

From Darkroom to Laptop

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Avant-garde photography began without cameras. At the end of World War I, artists including Raoul Hausmann, John Heartfield, Hannah Höch, Christian Schad, Man Ray, and László Moholy-Nagy experimented with photomontages and photograms.¹ On the one hand, these artists appropriated images from postcards, newspapers, magazines, and other newly illustrated mass media.² On the other hand, they abandoned cameras and lenses and placed quotidian objects directly between light sources and photographic papers: crystals, leaves, hands, lace, filmstrips, glasses, and virtually anything else that could refract or otherwise impede the path of light. Often produced and circulated as unique originals, the results—variously named Schadographs, Rayographs, cameraless photographs, and photograms, with the last eventually adopted as the generic term—varied from the immediate trace to the abstract form, but they invariably brought photography closer to the more established arts of drawing and painting. From these two operations (appropriation and cameralessness) with dual allegiances (mass media and art) we can chart a multifarious history of experimental photography that extends to the present.

At the core of these photographic experiments lies a twofold proposition: the world is already a photograph, and photography is a world of its own. These parallel propositions do not cohere into a single practice; rather, they are allied against a common notion: photography as the veridical trace of reality. In contrast to this arch-photographic value, which is often confused with photography's essence or nature, experimental photographs look inward to the world of photographic images—their systems of production, reproduction, circulation, and exhibition—and, through those systems, back toward the world. Among the most familiar techniques are procedures of appropriation used in Robert Heinecken's work from the 1970s and Vik Muniz's from the 1990s, as well as in recent pieces by emerging artists such as Anna Ostoya and Michele Abeles. The photogram technique also appears frequently, in Běla Kolářová's so-called radiograms in the 1960s, Bruce Conner's 1970s *Angel* works, various works by Adam Fuss beginning in the 1980s, more-recent

monumental cameraless photographs by Walead Beshty and Cory Arcangel, and photogram installations by Liz Deschenes. What distinguishes the artists of the last decades from their early-twentieth-century antecedents are their frequent attempts to merge, resolve, or otherwise entangle these two operations.³ I will explore each of these tendencies in turn, not in order to silo them into separate histories but rather to trace their intricate imbrications.

For much of the twentieth century, the devotion to photography exhibited by Hausmann, Heartfield, Höch, Schad, Man Ray, and Moholy-Nagy relegated them to the second tier of modern artists, in both the marketplace and history books. But over the last half-century, as photography has shed its status as handmaiden to the arts, these artists have become essential figures for contemporary artists and historians. Pop art, Conceptual art, land art, performance, appropriation, and many contemporary practices are all but unthinkable without photography. In this sense Robert Rauschenberg and Andy Warhol can be viewed as pioneers of post–World War II photographic appropriation. (Rauschenberg, with Susan Weil, also made important innovations in cameraless photography.) To these a third name must be added: Heinecken.

Whereas Rauschenberg and Warhol subsumed photography within their (expanded) painting practices, Heinecken understood himself as a “paraphotographer,” working in and beyond the medium of photography.⁴ *The S.S. Copyright Project: “On Photography”* (1978, plate 293) is an exemplary work in this respect. To make it, Heinecken appropriated Susan Sontag’s author photograph (taken by Jill Krementz) from the cover of *On Photography*, published the previous year, by turning it into a set of pendant portraits in the form of Polaroid photocollages. The left-hand portrait is made up of dozens of instant photographs of pages from her book; the right-hand image is composed of images taken indiscriminately in Heinecken’s studio by his assistant. According to Heinecken, the pair of photocollages presents a set of oppositions: words versus pictures, relevant versus arbitrary, craft versus feelings, casual versus research. Together with the caustic text that accompanies it, the work constitutes an attack on Sontag’s book, which may have been provoked by her devastating diagnosis of a strain of photographic practice not far from Heinecken’s own: “Marx reproached philosophy for only trying to understand the world rather than trying to change

it. Photographers, operating within the terms of the Surrealist sensibility, suggest the vanity of even trying to understand the world and instead propose that we collect it.”⁵ Heinecken understood the world precisely by collecting it as photographs. He also appropriated photographs through cameraless techniques, such as making videograms of Ronald Reagan’s 1981 inaugural address by placing photosensitive paper directly on the television screen. Heinecken’s rejoinder to Sontag is clear: in a world where film stars are elected president—that is, in a world that is already photogenic—the exploration of photography as its own world coincides with an interrogation of the one we inhabit.

The collapse of photography and world, of photograms and appropriation, was not always at the heart of photographic experimentation. For much of the twentieth century, cameraless photography hovered between darkroom technique and cosmic spirit, its own world and the one beyond.⁶ Despite the dominion of Soviet-sanctioned Socialist Realism, the Prague-based artist Kolářová persevered with the experiments into “absolute” or abstract photography that she had begun in the interwar period. Beginning in 1961, she created a series of what she called “radiograms,” after the Czech term for X-ray images, the most common form of cameraless photography. Kolářová’s photograms do not point to something beyond themselves—except perhaps to the occult. The pleasure in *Radiogram of Circle* (1962–63, plate 295) lies in forms at once immediately discernible and elusively transcendent coupled with the extended effort required to solve the riddle of their production. (It appears that she obtained the concentric circles by placing photosensitive paper on a spinning turntable and exposing it to light filtered through a sieve.) Separated from Kolářová’s radiograms by a decade and the Iron Curtain, the San Francisco-based polymath Bruce Conner continued the emphasis on process, abstraction, and the spiritual with a series of full-length, cameraless self-portraits. To create *Angel* (1975, plate 296), he stood between a roll of photographic paper and an empty slide projector operated by the photographer Edmund Shea. In the finished work, after exposure and development, Conner’s body was transmuted into a luminous silhouette, radiant heart, and single leg. (In some traditions, angels are believed to have only one leg.) The spiritual dimension of cameraless photography reemerges transmogrified in the work of the New York-based photographer Fuss, among the first artists to anchor

a successful career in it, as well as experimenting with pinhole cameras, daguerreotypes, and other outmoded forms of photography. In an untitled photograph from 1988 (plate 301) the energy and fluidity of a snake’s movements through talcum powder are recorded directly on a photosensitive surface, establishing Fuss as equal parts shaman and technician; he has also made photograms of babies in water and of rabbit entrails, the latter the basis for ancient Roman haruspicy, a form of divination rooted in the inspection of the organs. Around this time, the first book-length histories of photograms in modern art saw the light of day, but the renaissance in cameraless photography would have to wait until the digital revolution and the perceived obsolescence of analog photography sent artists, critics, and historians back into the darkroom.⁷

Among the dominant strands of current experimentation is a renewed (or newly invented) interest in the material qualities of photography. Whereas Moholy-Nagy and other interwar artists considered photograms to be the very height of dematerialization, contemporary artists are piercing, slashing, peeling, and otherwise violating the photographic surface in an effort to reclaim the materiality that they fear has been lost to digital information. (The relative materiality or immateriality of a medium tends to have everything to do with its history and application and little to do with its ontology or “nature.”) This quality is embodied in works such as *Pan (C-223)* (2003, plate 306), by Marco Breuer, a New York-based German photographer who has abandoned the camera in favor of razor blades and other tools with which he slices, scores, and otherwise exposes various layers of photographic paper. From a distance, Breuer’s abstract photographs are visual tapestries of finely woven color; up close, they carry the ridges, grooves, and scars of an impossibly jagged landscape. Breuer revisits and inverts the techniques of Kolářová: to make *Spin (C-823)* (2008), he placed a sheet of exposed color photographic paper on a modified turntable and scratched through the emulsion with a stylus; Kolářová’s writing in light (“photo-graphy”) yields to engraving in paper. In his foregrounding of the paper’s physicality, Breuer is representative of a generation of artists whose material experiments with photography often approach or exceed the recognized boundaries of the medium.

The tension between photographic materiality and immateriality has also been productively pursued in

— 1 See Antonin Dufek, “Abstract and Nonfigurative Tendencies,” in Vladimir Birgus, ed., *Czech Photographic Avant-Garde, 1918–1948* (Cambridge, Mass.: MIT Press, 2002), p. 73.

— 2 Because of technical limitations and social mores, photographs were not a fixture of the daily presses until the early twentieth century. Their avant-garde adoption was roughly coterminous with their mass-media proliferation.

— 3 Among historical avant-garde precedents, the most important exception to the rule whereby photograms and photomontage occupied separate tracks was Christian Schad, whose cameraless photographs were an extension of a collage practice. In the decade of their creation, however, the Schadographs were mostly

locked away by Tristan Tzara and remained little known for generations.

— 4 See Eva Respini, “Not a Picture of, but an Object about Something,” in Respini, ed., *Robert Heinecken: Object Matter* (New York: The Museum of Modern Art, 2014), p. 24n1.

— 5 Susan Sontag, *On Photography* (New York: Picador, 1977), p. 82.

— 6 On photography and the occult, see Clément Chéroux et al., eds., *The Perfect Medium: Photography and the Occult* (New Haven, Conn.: Yale University Press, 2005).

— 7 See especially Floris M. Neussiss and Renate Heyne, eds., *Das Fotogramm in Der Kunst Des 20. Jahrhunderts* (Cologne: DuMont, 1990).

a range of hybrid photo-sculptures. On the one hand are photographs that function like objects, such as Heinecken's *Multiple Solution Puzzle* (1965), in which nudes are sliced into square or triangular pieces to be rearranged like a puzzle, or Ostoya's more recent *Mixed Pseudomorphism of a True/False Cry* (2010, plate 324), which mashes up a 1931 photograph by Germaine Krull, showing the model Wanda Hubbel in tears, and Bas Jan Ader's *I'm Too Sad to Tell You* (1970, plate 146), depicting the crying artist. Half of each despondent face is mounted on the sloping side of a trapezoidal prism to create a work that vacillates between authenticity and performance, male and female, and photography (and film) and sculpture, without clear resolution. Other, starkly different forays into sculpture include the intricate suspended photographs in Annette Messager's *My Vows* (*Mes Vœux*, 1988–91; plate 300) and the belated punk violence of Brendan Fowler's *Spring 2012–Fall 2012 ("Miles" Security Jacket, Chocolate Hat, Stack of Matt's Plates from Party, Andrea's Sweater)* (2013, plate 321). A second trajectory of this tension traces sculptures or assemblages made only to be photographed, such as well-known works by Thomas Demand and Muniz that appropriate iconic and obscure images from the annals of history and the canons of art. One such exemplary work is Sara VanDerBeek's *Delaunay* (2008, plate 323), which is based on a tapestry design by Sonia Delaunay, a pioneer in the avant-garde synthesis of art and life through abstraction and design. VanDerBeek constructed and photographed a shallow sculpture from images of Frank Stella paintings, African textiles, Kabuki actors, the Nuba people (photographed by Leni Riefenstahl), and other sources. The result oscillates between flatness and depth, virtual images and sculptural installations, particulars and universals, and historical specificity and timeless truths, in a manner that evokes and questions the operations of encyclopedic photo-installations such as Edward Steichen's *Family of Man*, at The Museum of Modern Art in 1955, as well as the web of images woven by the Internet.

The oeuvre of James Welling, including quasi-abstract photographs of tinfoil (*Untitled [CA0]* [1981, plate 302]), casts a long shadow over nearly all the recent experiments in photographic abstraction. The artist once described his practice as "something like redefining modernism, but with a sense of history," and several recent works energetically punctuate this claim.⁸ Indeed history, once the antagonist of modernism, has become a central

ingredient in many contemporary photographs. One such work is *phg.06* (2012, plate 329), by the German photographer Thomas Ruff, whose forms readily resemble those of a photogram by Moholy-Nagy or one of his Chicago acolytes, although its dimensions far exceed those of anything created by them. The images are in fact digital fabrications created over several days of computer processing—in other words, cameraless photography that also forswears the darkroom and photographic paper. This is in line with Ruff's larger practice: although Ruff is considered one of the most important photographers of the late twentieth and early twenty-first centuries, he has not used his camera in years, perhaps decades. Instead, he interrogates the systems that are deployed in the production and consumption of photography, including online pornography, jpeg compression, and images from outer space. His photogram series redoes photographic modernism as history: the darkroom is virtual, the cameralessness is virtual, and the visual data is virtual; only the formal vocabulary is real. In *phg.06* modernism, too, is made visible as a system for the production and consumption of photography.

Another version of modernism's history is encapsulated in Arcangel's *Photoshop CS: 110 by 72 inches, 300 DPI, RGB, square pixels, default gradient "Spectrum," mousedown y=1098 x=1749.9, mouseup y=0 x=4160* (2008, plate 330). The title provides the instructions to make the same abstract image at home, using just a few mouse clicks. In theory it is the apotheosis of virtual images and de-skilled (better: DIY) aesthetics. But only in theory. Face mounted to Plexiglas and back mounted to acrylic, the "immaterial" image weighs roughly six hundred pounds. At a smaller scale, the wave of blue that metamorphoses into a cloud of magenta would hardly register, and neither would the visceral connection to Color Field painting and high modernism. (And it would perhaps announce too clearly its debt to Welling's *Degrades* series of 1986–2006.) Created without a camera, using off-the-shelf software, and stored and exhibited like a painting, Arcangel's image asserts but tenuous claims on photography. And this tenuousness is instructive. At the end of the nineteenth century, the Pictorialists espoused pompous techniques to raise their photographs to the status of paintings. At the start of the twenty-first, artists employ advanced technology to render their pictorial files as monumental photographs. But Arcangel refuses to give monumentality

the last word: he sells closely related works called *Photoshop Gradient Demonstrations*—protective cases for iPhones and iPads (\$39.95 each) and bedsheets (\$495.95 for a queen-sized set)—directly from his website.

This uncomfortable reminder that Abstract Expressionism flirted with and frequently descended into middlebrow kitsch—"apocalyptic wallpaper," in Harold Rosenberg's famous phrase—is evident in the resplendent cyanotypes of Christian Marclay's *Allover* series.⁹ In *Allover* (*Genesis, Travis Tritt, and others*) (2008, plate 304), the imposing scale and formal beauty of a Jackson Pollock canvas collide with tawdry music and cheap and outmoded recording technologies such as cassette tapes and blueprint paper. Notwithstanding the stunning Prussian blues and piercing whites—the blueprint paper and the traces left by unspooled and smashed audio cassettes—the series explores a world of trashed, outmoded media by referring to its own obsolescence.

Inward experimentation aimed at an outward engagement with the world is richly evident in Deschenes's *Tilt/Swing (360° field of vision, version 1)* (2009, plate 314). It is an installation comprising six mirrorlike silver-toned photograms arranged according to a 1935 diagram by Herbert Bayer, in which a Cyclops-spectator gazes in every direction to illustrate the idea of field of vision. The "tilt/swing" of Deschenes's title refers to a lens and technique employed to correct perspectival distortion and frequently used in architectural photography—a reference made all the more apt by Bayer's having based his diagram on an earlier drawing of an installation featuring photographs of iconic modernist buildings by Walter Gropius, Ludwig Mies van der Rohe, and others at a 1930 Werkbund exhibition in Paris. In both diagrams the spectator is at once a master and victim of images, omniscient and oppressed, a dynamic all the more pronounced in the present day, given the ubiquity of screens. Against this backdrop, Deschenes's intervention is multifaceted and poignant. The photograms were exposed at night to sidereal and lunar light—a subtle reference to the nineteenth-century "celestographs" of August Strindberg—assisted by a healthy (better: unhealthy) dose of ambient light. In short, the photograms were only exposed because we have polluted the night with so much light. What's more, the images will oxidize over time because of their prolonged exposure to air, bringing to mind John Cage's description of Rauschenberg's white monochromes:

"Airports for the lights, shadows and particles."¹⁰ Deschenes, in sum, redirects the grand designation of nineteenth-century photography as "a mirror with a memory."¹¹ Rather than remember a face, a building, or a landscape, Deschenes's blank, cameraless mirrors remember, if only vaguely, our light-and-image-saturated environments.

Walead Beshty has produced a body of work that inscribes within each photograph a milieu that extends from the darkroom to the gallery and far beyond. At first glance, cameraless works such as *Three Color Curl (CMY: Irvine, California, August 19th 2008, Fuji Crystal Archive Type C)* (2008, plate 317) appear to fit neatly into a history of radiant abstract photographs. Beshty's earliest photograms were loosely inspired by a photogram Moholy-Nagy made by wetting and crumpling a piece of photographic paper and exposing it to light.¹² In those early works, the iridescent bars of color are a product of bends in the paper and exposure to colored lights in a combination of predetermined parameters and blind chance, operations that characterize Beshty's practice (the images are produced in total darkness). For all their visual beauty—indeed, they border on too beautiful—the works are literally inscribed with the work of photography: the titles do not provide DIY instructions (as do Arcangel's) so much as fabrication details: the location, date, and means of production. Beshty has extended this principle, first actualized in the darkroom, to the full spectrum of production, reproduction, circulation, and exhibition of images and objects: in nearly life-size portraits of the laborers who frame and install his works; in Plexiglas sculptures sized, shipped, and scarred in accordance with the proprietary dimensions of a FedEx box; in copper sculptures handled without gloves to record not the hand of the artist but those of the handlers (what we might call late-capitalistic ductus or the perfect antithesis to Moholy-Nagy's so-called Telephone Pictures [1923], ostensibly ordered by phone and manufactured without any manual traces); and in photographs of abandoned embassies which he exposed in airport X-ray machines (aleatory photograms meet the global security apparatus). In each of these instances—and many others—Beshty locates the meaning of images not in their own experimental world but in those where images are produced, reproduced, circulated, and received. Never has the inward gaze opened so clearly on these worlds' twisted narrows and wide expanses.

⁸ James Welling, "90s Then: James Welling Talks to Jan Tumlir," *Artforum* 41, no. 8 (2003): 255.

⁹ Harold Rosenberg, "The American Action Painter," in *The Tradition of the New* (New York: Horizon Press, 1959), p. 34.

¹⁰ John Cage, "On Robert Rauschenberg, Artist, and His Work," in *Silence* (Middletown, Conn.: Wesleyan University Press, 1961), p. 102.

¹¹ At first the artist knew about the work only as a rumor. But it indeed exists. *Diagram of Forces* (c. 1938–43).

¹² Oliver Wendell Holmes, "The Stereoscope and the Stereograph," in Alan Trachtenberg, ed., *Classic Essays on Photography* (New Haven, Conn.: Lee's Island Books, 1960), p. 73.