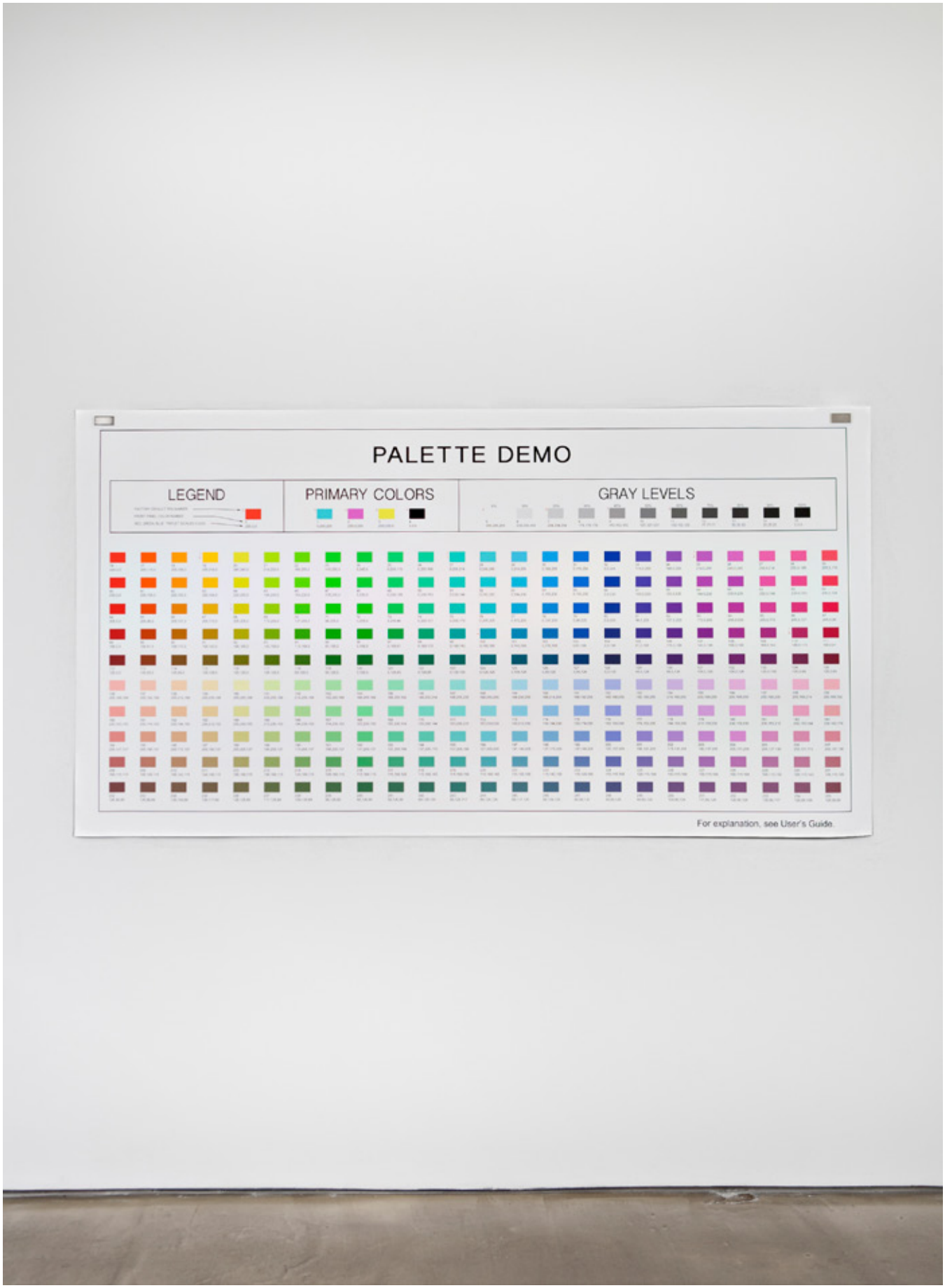
GAMUT WARNING at Denny Gallery, Installation Overview, 2013.



GAMUT WARNING at Denny Gallery, Installation Overview, 2013.

GAMUT WARNING at Denny Gallery, Installation Overview, 2013.

NEW CONTAINERS

Herron Gallery, Indianapolis.
January 11th—February 13th, 2013.

An extension of medium-specific inquiries, New Containers addresses the form and function of context. Photography itself has become a space/container that defines and allows for a variety of ideas to coexist within a set of bounded possibilities. Photography's role as container represents a much broader line of thought that approaches the medium as a microcosm of contemporary modes of understanding. The fact that photography is inherently mediated, regardless of ethics, intentions, or supposed veracity, is one we need to accept and foreground in our consumption of images.

That said, the power of photography as a metamedium lies in its ability to measure the affects and effects of media on a given message. Photography is what we make it to be; it is an idea larger than the fixing of light; it is a new language that requires and deserves a new literacy. It, more than any invention—from writing and the printing press to the internet—has fundamentally restructured thought.

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New Containers, Herron Gallery, Installation Overview, 2013.

New Containers, Herron Gallery, Installation Overview, 2013.

LIGHT CASTINGS

Voltage Gallery, Cincinnati.
October 7th—November 5th, 2012.

Recently photography has engaged the three dimensional form with renewed passion. The objecthood of the photograph, the indexicality of the photographic subject, and the theater of photographic installation converge in engaging new work by two young artists, each merging a conceptual rigor with an appreciation of both older process and digital technologies alike. Inheritors of the post modernism's photographic turn, Anthony Pearson and Jordan Tate scramble the tools of the medium into seductive works of art.

Light Castings showcases new attitudes about photography as object and representation, as a form that embraces the optical, the sculptural, and the cinematic. Both Tate and Pearson maintain studio-based practices in which they parlay selected elements into a specific vocabulary of forms. They reach back to the medium's beginnings to redefine the tools of photography transformed by digital culture, to different ends. Photography derives from the Greek "writing with light;" questions about the photographic process itself appear in ways and means in each body of work. Casting refers to the process of creating a multi-dimensional multiple from a single matrix, either photographic negative, digital file, or plaster mold. The example of James Welling's work, in which the subject/form relationship differs for each photographic project, creates a point of shared concern for both artists.

Following the path hewn in past decades by Welling, both artists select and apply photographic techniques and operations very specifically; they assume topical important roles in each body of work. The process, the materials, and history are taught and told here. The direct experience of photographic process and the resultant focus on materiality takes center stage in both artists' work: Tate takes an open-source stance of infinite repeatability, while Pearson's self-referential, closed system of art making relies on the properties of the unique.

Lisa Kurzner

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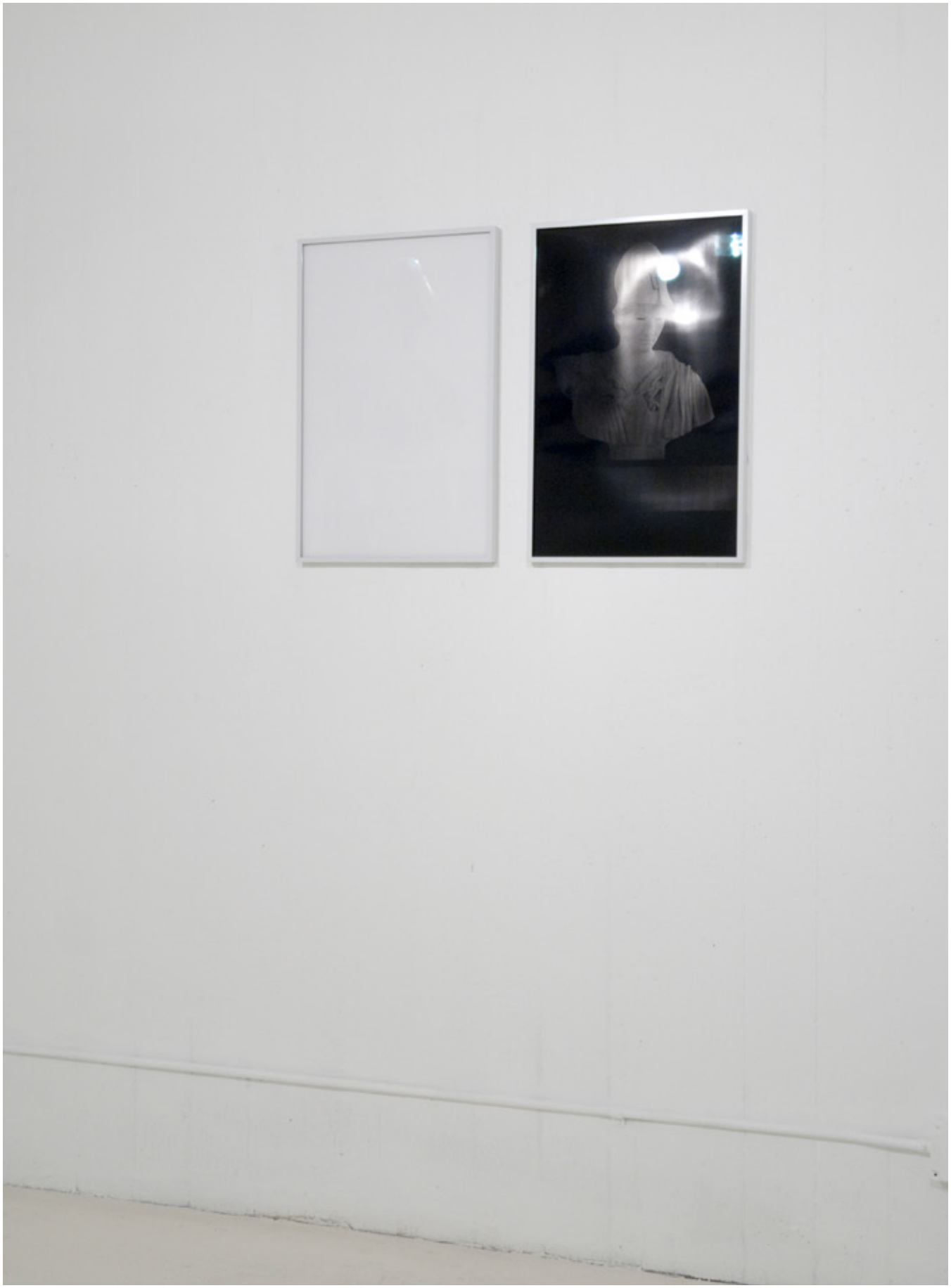
Light Castings, Installation Overview, 2012.

Light Castings, Installation Overview, 2012.

Light Castings, Installation Overview, 2012.



New Work #117, Differential Gloss Inkjet Prints, 2012

JORDAN TATE

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