

THE MIRACLE OF ANALOGY

or

The History of Photography, Part 1

KAJA SILVERMAN



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Frontispiece: Abelardo Morell, *Camera Obscura: Courtyard Building, Lacock Abbey, England*, 2003. Silver-gelatin print. Image © Abelardo Morell, courtesy of Edwynn Houk Gallery, New York.

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For those I love.

TABLE OF CONTENTS

Acknowledgments

INTRODUCTION

1. THE SECOND COMING

2. UNSTOPPABLE DEVELOPMENT

3. WATER IN THE CAMERA

4. A KIND OF REPUBLIC

5. JE VOUS

6. POSTHUMOUS PRESENCE

Notes

References

Index

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INTRODUCTION

WE HAVE GROWN accustomed to thinking of the camera as an aggressive device: an instrument for shooting, capturing, and representing the world. Since most cameras require an operator, and it is usually a human hand that picks up the apparatus, points it in a particular direction, makes the necessary technical adjustments, and clicks the camera button, we often transfer this power to our look. The standardization of this account of photography marked the beginning of a new chapter in the history of modern metaphysics—the history that began with the *cogito*, which seeks to establish man as the “relational center” of all that is, and whose “fundamental event” is “the conquest of the world as a picture.”¹ It did so by fixing a problem that had emerged in the previous chapter: the problem posed by human perception. In order to replace the sky and earth with his mental representations, Descartes had to “call away all of [his] senses” and “efface even from [his] thoughts all of the images of corporeal things.”² His camera-wielding successor could picture the world—or so he claimed—without closing his eyes.

When we challenge this account of photography, it is usually by appealing to the medium’s indexicality. Since an analogue photograph is the luminous trace of what was in front of the camera at the moment the photograph was made, we argue, it attests to its referent’s reality, just as a footprint attests to the reality of the foot that formed it. The philosopher from whom the concept of indexicality derives—Charles Sanders Peirce—uses it to describe both signs that are linked to an unfolding situation or event and those that are linked to a prior situation or event. “I see a man with a rolling gait. This is a probable indication that he is a sailor...,” he writes in “What Is a Sign?” “A weathercock *indicates* the direction of the wind. A sun-dial or a clock *indicates* the time of day... [and] a tremendous thunderbolt indicates that *something* considerable happened, though we may not know precisely what the event was.”³

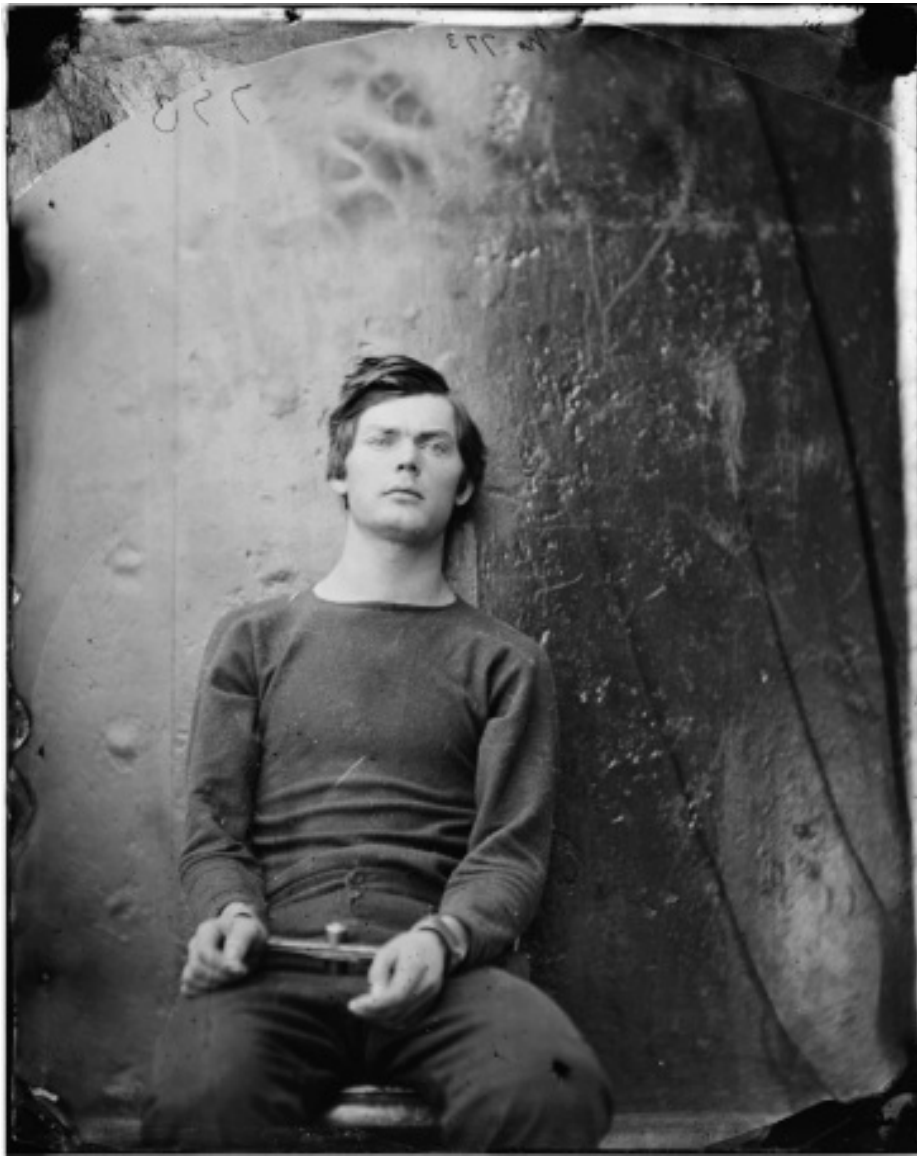


Figure 1. Alexander Gardner, *Washington Navy Yard, D. C. Lewis Payne, in sweater, seated and manacled*, 1865. Albumen print from collodion wet-plate negative. Courtesy of the Library of Congress.

Discussions of photographic indexicality, though, always focus on the past; an analogue photograph is presumed to stand in for an *absent* referent—one that is no longer *there*.⁴ A photograph is “in no way a *presence*,” Roland Barthes writes in “Rhetoric of the Image,” an influential and widely read essay from the mid-sixties. “Its reality is that of the having-been-there.”⁵ Although Barthes associates the photographic image more with the future perfect than the past in *Camera Lucida*, he does not temper the image’s finality. Looking at Alexander Gardner’s 1865 photograph of Thomas Payne, one of four conspirators hung for the attempted assassination of members of Abraham Lincoln’s cabinet, he writes: “I observe with horror an anterior future of which death is the stake. By giving me the absolute past of the pose (aorist), the photograph tells me death in the future... I shudder... *over a catastrophe which has already occurred*.” Barthes then extends this bleak claim to all photographs. “Whether or not the subject is already dead,” he concludes, “every photograph is this catastrophe.”⁶

Many leftist artists and writers have gravitated to this account of the photographic image. For some, like Walter Benjamin and the young Hans Haacke,⁷ it seems to give photography an evidentiary power—the power to expose what might otherwise escape justice. “It has justly been said that [Atget] photographed [the empty streets of Paris] like

scenes of crime,” Benjamin writes in section 7 of “The Work of Art in the Age of Its Technological Reproducibility.” “A crime scene, too, is deserted.”⁸ Others attribute a memorial value to the photographic image, engaging with its “pastness” in ways more melancholy than accusatory. For Ana Mendieta, who photographed the ephemeral traces left on the landscape by her absent body, and W. G. Sebald and Eduardo Cadava, whose work never fails to move me, an analogue photograph is the umbilical cord connecting us to what we have loved and lost, to what is gone because we failed to save it, or to what might have been, but now will never be.⁹

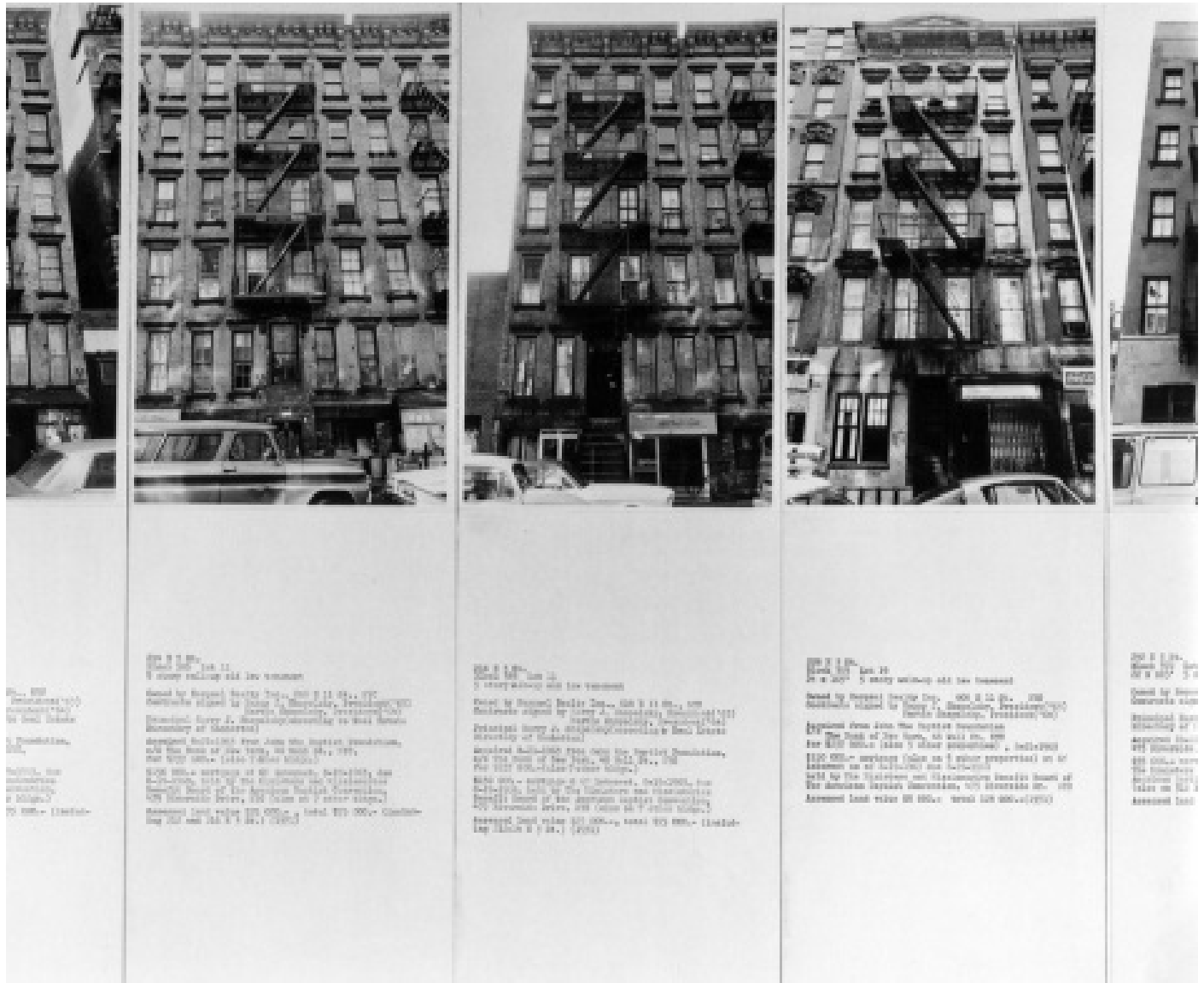


Figure 2. Hans Haacke, *Shapolsky et al. Manhattan Real Estate Holdings, A Real Time Social System, as of May 1, 1971*. Photographic installation. Reprinted with permission of the artist. © Hans Haacke/Artists Rights Society (ARS).

But although there have been pitched battles between those who champion the evidentiary value of the photographic image and those who emphasize its constructedness, the former is only another way of overcoming doubt. If a photograph can prove “what was,” then it is the royal road to certainty—the means through which we know and judge the world. And if what we see when we look at a photographic image is unalterable, then there is only one thing we can do: take “what is dead” or “going to die” into our “arms.”¹⁰ Barthes’s mobilization of the future perfect in this and other passages in *Camera Lucida* renders the future as unchanging as the past. This account of the photographic image consequently both expresses and contributes to the political despair that afflicts so many

of us today: our sense that the future is “all used up.”

In 1931, Benjamin wrote an essay about this malaise, which he calls “left-wing melancholy.” It is “the attitude,” he writes, “to which there is no longer, in general, any corresponding political action.” It affects those who are “remote from the process of production.”¹¹ Although Benjamin is merciless in his condemnation of those who have succumbed to left-wing melancholy, he was on the verge of capitulating to it himself. Not only was he an unemployed Jewish intellectual living in a country that he would soon be forced to flee, but he, too, was “remote from the process of production,” since he was a member of the bourgeoisie.



Figure 3. Ana Mendieta, *Untitled (from the Silueta series)*, 1980. Silver-gelatin print. © The Estate of Ana Mendieta Collection, L.L.C. Courtesy of Galerie Lelong, New York.

As I show in *The Promise of Social Happiness*, the companion volume to this book, Benjamin had been searching for years for a way of defining himself as a left-wing intellectual, but he could not get past Marx’s dictum that “revolutionary ideas” can come only from the “revolutionary class,” i.e., the proletariat.¹² The events that followed—the fall of the Weimar Republic, Hitler’s rise to power, the implementation of the “Final Solution,” the signing of the Hitler-Stalin Pact, and the increasing Stalinization of the Soviet Union—rendered his personal situation more and more desperate. They also showed that a proletarian revolution does not automatically lead to a classless society, and that communism as Marx defines it is not a reliable bulwark against fascism. Unable to answer the question “What is to be done?” Benjamin had no protection against the “fatalism” he had earlier excoriated, so in 1935 and 1936¹³ he tried to find a “cure”—to imagine an action that would be capable of defeating fascism and fulfilling Marx’s agenda, and to which he himself could also contribute. He turned for this purpose to photography, and the result is an even more melancholic account of the medium.

Since photography is able to replicate a work of art “many times over,” Benjamin

argues in “The Work of Art,” it permits everyone to own a copy of something that was previously available only to an elite institution or a privileged individual.¹⁴ Photography and film can also “captur[e] assemblies of hundreds of thousands,” allowing multitudes of people to see themselves as a collectivity.¹⁵ They thus replace a “unique existence” with a mass existence, and proletarianize our perceptions.¹⁶ And this is only the beginning of what these technological images can do for us. With their help, we can “liquidate” the “cultural heritage” from which fascism derives its power, resurrect it in a new form, and renew humanity. We can also seize the “totality of the instruments and forces of production,” and usher in a classless society, whose members will “develop” all of their “capacities.”¹⁷

But far from undermining the cult of the fascist leader, industrial photography and film helped to establish it. Hitler descends godlike from the clouds in Leni Riefenstahl’s *Triumph of the Will*, and National Socialism used film and photography to promote many of its other goals. And in the case of neither National Socialism nor capitalism did exhibition value “drive back” cult value. It was through the ubiquitous display of his photographic image that Hitler assumed cult value, and it is through a similar display that the commodity assumes its otherworldly luster. Finally, instead of helping capitalism to destroy itself, industrial film and photography have prolonged its life. They are the shop windows in which most commodities gleam, and they operate according to the same logic.

A successful capitalist transaction begins with the illusion that a commodity is uniquely wonderful, and ends with the “discovery” that it is identical to millions of others.¹⁸ Ideally, the consumer moves with lightning speed from the first stage to the second, so as to be ready for the next iteration of this two-stage process, but each disillusionment weakens his capacity to believe in the next commodity’s uniqueness, and eventually he may lose it altogether. This can be a salutary loss—one that prompts him to look for another way of relating to the world around him. However, the disillusioned consumer can also hunker down in commodity fetishism’s depressive position. His goal will then be to show that everything is the “same.” He may claim to be working on behalf of the masses, but this equalization has nothing to do with democracy. The Great Leveler proves that everything is identical the way commodification has taught him to do: through a de-idealizing appropriation. This is a destructive act, and disillusionment is its motor force.

“Aura” means many different things in “The Work of Art.” One of them, although Benjamin would dispute this, is the glow with which objects shine in the first stage of commodity fetishism, a glow created through exhibition value. When he calls for the destruction of the aura, it is also in the terms dictated by commodity fetishism. “*The present day masses [want] to ‘get closer’ to things . . .*,” Benjamin proclaims. “Every day the urge grows stronger to get hold of an object at close range in an image or, better, in a facsimile, a reproduction... The stripping of the veil from the object, the destruction of the aura, is the signature of a perception whose ‘sense for sameness in the world’ has so increased that, by means of reproduction, it extracts sameness even from what is unique.”¹⁹

When Benjamin writes that the “cult of the movie star” preserves “the magic of the personality which has long been no more than the putrid magic of its commodity

character,”²⁰ he shows that the logic of commodification had already invaded the sphere of human relations, saturating them with the same disillusionment. It’s difficult to embrace seriality when it takes the form of a million copies of the same fanzine, or a film sequence with a *mise-en-abyme* of identically dressed women sitting at identical grand pianos, like those in Busby Berkeley’s *Gold Diggers of 1935*. It becomes even more difficult when we think of the aggression behind these reiterations.

This account of photography is also as shadowed by absence as the other two. The medium allows us to view works of art in absentia and to create copies that have no original, Benjamin argues in “The Work of Art.”²¹ It performs activities that were previously performed only by human beings, thereby rendering the latter superfluous.²² It also “sucks” the aura “out of reality” by “purging” images of their aesthetic value,²³ and it “detaches” the film actor’s image from his “person,” thereby dispensing with the need for his presence.²⁴ Benjamin buttresses this last claim with a passage from Luigi Pirandello’s *The Turn*. “The film actor feels as if exiled,” this passage reads, “exiled not only from the stage but from his own person. With a vague unease, he senses an inexplicable void, stemming from the fact that his body has lost its substance, that he has been volatilized, stripped of his reality, his life, his voice, the noises he makes when moving about, and has been turned into a mute image that flickers for a moment on the screen, then vanishes into silence.”²⁵

Benjamin’s attempt to turn this passage into another paean to technological reproducibility falls miserably short, and his follow-up remarks in the next section ring even more hollow. “*The representation of human beings by means of an apparatus has made possible a highly productive use of the human being’s selfalienation,*” he enthuses in the first sentence.²⁶ If the reader pursues this train of thought to the end of the section, as I have often done in the past, although I am now incredulous at my own credulity, he will arrive at a chilling description of the spectatorial economy to which this separation leads. “When [the screen actor] stands before the apparatus,” Benjamin writes, “he knows that in the end he is confronting the masses. It is they who will control him. Those who are not visible, not present while he executes his performance, are precisely the ones who will control it. This invisibility heightens the authority of their control.” It would be hard to imagine a more compelling argument for presence than this celebration of absence, with its one-way windows and unopposable power.

As I will demonstrate in the last chapter of this book, Benjamin offers a very different account of photography in “Little History of Photography.” In the first half of this 1931 essay, he privileges pre-industrial instead of industrial photography, and associates it with a disclosive rather than an evidentiary truth. He also attributes it to the world, instead of to technology, treats it as an analogy, instead of an index or a copy, and associates it with development, instead of fixity. Even more astonishingly, Benjamin suggests that the photographic image is propelled by a mysterious kind of intentionality toward a particular look—one that has the capacity to recognize it, and thereby to redeem it. It travels through time and space to reach this look, and when it arrives, something extraordinary happens. The present discovers itself within the past, and the past is realized within the present.²⁷

All these concepts resurface in Benjamin’s later account of messianic history. “The past

carries with it a secret index by which it is referred to redemption,” he writes in “On the Concept of History.” “There is a secret agreement between past generations and the present one... our coming was expected on earth... like every generation that preceded us, we have been endowed with a *weak* messianic power, a power on which the past has a claim.”²⁸ The power described in this passage is the capacity to perceive the similarities between our generation and a previous generation. It is “messianic” because recognition precludes repetition—because if we see that we are on the verge of reenacting an earlier generation’s mistake, we will adopt a different course of action. This messianism is “weak” because there are no final solutions, because every generation “must strive anew to wrest tradition away from the conformism that is working to overpower it.”²⁹

At moments of danger, Benjamin argues, earlier generations alert us to the mistake that we are on the verge of making through an image that bursts out of the continuum of time and travels toward us. They do so because we are in a position to “change the character” of *their* “day.”³⁰ If we recognize the present in this image from the past, and also understand that it is “intended” for us,³¹ we will redeem both the past and the present. At the moment in which this redemption occurs, which Benjamin calls “*Jetztzeit*” or “now-time,” “what is” becomes co-present with “what was,” just as it does in “Little History.” “It’s not that what is past casts its light on what is present,” he observes in *The Arcades Project*, or that “what is present casts its light on what is past; rather... what has been comes together in a flash with the now to form a constellation.”³² If, however, we ignore a previous generation’s warning, we doom it, as well as ourselves. It is because of the reversibility and reciprocity of this relationship that the past has a “claim” on our weak messianic power.

Not only does the image described here “behave” like the photograph described in “Little History,” but it also resembles a photograph in several other ways. Benjamin repeatedly associates it with a “flash,” and at a key moment in *The Arcades Project* he quotes the following passage from André Monglond: “The past has left images of itself in literary texts, images comparable to those which are imprinted by light on a photosensitive page. The future alone possesses developers strong enough to reveal the image in all its details.”³³ Strangely, though, photography is not the vehicle through which the past addresses the present in “On the Concept of History” and *The Arcades Project*; that role is reserved for language, with its “non-sensuous similarities.”³⁴

Benjamin turns to language because he has stripped the photographic image of its redemptive properties. If it is one of a potentially infinite number of identical and industrially generated copies, it cannot be the bearer of a mysterious intentionality, nor can it help us see the similarities between previous generations and our own; it promotes repetition, not recognition. And although language also houses similarities, they are nonsensuous,³⁵ and nonsensuous similarities are “only a faint residue of the magical correspondences and analogies that were familiar to ancient people.”³⁶ They also “flash up fleetingly out of the stream of things only in order to sink down once more.”³⁷ Finally, nonsensuous similarities seem to originate within us—to be a mental construct, rather than a call from the world or a historical summons. They consequently can’t do for us what the concentration camp photographs that landed on Gerhard Richter’s “doormat” in the mid-

sixties did for him: persist as “unfinished business” until he was able to respond to them.³⁸



Figure 4. Gerhard Richter, *Six Photos. May 2–7, 1989 (c / 4 May 1989)*, 1991. Silver-gelatin print on resin-coated paper. Courtesy of the artist.

THE IDEA THAT PHOTOGRAPHY MEANS “CAMERA,” and that the camera is an instrument for mastering the world, emerged early in the history of the so-called medium. In a chilling passage in his 1859 essay “The Stereoscope and the Stereograph,” Oliver Wendell Holmes not only characterizes the world as a picture, whose essence inheres in its photographic representability, but suggests that once this essence has been extracted, the world itself can be thrown away. “Form is henceforth divorced from matter,” this passage reads. “In fact matter as a visible object is of no great use any longer... Give us a few negatives of a thing worth seeing, taken from different points of view, and that is all we want of it. Pull it down or burn it up, if you please.”³⁹

The notion that a photograph is a trace of its referent—and therefore both evidentiary and memorial—is every bit as old. In 1857, Lady Eastlake declared the medium’s “unerring records in the service of mechanics, engineering, geology, and natural history” to be “facts of the most sterling and stubborn kind,” and therefore “the sworn witness of everything presented to [its] view.”⁴⁰ And since “every form that is traced by light is the impress of one moment, or one hour” in the “great passage of time,” she writes in another passage in the same essay, photography also “give[s]” us our child’s “shoes” or his “inseparable toy” with a “strength of identity that art does not even seek.”⁴¹

However, Holmes’s and Eastlake’s essays contain many passages that anticipate Benjamin’s first account of photography—that foreground the limits of human vision, that attribute the photographic image to the world, and that suggest that photography’s truth is disclosive, rather than evidentiary. Both authors also call it a “gift,” and identify us as the recipients of this gift. Lady Eastlake repeatedly characterizes the photographic image as an emerging image: one that approaches us from the future, and that arrives in the present.

Finally, both Eastlake and Holmes suggest that photography may have important ramifications for human relationality. She maintains that those involved with photography form “a kind of republic,” and he makes similar claims when talking about the stereoscopic image.⁴²

Many of these ideas figure prominently in other early descriptions of the photographic image as well, particularly in those provided by William Henry Fox Talbot. “It is not the artist who makes the picture, but the picture which makes *itself*,” Talbot observes in an 1839 letter to the editor of the *Literary Gazette; and Journal of the Belles Lettres, Arts, Sciences, etc.* “All that the artist does is to dispose the apparatus before the image he requires... At the end of the [allotted] time he returns, takes out his picture, and finds it finished.”⁴³ They also appear in seventeenth- and eighteenth-century descriptions of the camera obscura, and when they vanish from photography, they resurface elsewhere: in painting, sculpture, literature, philosophy, psychoanalysis, cinema, and time-based work. They invite us to think anew about photography.

This book is a response to that invitation. As I hope to show, photography isn’t a medium that was invented by three or four men⁴⁴ in the 1820s and 1830s, that was improved in numerous ways over the following century, and that has now been replaced by computational images. It is, rather, the world’s primary way of revealing itself to us—of demonstrating that it exists, and that it will forever exceed us. Photography is also an ontological calling card: it helps us to see that each of us is a node in a vast constellation of analogies. When I say “analogy,” I do not mean sameness, symbolic equivalence, logical adequation, or even a rhetorical relationship—like a metaphor or a simile—in which one term functions as the provisional placeholder for another. I am talking about the authorless and untranscendable similarities that structure Being, or what I will be calling “the world,” and that give everything the same ontological weight.

These similarities are authorless and untranscendable because there is no metaphysical agency to which they could be imputed, and no other domain to which we might retreat, in order to be alone. As Walt Whitman writes in an inexhaustibly rich passage, “A vast similitude interlocks all / All spheres, grown, ungrown, small, large, suns, moons, planets, . . . / All distances of place however wide, / all distances of time, [and] all inanimate forms.” It also includes “all souls, all bodies though they be ever so different, or in different worlds, / All gaseous, watery, vegetable, mineral processes, the fishes, the brutes, / All nations, colors, barbarisms, civilizations, languages, / All identities that have existed or may exist on this globe, or any globe, / All lives and deaths, all of the past, present, future.”⁴⁵ It is also only through this interlocking that we ourselves exist. Two is the smallest unit of Being.

Most of us are willing to acknowledge some of these similarities, but extremely reluctant to acknowledge others, particularly those that call our autonomy, agency, unity, and primacy into question. Photography is the vehicle through which these profoundly enabling but unwelcome relationships are revealed to us, and through which we learn to think analogically. It is able to disclose the world, show us that it is structured by analogy, and help us assume our place within it because it, too, is analogical. A negative analogizes its referent, the positive prints that are generated from it, and all of its digital offspring, and it moves through time, in search of other “kin.” As I discovered over and over again

while writing this book, photography also analogizes the analogies that reside at the heart of human perception: those through which we see and are seen. Since it almost always does so in a visual way, it gives them a second power; it holds open the perceptual “open,”⁴⁶ helping us recognize what we might otherwise foreclose.

Every analogy contains both similarity and difference. Similarity is the connector, what holds two things together, and difference is what prevents them from being collapsed into one. In some analogies these qualities are balanced, but in others similarity far outweighs difference, or difference, similarity. One of the most miraculous features of an analogy is its ability to operate in the face of these imbalances: to maintain the “two-in-one” principle even when there is only a narrow margin of difference, or a sliver of similarity. In the last chapter of *Flesh of My Flesh*, I suggested that there is something inherently photographic about analogies in which there is only a little difference.⁴⁷ The analogies that link one print of a negative to all of the other prints of the same negative turn on variations so slight that we have a hard time seeing them, and we sometimes find it difficult to distinguish a photograph from its referent, even though we know very well that they belong to different registers.

I explore this kind of analogy here as well, and explain why some photographs—like the famous “Winter Garden” portrait of Barthes’s mother in *Camera Lucida*—seem ontologically connected to their referents. But I also address analogies in which there is an overwhelming amount of difference, which is bridged through reversible reversals, or what Maurice Merleau-Ponty calls “chiasmus.” This, too, is a quintessentially photographic kind of analogy. Photography models it for us through the inversion and lateral reversal of the camera obscura’s image stream, the positive print’s reversal of the reversal through which its negative was made, the two-way street leading from the space of the viewer to that of the stereoscopic image, cinema’s shot/reverse shot formation, and the cross-temporal practices of some contemporary artists. I say “model” because we, too, are bound to each other through reversible reversals, and because it is there, and only there, that the promise of social happiness can still be glimpsed.

Not only is the photographic image an analogy, rather than a representation or an index, but analogy is also the fluid in which it develops. This process does not begin when we decide that it should, or end when we command it to. Photography develops, rather, *with us*, and *in response to us*. It assumes historically legible forms, and when we divest them of their saving power, generally by imputing them to ourselves, it goes elsewhere. The earliest of these forms was the pinhole camera, which was more “found” than invented. It morphed into the optical camera obscura, was reborn as chemical photography, migrated into literature and painting, and lives on in a digital form. It will not end until we do.

THE SECOND COMING

IT IS AS IMPOSSIBLE to know when photography began as it is to know when our first ancestors opened their eyes, but if we were able to locate one of these events, we would not have to search long for the other. The two photographic processes that were unveiled in 1839 by Louis-Jacques-Mandé Daguerre and William Henry Fox Talbot built on a number of earlier chemical experiments and discoveries, even the most cursory survey of which would include Angelo Sala's 1614 discovery that a nitrate of silver darkens when exposed to sun, Heinrich Schulze's 1724 realization that this darkening can be used to make an image, Thomas Wedgwood's late-eighteenth-century attempts to do just that, and John Herschel's 1819 discovery that hyposulphites can dissolve the unreduced salts of silver, which led to the invention of "hypo," a photographic fixer. Pride of place, though, would be given to Joseph Nicéphore Niépce, whose chemical experiments resulted in the first photographic image.¹

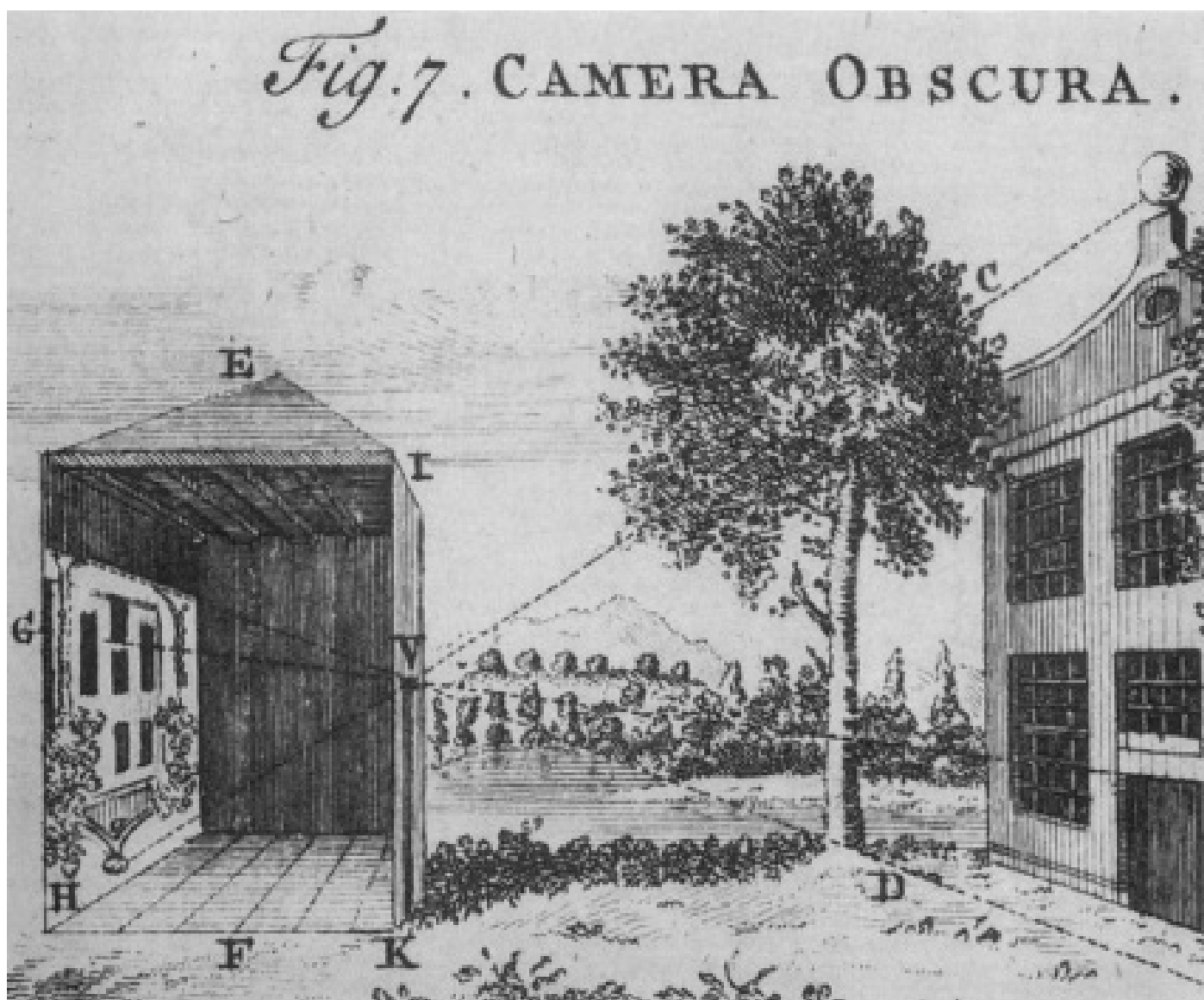


Figure 5. Thomas Jeffreys, Illustration from *A New and Complete Dictionary of the Arts and Sciences*, 1754.

Daguerre and Talbot also relied on a much older optical device: the camera obscura.² The classical camera obscura—the one that was the norm from the thirteenth to the

seventeenth centuries—was a darkened chamber with a small aperture through which light entered, bearing a reversed and inverted stream of images that both originated in the external world and analogized it. This continuous flow of mobile and evanescent images existed only in the “now” in which it appeared, and since the viewer had to enter the camera obscura in order to see it, the two were spatially as well as temporally *co-present*.

This device formalized optical principles that had been accidentally discovered centuries earlier and that are as old as light itself. In the fifth century b.c., the Chinese philosopher Mo Ti noted the “image-making properties” of a small aperture.³ A century later, Aristotle was struck by the many crescent-shaped images of the sun that appeared on the ground beneath a tree during an eclipse of the sun, and attributed them to the small spaces between the leaves.⁴ In the eleventh century, the Arab scholar Alhazen discovered the same principles while investigating the formation of images in a darkened room, and he viewed the sun during an eclipse from a similar place. He described the latter experience in the following way: “If the image of the sun at the time of an eclipse—provided it is not a total one—passes through a small round hole onto a plane surface, opposite, it will be crescent-shaped... If the hole is very large, the crescent shape of the image disappears altogether and the light [on the wall] becomes round if the hole is round... with any shaped opening you like, the image always takes the same shape... provided the hole is large and the receiving surface parallel to it.”⁵

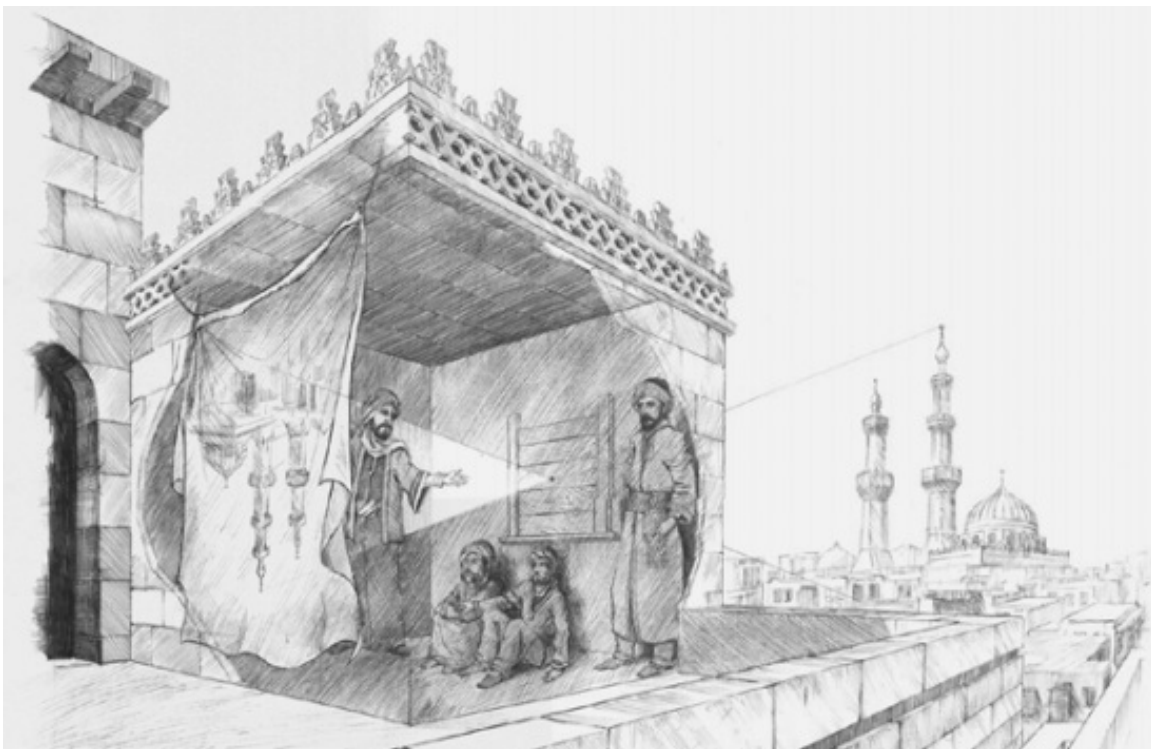


Figure 6. Alhazan and his camera obscura in Cairo, Egypt, in the eleventh century. Courtesy of Ali Amro. © Muslim Heritage, Ltd.

“Receiving surface” sounds odd to a contemporary ear, since it suggests that the optical device that figured so prominently in the early years of chemical photography was *receptive*, rather than *productive*, but Alhazen is not the only early commentator who speaks in these terms; receptivity is a recurrent trope in pre-1700 accounts of the camera obscura. “When at the time of an eclipse of the sun, its rays are *received* in a dark place,” John Peckham observes in *Perspectiva communis* (1279), “through a hole of any shape, it

is possible to see the crescent-shape getting smaller as the moon covers the sun.”⁶ “When the images of illuminated objects pass through a small round hole into a very dark room [and] you *receive* them on a piece of white paper placed vertically in the room at some distance from the aperture,” Leonardo da Vinci writes in Manuscript D, “you will see all those objects in their natural shapes and colors.”⁷ “If you have a piece of white paper or other material upon which [the images] of everything passing through the aperture may be *received*, you will see everything on the earth and in the sky with their colors and forms,” Cesare Cesariano remarks in a note in his 1521 translation of Vitruvius’s *Treatise on Architecture*.⁸ “The visible radiations [of] all [of] the objects without are intromitted, falling upon a paper, which is accommodated to *receive* them,” Sir Henry Wotton writes in his famous 1620 letter to Francis Bacon about Johannes Kepler’s tent camera obscura.⁹

Since the viewer had to enter the classical camera obscura in order to see its images, he was also a receiver.¹⁰ This would have been hard to ignore, because the device had no focusing mechanism. The only way the viewer could render its often hard-to-see images more legible was to move around the sheet of paper on which they were received until he found the point at which they came into focus—i.e., to participate in the reception process. Daniele Barbaro describes this practice in his 1568 book, *La Pratica della prospettiva*. “If you take a sheet of paper and place it in front of the lens,” he writes there, “you will see clearly on the paper all that goes on outside the house. This you will see most distinctly at a certain distance, which you will find by moving the paper nearer to or farther away from the lens, until you have found the proper position.”¹¹

For centuries, the camera obscura was primarily used to watch solar eclipses, and it was put to this purpose because the human eye cannot tolerate the amount of light that floods into it when it looks directly at the sun.¹² It consequently testified to the external source not only of the images that appeared on the screen, but also of those perceived by the human eye. So long as Christianity and Platonism were the dominant forces within Western thought, the notion that light enters the human eye from outside was unproblematic; illumination was, after all, a privileged signifier for both God and the demiurge. Since both systems of thought emphasize how blinding this divine light can be, the fact that a solar eclipse could be safely viewed only from the refuge of a camera obscura was also neither noteworthy nor particularly disturbing. And since the images that appeared within the device issued from a higher agency, they could be presumed to be a reliable source of information about what was happening in the external world.

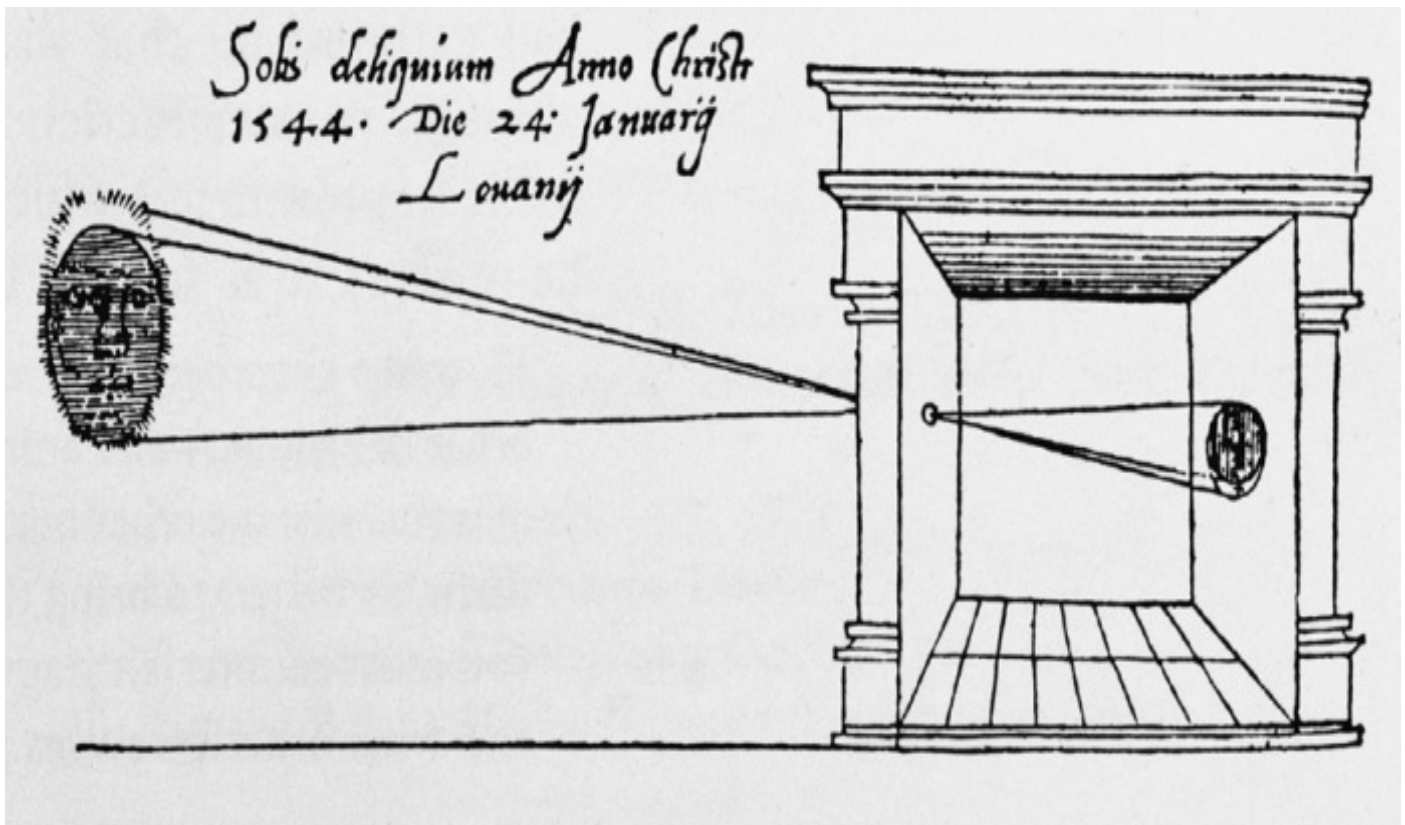


Figure 7. Illustration from Gemma Frisius, *De radio astronomico et geometrico liber*, 1554. Courtesy of the National Media Museum/SSPL.

However, in 1490 Leonardo noted that the human eye also resembles a camera obscura—that rays of light enter its dark “chamber” through a “small aperture,” just as they do in the latter device, and that they also bear an inverted and laterally reversed stream of images.¹³ Because he was a largely secular thinker, he realized that both image streams originate in and refer back to a terrestrial source.¹⁴ He was also alive to their aesthetic properties. Leonardo likened the camera obscura’s images to “paintings,”¹⁵ and searched for other unauthored art works in the external world. “Cast your glance on any walls dirty with such stains or walls made up of rock formations of different types,” he advises his fellow artists in *Ashburnham I*, “If you have to invent some scenes, you will be able to discover them there in diverse forms, in diverse landscapes, adorned with mountains, rivers, rocks, trees, extensive plains, valleys, and hills.”¹⁶

I say “unauthored works of art” because Leonardo did not view image making as a strictly human activity. He believed that there is an aesthetic capacity in all worldly things that allows them to generate images of themselves. “Every body fills the surrounding air with infinite images of itself,” Leonardo writes in one notebook entry. “All bodies together, and each by itself, give off to the surrounding air an infinite number of images... each conveying the nature, color and form of the body which produces it,” he observes in another.¹⁷ This activity is self-presentational, and our look is its “lodestone.” Bodies give themselves to be seen by us by sending us analogies or “portraits” of themselves. Leonardo was also interested in a different kind of human art making—one that would begin with the acceptance of this gift. “The mind of the painter must resemble a mirror, which always takes on the color of the object it reflects and is completely occupied by the images of as many objects as there are in front of it,” he observes elsewhere in *Ashburnham I*.¹⁸

Ancient scholars had two conflicting theories of vision. For some, as James S. Ackerman explains, “the eye was passive and simply received emanations from the outer world,” but for others it was “active and cast out rays or a spirit to touch the seen object.”¹⁹ When Leonardo urges painters to let their minds be “filled by as many images as there are objects before it,” he might seem to be drawing on the first of these theories. In fact, though, he is only describing the initial stage in a complex process—one that is as much about giving as receiving. This process begins when the world conveys a visual analogy of itself to the human eye. The viewer receives this gift by relating it to similar things within his own memory reserve. Leonardo’s artist goes one step further: he generates an external analogy for the one created through the “marriage” of the world’s visual analogy with the viewer’s mental analogy. This opens the analogical network to other viewers.

Paul Valéry provides an excellent description of this process in “Introduction to the Method of Leonardo.” “At first the process [of receiving something] is undergone passively, almost unconsciously,” he writes, “as a vessel lets itself be filled: there is a feeling of slow and pleasurable circulation. Later... one assigns new values to things that had seemed closed and irreducible, one adds to them, takes more pleasure in particular features, finds expression for these; and what happens is like the restitution of an energy that our senses had received. Soon the energy will alter the environment in its turn, employing to this end the conscious thought of a person.”²⁰ Daniel Arasse also talks about the unusual dynamism and reciprocity of Leonardo’s analogies, and says that the result is an “unfinished universality”—one oriented to the future.²¹

Leonardo isn’t the only early-modern viewer of the camera obscura who compares it to the human eye. Johannes Kepler also likens the inverted and laterally reversed images that enter this organ to those that enter the camera obscura, and he pushes the comparison a step further: he characterizes the retina as the ocular equivalent of the camera obscura’s “receiving screen.” “Vision... occurs through a picture of the visible object at the white of the retina and the concave wall,” he writes in his 1604 book, *Ad Vitellionem paralipomena*, “and those things that are on the right outside, are depicted on the left side of the wall, the left at the right, the top at the bottom, the bottom at the top.”²²

Kepler calls this reversed and inverted “picture” the “retinal image,” and refuses to posit a higher visual faculty that would rectify its “deformations.” “Vision occurs when the image of the whole hemisphere of the world that is before the eye... is set up at the white wall, tinged with red, of the concave surface of the retina,” he declares in another passage in *Ad Vitellionem paralipomena*. “How this image or picture is joined together with the visual spirits that reside in the retina and the nerve, and whether it is arraigned within by the spirits... to the tribunal of the soul or of the visual faculty... I leave to the natural philosophers. For the arsenal of the optical writers does not extend beyond this opaque wall.”²³ Kepler thus refuses to argue that the blindness of the seeing eye can be overcome through the clarity of mental representation.

Like Leonardo, Kepler is also obsessed with analogies, or what he calls “correspondences,” and he sees the camera obscura as the agency of their disclosure. His analogies, though, are divinely authored, and they operate synchronically rather than diachronically—as elements within a vast and already fully articulated system—a finished

rather than an unfinished universality.²⁴ He also gives his retinal discovery a stabilizing name; it is an “image,” rather than a “flow of images.” Finally, he conducted his cosmological observations with a camera obscura whose inversions and reversals were “corrected” through two convex lenses.²⁵

René Descartes seemingly picks up where Kepler leaves off in Discourse 5 of the *Optics*. He urges those who do not believe that the inverted and reversed images of the external world appear on the surface of the retina to peel away the back layers of the eye of a dead person or animal, insert it into the aperture of a camera obscura, facing outward, enter the camera obscura, and look at the retina from the other side. They will then perceive images just like those that appear on the camera obscura’s receiving surface.²⁶ But as we can see from the accompanying diagram, the experiment described by Descartes is calculated to *disprove* rather than to *prove* Kepler’s claim. By placing a lifeless eye in the aperture of the camera obscura, Descartes renders the retinal image both visible and mechanical, and by positioning the viewer in front of this image, he transforms the latter from a blind receiver of external images into a knowledgeable observer of what he sees. A few pages earlier, he flatly declares that “it is the mind which senses, not the body.”²⁷ As Maurice Merleau-Ponty observes in “Eye and Mind,” Descartes’s *Optics* is “the breviary of a thought that wants no longer to abide in the visible and so decides to construct the visible according to a model-in-thought.”²⁸

This is hardly surprising. Certainty was the defining attribute of the subject Descartes aspired to be, and there was only one foundation on which he was willing to base his beliefs: himself. The retinal image discredited this “self,” since it showed that the images that our eyes receive do not correlate in a one-to-one way with the objects from which they derive. There is also a disconnect between the retinal image and what we “see,” which means that there must be an agency within us that reverses its reversal and inverts its inversion before we perceive it. Shutting one’s eyes and closing one’s ears might block out the external world, but it offers no protection against this internal “other.”

Descartes is clearly haunted by this thought, because he spends as much time in the *Meditations* and *The Discourse on Method* worrying about whether he is deceiving himself as he does worrying about whether others are deceiving him. He tries to banish it by transforming the device that Kepler compares to the human eye into a signifier for a new kind of interiority—one befitting a sovereign subject. The heated room to which he retreats in his search for truth is like the isolated space of a camera obscura, the darkness into which he is plunged when he closes his eyes like the darkness of that enclosure, and the mental representations that he places before his inner eye like the images that pass before the eyes of its viewer. Unlike the images in the physical camera obscura, or the mind described by Leonardo, though, those that appear within Descartes’s mental camera obscura are stable, and he is both their producer and their viewer.

John Locke also invokes the camera obscura when describing *his* version of the modern subject. Since he believed that “external and internal sensations” were the “only windows” through which the light of understanding could enter into the “dark room” of the mind, he could not simply dispense with the outer eye, as Descartes had done, so he transformed the analogy between the physical device and its mental counterpart into a contrasting set. Like the camera obscura, the mind is a chamber into which images come, Locke argues, but

what happens thereafter is very different. In the former, images enter and leave in a disorderly fashion, because perception reigns supreme. In the latter, though, what arrives is conceptually organized, and remains where it has been put, because understanding governs perception. “The *understanding* is not much unlike a closet wholly shut from light, with only some little opening left... to let in external visible resemblances, or ideas of things without,” Locke writes in *An Essay Concerning Human Understanding*, “would the pictures coming into such a dark room but stay there, and lie so orderly as to be found upon occasion, it would very much resemble the understanding of a man.”²⁹ The “orderliness” described by Locke could be secured only by immobilizing the external world, and suspending the associative faculty through which we respond to its images.

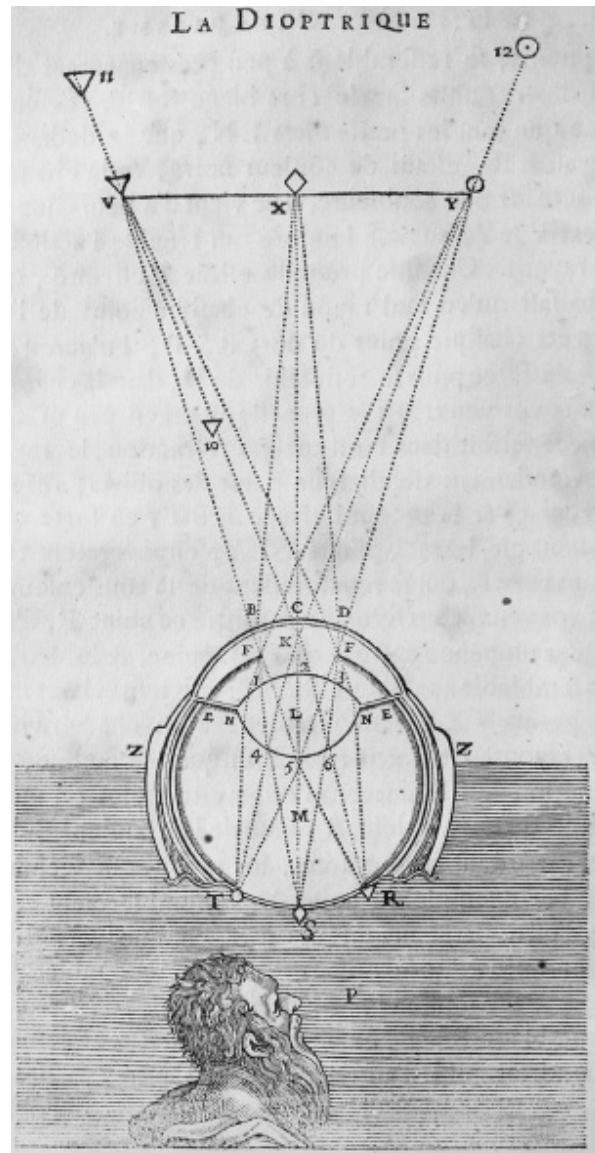


Figure 8. Illustration from René Descartes, *Discours de la Méthode*, 1637. Courtesy of the Fisher Rare Books Library, University of Toronto.

Gottfried Leibnitz quotes this last passage in chapter 11 of *New Essays on Human Understanding*, but he disputes every one of its assumptions.³⁰ Kepler's discovery cannot be neutralized by privileging the mind over vision, he argues in the following paragraph, because they are both part of the same system. The defining attribute of this system is also the one that Kepler dramatizes through the retinal image: receptivity. But the "brain," as he calls it, isn't an empty vessel into which images of the world flow; it is "diversified by folds representing items of innate knowledge and... this screen or membrane, being under tension, has a kind of elasticity or active force." It consequently "acts (or reacts) both to past folds and to new ones coming from impressions of the species." These actions and reactions consist of "vibrations or oscillations," like those we see when a cord is "plucked," and produce "something of a musical sound."³¹ Leibnitz's account of perceptual reception is thus as dynamic, reciprocal, and analogical as the one Valéry presents in his reading of Leonardo.

LEONARDO also isn't the only early-modern commentator who talks about the aesthetic properties of the camera obscura's images. Barbaro notes the "gradations, colors" and "shadows" of these images, and encourages his readers to trace their outlines on a sheet of

paper, so that they will have “the entire perspective.”³² G. Battista della Porta recommends the same thing, and explains how to achieve this goal in the first edition of his popular book *Magiae naturalis*. His instructions, though, are very different from the ones Leonardo offers to his fellow painters. Instead of encouraging his readers to make paintings that correspond with the images that appear inside the camera obscura, della Porta urges them to outline those images with a pencil, so that all that they have to do is “lay on the colors.”³³

Since the epistemological crisis that was precipitated by the discovery of the blind spots at the heart of human vision was partially resolved by adapting the camera obscura to the psychic exigencies and representational demands of the modern subject, it was increasingly relegated to the category of a “tool.” In the sixteenth century, lenses were placed in the aperture of the camera obscura, making its images larger, clearer, and brighter. In the seventeenth century, mirrors were used to render them upright.³⁴ They could then be “reflected downwards onto a drawing-board with paper,” and traced, permitting even those who were not skilled to produce a satisfactory drawing.³⁵

The camera obscura also became portable,³⁶ and later in the century it was transformed from a receptacle that contained the viewer into a much smaller box, whose images were available to an external eye, through either an aperture or an arrangement of the sort described above. It was equipped with better lenses that enlarged its images, and in 1685, Johann Zahn designed a camera obscura that could be manually focused by moving the lens, instead of relocating the screen.³⁷ In the eighteenth century, the device was incorporated into tables and desks, where one could sit and draw, and added to sedan-chairs and carriages, so that it could be enjoyed in transit. It was also used as a sketchpad by scientists and travellers, as well as artists.³⁸



Fig. 2.

Figure 9. Illustration from Otto Lueger, *Lexikon der Gesamten Technik*, 1926.

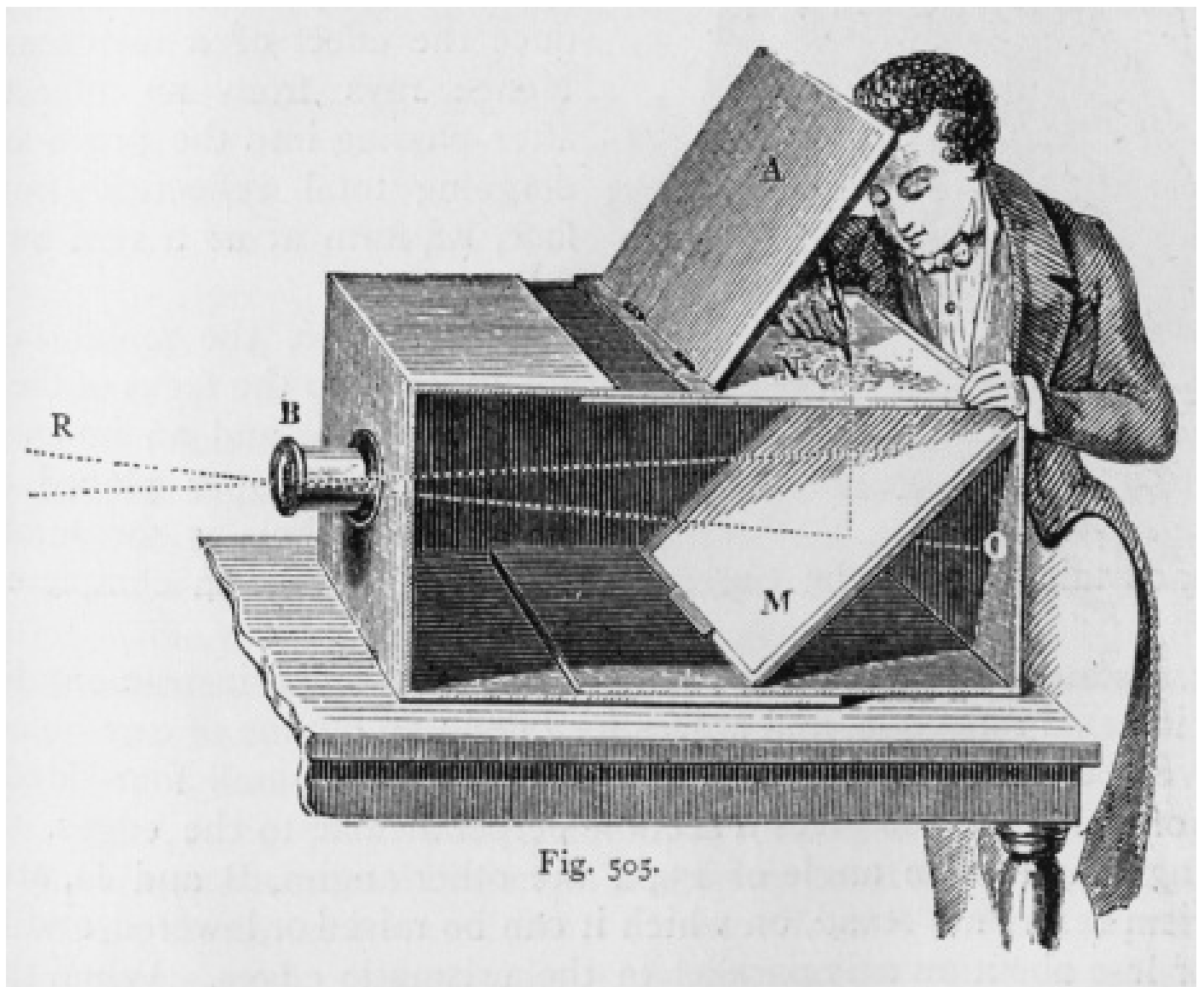


Fig. 505.

Figure 10. Illustration from Adolphe Ganot, *An Elementary Treatise on Physics*, 1882.

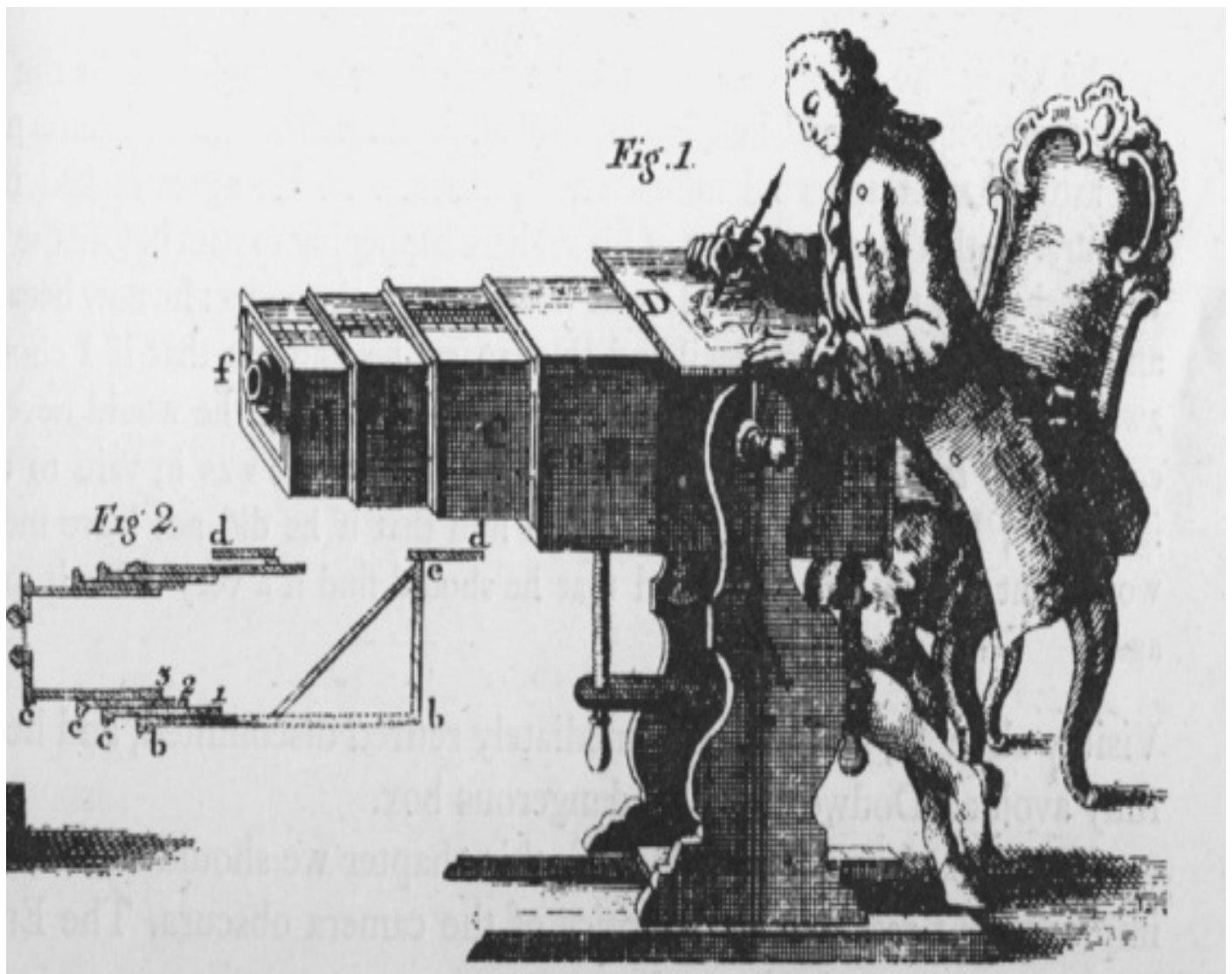


Figure 11. Illustration from G. F. Brander, *Wissenschaftliche Instrumente aus seiner Werkstatt*, 1769 (detail).

People began thinking of the camera obscura as a mechanism for “taking likenesses,” instead of receiving them. In 1694, Robert Hooke presented a paper about a camera obscura of his own design to the Royal Society in London. In this paper, which he called “An instrument of use to take the Draught or Picture of anything,” he told his listeners that “any Person shall be able to give us the true Draught of whatever he sees before him,” by “nimble running over, with his Pen, the Boundaries or Outlines” of the image that emerges within its darkened chamber.³⁹ In a 1773 letter to his partner, Josiah Wedgwood offered to travel to London with a camera obscura, in order to “take a 100 views upon the road.”⁴⁰ And in a 1777 letter to the Reverend William Mason, Horace Walpole not only substituted the verb “to take” for the verb “to receive”; he also described a camera obscura that dispensed with, and improved upon nature, permitting the artist to produce rapid, strong, and precise drawings.⁴¹ This apparatus “no longer depends on the sun, and serves for taking portraits with a force and exactness incredible,” he wrote. “This instrument will enable engravers to copy pictures with the utmost precision.”⁴² The original now exists only so that a copy can be made. The picture is “ready drawn for [man],” as Hooke put it, so that instead of laboriously drawing from nature, he can quickly trace its outlines. The copy also amplifies upon the “beauty” of the original.⁴³

Like Descartes’s “clear and distinct ideas,” the drawings produced by tracing the

outlines of the camera obscura's images transformed a mobile, ephemeral, and untotizable flow into a single, stable, circumscribed representation. They also promoted the fantasy of a sovereign subject. "What [was] in its entirety," as Heidegger would say, was "now taken in such a way that it first is in its being and only is in being to the extent that it is set up by man, who represents and sets forth."⁴⁴ There was no room within this account for the aesthetic qualities of the camera obscura's image stream.

Fascinatingly, though, a counter-discourse emerged in the seventeenth century that foregrounded the pictorial properties of the camera obscura's images, and attributed them to the world. Athanasius Kircher characterized nature as a "painter" in his 1646 book, *Great Art of Light and Shadows*,⁴⁵ and in 1662, Constantijn Huygens wrote that "all painting is dead by comparison [with the camera obscura's images], for here is life itself, or something more noble... Figure, contour, and movement come together naturally therein, in a way that is altogether pleasing."⁴⁶

This account of the camera obscura resurfaced in the eighteenth century. In 1704, John Harris wrote that if the sun is shining brightly on the objects outside the camera, "you will have the colors of all things there in their natural paint, and such an admirable proportion of light and shadow, as is impossible to be imitated by art; and yet I never saw anything of this kind that comes near this natural landscape."⁴⁷ In 1712, Joseph Addison observed that "the prettiest landscape" he ever saw was "one drawn on the walls" of a camera obscura.⁴⁸ In 1740 Benjamin Martin maintained that the camera obscura's images are "infinitely superior" to "the finest performance of the pencil."⁴⁹ And in 1764 Count Francesco Algarotti declared that "nothing is more delightful to behold" than nature's pictures.⁵⁰

Alexander Pope not only echoed this praise, he also claimed that worldly things draw their own pictures with the "pencils" of light that emanate from them, and he located this action in a continuous present tense. Pope converted a grotto on his property into a camera obscura, and in 1725 he told a friend that "when you shut the doors of this grotto, it becomes on the instant, from a luminous room, a camera obscura, on the walls of which all of the objects of the river, hills, wood, and boats, *are forming* a moving picture in their visible radiations."⁵¹ As we can see from this last sentence of this passage, "nature" had a broad meaning for Pope—one closer to what I am calling "the world" than to what we think of as nature.

It also had an expansive meaning for some of the other writers I have just mentioned, particularly for Algarotti, who equates it with "exterior objects" in an important passage in *An essay on painting*. He returns in this passage to Kepler's notion of the retinal screen, and uses it to underscore the receptivity of the human eye. "Nature is continually forming... pictures in our eyes," this passage reads. "The rays of light coming from exterior objects, after entering the pupil... proceed to the retina, which lies at the bottom of the eye, and stamp upon it, by their union, the image of the object, towards which the pupil is directed."⁵² Because the camera obscura functions in an analogous way, Algarotti observes, it is able to reveal this "grand operation" to us—an operation about which we might otherwise know nothing.

But the camera obscura is much more for this eighteenth-century writer than an instrument of self-knowledge; it is the agency through which we learn to see the world

differently. “We cannot look directly at any object that is not surrounded by many others, all darting their rays together into our eyes, that it is impossible we should distinguish all the different modulations of its light and colors,” Algarotti writes. “At least we can only see them in so full and confused a manner, as not to be able to determine any things precisely about them.”⁵³ In the camera obscura, on the other hand, “the visual faculty is wholly brought to bear upon the object before it.” This is due in part to the surrounding darkness—to the fact that the “light of every other object is, as it were, perfectly extinguished.” But the camera obscura also inducts us into a new way of seeing through the “force and brightness” of its images.⁵⁴ In the passage that follows, Algarotti suggests that this “force and brightness” are the result of an aesthetic intensification; he praises the “justness” of these pictures’ “contours,” the “exactness” of their “perspective and of the chiaroscuro,” the “vivacity and richness” of their colors, and the “infinite variety” of their “tints.”⁵⁵

This description of the camera obscura’s images sounds like an early draft of Heidegger’s “The Question Concerning Technology.” We have exalted ourselves to “the posture of the lord of the earth,” he writes there, and relegated everything else to the status of “standing reserve”—raw material for us to do with as we wish. We do not see that nothing can escape this instrumental logic, and that we are “at the point” where we ourselves “will have to be taken as standing-reserve.”⁵⁶ But the essence of technology is nothing technological; it is, rather, “*poiēsis*” or “revelation.” There are two kinds of *poiēsis*. The first is the product of human labor; it results from “the skills and activities of the craftsman,” the “arts of the mind,” and the “fine arts.” The second kind of *poiēsis* has a very different source; it occurs through the “arising of something from out of itself.” Heidegger compares it to “the bursting of a blossom into bloom,” and calls it “*poiēsis* in the highest sense,”⁵⁷ because it houses a “saving power.”⁵⁸ It has the power to save us because it resists our attempts to establish ourselves as its source—because it is so manifestly a “self-showing” and a “self-giving” on the part of the world. It is by “coming to presence into the beautiful” that something gives itself to be seen, Heidegger writes near the end of the essay, and he repeatedly associates beauty with illumination: with “light,” “radiance,” and a “shining forth.”⁵⁹

THE DRAWINGS that the modern subject produced with the help of the optical camera obscura satisfied his desire for a stable representation, but they did not halt the stream of images inside the device, or alter them in any other way. The experimentation that led to the heliograph and the daguerreotype was clearly driven by the desire for a more decisive victory—one that would allow man to “harness” the world’s power, and force its drawings to obey his commands. Niépce described heliography as a “technique” for “taking views,” “fixing” them “with the action of light,” and “reproducing them by printing.”⁶⁰ When extolling the brevity of his exposure times, Daguerre also reached for the verb through which some viewers described their relationship to the camera obscura after lenses and mirrors had been added to it, and that would soon become ubiquitous in photographic circles: the verb “to take.” “By this process,” he writes, “without any idea of drawing, without any knowledge of chemistry and physics, it will be possible to *take* in a few minutes the most detailed views” (my emphasis).⁶¹

Later in the same essay, Daguerre goes one step further: he installs himself in the

position of the giver, and relegates nature to that of the receiver. “The DAGUERREOTYPE is not merely an instrument which serves to draw Nature...,” he boasts, “it is a chemical and physical process which gives her the power to reproduce herself.”⁶² Some early viewers not only repeated these claims but amplified them. In a lengthy 1839 review of the daguerreotype, Jules Janin compared Daguerre to God: “We have a fine passage in the Bible, God said, ‘Let there be light’ and light there was. You can say to the towers of Notre Dame, ‘Place yourself there;’ the towers obey. Thus have they obeyed Daguerre, who one bright day transported them to his home from the gigantic foundation-stone upon which they are built.”⁶³ It is impossible “to command more imperiously,” he declares a few paragraphs later. Another commentator maintained that “even a shadow, the emblem of all that is most fleeting in this world, [was] fettered by the spell of [Talbot’s] invention.”⁶⁴



Figure 12. Louis-Jacques-Mandé Daguerre, *Intérieur d'un cabinet de curiosités*, 1837. Daguerreotype. Courtesy of the Société Française de Photographie, Paris.

However, the verb “to receive” figures much more prominently than the verb “to take” in early accounts of photography. Daguerre uses it when talking about the part played by the camera obscura in the production of his photographs, and Edgar Allen Poe suggests that it is the defining attribute of the daguerreotype. Although the photographic plate “does not at first appear to have *received* a definite impression,” he wrote in 1840, it later assumes “a miraculous beauty.”⁶⁵ David Brewster also uses the verb many times in his 1843 account of the existing photographic processes,⁶⁶ and it is ubiquitous in both Talbot’s writings and Lady Eastlake’s 1857 article.

A number of the other tropes that eighteenth-century writers associated with the camera

obscura also resurfaced in the first two decades of chemical photography.⁶⁷ Niépce called the images that emerged from his experiments “heliographs,”⁶⁸ and Holmes titled an 1863 essay about the medium “Doings of the Sunbeam.”⁶⁹ Talbot wrote that “it is not the artist who makes the picture, but the picture which makes *itself*. All that the artist does is to dispose the apparatus before the image he requires... . At the end of the [allotted] time he returns, takes out his picture, and finds it finished.”⁷⁰

Many writers also conceptualized the source of the photographic image as a hand, rather than an eye. Talbot imputed the images that were generated through his technique to the “pencil of nature,”⁷¹ and characterized the negatives that emerged from his cameras as “photogenic drawings;”⁷² Daguerre described the daguerreotype as “the imprint of nature,”⁷³ and a contemporaneous reviewer attributed the photographic image to the “rectilinear pencils of light.”⁷⁴ At one point in her 1857 essay, Lady Eastlake metaphorizes the light that generates the photographic image as an eye, but this eye is not human, and it behaves more like a stylus than an organ of vision. With a “wink,” it traces “the glory of the heavens, the wonders of the deep,” and “the most fleeting smile of the babe.”⁷⁵ In another passage from the same essay, Lady Eastlake calls it a “solar pencil.”⁷⁶

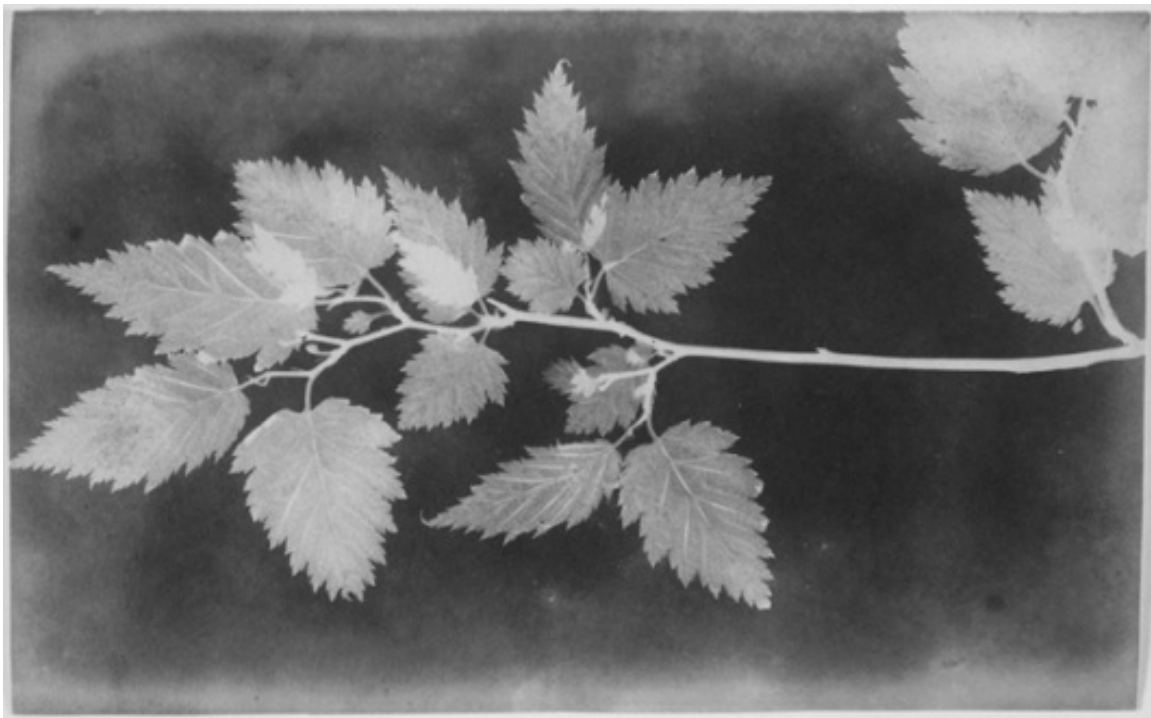


Figure 13. William Henry Fox Talbot, *Leaves on a stem*, 1842. Salted paper print. Courtesy of the National Media Museum/SSPL.

Talbot and his contemporaries were also amazed by the detail and precision of the photographic image, which revealed things they could not see. “The perfection and fidelity of the pictures are such, that, on examining them by microscopic power, details are discovered which are not perceivable to the naked eye in the original objects,” Sir John Robison wrote in 1839.⁷⁷ “In a view up the street, a distant sign would be perceived, and the eye could just discern that there were lines of letters on it,” Samuel Morse remarked the same year, “but so minute as not to be read with the naked eye.” In the daguerreotype, by contrast, “every letter was clearly and distinctly legible, and so also were the minutest breaks and lines in the walls of the buildings and the pavements of the street.”⁷⁸ “The

perfection [of the photographic image] exceeds the accuracy of the eye as its judge,” noted another commentator.⁷⁹

Surprisingly, these early viewers and practitioners did not rush to resolve the discrepancies between what they saw and what the camera showed by establishing one as the truth and the other as an illusion. Neither did they conclude that sensory perception is duplicitous, or take epistemological shelter within the domain of mental representations. They understood that their look and the photographic image opened onto the same world—their world. I say “world” because the numerous references to nature in this literature once again show that it signified something much larger for its authors than it does for us.



Figure 14. “M. de Sainte-Croix,” *Parliament Street from Trafalgar Square*, 1839. Daguerreotype. © Victoria and Albert Museum, London.

As can be seen from the constant references to drawing, painting, and engraving in the passages I have just quoted, many early viewers of the photographic image were also struck by its aesthetic qualities, and a number of them saw it as a superior kind of art making. Talbot tried to “take sketches” with the aid of Sir William Hyde Wollaston’s camera lucida while traveling in Italy. He found them wonderful when viewing them through the prism of this device, but when he looked at the drawings directly, he found the marks left by his “faithless pencil... melancholy to behold.” Talbot repeated the experiment with a camera obscura, but he was neither patient nor skillful enough “to trace

all of the minute details visible on the paper.” He abandoned his quest to become a better draughtsman, and began searching for a way of preserving these “fairy pictures.”⁸⁰

Commentators expressed similar sentiments after looking at the first daguerreotypes and “photogenic drawings.”⁸¹ An anonymous reviewer in an 1839 issue of the *United States Democratic Review* described the daguerreotype as a “master-piece” designed “by Nature herself.”⁸² The editor of an 1839 issue of *Belles Lettres* urged his readers to improve their draughtsmanship by making her their “drawing-mistress,”⁸³ and another reviewer declared the medium to be “as great a step in the fine arts, as the steam-engine was in the mechanical arts.”⁸⁴ Talbot extolled the “inimitable beauty of the pictures of Nature’s drawing which the glass lens of the Camera throws upon the paper in its focus.”⁸⁵

Some commentators also linked photography to a specific *kind* of picture: the self-portrait.⁸⁶ One reviewer wrote that henceforth “every fixed object” would be able to paint itself with the “pencils of light,” and transfer its “mimic image to the silver tablet.”⁸⁷ Since many of Talbot’s photographs were made by placing an object directly on a sensitized sheet of paper, and this object prevented the area beneath it from darkening when the paper was exposed to light, this object could be literally said to draw its own portrait, but commentators did not limit their claims to this kind of photograph. An anonymous reviewer wrote that “*all* nature, animate and inanimate, shall henceforth be its own painter,” and also the “engraver, printer and publisher” of the resulting portrait, so that each of us can have our own “copy” (my emphasis). He also suggested that photography is the world’s way of revealing itself to us, and of showing us how it wants to be seen—i.e., of awakening us from our Cartesian dream and reasserting its primacy. “Ye artists of all denominations that have so vilified nature as her journeymen, see how she rises up against you, and takes the staff into her own hands,” this extraordinary passage reads. “Your mistress now, with a vengeance, she will show you what she really is... Every church will show itself to the world without your help. It will make its wants visible and known on paper.”⁸⁸

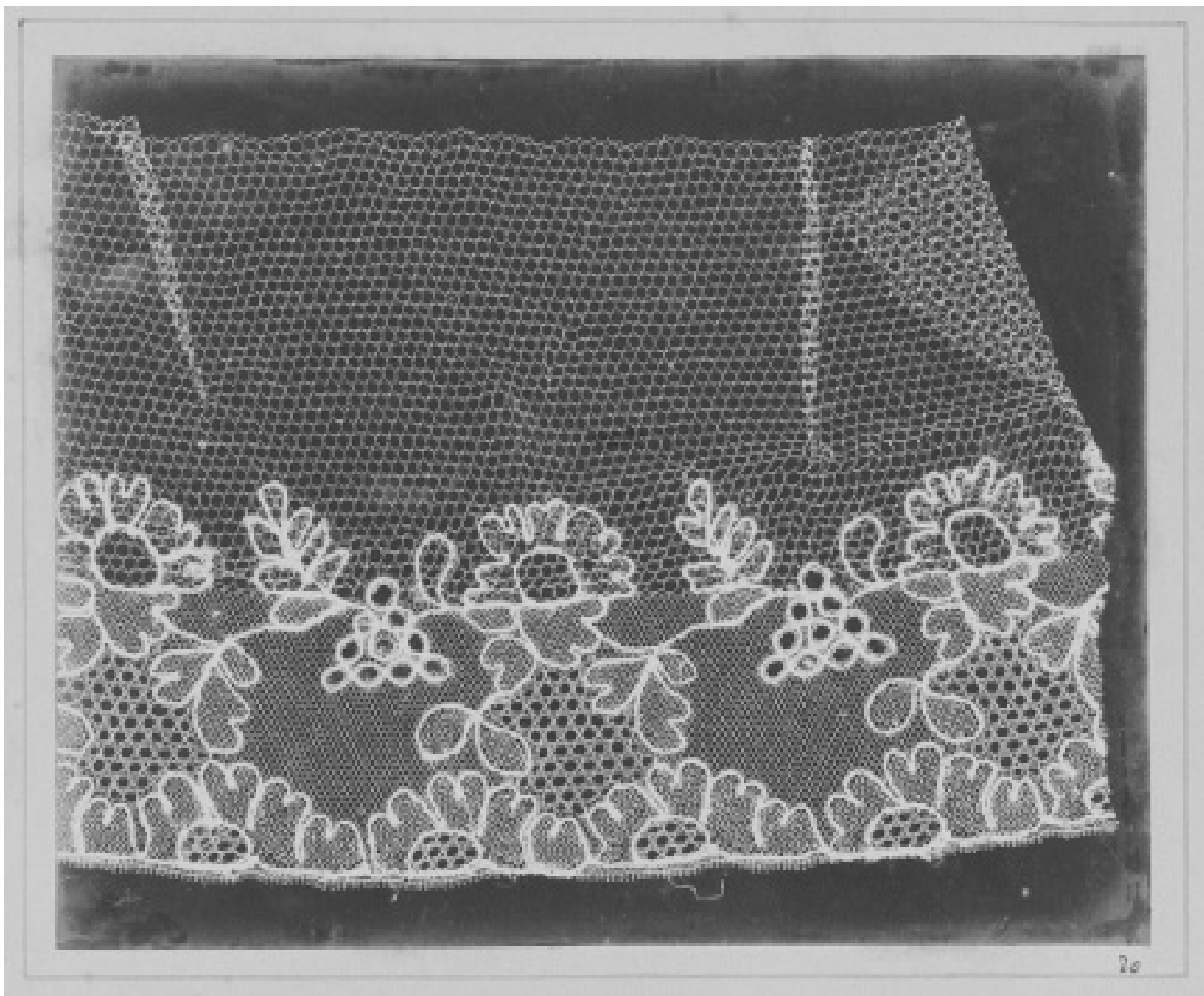


Figure 15. Henry Fox Talbot, *Lace*, 1842. Salted paper print. Courtesy of the Metropolitan Museum of Art, New York.

IN A STRIKING PASSAGE in her 1857 essay, Lady Eastlake compares the appearance of the photographic image to the creation of the world, just as Janin does in his 1839 review, but she uses the verb “to reveal” twice in this passage, suggesting that the photographic image may actually have more to do with the *disclosure* of the world than with its *creation*. “The prepared paper or plate which we put into the camera may be compared to a chaos, without form and void, on which the merest glance of the sun’s rays calls up image after image, till the fair creation stands revealed,” it reads, “yet not revealed in the order in which it met the solar eye. For while some colors have hastened to greet [the sun’s] coming, others have been found slumbering at their posts, and have been left with darkness in their lamps.”⁸⁹

Lady Eastlake also invokes a second biblical story in this passage: the parable of ten virgins who fall asleep while waiting for a bridegroom, and whose lamps go out while they are sleeping.⁹⁰ Five are able to relight their lamps when the bridegroom returns, because they have brought extra oil, but the others are unprepared. The bridegroom takes the “ready” virgins to the wedding banquet, but shuts the door on the others. In its scriptural context, this story is an allegory for the Second Coming. The wedding banquet stands for the Rapture, the bridegroom for Christ, the virgins with bright lamps for those who will ascend to heaven, and the others for those who will be left behind.

Since it is difficult to think of any nineteenth-century British context in which this parable would not have been viewed as embarrassingly anachronistic, Lady Eastlake's reliance on it is odd, to say the least. However, she wasn't the only prominent figure in the world of British photography who gravitated to the story. Julia Margaret Cameron based two 1864 photographs on it: *The Five Wise Virgins* and *The Five Foolish Virgins*. In each of these photographs, five women dressed in vaguely historical garb impersonate the virgins mentioned in the title. Although there are no references in either photograph to a bridegroom, a number of the story's other elements have been retained.

The figures in *The Five Wise Virgins* hold lamps, and because they are so tightly framed, particularly at the top of the photograph, they also seem to be ascending—an impression that is strengthened by the blur at the base of the image. The middle figure is distinguished from her companions through her clothing and demeanor, which centers the photograph both morally and compositionally, and three of the other figures turn toward her, as in a medieval triptych.



Figure 16. Julia Margaret Cameron, *The Five Wise Virgins*, 1864. Albumen print from collodion wet-plate negative. © Victoria and Albert Museum, London.

The figures in *The Five Foolish Virgins* also fill the frame horizontally—so much so that the figure on the left seems on the verge of being squeezed out of the picture. However, there is so much space above their heads that we can see part of the ceiling and a backdrop attached to the wall behind them. Their feet are cropped off by the lower frame of the image, but we know that they are standing on terra firma, because the backdrop tells us that they are in a photographic studio. *The Five Foolish Virgins* also has no moral or compositional center; all of the figures are dressed in a similar way, and their heads form a level band across the upper portion of the picture.



Figure 17. Julia Margaret Cameron, *The Five Foolish Virgins*, 1864. Albumen print from collodion wet-plate negative. © Victoria and Albert Museum, London.

But although the distinction between those who ascend to heaven and those who are left behind is clearly marked, it is also undermined in a number of ways. To begin with, the central figure in the first photograph looks more like a Madonna than a “wise virgin,” which scrambles the interpretive wires in all kinds of ways, and disables the story’s marriage premise. The poses of the figures who turn toward her are also misaligned, and their looks do not meet. Finally, the figure on the far right doesn’t seem to be a member of this group. She turns away from the others, thereby preventing the photograph from actually becoming a triptych, and foregrounding its horizontal over its vertical axis. She also gazes directly out at us, both welcoming and returning our look. Although this figure is compositionally marginal, she is the real center of the photograph.

On closer inspection, some remnants of a triptych can also be glimpsed in *The Five Foolish Virgins*. Although there is no “eyeline match,” three of the five figures turn toward each other, and appear to be looking at each other. The figure on the left looks down, which pushes her even further out of the picture, but the one on the right is emphatically there, and utterly riveting. Unlike all of the other figures in this photograph, who are sharply delineated, she has Cameron’s signature “blur,” and she gazes intensely out-of-frame, at an unseen object. With the forward tilt of her body, she both signals its

appearance, and anticipates its arrival. She thus occupies an analogous position to the one occupied by the figure who gazes out at us in *The Five Wise Virgins*, both conceptually and compositionally, and like the latter, she steals the show.

Lady Eastlake's apparent reason for invoking the parable of the wise and foolish virgins is unrelated to Cameron's photographs. She uses it to expand on the distinction between "laggard colors," like red and yellow, and "impatient" ones, like blue and violet, i.e., colors that are slow to inscribe their traces on the recipient plate and those that do so quickly.⁹¹ However, the biblical story has nothing to do with slowness or quickness, and the distance between the colors described in this passage and the bridesmaids in the biblical parable is so vast as to be unbridgeable. The real reason why Lady Eastlake turns to this parable is because it is the pivot through which she shifts from her first account of photography to her second—from the notion that photography *creates* the world to the notion that photography *reveals* it. Although this might seem a trifling distinction, it is in fact profound. The world did not disappear when Descartes replaced his sensory perceptions with mental representations; it was still there, but it was no longer *present*. The heliograph, daguerreotype, and calotype were the means through which it attempted to rectify this situation—to "come forward," or "presence."

Lady Eastlake uses the story about the wise and foolish virgins to effect this shift because photography is a second coming, and the only one we are ever likely to experience: the second coming of the world. The parable also analogizes the other part of the photographic event: the part that has to do with us. Like the bridegroom, the photographic image arrives from elsewhere, hoping that we will see it. Unfortunately, though, this does not often happen, because there are two kinds of viewers: those who "hasten to greet it" and those who miss the encounter for which they should have been waiting. I will end this chapter with an artist who is as ready for that encounter as the figures on the right side of Cameron's diptych, but who requires no theological alibi: the Cuban American photographer Abelardo Morell.

IN 1991, Morell covered the windows of the living room in his Quincy, Massachusetts, house with black plastic and cut a small opening in the plastic. Light entered the room through this opening, just as it did in the first pinhole camera, carrying a reversed and inverted stream of images, but instead of landing on a screen in a space that was set apart for that purpose, or whose normal functioning was temporarily suspended, it spilled onto the walls, ceiling, and contents of what was still recognizably a domestic space. Morell then focused his camera on this visual palimpsest and exposed the negative.⁹²

The exposure lasted eight hours—almost as long as the one that produced the earliest extant photograph—but Morell did not call the resulting photograph "View from a Living Room," or even "View of the Houses across the Street." Instead, he called it "*Camera Obscura Image of Houses Across the Street in Our Livingroom*,"⁹³ a title he later changed to *Houses Across the Street in Our Living Room, Quincy, Massachusetts*.⁹⁴ The first version of the title attributes the inverted image to the camera obscura, rather than Morell's camera or his look. The amended title links it to a specific place—Quincy, Massachusetts. It also suggests that although the camera obscura played an enabling role in the creation of the photograph, the upside-down part of the image actually originated in the houses themselves.⁹⁵ They entered Morell's living room through what might be called

an “ontological extrusion,” and during the eight hours it took to make this photograph the living room and the houses were co-present, both temporally, and spatially.



Figure 18. Abelardo Morell, *Camera Obscura Image of Houses Across the Street in Our Livingroom*, 1991. Silver-gelatin print. Image © Abelardo Morell, courtesy of Edwynn Houk Gallery, New York.

The intimacy of this relationship is even more marked in a closely related photograph, whose name underwent a similar transformation. In this photograph, which was initially called *Camera Obscura Image of Houses Across the Street in Our Bedroom*,⁹⁶ and later *Houses Across the Street in Our Bedroom, Quincy, Massachusetts*,⁹⁷ the upside-down image extends from the wall behind a bed down to the pillows and coverlet below. The bed invites us to think about the people who sleep in it, and—through an almost inevitable extrapolation—those who sleep in similar beds on the other side of the street.

The photograph consequently functions as a receiving room for Morell’s neighbors, as well as their houses. In the years since he made these two photographs, the artist has facilitated similar encounters in many other places. These venues are often bedrooms, but even when this is not the case, Morell thinks of the encounters as “couplings.” “One of the satisfactions I get from making this imagery,” he writes, “comes from my seeing the weird and yet natural marriage of the inside and outside.”⁹⁸



Figure 19. Abelardo Morell, *Houses Across the Street in Our Bedroom*, Quincy, MA, 1994. Silver-gelatin print. Image © Abelardo Morell, courtesy of Edwynn Houk Gallery, New York.

In 2005, Morell began making color camera obscura photographs. The first of these photographs welcomes an inverted and reversed image of the exterior of the Philadelphia Museum of Art into one of the museum’s own galleries, and pairs it with a painting that performs the same action in reverse: Giorgio de Chirico’s *The Soothsayer’s Recompense* (1913). Part of the upside-down image of the museum’s exterior also enters the de Chirico painting, establishing it as a co-creation. The same is true of the photograph in which the transformed painting appears. The interior and exterior meet, as Elizabeth Siegel puts it, “to form a new image.”⁹⁹

Around the same time that Morell turned to color, he began using lenses and prisms to sharpen the focus of the camera obscura’s images and reverse its reversals.¹⁰⁰ He also started working with a digital camera. Since the images that enter the camera obscura are many-hued, Morell’s shift from black-and-white to color photography can be seen as a logical extension of his original project, and although his lenses and prisms “upped” the technological “ante,” they too have a historical precedent. Digital images, on the other hand, are generally assumed to be non-referential and non-indexical, and therefore discontinuous with the camera obscura and chemical photography. Morell, however, believes that digital photographs also have a disclosive potential, and that they may even have the capacity to render “the universe next door” *more* present than its antecedents could. “I have... been able to shorten my exposures considerably thanks to digital technology,” he confides in a short essay on his website, “which in turn makes it possible to capture more momentary light. I love the increased sense of reality that the outdoor has in these new works—the marriage of the outside and the inside is now made up of more

equal partners.”¹⁰¹



Figure 20/Colorplate 1. Abelardo Morell, *Camera Obscura: The Philadelphia Museum of Art East Entrance in Gallery #171 with a de Chirico Painting*, 2005. Inkjet print. Image © Abelardo Morell, courtesy of Edwynn Houk Gallery, New York.

It is perhaps for this reason that Pope’s beautiful description of his grotto camera obscura always makes me think of one of Morell’s more recent works, *Camera Obscura: View of Central Park Looking North—Fall* (2008). This work is part of a series of photographs that were produced at different times of year in a New York City hotel, using one of its rooms as a camera obscura. Unlike the names that Morell gave his earlier camera obscura photographs, the name that he assigned to this one contains the word through which the photographic image was subordinated to the human look: “view.” The photograph itself, however, completely redefines this word.



Figure 21/Colorplate 2. Abelardo Morell, *Camera Obscura: View of Central Park Looking North—Fall*, 2008. Inkjet print. Image © Abelardo Morell, courtesy of Edwynn Houk Gallery, New York.

As Morell shows us by positioning his camera in front of a wall, instead of a window, the view to which the title alludes was not carved out of the world by the photographer's look, and then "captured" by his camera. It was drawn, rather, on the wainscoted wall of a darkened hotel room through the "visible radiations" of external objects: trees, lakes, and buildings. It was also a "moving" rather than a fixed "picture," and although this picture has now been incorporated into a photograph, it still is. Central Park's autumnal self-portrait retains this power because Morell waited for it to arrive, and embraced it when it did. Although he did not make it, he knew that it was good.

UNSTOPPABLE DEVELOPMENT

THE TROPES that Alexander Pope and Count Francesco Algarotti associated with the camera obscura resurfaced in the 1830s and 1840s because chemical photography picked up where the camera obscura left off, both technically and ontologically. This might seem a puzzling claim, since unlike the images that appear inside the camera obscura, which are mobile and ephemeral, the defining attributes of analogue photography are immobility and permanence. The photographic image was, however, neither immobile nor permanent in the first decades of its history. It emerged slowly, through the gradual accretion of the traces inscribed on a “recipient-plate” by the light emitted by the external world, and it often disappeared shortly after it arrived.¹ And even when this image did not blacken or fade, there was an instability at its core.

Niépce began experimenting with chemical photography in 1814,² significantly earlier than either Daguerre or Talbot. He was drawn to it not for aesthetic reasons, but rather because he saw it as a potentially reproductive medium, like lithography—a vehicle for generating multiple copies of already existing images.³ Niépce repeatedly tried to actualize this potential by waxing or oiling an engraving, placing it on a surface coated with a light-sensitive varnish, and exposing it to the sun. In 1822 he succeeded in making a permanent contact negative of an engraving of Pope Pius VII. Others followed, some of which he had acid-etched, in order to render them more reproducible, and from which he managed to extract a few faint paper contact positives.⁴

In 1816, Niépce also began trying to “obtain” a printable “view” of nature with the help of a camera obscura.⁵ As we saw in the previous chapter, many seventeenth- and eighteenth-century users of this device also described their activities in this way, and for them, too, “taking” a “view” of nature meant arresting the camera obscura’s image stream, and forcing the resulting image “to remain on the table.”⁶ They sought to become “takers” rather than “receivers” of these luminous images by tracing their outlines on a sheet of paper. In most of the devices that were designed for this purpose, the screen was a tabletop, on which the user placed his tracing paper. He gazed down at the image stream, which was projected onto the screen from above or below. The “views” that he “took” with this device were thus manifestly derivative—copies of a preexisting model that issued from an external source. This was not a psychically sustainable arrangement for the modern subject, whose defining feature was “originality.”

The optical camera obscura that Robert Hooke described to the Royal Society in 1694 made it much easier for the user to attribute what he saw to his own look.⁷ This cone-shaped device fit over his head, moved when he did, and allowed him to “point” at whatever he wanted to “see.” The screen functioned simultaneously as a viewfinder and a drawing surface, and its snug position within the camera obscura concealed the fact that the image stream entered the device from the other end. The user seemed to be looking *through* the camera obscura, at the world outside, and recording what he saw (see chapter 3, [figure 40](#)).

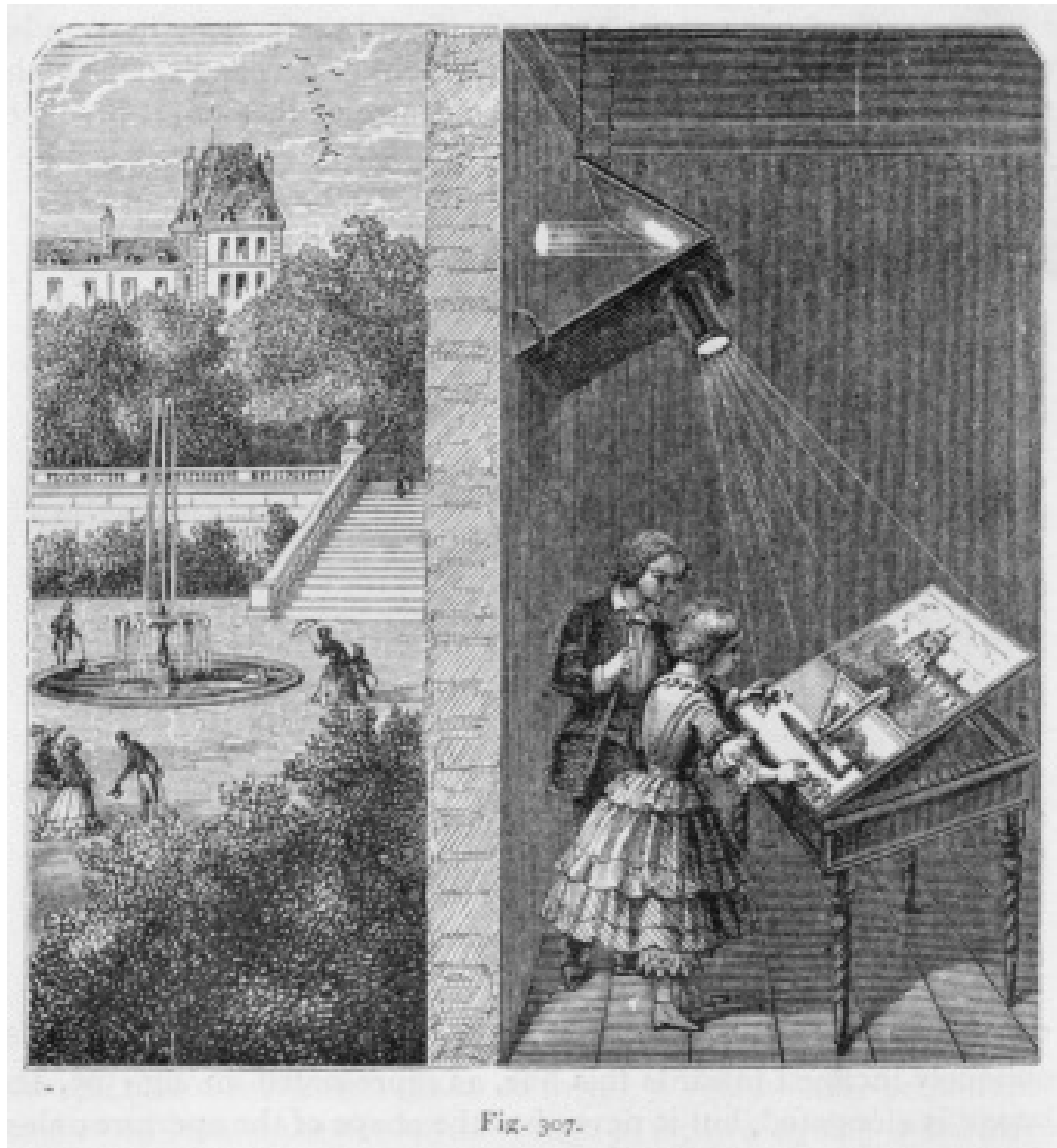


Figure 22. Illustration from Adolphe Ganot, *Natural Philosophy*, 1872.

Niépce pushed this project further. Instead of tracing the camera obscura's images on a sheet of paper, he tried to make the camera obscura draw what *he* saw. The “view” that he wanted the camera obscura to “take” had his signature all over it; it was the one that met his eyes when he looked out of the window of his attic workroom. Niépce installed a camera obscura in this window many times in 1816, and his letters to Claude, his brother and sometime collaborator, are full of references to the courtyard, and of laborious attempts to align his photographs with it. “I have made the experiment *in accordance with the procedure known to you*,” he wrote in May of that year, “. . . and I saw on the white paper all of the bird house which one can see from the window, also a faint image of the casement which was less illuminated than the outside objects.”⁸ “The white mass, which shows only dimly at the right of the bird house... is the pear tree... and the black spot above the tree top is an opening between the branches,” he wrote three weeks later.⁹

Niépce also referred to the photographs that he hoped to extract from the camera obscura as “view-points” (“*points de vue*”).¹⁰ This phrase recalls both the vanishing point in a perspectival painting and the fixed position from which such a painting becomes intelligible—a position that affords the person who steps into it a powerful sense of mastery.¹¹ It also anticipates Hollywood cinema's imputation of what the viewer sees to a

fictional look, through the shot/reverse shot. And the way in which Niépce talks about the camera obscura indicates that he did indeed regard it as his ocular representative; he mentions the lens far more often than the screen or the darkened chamber, and he describes it as an “artificial eye.”¹² A striking passage in one of Claude’s letters shows that this was a shared assumption. “I have read and re-read the interesting details you kindly transmitted to me...,” he wrote Nicéphore in 1822, “attentive and following with your eyes the admirable work of light; and *I thought I myself saw a ‘point de vue’ which I had great pleasure in remembering.*”¹³

Niépce’s 1816 experiments with the camera obscura produced several negatives of the buildings onto which his studio window opened, but they vanished shortly after he removed them from the apparatus. He called these short-lived photographs “retinas” (“*réтины*”), presumably because they resembled an afterimage.¹⁴ This formulation also recalls the retinal image, the concept through which Kepler theorized the opacity of human vision.¹⁵ Sometime in the summer of 1826 or 1827,¹⁶ Niépce coated a polished pewter plate with a mixture of bitumen of Judea and lavender oil, put the plate in a camera obscura, and once again installed the device in his workroom window. When he removed it eight hours later, the plate was blank, but after he washed it with lavender and white petroleum, a direct positive image of the adjacent structures and buildings appeared on its shiny surface, and the bitumen hardened into an enduring image.¹⁷ It was with this image, Georges Potonniée and the Gernsheims declare, that photography began.¹⁸

But *View from the Window at Le Gras* wasn’t the result for which Niépce had been waiting, either. Because of the length of the exposure, sunlight illuminates the buildings from both sides, and the photograph also shows us the traces inscribed on the pewter plate during the intervening period. It is the precipitate of eight hours of continuous change, and this process occurred in tandem with, and as a consequence of, another metamorphosis—one transpiring in the external world. *View from the Window* thus not only loudly proclaims itself to be a “photogenic drawing,” but also recalls Leonardo’s dynamic analogies.¹⁹

Since Niépce didn’t know what light had inscribed on the pewter plate until he took the plate out of the camera obscura and washed it with lavender and white petroleum, his decision to remove it after eight hours was completely arbitrary. It would also have been arbitrary if he had been able to witness what was happening, since the “view” that traced its picture on the shiny surface never assumed a final shape. Niépce must have realized at some point that his difficulties had less to do with chemistry than with the sky and buildings, because he reordered his priorities. His first goal was no longer to make a reproducible image, he announced in an 1828 letter. It was, rather, to replicate a different prototype: the *world*. Only then could he resume his earlier quest. “My sole object [is] to copy nature with the greatest fidelity, [and it is] to that which I attach myself exclusively,” he told the engraver Lemaître, “for only when I have succeeded in this can I seriously begin to tackle the various fields of application of which my discovery is capable.”²⁰ But Niépce still didn’t understand the basis of his difficulties; he thought that all he needed was a better lens.²¹

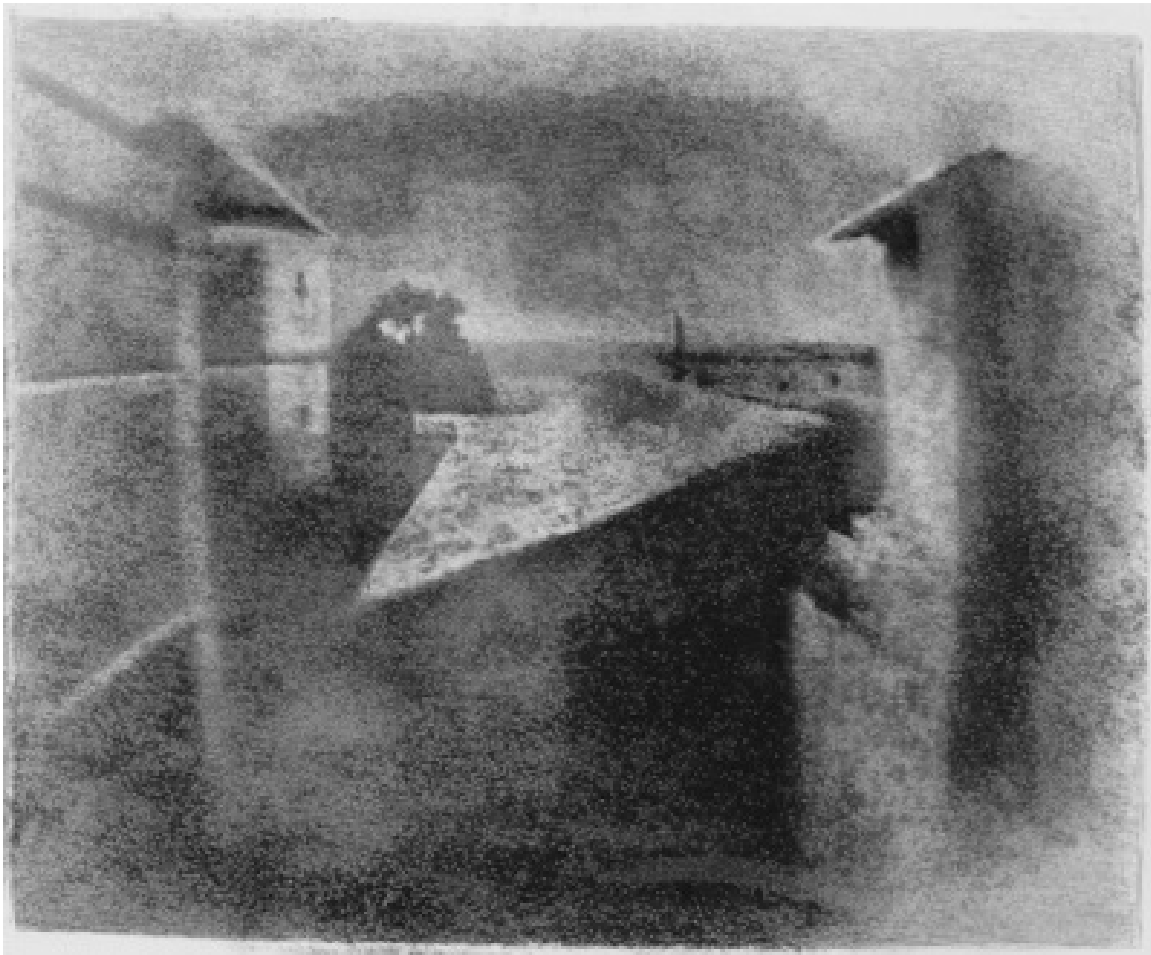


Figure 23. Nicéphore Niépce, *View from the Window at Le Gras*, ca. 1826, as enhanced by Helmut Gernsheim, 1952. Silver-gelatin print and watercolor from original heliograph on pewter. Courtesy of the Harry Ransom Center at the University of Texas at Austin.

Daguerre joined forces with Niépce in 1828, and continued experimenting with photography after the latter's death. He encouraged his partner to focus his reproductive efforts on nature, rather than preexisting images,²² and he also practiced what he preached; the daguerreotype offers a “faithful” but unreproducible image of its referent. But Daguerre was not really interested in collaborating either with Niépce or with nature.²³ He wanted to establish himself as the source of the photographic image, and he believed that the best way to do this was “to arrive at such rapidity that the impression could be produced in a few minutes, so that the shadows in nature should not have time to alter their position,”²⁴ and so much detail that the viewer would believe himself to be looking at solid and recognizable forms. “In order to obtain a perfect image of nature only three to thirty minutes at the most are necessary...,” he writes. “By this process, without any idea of drawing, without any knowledge of chemistry and physics, it will be possible to take in a few minutes the most detailed views, the most picturesque scenery.”²⁵

This account of the daguerreotype clearly tapped into the unconscious desires of some of his reviewers, because they not only repeated his claims but hyperbolized them. “M. Daguerre shows you the plain plate of copper,” Hippolyte Gaucheraud enthused. “He places it, in your presence, in his apparatus, and, in three minutes, if there is a bright summer sun, and a few more, if autumn or winter weaken the power of its beams, he takes out the metal and shows it to you, covered with a charming design representing the object towards which the apparatus was turned. Nothing remains but a short mechanical

operation—of washing, I believe—and the design, which has been obtained in so few moments, remains unalterably fixed, so that the hottest sun cannot destroy it.”²⁶ And Sir John Robison declared, “The new art has been discovered to fix these wonderful images, which have hitherto passed away volatile—evanescent as a dream—to stop them at our will, on a substance finely sensible to the immediate action of light, and render them permanent before our eyes, in traces represented by tints in perfect harmony on each point, with different degrees of intensity.”²⁷

As another reviewer makes painfully evident, this fantasy of “immediate action” and “absolute fixation” was yet another iteration of the Cartesian dream. But the dream had a new narrative—one that acknowledged the challenges posed by photography. Yes, there is indeed a world, this narrative goes, and it has an “eye,” called the sun, that is the “all-powerful agent of a new art.” However, this seemingly omnipotent force is our “willing and obedient slave”; it performs all of the physical labor, while deferring to our aesthetic judgment. If we wish a monument to “appear in relief, free from any surrounding effect that may lessen its noble effect,” it will make the monument stand forth, “isolated as the column in the Place Vendôme.” We can also “obtain” all of the other “effects” that we desire to create through the “same admirable process,” from “the earliest dawn” to “twilight’s close.”²⁸



Figure 24. Louis Daguerre, *Notre-Dame and the Ile de la Cité*, ca. 1838. Daguerreotype. Courtesy of the Harry Ransom Center at the University of Texas at Austin.

But Daguerre did not succeed in preserving any of his photographs until 1837, and those that survive are far from “fixed.” The daguerreotype has to be angled to be seen, and it shifts in certain positions from a positive to a negative image. It is also extremely fragile, as was already apparent to Daguerre’s contemporaries.²⁹ Since it is produced through the impress of light on a silver-plated surface, rather than the copper beneath this plating, it can be easily rubbed away, and it must be framed behind sealed glass to keep the silver from oxidizing.³⁰ An odd complaint also surfaces in some of the reviews. “Motion,” as one commentator puts it, “escapes [Daguerre], or leaves only vague and uncertain traces.”³¹ Three of the reviewers who level this complaint attach it to a particular set of photographs—those devoted to the Boulevard du Temple.

In 1839,³² Daguerre attempted—perhaps consciously, but in all likelihood unconsciously—to remake *View from the Window*, with different protocols. Like Niépce, he installed a camera obscura in the upper-story window of his workroom, in order to “take” the “view” that he saw when he looked out of it. Like his predecessor’s experiment, his also began in the early morning and ended in the late afternoon. But rather than pointing his camera obscura at a cluster of buildings on a country estate, Daguerre pointed it at the Boulevard du Temple, one of the busiest streets in Paris, and instead of producing one photograph, he produced three.³³ He also made each of them at a different time of day—the first in the early morning, the second at noon, and the third in the late afternoon. Although his exposures were long by today’s standards, they were infinitesimal by comparison with Niépce’s; according to one reviewer, they lasted only thirty seconds.³⁴ Each daguerreotype is consequently the precipitate of a very small part of the period that

they collectively represent. Finally, this period is more symbolic than real; two of the photographs were made on one day, and the third on another day.

Daguerre repeated this experiment with two other locations the following year: the Place de la Concorde and the Tuileries Palace.³⁵ Neither series has survived, but we have two contemporaneous descriptions of the first. “In one of these designs, you may almost tell the hour of the day,” the first reviewer writes. “Three views of the [Luxor Obelisk] are taken; one in the morning, one at noon, and the other in the evening; and nobody will mistake the effect of the morning for that of the evening.”³⁶ The Luxor Obelisk was immediately recognizable in all three “views” of the Place de la Concorde, the other claims, and “the effect of the morning light [was] distinctly discernible from that of the evening, though the sun’s altitude, and consequently the length of the shadows, [were] the same in both.”³⁷ We can see from these descriptions what Daguerre was hoping to accomplish with the Boulevard du Temple series. By replacing a photograph created through eight hours of uninterrupted exposure with three photographs representing the beginning, middle, and end of a hypothetical day, he was trying to rationalize time, and solidify form.



Figure 25. Louis Daguerre, *The Boulevard du Temple*. 1838. Daguerreotype. Courtesy of the Bayerisches Nationalmuseum (inventory no. R 6312.1–8).

Daguerre seemed to have achieved these goals in the Place de la Concorde series, at least in the minds of his reviewers. No one, though, could determine the time of day from the Boulevard du Temple photographs, nor did they correspond to what Daguerre’s contemporaries were used to seeing when they ventured into his neighborhood. Samuel Morse visited Daguerre’s studio shortly after he made the daguerreotypes, and described the first of them in a letter to his brother. He talks about the mysterious absence of vehicles and crowds in a location that was normally overflowing with both, and the equally mysterious presence of part of a human figure in the lower left frame. “The

Boulevard, so constantly filled with a moving throng of pedestrians and carriages, was perfectly solitary, except an individual who was having his boots brushed,” he writes. “His feet were compelled, of course, to be stationary for some time, one being on the box of the boot-black, and the other on the ground. Consequently his boots and legs are well defined, but he is without body or head, because these were in motion.” Morse concludes that “objects moving are not impressed.”³⁸

Gaucheraud provides a similar reading of the last photograph in the series, which was also devoid of vehicles and crowds, and which apparently contained two horses, one of whom—like the human figure in the first photograph—was only partially present. (I say “apparently” because this photograph is lost.) “Nature in motion is not represented or at least not without great difficulty...,” he writes. “In one of the views of the Boulevards... all that was walking or moving does not appear in the design; of two horses in a hackney coach on the stand, one unluckily moved its head during the short operation; the animal is without a head in the design.” Since photographers need their subjects to remain stationary for an extended period of time, Gaucheraud concludes, they should focus on things that are inherently motionless, like inanimate nature and architecture.³⁹

Morse’s preoccupation with the tiny human figure—or, as has been more recently argued, two tiny human figures⁴⁰—in the left frame of a photograph in which so many other things are happening is odd. It is even stranger to find Gaucheraud attributing immobility to architecture when discussing this series, since the most prominent thing in the two surviving photographs is the building in the foreground, and it is far from still. Not only does it occupy a slightly different position in each photograph, but it also moves in multiple directions within them. In the first daguerreotype, the building both emerges from and retreats back into the mist in the background and at its base, and in the second it simultaneously rises out of the darkness that engulfs its lower half and sinks back into it. This is a striking instantiation of the kind of movement I discussed in [chapter 1](#): of the “coming forward” or “presencing” of the world through self-presentation. It also reminds us that every disclosure is a partial concealment—that nothing ever stands fully exposed before us.

Although the building in the foreground of the Boulevard du Temple series is manifestly the same “body” in both daguerreotypes, it also looks very different in the second daguerreotype than it does in the first; it is squatter, its windows are larger, and its façade has three levels instead of two. I take the word “body” from Henri Bergson, who uses it to emphasize the “evolutionary” nature of all phenomena. Everything “changes at every moment,” he writes in *Creative Evolution*. It also does so “without ceasing” (my emphasis). There is, consequently, no such thing as a form; there is only *formation*. These infinitesimal metamorphoses are, however, imperceptible to the human eye. When “successive images” differ slightly, we consider them all as “the waxing and waning of a single *mean* image,” and when a body alters enough to “overcome the inertia of our perception,” we say that it has “changed form.”⁴¹ We also have a vested interest in not perceiving them, since they are epistemologically unmooring. But the movement that escapes *us* is highly visible in the Boulevard du Temple photographs—and not just through the building in the foreground. Through their partial appearance, the man and the horse help us to see that they, too, are less beings than “becomings,” and one cannot look

at the daguerreotypes for very long without feeling the ground shifting beneath one's feet. This part of Paris was unrecognizable after Baron Haussmann finished "renovating" the city.

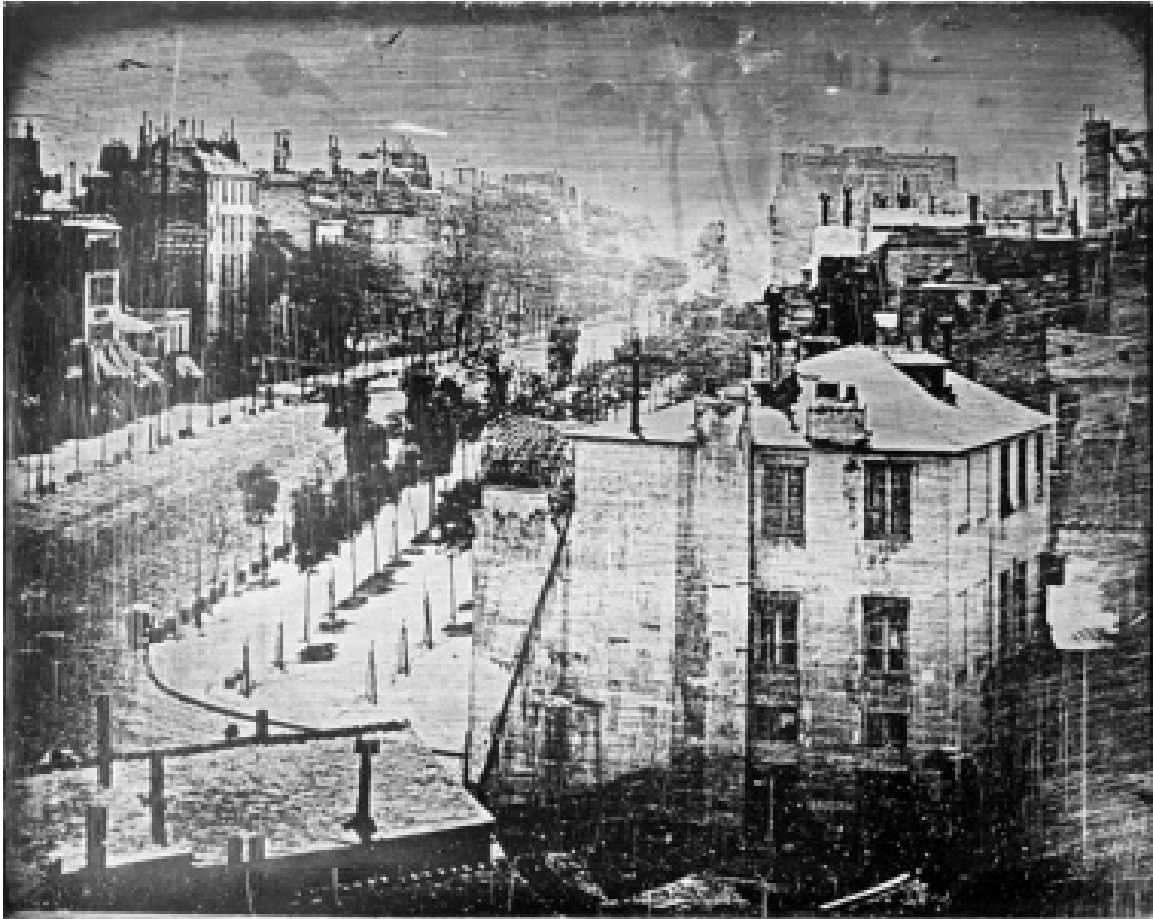


Figure 26. Louis Daguerre, *The Boulevard du Temple*. 1838. Daguerreotype. Courtesy of the Bayerisches Nationalmuseum (inventory no. R 6312.1–8).

There is also another kind of movement in the Boulevard du Temple daguerreotypes, and that is the one through which they emerged. The industrialization of photography has made this movement almost impossible to see, but it was hard to miss in the late 1830s and early 1840s, since exposures were not only long but manifestly developmental. Some pictorial elements appeared earlier than others, and continued evolving until the photograph was chemically stabilized. The photographer consequently had to decide whether to underexpose the “slow” colors so that the “speedy” ones would not be overexposed, or to overexpose the latter so that the former would not be underexposed. Although Gaucheraud does not recognize this movement *as movement*, he describes it brilliantly. “Trees are very well represented [in the Boulevard du Temple daguerreotypes],” he writes “[but] their color... hinders the solar rays from producing their image as quickly as that of houses, and other objects of a different color.” And this “causes a difficulty for [the] landscape, because there is a certain fixed point of perfection for trees, and another for all objects the colors of which are not green. The consequence is, that when the houses are finished, the trees are not, and when the trees are finished, the houses are too much so.”⁴²

Robison provides both the most detailed and the most perceptive account of the Boulevard du Temple photographs. Like Morse, he notes the absent crowds and the partial appearance of the man who is having his shoes shined, and explains both through the length of the exposure, but instead of concluding that “objects moving are not impressed,” he writes that “vacillating objects make indistinct pictures.”⁴³ This formulation makes room for the ceaseless metamorphosis of the building and the man, and the simultaneity

within the photograph of presence and absence, and appearance and disappearance.

Robison also addresses all of the developmental aspects of the series: the gradual emergence of the buildings at dawn, the slow appearance of the image on the photographic plate, and the modulation of light over the course of the day. “A set of three pictures of the same group of houses, one taken soon after sunrise, one at noon, and one in the evening; in these the change of aspect produced by the variations in the distribution of light, was exemplified in a way which art could never attain to,” he observes. “One specimen was remarkable from its showing the progress made by light in producing the picture. A plate having been exposed during thirty seconds to the action of the light and then removed, the appearance of the view was that of the earliest dawn of day; there was a grey sky, and a few corners of buildings and other objects beginning to be visible through the deep black in which all the rest of the picture was involved.”⁴⁴ This passage restores the temporal continuum that Daguerre works so hard to interrupt, and de-substantializes the Boulevard du Temple.

IN 1834 AND 1835, Talbot produced a number of negative photographs by sensitizing numerous pieces of paper with sodium chloride and silver nitrate, inserting them in tiny camerae obscurae, and exposing the devices to the sun for half an hour.⁴⁵ Like Niépce’s first successful camera photograph, Talbot’s features a window in his house: the oriel window in the south gallery of Lacock Abbey. However, rather than offering a view *from* this window, it offers a view *of* it. It also differs from Niépce’s first photograph in another significant way: it can’t be attributed to Talbot. The camera obscura within which the photographic plate was exposed to light sat on the mantelpiece across from this window, a position from which only the fireplace could have “looked.”⁴⁶

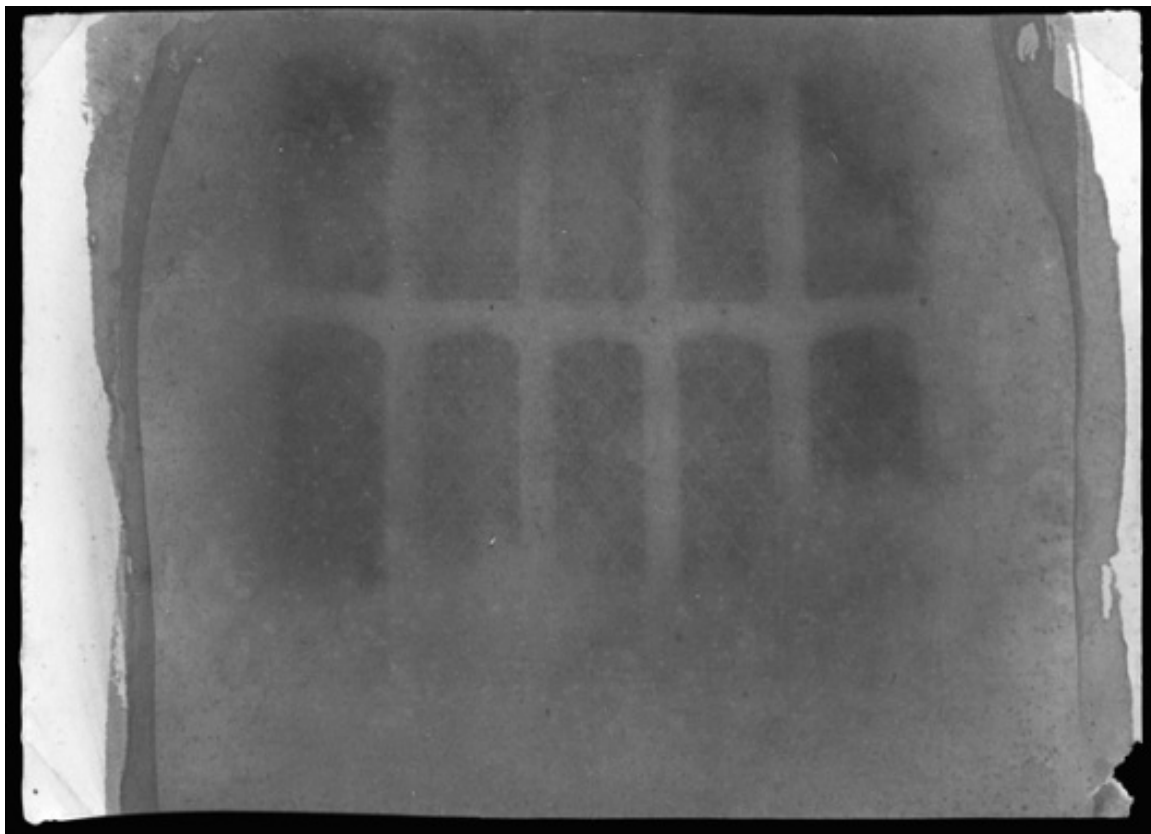


Figure 27. Henry Fox Talbot, *The Oriel Window, South Gallery, Lacock Abbey*, ca. 1835. Photogenic drawing negative.

In 1840, Talbot discovered that an image had appeared on a piece of paper that had been in the camera obscura for only a short time, and this discovery helped him develop a new process. By sensitizing his paper with silver nitrate and potassium iodide, moistening it with a solution of acetic acid, silver nitrate, and gallic acid shortly before using it, removing it from the camera obscura when there was only a latent image, and then bathing it in a gallic silver nitrate solution, he dramatically reduced his exposure times—sometimes to as little as thirty seconds. He called the images that resulted from this new and improved process “calotypes.”

But Talbot found it almost impossible to retain the images that emerged from his photographic experiments. His early photographs blackened or faded when exposed to light,⁴⁷ and although he had better luck with his calotypes, most of which he “fixed” with “hypo,” there were still numerous casualties. The images on many of the plates in *The Pencil of Nature* vanished, and a reviewer of the 1862 International Exhibition wrote that some of the calotypes that were exhibited there had “fad[ed] before the eyes of the nations assembled.”⁴⁸

Talbot’s surviving photographs are also labile in another sense, one that recalls both *View from a Window*, and the Boulevard du Temple daguerreotypes. They seem—as Gail Buckland puts it—to be “in a state of evolution, of slowly being created by dancing rays of light.”⁴⁹ And although Talbot was alarmed by the blackening and fading of his photographs, he loved watching the latent image slowly emerge on a sheet of sensitized paper after he removed it from the camera obscura. “I know of few things in the range of science more surprising than the gradual appearance of the picture on the blank sheet,” he confided in a February 19, 1841, letter to the editor of the *Literary Gazette*.⁵⁰ Talbot also saw this process as a continuation of what happened inside the camera obscura, and

attributed it to the same agency. His photographs were not only drawn with the pencil of nature, they were also “self-developing.” “One day last September, I had been trying pieces of sensitized paper... in the camera obscura, allowing them to remain there for only a short time,” he recounts in the same letter. “One of these papers was taken out and examined by candlelight. There was little or nothing to be seen upon it and I left it lying on a table in a dark room. Returning sometime after, I took up the paper and was very much surprised to see upon it a distinct picture... the only conclusion that could be drawn was that the picture unexpectedly *developed itself* by a spontaneous action.”



Figure 28/Colorplate 3. Henry Fox Talbot, *The Stable Court, Lacock Abbey*, ca. 1841. Calotype negative. Courtesy of the National Media Museum/SSPL.



Figure 29/Colorplate 4. Henry Fox Talbot, *Entrance Gate, Abbotsford*, 1845. Calotype negative. Courtesy of the National Media Museum/SSPL.

Sir David Brewster provides a similar account of Daguerre's procedure in "Photogenic Drawing, or Drawing by the Agency of Light." He characterizes the transformation of a latent daguerreotype into an actual one as a reflexive process, and identifies the people, places, and things that are disclosed through it as the agents of this auto-development. "After remaining a number of minutes, depending on the intensity of the light, the plate is taken out of the camera," he observes, "and placed in what is called a mercury box. There it is exposed to the vapor of mercury... and, after a certain time, the operator, looking through a little window in front of the box, observes the landscape, or figures, gradually *developing themselves* on the surface of the plate."⁵¹ This description, which applies with uncanny precision to the Boulevard du Temple series, locates the daguerreotype's self-development in an ongoing "now" that is more akin to the temporality of the camera obscura's images than to the one we usually attribute to the photographic image.

In an important passage in *The Pencil of Nature*, Talbot confesses that he is constantly seeing new things in his surviving calotypes, suggesting that they went on developing after they were chemically stabilized. "It frequently happens... that the operator himself discovers on examination, perhaps long afterwards, that he has depicted many things that he had no notion of at the time," he writes. "Sometimes inscriptions and dates are found upon the buildings, or printed placards, most irrelevant, are discovered upon their walls: sometimes a distant dial-plate is seen, and upon it—unconsciously recorded—the hour of the day at which the view was taken."⁵² He also makes another astonishing claim: that faded photographs can be "revived" by re-exposing them to the chemicals through which

they were developed, and that when they reappear, they often contain new things.⁵³



Figure 30. Henry Fox Talbot, *Table set for tea*, ca. 1843. Salted paper print. Courtesy of the National Media Museum/SSPL.

Once again the vehicle of this continuing development is analogy, but of a kind that I have not yet described. Like the analogies through which *View from a Window* and the *Boulevard du Temple* series were created, those through which Talbot's photographs first emerged were forged in the here and now, and the image evolved in tandem with the world. The analogies through which his photographs continued to develop after they had been chemically stabilized were trans-temporal; they connected an image from one moment in time with an image from another. As Talbot suggests, some of these analogies were psychic. "A casual gleam of sunshine, or a shadow, thrown across [the viewer's] path, a time-withered oak, or a moss covered stone may awaken a train of thought and feelings, and picturesque imaginings," he writes in another passage from *The Pencil of Nature*.⁵⁴ Others took a material form, and it was usually during the reproductive process that this material self-development began.



Figure 31. Henry Fox Talbot, *Winter Trees, Reflected in a Pond*, ca. 1841. Salted paper print. Courtesy of the National Media Museum/SSPL.

AS WE HAVE ALREADY SEEN, Daguerre was not interested in reproduction; his photographs were “one of a kind.” Although Talbot invented the process that allowed multiple positive prints to be made from a negative, that was not what drew him to photography either. He was slow to deploy it, and when he finally began to “reverse” his “reversed” images, as he called them, he did so by placing a sheet of sensitized paper directly on the negative, then exposing it to light. Since this procedure had to be repeated every time he wanted a positive print, and nothing about it was standardized, the resulting images are far from identical and he defends their differences in *The Pencil of Nature*.⁵⁵

The only one of the three figures I have discussed in this chapter who thought of photography as a primarily reproductive medium was Niépce. He tried to use it to copy engravings, to “take” what he saw when he looked out of his study window, and—finally—to make prints of *View from a Window*. The first of these attempts led to a few recognizable images, the second to one that is barely legible, and the third to nothing at all. Niépce attributed his inability to reproduce *View from a Window* to the “metallic reflection” of the pewter plate, and thought that he would be able to “obtain a vigorous picture” from a glass plate,⁵⁶ but history suggests otherwise. In the years since Niépce removed the photograph from the camera obscura and washed it with lavender and white petroleum, there have been numerous attempts to reproduce it, none of which has succeeded.

In 1827, Niépce went to England to visit Claude, who was gravely ill, and he took *View from a Window* with him. While he was there, he met Francis Bauer, a well-known

botanical draughtsman, who encouraged him to write a memoir about his discovery for presentation to the Royal Society. Niépce wrote the memoir, but he was so secretive about his process that nothing came of it.⁵⁷ He left *View from a Window* with Bauer when he returned to France, and after Bauer's death it passed through several other hands. It was publicly exhibited in 1885 and 1898, and then passed into obscurity.⁵⁸

Helmut and Alison Gernsheim spent six years trying to track down *View from a Window*, and in 1952 they finally found what they were looking for, in a large trunk in England. When he first saw the photograph, Helmut Gernsheim recounts in his most comprehensive account of this discovery,⁵⁹ he thought that he was looking at a mirror in an Empire frame. He went to the window, and angled the plate in various directions, and eventually the image came into view. Astonishingly, given that Gernsheim wrote this essay more than half a century after the industrialization of photography, he attributes its appearance to the courtyard, rather than to Niépce's action, or his own intervention. He also suggests that this self-disclosure happened gradually; the "entire courtyard scene *unfolded itself* in front of my eyes," he observes (my emphasis).⁶⁰

Gernsheim persuaded the owner of the heliograph to donate it to his extensive photography collection, and immediately tried to photograph it, but all that appeared in the resulting images was his camera. He then asked Scotland Yard to help him reproduce it, reasoning that since photographers there were "so expert in detecting invisible spots, scratches, hair, and fingerprints where the eye can see nothing at all," making a copy of a "clearly recognizable image" should be "easy game." When Britain's famous detective agency declined to put its public services to private uses, he turned first to the *Times*, where the project was deemed to be "impossible," and then to the National Gallery, whose highly skilled photographers tried, but failed, to reproduce *View from a Window*. Finally, thinking that the "giants of the photographic industry" would feel "in honor bound to produce a result," Gernsheim approached the Research Laboratory of the Eastman Kodak Company in Harrow, and the director agreed to try. But although the Eastman Kodak technicians worked on the project for three weeks, Gernsheim found the resulting photograph a "gross distortion of the original," and prohibited its publication until 1977.⁶¹

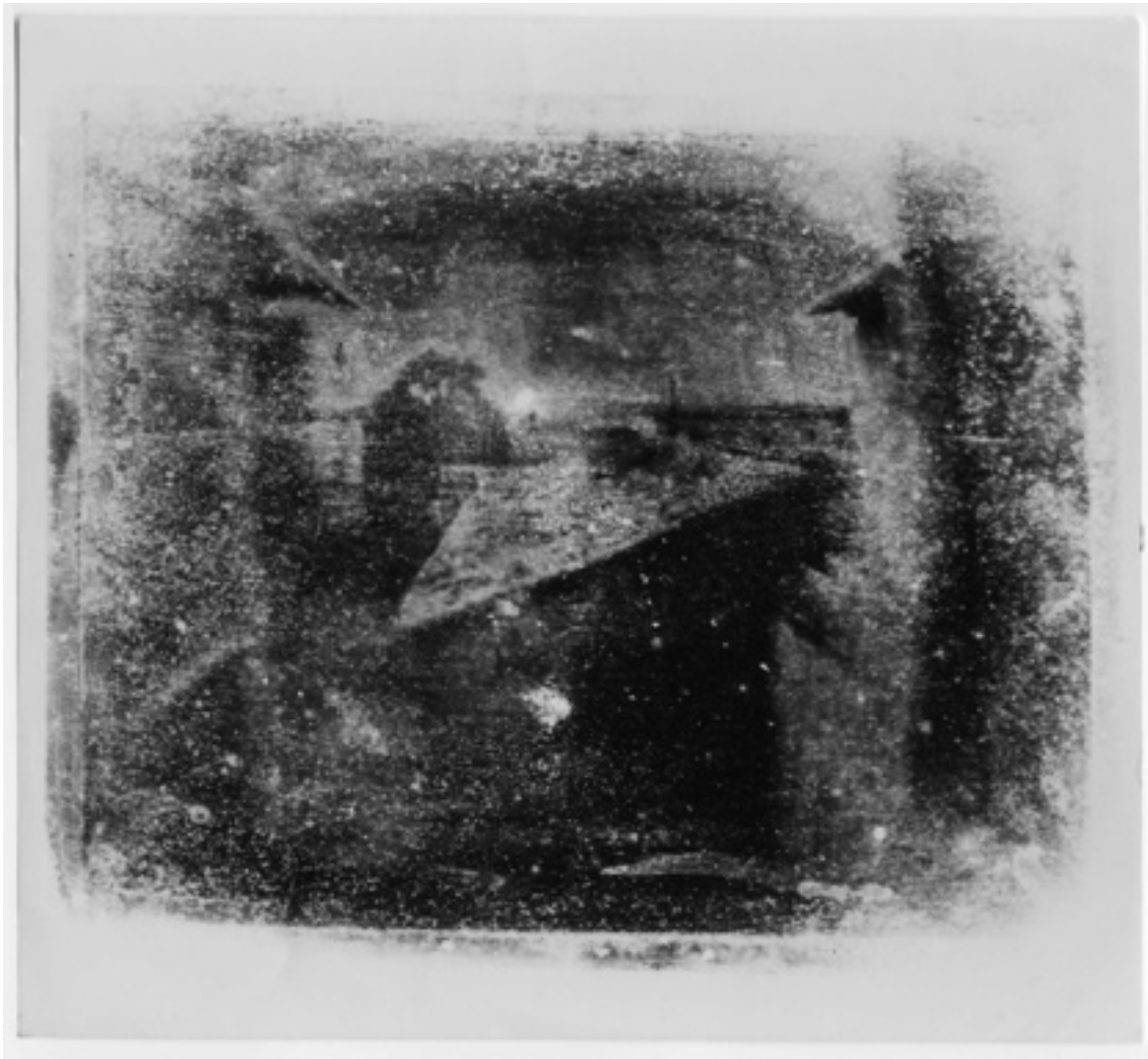


Figure 32. *View from the Window at Le Gras* as reproduced by the Kodak Research Laboratory (Harrow, UK), 1952. Silver-gelatin print from original heliograph on pewter. Courtesy of the Harry Ransom Center at the University of Texas at Austin.

As we can see from the first institution to which he turned for help—Scotland Yard—Gernsheim imputed an evidentiary value to the photographic image. He believed that a photograph of *View from a Window* would preserve this “important document,” and he approached the heliograph itself in the same way. “Though Niépce’s estate, Gras, was altered to some extent by later owners, the tower (pigeon house) on the left of the photograph still stands, and is in fact *on the left* when looking out of the window of Niépce’s attic workroom,” he writes in *The History of Photography*, “a proof that a prism was used when taking the photograph. These two facts make it quite certain that the view cannot have been taken before 1826.”⁶² This passage recalls those in which Niépce tried to align his photographs with what he saw when he looked out of his workroom window.

In 1963, Gernsheim gave *View from a Window* to the Harry Ransom Center at the University of Texas, Austin, and in June 2002, the center sent it to the Getty Conservation Institute to be examined and reproduced. The institute’s technicians adopted an even more forensic approach to the photograph. They spent “a day and a half with the original heliograph in their photographic studios in order to record photographically and digitally all aspects of the plate.” They also documented it “under all manner of scientific lights, including ultraviolet spectra,” and “produced new color film and digital/electronic copies of the plate, in an attempt to reveal more of the unretouched image while still providing a

sense of the complex physical state of the photograph.”⁶³ But the digital images that are displayed on the Harry Ransom Center website are no more revealing of the “unretouched image” than the Kodak photograph is.



Figure 33/Colorplate 5. *View from the Window at Le Gras* in its original frame. Courtesy of the Harry Ransom Center at the University of Texas at Austin.

Gernsheim and the Getty technicians attribute the heliograph’s unreproducibility to Niépce’s underexposure of the original plate. This explanation, however, is unnecessary, because there is no blame to apportion. The Kodak photograph and all of the images that have appeared on the Harry Ransom Center website are not “bad copies,” or even “representations of representations”;⁶⁴ rather, they are some of the analogies through which the heliograph has continued to self-develop. This creative evolution began with a non-photographic image, and gained momentum through another unholy alliance: a “manipulated” photograph of an over-painted photograph.

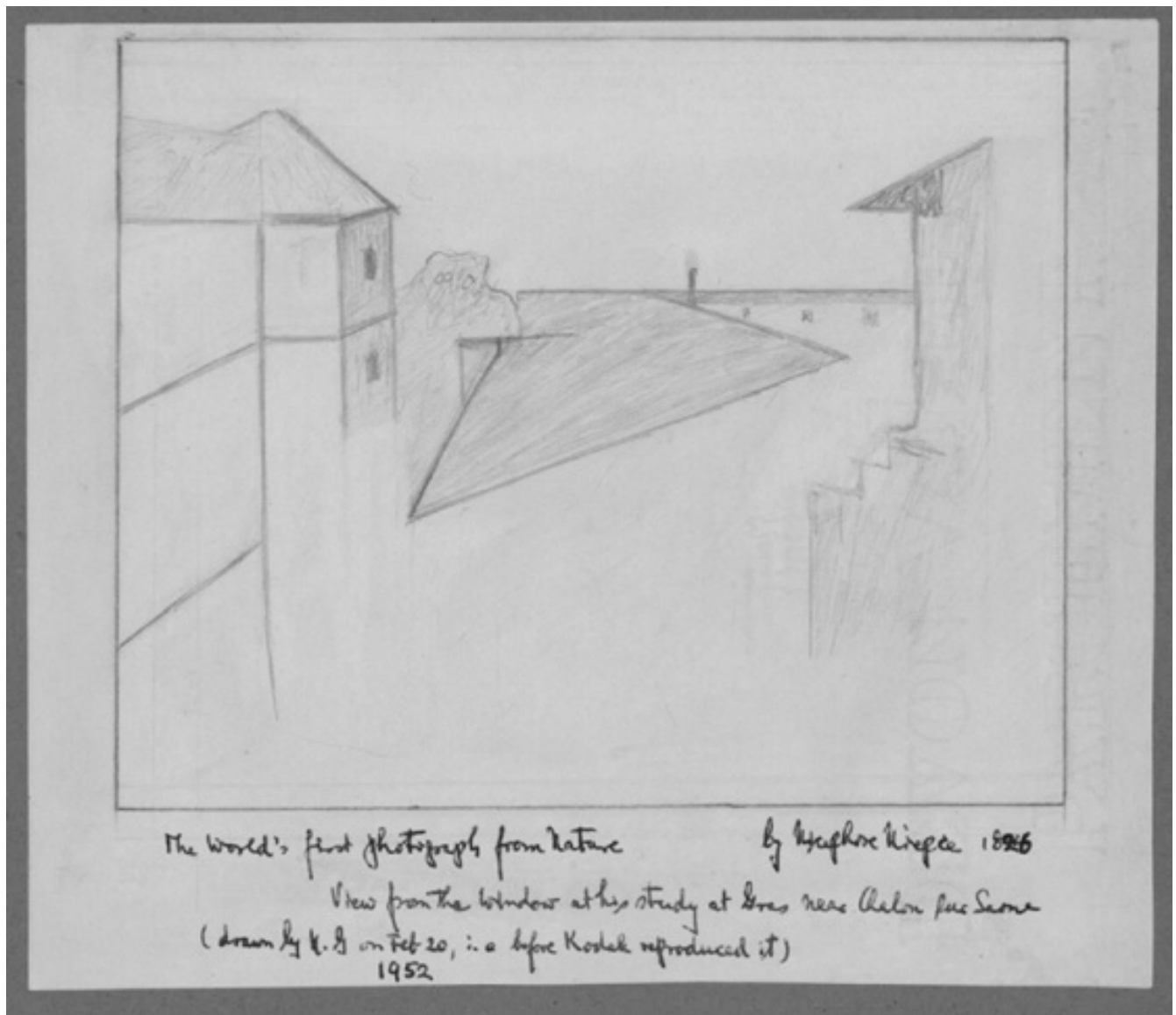


Figure 34. Helmut Gernsheim, drawing of *View from the Window at Le Gras*, 1952. Pencil on paper. Courtesy of the Harry Ransom Center at the University of Texas at Austin.

When Gernsheim realized that he would have to surrender the heliograph to a “research laboratory” in order to have it reproduced, he decided to make a drawing of it on the same scale, so that he would have a record of the “crucial document” if something happened to it. We do not usually attribute evidentiary value to a drawing, and this one warrants no exception. Instead of an elusive image hidden in the illusionistic depths of a shiny pewter plate, it is a legible sketch on a flat sheet of non-reflective paper. It also privileges line over mass, and reverses the photograph’s tonal values. But this does not mean that the heliograph and the drawing are two separate images. The shapes in the drawing echo those in the heliograph, and the heliograph also resembles the drawing in some surprising ways. *View from a Window* would be as useless in a court of law as the drawing; it corresponded *with* the ceaselessly changing scene outside Niépce’s window on the day it was made, rather than *to* it. It was also drawn with a “pencil”: the pencil of light. These are aspects of the photograph that we would not see without Gernsheim’s drawing. *View from a Window* reasserts itself as heliograph—a gift from the world to us—in an astonishing way: through an image drawn with a human hand.

When the Kodak technicians failed to produce a satisfactory copy of *View from a Window*, Gernsheim had nowhere else to go, so he and his wife spent nearly two days

applying pointillist watercolor dots to one of their prints, so as to make it more representative of the heliograph. When he photographed this over-painted photograph, he “held back the sky, the roof of the barn, and a few other features that were bright in the original, not black.” Gernsheim was keenly aware of the differences between the heliograph and this image. His photograph of the over-painted photograph is “a more uniform and clearly defined image” than the Kodak print, he writes in “The 150th Anniversary of Photography,” but its “pointillistic effect” is “completely alien” to Niépce’s “medium,” which is “as smooth as a mirror.”⁶⁵ However, he nevertheless called it the “rare original” in his 1952 account of his study, and mandated that it be the heliograph’s primary representative for twenty-five years.

Much later, after this “ruse” was discovered, Gernsheim responded to his critics in the following way: “Because it became known that I had touched up Kodak’s reproduction some people ignorant of the original plate, misconstrued my intention, believing I had been trying to improve on Niépce, whereas I had merely been trying to improve upon Kodak, to restore Niépce.”⁶⁶ The word “intention” figures prominently here; it is, indeed, the pivot on which his defense turns. Gernsheim’s detractors imputed the wrong intention to him, he argued, and he was sure that when they realized that he was merely trying to reassert Niépce’s intention, they would exonerate him.

But not only can we never fully know what anyone else intends, we can never fully know what we intend. Gernsheim was also contending with another intentionality, one that militated against a return to the “original”: the photograph’s own impulsion toward a further self-development. This impulsion was the driving force behind the many transformations to which Gernsheim subjected *View from a Window*. I say “many” because the drawing and the over-painted photograph weren’t the only analogies generated by Gernsheim. The entire process began with a mental image or group of images, and when Gernsheim touched up the photograph, he analogized this analogy. The over-painted photograph is—as Barbara Brown discreetly puts it—“his approximation of how he felt the original should appear in reproduction.”⁶⁷

Even now, it is to this image that most of us turn when we want to look at *View from a Window*, and for good reason. Like the heliograph, it evolved slowly, through the gradual accumulation of marks. In the former case, as in the latter case, there was no necessary end point to this evolution. Finally, although the heliograph’s “image layer” was long assumed to consist of a solid coat of bitumen, the Getty’s “XRF analysis” showed that it is actually a random pattern of bitumen “microdots.”⁶⁸ Since Gernsheim died long before the Getty analyzed the heliograph, he never knew about these microdots, but they surfaced through his dots of watercolor paint, like an image in a developing bath.

In spring 2013, an “interactive” version of *View from a Window* appeared on the Harry Ransom Center’s website. It is a digital composite of two other images: Gernsheim’s drawing, and the most frequently exhibited of the center’s “high-tech” photographs of the heliograph. The former is superimposed on the latter, and used to divide it into identifiable segments. If one clicks on a segment, as one is invited to do, its outlines light up with an orange glow, and the pertinent information appears to the left of the image (e.g., “bake house roof, no longer standing”). This is a continuation of the forensic project begun by Niépce and renewed by Gernsheim and the Getty technicians. But once again another

intentionality also makes itself felt. Although the two composited images echo each other, they do not merge. Some of the lines of the superimposed diagram extend beyond or cut into the shadowy shapes of the underlying buildings. These discrepancies prevent the image that they both inhabit from forming a seamless whole. The “interactive” version of *View from a Window* is consequently manifestly analogical, and it links chemical photography to digital photography, as well as to drawing.

A 2005 work by Joan Fontcuberta—*Googlegram: Niépce*—is another installment in this ongoing story, and the one with which I will conclude my own narrative.⁶⁹ From a distance, *Googlegram: Niépce* looks like a blown-up, slightly colorized version of Gernsheim’s over-painted photograph. As one approaches the work, though, it begins to morph. First the image becomes less resolute, then it turns into an abstract picture, and eventually it dissolves into a vast mosaic of tiny jpegs. There are far more images here than our eyes could ever see, even if we were to spend the rest of our lives looking at them, making *Googlegram: Niépce* a powerful reminder of the limits of human vision, and the inexhaustibility of the perceptual world. The work also challenges our sovereignty in another important way: by exposing us to a multitude of other intentionalities.

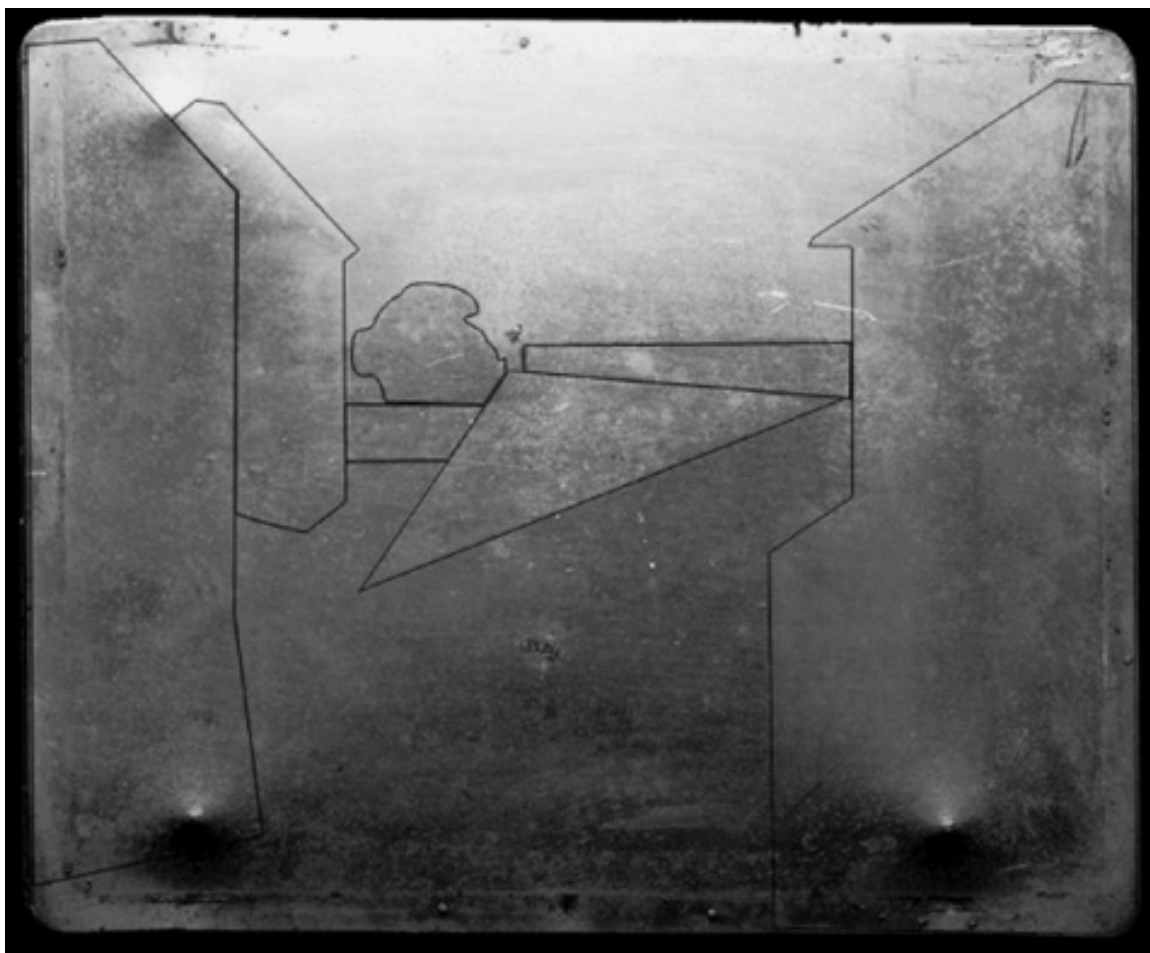


Figure 35/Colorplate 5. *View from the Window at Le Gras* with Gernsheim’s pencil drawing superimposed. Courtesy of the Harry Ransom Center at the University of Texas at Austin.

Two of these intentionalities are computational. Fontcuberta begins a Googlegram by locating an image that is “an icon of our time,” and that is linked to one or more words. He then conducts a Google image search with this word or set of words, and reconstitutes the iconic image with the jpegs to which this search leads through a freeware photomosaic program.⁷⁰ The search part of this process ignores both the visual qualities of the images it

finds and their affinities to each other; it is relentlessly linguistic. But it also treats words as classificatory units, rather than as sources of meaning or one of the “houses” of Being. It is thus as impervious to the complexity of the *words* with which it searches as it is to the *images* it finds, and this leads to all kinds of errors, or what Fontcuberta calls “archive noise.”⁷¹ Although the photomosaic program is also relentlessly single-minded and indifferent to the images with which it works, its “logic” is visual, instead of verbal. It arranges the jpegs strictly according to their “chromatic value and density.”⁷²



Figure 36/Colorplate 6. Juan Fontcuberta, *Googlegram: Niépce*, 2005. Chromogenic print. Courtesy of the artist.

The iconic image that Fontcuberta refashions in *Googlegram: Niépce* is of course Gernsheim’s over-painted photograph, and he searched for its 10,000 jpegs with the words “photo” and “foto.” Since *View from a Window* is often called “the first photograph,” on the Internet, as in the classroom, there is an unusually tight connection between it and the search words, but since every image on the Internet is a digital photograph, the search also encompassed all of them. The photomosaic program forged similar links between the over-painted photograph and these digital photographs. *Googlegram: Niépce* is a photograph constructed out of 10,000 smaller photographs, found by searching with the words “photo” and “foto” and assembled by a photomosaic program. There seems to be no room here for anything but these two meaningless and highly reiterative intentionalities, both of which scream “photography.”



Figure 37/Colorplate 7. Juan Fontcuberta, *Googlegram: Niépce* (detail). Courtesy of the artist.

But although a photomosaic promotes totality from a distance, it works against it up close, as do all mosaics, and Fontcuberta is interested in this double optic. He also believes that the “structure of mosaic”—which dates back to 3000 B.C.—can be found in all photography. Chemical photography is “an irregular mosaic of silver halogen molecules,” he writes, a printed image is a “mosaic of dots that inform the photomechanical frame,” and a digital photograph is “produced by the grey tint of pixels.”⁷³ As we have already seen, the Getty technicians also found a mosaic when they analyzed *View from a Window*, and Gernsheim brought this mosaic to the surface with his pointillist dots. And not only is *Googlegram: Niépce* itself a mosaic, but its 10,000 jpegs also render both the bitumen dots in Niépce’s photograph and the watercolor dots in Gernsheim’s over-painted photograph *hyper-visible*.

The photomosaic program also adds something to the mosaic tradition, something that makes room for another kind of intentionality. In a conventional mosaic, Fontcuberta writes, each component is “a pure spot of color without meaning,” but in a photomosaic it is a photograph, which “still [has] a meaning by [itself].” This meaning isn’t the kind we mobilize by identifying what is “in” a photograph; it is, rather, the inexhaustible significance that every being should always have for us, and that the photographic image helps us to experience. The first time I came close enough to see the sea of faces in

Googlegram: Niépce, I had this experience. I felt that they “expected” my arrival, and that there was a “secret agreement” between them and me. I also knew—with the kind of knowledge that bypasses all reason—that this agreement gave them a “claim” on me.⁷⁴



Figure 38/Colorplate 7. Juan Fontcuberta, *Googlegram: Niépce* (detail). Courtesy of the artist.

Although Fontcuberta does not say so, the 10,000 jpegs that make up *Googlegram: Niépce* also have yet another kind of intentionality. When we conduct a Google image search, the search engine looks for the images that have been most frequently linked to our search word. These links, however, have been forged by other Internet users, and reflect their predilections, antipathies, rivalries, and desires, instead of our own. That is why we are so often frustrated by what the search finds. By running his Google image search through a photomosaic program that arranged the results according to chromatic value and intensity, Fontcuberta prevented himself from selecting the jpegs that he liked and eliminating those that he found alien or irritating. He opened the door of his work to images that were tagged and uploaded by thousands of other users, and in which their affects were still lodged. He did so, I believe, because the human psyche is another of the places where the photographic image develops.

WATER IN THE CAMERA

IN 1989, Jeff Wall published a short essay called “Photography and Liquid Intelligence.” Like most of the other writings that we return to again and again, it is full of seemingly unresolvable contradictions. These contradictions radiate out from the notion of “liquid intelligence,” which links terms that are hard to think together and whose locus keeps shifting. Sometimes Wall attributes this intelligence to liquids, sometimes he situates it within chemical photography, and sometimes he imputes it to nature, the world, or even the cosmos. He distinguishes it at every point in his argument from another kind of intelligence: “optical” or “technological” intelligence. But this concept is also unstable, and he adopts a different attitude toward it in the second half of the essay than he does in the first.¹

Wall begins “Photography and Liquid Intelligence” with one of his own works, *Milk* (1984). In the lower right corner of the light box, an apparently indigent man sits on the pavement in front of a red brick wall. The wall fills most of the right side of the picture, and part of the left. There is an inexplicable gap between it and the next building, where weeds are collecting. This building is a hodgepodge of materials and architectural signifiers, all of which feel strangely truncated, and none of which has any discernible function or meaning. It combines a narrow strip of fake bricks with a large window framed in black metal, and a patch of stucco wall. The window connotes “shop,” but what its glass reveals of the interior—a small door opening onto a staircase—suggests that it is a residential building. This is form at its most arbitrary.

The man’s left hand is clenched, and his left arm—whose angularity rhymes with the horizontal pattern of the brick—is rigid with anger. He looks to the right, and his left knee is also turned in this direction, but his right knee points in the other direction. He holds a milk carton in a brown paper bag in his right hand, out of which milk erupts. Since this is one of Wall’s most “psychological” works, one is sorely tempted to read the liquid symptomatically—to interpret it as a signifier of the man’s rage against the social order from which he is excluded, and his body’s double directionality as the manifestation of an internal division. The light box, though, is named after the milk, not the man, and Wall also focuses on the milk in his 1989 essay. He associates it with lability and incalculability, and he opposes it to “form,” rather than to society or a psychic entity.



Figure 39/Colorplate 8. Jeff Wall, *Milk*, 1984. Transparency in light box. Courtesy of the artist.

“In *Milk*, as in some of my other pictures, an important part is played by complicated natural forms,” Wall writes. “The explosion of the milk from its container takes a shape which is not really describable or characterizable, but which provokes many associations. A natural form, with its unpredictable contours, is an expression of infinitesimal metamorphoses of quality.”² This is the first instantiation of the concept invoked in the title, and Wall invites us to interpret it both literally and metaphorically: as a quality that liquids have and also as the fluidity of what we imagine to be solid forms. Photography is based on a dramatically different kind of movement, he declares: the mechanical opening and closing of the shutter. This movement gives it a “substratum of instantaneity.”³

The passage I have just summarized could have been lifted directly out of Bergson’s *Creative Evolution*, and it seems the perfect segue to one of the philosopher’s primary claims: the claim that since photography brings everything to a halt, it is incapable of registering these metamorphoses.⁴ Wall, however, heads off in another direction. He argues that the camera’s instantaneity permits it to “see” much more quickly than we do—almost as fast as liquids metamorphose. This makes it the ideal medium for representing this movement. The fact that it does so in such a “dry” and “glassed-in” way is also an advantage rather than a disadvantage, since it shows us that photography is an “institution,” remote from nature.⁵ By immobilizing the movement whose properties it renders visible, photography demonstrates that its intelligence is “ocular,” not “liquid.” And the glass needs to be there, because you “certainly don’t want any water in your camera.”⁶

Later in the same paragraph, Wall reshuffles the deck. Chemical photography relies on water and other fluids, he now argues, and these fluids connect it to “very ancient production-processes” from “the origins of techne”—processes like washing, bleaching, and dissolving, that have not emerged “from the mineral and vegetable worlds.”⁷ They also give it a liquid as well as an ocular intelligence. Photography’s liquid intelligence makes it unpredictable and uncontrollable, and hence hard to “rationalize.” Computation liberates the dry part of the medium from this unhappy alliance by eliminating liquids “from the immediate production-process.”⁸

There are echoes of Heidegger in this argument,⁹ and they become more pronounced as Wall proceeds. Technology may be the vehicle through which we purge photography of liquidity, he argues, but the intelligence behind this evacuation is human. The goal of the exercise is also dispiritingly familiar: separation from and conquest of the world. “Th[e] expansion of the dry part of photography I see metaphorically as a kind of hubris of the orthodox technological intelligence which, secured behind a barrier of perfectly engineered glass, surveys natural forms in its famous cool manner,” Wall writes. And this look may not be as “cool” as it appears to be. Human vision becomes “ballistic” when it is “augmented by glass.”¹⁰ It is now the world that needs protection, not the camera.

At first glance, this argument meshes perfectly with the narrative I have been recounting. In the first chapter of its history, photography’s intelligence was entirely liquid. A continuous stream of evanescent images entered the darkened space of the camera obscura from outside, dynamically analogizing its equally labile source, and encouraging the viewer to “energize” the world by corresponding with it both psychically and aesthetically. This liquidity washed away all of the distinctions on which modern subjectivity depends, and rendered certain knowledge impossible, so seventeenth-century man attempted to “ocularize” the camera obscura by substituting mental representations for the perceptual world, and transforming the camera obscura into a device for arresting its image stream.

Most of the latter devices were incorporated into tables and desks, at which the viewer sat, and on which he drew. Although they encouraged him to see himself as the source of the resulting image, they did not attribute the stream of images on which he based his drawing to his look. The camera obscura also mediated his encounter with the world. He was consequently still at the mercy of the device’s liquid intelligence. But in 1694, Robert Hooke designed an optical camera obscura that fit over the head of its user and moved when he did, as if it were a part of his body. The figure in the illustrative etching of this device draws on the screen “through” which he surveys the world, in a seemingly unmediated way. The “ballistic” and “projectile” qualities that Wall associates with the “glassed-in” look are communicated through its shape, and its user towers over the landscape in which he stands, his head in the celestial light. “I see, I draw, I conquer” is the etching’s implied caption.

And what was only a dream in 1694 is now a reality. “Woolgathering Freudians” may worry about “the allusions to firearms and warfare that permeate the terminology of photography,” as Todd Gustavson remarks in his history of the camera,¹¹ but the rest of us happily “load” our camera, “aim” at what we want to “capture,” and “shoot.” And since our cameras are digital, and we process them on our computers, everything is calculable.

Soon there will be no more darkrooms or developing labs, and photography will be completely dry.¹² However, it wasn't until the 1880s that the verb "to take" decisively replaced the verb "to receive" and "shoot" became a synonym for "take." It was also only through the industrialization of chemical photography that this shift occurred. Most of the terms through which we conceptualize the medium were manufactured for us, just like our equipment and material.



Figure 40. Engraving from Robert Hooke, *Philosophical Experiments and Observations*, 1727.

THE OCULARIZATION of chemical photography began—as one would expect—with the camera. Daguerre designed the apparatus for which his process called, and signed a contract with his brother-in-law Alphonse Giroux to manufacture and sell it. The device, which was similar to the one he himself used, was a fixed-bed, double-box camera, which the operator focused by sliding the rear box into the slightly larger front box. Twenty-five percent of the profits from this enterprise went to him, and his name was used to market the camera and undercut competitors. Giroux attached a plaque to the device that read: “No apparatus is guaranteed if it does not bear the signature of M. Daguerre and the seal of M. Giroux.”¹³

To make the camera more attractive, Giroux sold it with a kit containing everything else that an operator would need to make a daguerreotype: polished plate, spirit lamp, mercury box, box for iodizing, chemicals, and buff stick. He also equipped it with a landscape-type lens, presumably so that he could patent it as a new design, and others followed suit. In 1841, N. P. Lerebours added a simple shutter to a camera of similar design, in 1843 Charles Chevalier hinged the sides of the boxes, allowing the camera to be folded up, in 1845 another French manufacturer created a camera with a three-box focusing system, and in 1851 W. & W. H. Lewis designed a camera with an internal bellows that was

transportable and that permitted the operator to change the focus and alter the perspective.¹⁴



Figure 42. Lewis daguerreotype camera (quarter plate), ca. 1851. Courtesy of the George Eastman House, International Museum of Photography and Film.

These innovations made the camera easier to use, but they did nothing to conceal the distance between the operator's look and the camera lens. Not only were the lens and the viewfinder at opposite ends of the device, but focusing the lens and exposing the photographic plate were manifestly separate events. The photographer also had only limited control over the first, and none over the second. In order to bring the image that would later emerge into conformity with the one he wanted to "obtain," or even to have some sense of the one that he was likely to receive, he was obliged to open the camera shutter, slide a ground-glass plate into the frame designed for the photographic plate, look at the image that appeared on it, and adjust the lens until it came into focus. Because of the amount of light in the camera, this image was faint, so focusing it required a lot of guesswork. In order to expose the photographic plate, the photographer had to remove the ground glass, close the shutter, slide the plate into the frame, and reopen the shutter long enough for the image to be received. And once the photographic plate was in place, he was unable to see what was happening inside the camera.

Between 1858 and 1862, three cameras were created that should have made it easier for the operator to believe that he was "in control." In 1861 Thomas Sutton designed and patented a single-lens reflex plate camera, which narrowed the gap between focusing and exposure.¹⁵ A mirror was positioned between the lens and the photographic plate, which reflected the luminous image stream entering the camera to the viewfinder, obviating the need to replace the ground glass with the photographic plate prior to exposure, and giving the operator a much better sense of what the camera would be "seeing." After focusing the lens, he raised the mirror with a manual lever so that the photographic exposure could occur.

In 1858, Thomas Skaife created a small camera with a lens so fast that it could register slow-moving objects. He modeled it on a gun, and named it the "Pistolgraph." People also

perceived it as a weapon; Skaife was “nearly arrested” when he directed it at Queen Victoria—and cameras were by then a familiar part of the cultural landscape.¹⁶ The Pistolgraph couldn’t be “fired from the hip,” since it required a tripod, but in 1862 the French company A. Briois began manufacturing a gun-shaped camera that was designed to be handheld: Thompson’s Revolver Camera.¹⁷ Like the Colt revolver,¹⁸ on which it was modeled, Thompson’s Revolver Camera had a rotating cylinder that allowed its user to “shoot” multiple times before “reloading.”

Surprisingly, though, Sutton’s single-lens reflex camera never went into production, and there is a dearth of information about it, suggesting that it didn’t appeal to the popular imagination.¹⁹ There was also little interest in the gun-shaped cameras; the Pistolgraph wasn’t reproduced, and only one hundred issues of Thompson’s Revolver Camera were manufactured.²⁰ These devices didn’t catch on, I believe, because the other aspects of chemical photography were still so “wet”—literally as well as metaphorically. The medium’s practitioners experimented with a dizzying number of chemicals and foods in their attempt to find substances sensitive enough to receive the photographic image “expeditiously.” The season, the weather, and the time of day all complicated this search, because what worked in one set of conditions often failed to work in another, and often for reasons that were difficult to understand. “When’er the wind is in the East, / Use twice the seconds at the least,” wrote a midcentury wit. “And if the East incline to the North, / Take not the wretched sitter forth. / Come cloud electric, or of hail, / Then every picture’s sure to fail, / But with light zephyrs from the West, / In scarce five seconds ’tis imprest” / And if the West incline to South, / In three you have eyes, nose and mouth.”²¹ There are several similar passages in Lady Eastlake’s 1857 essay, in one of which she observes that photography is “too profoundly interlocked with the deep things of Nature to be entirely unlocked by any given method,” and in another of which she concludes that the “subtle agenc[y]” on which the photographer depends will “never be taught implicitly to obey.”²²



Figure 43. Pistolgraph by Thomas Skaife, London, ca. 1859. Courtesy of the George Eastman House, International Museum of Photography and Film.



Figure 44. Thompson's Revolver Camera, ca. 1862. Courtesy of the George Eastman House, International Museum of Photography and Film.

Photography's practitioners also searched long and hard for a substance potent enough to retain the images that appeared on their recipient plates. After so many of the calotypes in *The Pencil of Nature* vanished, photographers started using albumen paper, but these prints were also unreliable. In 1855 the Royal Photographic Society of London created a Fading Committee to address the problem.²³ And since the daguerreotype was one of a kind, and Talbot's positive prints so varied, photographers were no closer to reaching the third and most important of Niépce's goals: reproduction.

In 1851, Frederick Scott Archer introduced the collodion wet plate, which required only a few seconds of exposure and which produced a sharply delineated negative on a glass plate, from which many nearly identical positive prints could be made. It was a complicated process, though, with many steps, all of which had to be performed within ten minutes, before the chemicals dried. After polishing the plate, the photographer coated it with a solution of collodion, ether, alcohol, potassium iodine, and nitrated cellulose, making sure that it was evenly distributed. He then sensitized the plate by dipping it in a bath of silver nitrate, and placed it in the camera. The silver nitrate solution often dripped, resulting in stains and chemical buildup on his equipment, and the chemicals with which he coated the plate eventually clogged the silver nitrate solution, causing the process to

fail. If he wanted to work outside a studio, he had to travel with a darkroom and bottled chemicals.²⁴

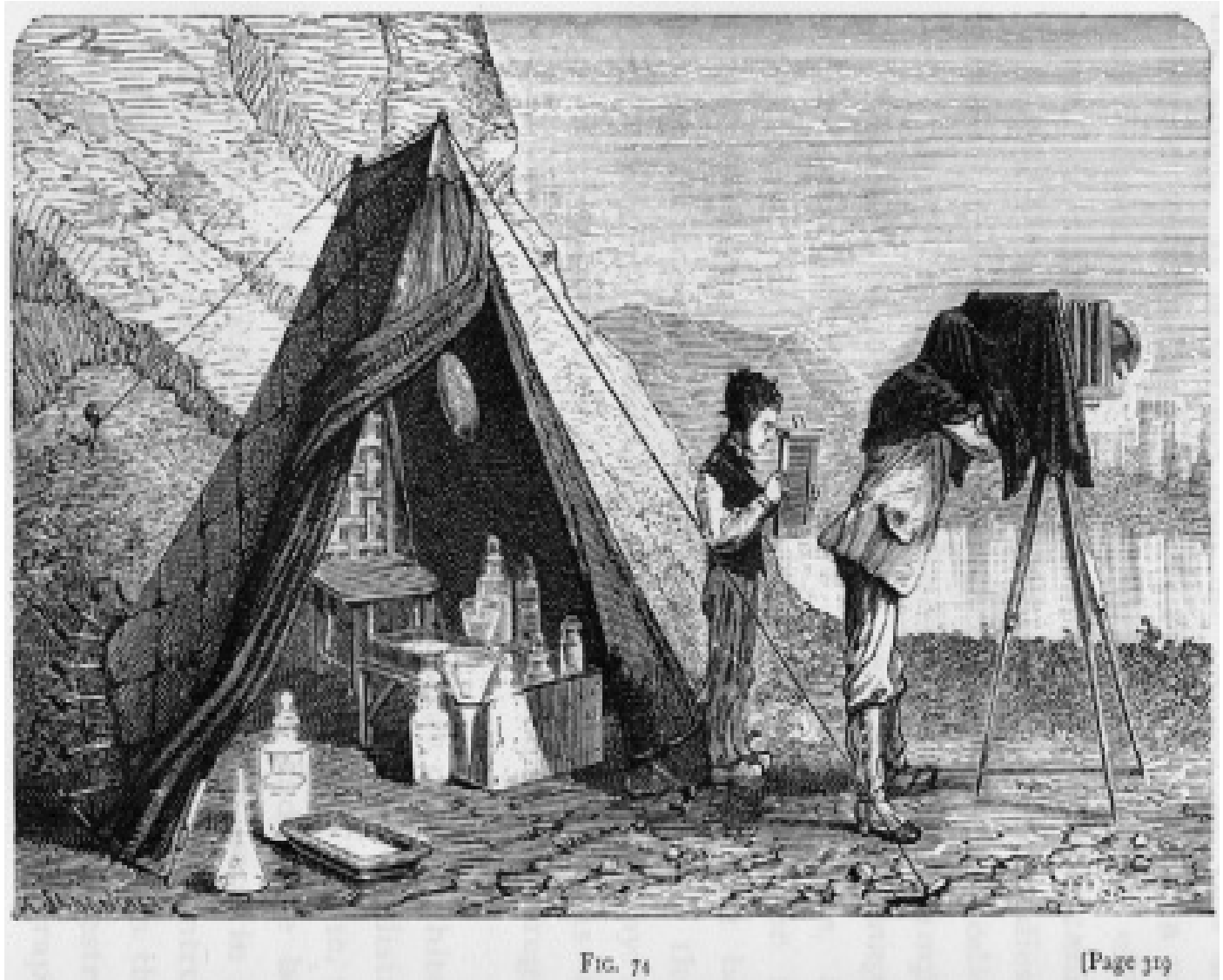


Figure 45. Illustration from Gaston Tissandier, *A History and Handbook of Photography*, 1877.

And this was only the beginning of the photographer's travails and tribulations. Oliver Wendell Holmes provides a detailed account of every stage of the wet-plate process in "Doings of the Sunbeam," and it shows that the development of the negative was as suspenseful in 1863 as it was in 1840. "We open [the camera] and find our milky-surfaced glass plate looking exactly as it did when we placed it in the shield," Holmes writes. "... We pour on the solution. There is no change at first... What if there were no picture there? Stop! What is that change of color beginning at the edge... ? It is a border, like that round the picture and then dawns the outline of a head."²⁵ The rest of the image slowly emerges, but then begins to disappear. Not until it has been washed in water, re-treated several times with the developing solution, rewashed, "plunged" into a "bath" of hyposulphite of soda, washed yet again, dried, and varnished is the negative fully there. Making positive prints from this negative was—as Holmes demonstrates—every bit as messy, laborious, and unpredictable.²⁶

The liquid intelligence of photography also expressed itself in another way in the 1850s and 1860s: one that encroached on human vision. In the early 1830s, Charles Wheatstone and Sir David Brewster, who had already written extensively about the afterimage and

other optical “illusions,” began investigating the physiological bases of another retinal peculiarity: binocular disparity. Those of us who have two eyes see something slightly different with each of them, in two dimensions. Our brain ascribes these differences to depth, and fuses the two images together. Consequently, instead of perceiving two flat images, we generally perceive one three-dimensional image.²⁷

Binocular disparity serves a crucial spatial function: it allows us to experience the “thickness” of the world. However, its discovery compounded the challenges that Kepler’s notion of the retinal image had posed to earlier thinkers.²⁸ Not only is this image inverted and laterally reversed, but there are *two* of them, and they are not identical. And not merely are we unable to see these images in the guise in which they are received, but we do not see them *at all*, because an internal agency combines them, over which we have no control.

In 1838, Wheatstone created an optical device that exploited this blind spot: the stereoscope. He used mirrors to deliver reflections of slightly different images to each of the viewer’s eyes, demonstrating that we also read difference as depth when the perceptual objects are flat.²⁹ This had even more dramatic implications for human vision, as Laura Burd Schiavo notes in an excellent 2003 essay.³⁰ By “creating a situation in which we ‘see’ that which is not really there, the stereoscope insinuated an arbitrary relationship between stimulus and sensation,” she writes. It also denaturalized the system of perspective, which is predicated on a “single, ideal eye” and which assumes there to be “a direct correlation between the object and the retinal image.”³¹

In 1849, Brewster invented the first lens-based stereoscope, in 1851 Jules Duboscq began making stereographic daguerreotypes, and in 1854, George Swan Nottage founded the London Stereoscopic Company for the production and sale of stereoscopes. Within two years, the Gernsheims report, “the stereoscope was in use in all parts of the world, and it was estimated that this firm alone, which then offered 10,000 stereoscopic slides, had already sold half a million instruments.” By 1858, the number of available slides had increased to 100,000. The London Stereoscopic Company’s motto was “No home without a stereoscope.”³² It might seem odd that a device that was used to demonstrate the unreliability of human vision should have become so popular, but most midcentury commentators saw it as an “instrument”—a tool “for furnishing visual truths,”³³ or for facilitating visual pleasure. “Nothing better displays the beauties and marvels of Photographic Art,” an American commentator wrote in 1858.³⁴

For some midcentury commentators, the stereoscope was also photography’s “employer.” “In every part of the globe” photographers are busily “taking binocular pictures for the instrument,” Brewster enthused in *The Stereoscope*.³⁵ Others believed that the stereoscope answered to man, just as photography answered to it. “If in the order of things the cheap popular toy which the stereoscope now represents was necessary for the use of man,” Lady Eastlake declared, “the photograph was first necessary for the service of the stereoscope.”³⁶ Promoters of stereoscopes and stereo cards took this last argument one step further. Not only does the stereoscope serve man, and photography the stereoscope, they declared, but the photographer also serves the viewer. Cameramen traverse “lands and seas,” cross “rivers and valleys,” and ascend “rocks and mountains

with their heavy and cumbersome photographic baggage” for “our gratification and instruction”—so that we may “have the advantage” of examining stereoscopic images by our fireplace, without being exposed to “the fatigue, the privation, and risks” of these “daring and enterprising artists,” Antoine Claudet wrote in 1860.³⁷

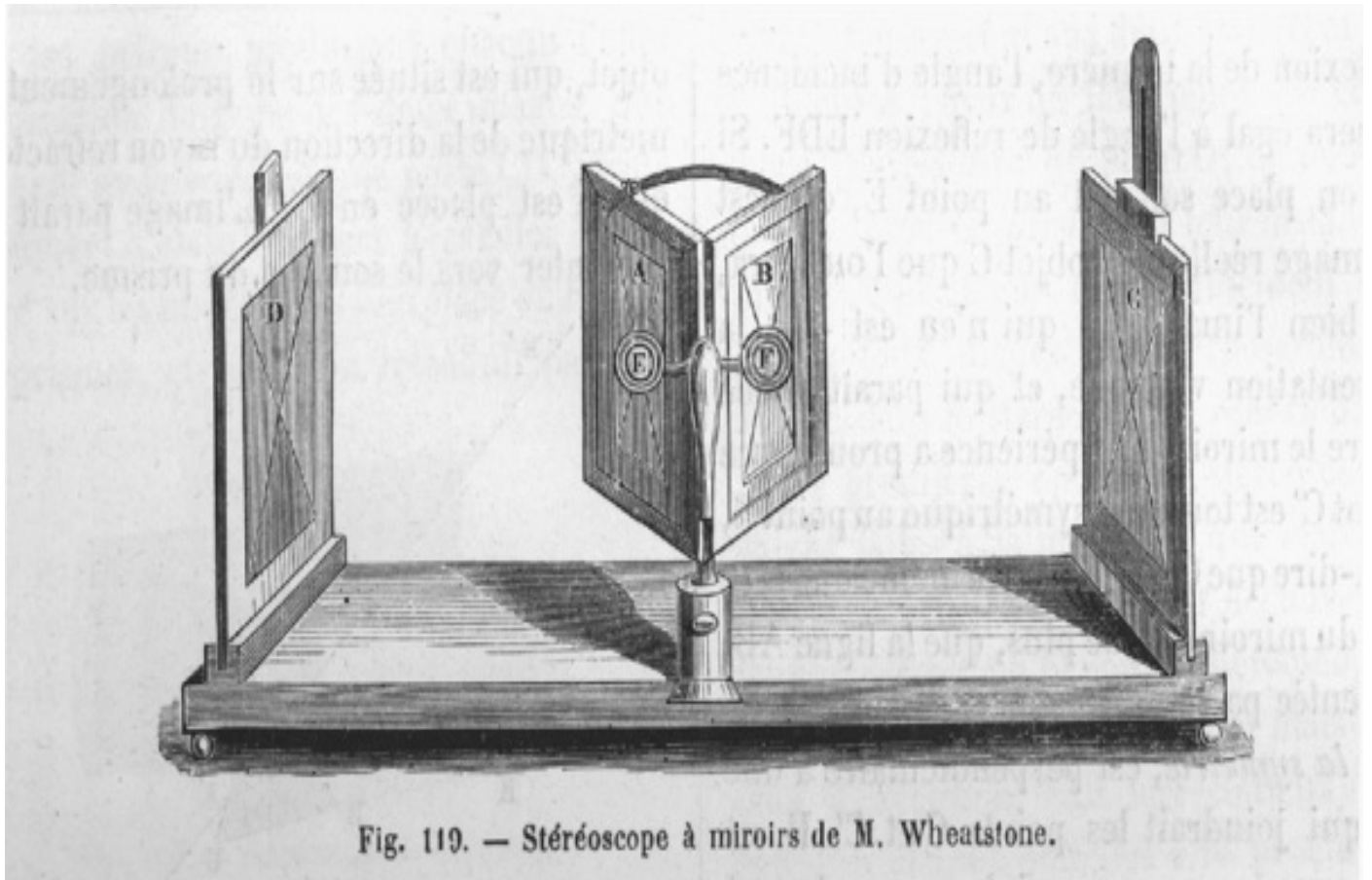


Figure 46. Illustration from Louis Figuier, *Les Merveilles de la Science*, 1869. Courtesy of the Max Planck Institute for the History of Science, Berlin.



Figure 47. Unknown photographer, *Stereoscopic view of Broadway, New York City*, ca. 1860. Albumen print stereocard. Courtesy of the National Media Museum/SSPL.

However, not everyone subordinated photography to the stereoscope, and the stereoscope to the human look. For John Ellis, photography and stereography were a couple, and one in which there was—surprisingly—no power differential; in 1856, he wrote that they were “indissolubly joined for their mutual advantage” or “dignification.”³⁸ Holmes also emphasized the closeness of this relationship. In 1861 he designed a simple, handheld stereoscope for photographic stereo cards that was widely adopted, and that did nothing to conceal the fact that they contain two non-identical images. He also wrote three essays about the stereoscope, which are full of information about and reflections on photography. In the first—“The Stereoscope and the Stereograph” (1859)—he provides an extended account of the differences between a negative and a positive print. In the second—“SunPainting and Sun-Sculpture” (1861)—he takes us on a “stereoscopic trip across the Atlantic” through a series of detailed descriptions of photographically-based stereoscopic images. And in the third—“Doings of the Sunbeam” (1863)—he provides the extended account of the collodion wet plate from which I quoted earlier.



Figure 48. Holmes stereocard viewer. Courtesy Wikimedia Commons.

In “The Stereoscope and the Stereograph,” Holmes also mobilizes all of the tropes that Talbot and other early writers associate with the calotype and daguerreotype, and reaffirms their saving power. We “owe” the “creations of our new art” to the “sun itself,” he writes, who is “a master of chiaroscuro,” and “the first of colorists.”³⁹ Its illumination permits man to “paint his miniature” simply by “looking at a blank tablet,” and “a multitudinous wilderness of forest foliage” to stamp itself “so faithfully and minutely” on that surface that every leaf is “perfect.”⁴⁰ Unlike man-made pictures, which show only what the artist has seen, a “perfect photograph” is “absolutely inexhaustible.” There are “as many beauties lurking [in it], unobserved, as there are flowers that blush unseen in forests and meadows.”⁴¹

Photographs also teach us to see analogically. “[A] point which must have struck everybody who has studied photographic portraits is the family likeness that shows itself through a wide connection,” Holmes writes in “Doings of the Sunbeam.” “We notice it more readily than in life... There is something in the face that corresponds to *tone* in the voice... and this kind of resemblance... we may observe, though the features are unlike.”⁴² Finally, photographs challenge our belief in stable forms. “Flitting moods which have escaped one pencil of sunbeams are caught by another,” Holmes observes in “Sun-Painting and Sun-Sculpture.” “Each new picture gives us a new aspect of our friend; we

find he had not one face, but many.”⁴³

Photography should consequently fill us with “inconceivable wonder,” as it did its first viewers, Holmes argues, but it has become “such an everyday matter” that “we forget its miraculous nature.”⁴⁴ Stereography shows us that photography is a “divine gift”⁴⁵ in two ways—through the stereo card, which I will discuss here, and through the stereoscopic image, which I will discuss in the next chapter. Holmes refers to the two side-by-side photographs on a stereo card as “twin pictures,” and attributes a disclosive power to them: the power to reveal the similarities that structure our world. “Among the accidents of life, as delineated in the stereograph, there is one that rarely fails,” he writes in “The Stereoscope and the Stereograph,” “. . . wherever man lives, you will find the *clothes-line* . . . How it brings the people who sleep under that house before us to see their sheets drying on that fence!”⁴⁶

The slight differences that distinguish one photograph on a stereo card from the other also show us that beings are as mobile and evanescent as the camera obscura’s image stream. “It is common to find an object in one of the twin pictures which we miss in the other...,” Holmes observes in “The Stereoscope and the Stereograph.” “In the lovely glass stereograph of the Lake of Brienz, on the left-hand side, a vaguely hinted female figure stands by the margin of the fair water: on the other side of the picture she is not seen. This is life; we seem to see her come and go... Here is the Fountain of the Ogre, at Berne. In the right picture two women are chatting, with arms akimbo, over its basin... on the left side there is but one woman, and you may see the blur where the other is melting into thin air as she fades forever from your eyes.”⁴⁷

All of the stereo cards that Holmes mentions feature water—a pool, a basin, a fountain, a lake—and most of them also include women. The women stand by the water or lean over it, and eventually they become as fluid as it is, and course through his thoughts, in a striking instantiation of liquid intelligence. “All the longings, passions, experiences, possibilities of womanhood animate that gliding shadow which has flitted through our consciousness,” he writes, “nameless, dateless, featureless, yet more profoundly real than the sharpest of portraits traced by a human hand.”⁴⁸



Figure 49. James Mullen, *Kentucky River Bridge. Finished Bridge from Mouth of Dix River*. 1877. Albumen print stereocard. Courtesy of the Archives and Special Collections, University of Louisville.

Although Holmes usually refers to the two photographs on a stereo card as “pictures,” he sometimes calls them “views.”⁴⁹ As we have already seen, when users of the optical camera obscura began thinking of themselves as “takers” rather than “receivers” of the world’s luminous self-portraits, they also talked about “views”; that was what they “took.” The word was important for Niépce as well; he repeatedly tried to extract an image from his camera obscura that corresponded to what he saw when he looked out of his workroom window. And sometimes he says “*point of view*,” thereby embedding his optic within what he was attempting to photograph. When Holmes refers to the two photographs on a stereo card as “views,” he attests to the impossibility of this project. Even if we were the only spectator in the world, there would always be at least two views, and at least two points of view.

One of the reasons the stereoscope was so easily domesticated is that it is a device for *viewing* these “views,” rather than for *making* them. It consequently evades the thorny issue of agency. The stereoscope’s user may have been forced to acknowledge his own binocularity, but nothing prevented him from attributing what he saw to the photographer’s look. The latter was not so fortunate. Some of the “twin pictures” on nineteenth-century stereo cards were produced with a single-lens camera; the two photographs were made consecutively, with slightly different camera setups, or carved out of the same negative, through artful framing. Most of these photographs, though, were created with a stereo camera. Unlike a conventional camera, which has monocular “vision,” which is hard to align with the human look, the stereo camera “sees” binocularly, and is all too easy to align with the human look. I say “all too easy” because as two contemporaneous essays show, the stereo camera cannot be reconciled with the Cartesian dream.



Figure 50. Jamin stereo camera. Courtesy of the George Eastman House, International Museum of Photography and Film.

In September 1869, *Harper's New Monthly Magazine* published an essay by Austin Abbott called "The Eye and the Camera."⁵⁰ The human look cannot be compared to an "ordinary camera," Abbott argues there, since we have two eyes, and it has a "single eye."⁵¹ If we want an optical device that resembles human vision, we must turn to a different kind of camera: the *stereo* camera. The caps that fit over the "two round tubes in front" that contain the lenses are like our eyelids, and the diaphragm that regulates the side of the aperture is like our pupils, which expand and contract "according to the degree of light."⁵² This "double instrument" makes "two pictures at the same instant that differ from each other just as the images received by one eye differ from those received by the other in an observer standing at the same place." This is not a flattering comparison, to say the least; instead of humanizing the camera, it mechanizes the human look. The analogical "fit" is also so tight that it would be impossible for anyone using the stereo camera to deny that his vision is "two-sided." And since being binocular means not just receiving two slightly different retinal images, but also not being able to perceive either of them, the stereo photographer could not even claim that he is "in charge" of what he sees, let alone what his camera registers. In both cases, all that he could really purport to be is a "viewer."

The September 1869 issue of *Harper's New Monthly Magazine* also contains another essay about photography, which speaks directly to this point. The essay, which is called "Photographs from the High Rockies," was written by John Samson, who accompanied Timothy O'Sullivan on his High Rockies expedition. Since it recounts the story of that expedition, the "photographer" to whom Samson refers is presumably O'Sullivan, who worked with both a conventional camera and a stereo camera. As Rosalind Krauss notes, the word "view" figures prominently in "Photographs from the High Rockies," but its meaning keeps shifting.⁵³ Sometimes a view is something that the photographer "takes," at other times it is something that he "makes," or "works up," and in one astonishing passage, it is something that he "views." "In speaking of the Humboldt and Carson sinks," this passage reads, "our photographer remarks: 'It was a pretty location to work in, and *viewing* there was as pleasant as could be desired.'"⁵⁴

IN 1860, the French scientist J. M. Taupenot began experimenting with collodion dry plate.⁵⁵ His exposures were extremely slow—six times the length of the collodion wet plate—but in 1864, B. J. Sayce and William Blanchard Bolton cut this time in half, and other "improvements" followed. In 1871, Richard Leach Maddox replaced the collodion with gelatin, allowing the plates to be sensitized in advance and developed later, and in 1878 gelatin dry plates began to be industrially produced. Photographers no longer had to travel with a darkroom and chemicals, prepare their own plates, or wait for the gradual development of an image.⁵⁶

The single-lens reflex camera also returned in a new guise in the 1880s. It was called the "Monocular Duplex," and it was marketed as an extension of the photographer's look. The camera "enables the Operator to see the picture non-inverted, and the full size of the plate the very instant of making the exposure," one advertisement proclaimed. It dispenses with all of the extraneous "impediments" that have prevented this "fascinating amusement" from realizing its full potential, a second declared. E. W. Smith issued another promise through the camera's name: the promise that it would allow the viewer to

see “double” with a single eye, instead of “single” with two eyes, as stereoscopy had mandated—to preside over both stages of the photographic event, without undergoing an internal division. And by describing the Monocular Duplex as an “Artist Camera,” the advertisements also bestowed another power on the viewer—one that recalls the purpose for which Hooke designed his 1694 camera obscura.

The ocularization of chemical photography reached its zenith in 1888, when George Eastman began manufacturing dry, transparent, flexible, photographic film and released the first Kodak camera. He marketed the camera under the slogan “You Press the Button, We Do the Rest.” The last word in this slogan covered a lot of things. The camera was “fitted with a rectilinear fixed-focus lens” that gave a “sharp definition of everything beyond 8 ft,” and it had only “one speed and a fixed stop.” It arrived “loaded” with enough film for one hundred exposures, and when they had all been used it was sent back to Eastman with the film still in it so that the negatives could be processed, printed, and mounted. The camera was reloaded, and returned to the owner with the prints.⁵⁷

The ostensible purpose of these innovations was to make the camera a more democratic apparatus—one available to amateur as well as professional photographers. “Today photography has been reduced to a cycle of three simple operations,” the “primer” proclaimed. “1. Pull the String. 2. Turn the Key. 3. Press the Button. This is the essence of photography and the greatest improvement of them all; for where the practice of the art was formerly confined to those who could give it study and time and room, it is now feasible for *every body*.” And because “the mechanical act of taking the picture... is divorced from all the chemical manipulations of preparing and finishing pictures which only experts can perform,” anyone of “ordinary intelligence” can “learn to take good pictures in ten minutes.”⁵⁸

THE PATENT MONOCULAR DUPLEX,

Or, **ARTIST CAMERA.**
C. R. Smith's Patent, 1884, England, France, & United States.



THIS CAMERA is invaluable for
 Instantaneous Exposures. Enables the
 Operator to see the picture non-inverted, and
 the full size of the plate the very instant of
 making the exposure. Dispenses with Tripod,
 Focusing-cloth, and Carrying-case. The
 Camera is leather-covered, and presents the
 appearance of a small portmanteau when
 carried. No metal work exposed to sight.
 Focused by means of Rack and Pinion.
 Time-exposure Attachment. Carries Eight
 Plates when in use.

Price, with Rectilinear Lens and three
 Double Holders for Plates $6\frac{1}{2} \times 4\frac{1}{4}$, **£16.**
 Fitted with Eastman Roll-Holder,
 $4\frac{3}{4} \times 6\frac{1}{2}$, **£19.**
 Forwarded to any address on receipt of
 price. *Send for Circular.*

E. W. SMITH & CO.
42 JOHN STREET, NEW YORK, U.S.

Figure 51. Newspaper advertisement for Smith's Monocular Duplex Camera, 1886.

The Kodak Camera.



"You press the button, we do the rest."

The only camera that anybody can use without
 instructions. Send for the Primer, free.

The Kodak is for sale by all Photo stock dealers.

The Eastman Dry Plate and Film Co.
ROCHESTER, N. Y.

Price, \$25.00—Loaded for 100 Pictures.

Figure 52. Newspaper advertisement for the Kodak camera, 1889.

But by reducing photography to three predefined steps, George Eastman substituted the Kodak system for the "pencil of nature." By releasing the photographer from "the chemical steps of the process," he also sealed off photography's liquid intelligence. Finally, by printing as well as developing the negative at the factory, Eastman created the

illusion that the photographs that arrived in the mail were the exact positive equivalents of the negatives that were in the camera when it was shipped off—that the governing principle of photography is “sameness.”



Size:
3½ x 2½ x 4½ inches.

Weight:
1 lb., 10 oz.

PRICE, \$25.00.

Loaded for 100 pictures, including Sole Leather Carrying Case with Strap.

Size of Picture:
1½ inches diameter.

ONE-HALF LENGTH.

THE KODAK CAMERA.

ANYBODY who can wind a watch can use the Kodak Camera. It is a magazine camera, and will make one hundred pictures without reloading. The operation of taking the picture is simply to point the camera and press a button. The picture is taken instantaneously on a strip of sensitive film, which is moved into position by turning a key.

A DIVISION OF LABOR. After the one hundred pictures have been taken, the strip of film (which is wound on a spool) may be removed, and sent by mail to the factory to have the pictures finished. Any amateur can finish his own pictures, and any number of duplicates can be made of each picture. A spool of film to reload the camera for one hundred pictures costs only two dollars.

No tripod is required, no focusing, no adjustment whatever. Rapid rectilinear lens. The Kodak will photograph anything, still or moving, indoors or out.

A PICTURESQUE DIARY of your trip to Europe, to the mountains, or the sea-shore, may be obtained without trouble with a Kodak Camera, that will be worth a hundred times its cost in after years.

A BEAUTIFUL INSTRUMENT is the Kodak; covered with dark Turkey morocco, nickel and lacquered brass trimmings, enclosed in a neat sole leather carrying case with shoulder-strap—about the size of a large field-glass.

Send for a copy of the **KODAK PRIMER** with Kodak photograph.

THE EASTMAN DRY PLATE AND FILM CO.,

Branch: 115 Oxford St., London. ROCHESTER, N. Y.

Figure 53. Newspaper advertisement for the Kodak camera, 1888.

IN THE CONCLUDING sentences of “Photography and Liquid Intelligence,” Wall offers yet another account of the latter concept. This time he associates it with a number of human qualities—thought, intention, agency, the capacity to look back—but locates it outside us. Wall presents this part of his argument through an extended analogy: “In Andrei Tarkovsky’s film *Solaris*, some scientists are studying an oceanic planet. Their techniques are typically scientific. But the ocean itself is an intelligence which is studying them in turn. It experiments on the experimenters... . I think this was a very precise metaphor for, among other things, the interrelation between liquid intelligence and optical intelligence in photography. In photography, the liquids study us, even from a great distance.”⁵⁹

Initially this external site appears to be chemical photography, but the last sentence suggests that it is much “bigger.” So does the expansive nature of the analogy; the signifier (the oceanic planet) radially exceeds what it is supposed to signify (the fluids in chemical photography). And immediately before declaring *Solaris* to be “a very precise

metaphor” for the relationship “between liquid intelligence and optical intelligence in photography,” Wall differentiates the oceanic planet from the vehicle through which it communicates with the scientists. The ocean experiments on the experimenters through images, he writes—by returning their memories to them “in the form of hallucinations, perfect in every detail.” It shows the scientists people from their past so that they will relate to these people again, “maybe in a new way.”



Figure 54/Colorplate 9. Andrei Tarkovsky, *Solaris*, 1972 (film still).



Figure 55/Colorplate 9. Andrei Tarkovsky, *Solaris*, 1972 (film still).

Like Tarkovsky's scientists, we have secured ourselves "behind a barrier of perfectly engineered glass," so that we can "study" an oceanic planet without getting "wet." This planet is as "intelligent" as the one in *Solaris*, and it also communicates with us through images. Like the hallucinations in Tarkovsky's film, these images are ontological calling cards: a summons to relationality. This oceanic planet, however, is our world, and it is through photography—rather than hallucinations—that it speaks to us.

A KIND OF REPUBLIC

NOT SURPRISINGLY, photography's early viewers and practitioners didn't know how to classify its images. Although Fox Talbot titled his 1844–46 book *The Pencil of Nature*, and sometimes referred to its photographic plates as “drawings,” he often used a more all-purpose noun, like “images,” or “pictures.”¹ His contemporaries employed a wide variety of other designators: “painting,” “engraving,” “imprint,” “copy,” “mirror,” and “double.”² Several authors weren't even sure that a photograph is an entity. At one point in his review of available photographic processes, the anonymous author of “Photogenic Drawing, or Drawing with the Agency of Light” declares every photograph to be “an authentic chapter in the history of the world” and the medium of photography to be “a gift to all nations.”³

Lady Eastlake makes a number of equally tantalizing claims. In one passage in her 1857 essay, she maintains that the photographic image is not a letter, a message, or a picture, but rather “a new form of communication between man and man,”⁴ and in another that it ushered in a new kind of relationality: one based on “brotherhood.” Photography “unites men of the most diverse lives, habits and stations” into “a kind of republic,” she writes, whose members follow a “new business,” practice “a new pleasure,” and speak “a new language.”⁵ It also “fills up the space” between them.⁶ These claims point to another dimension of photography's saving power—one that is social as well as ontological. The photographic image not only analogizes the external world, but also links us to one another through a particularly binding and democratizing kind of analogy: the one called “chiasmus.”

According to *The Oxford English Dictionary*, a chiasmus is “a rhetorical or literary figure in which words, grammatical constructions, or concepts are repeated in reverse order, in the same or a modified form,”⁷ such as John F. Kennedy's “Ask not what your country can do for you—ask what you can do for your country.” But chiasmus is also operative in other domains. The brain is able to fuse the two dimensional images that light inscribes on the retinas of two-sighted people into one three-dimensional image because half of the optic nerve fibers carrying visual “information” from each retina to the brain cross at the optic chiasm.⁸ “Chiasmus” is also Merleau-Ponty's name for the ontological thread stitching the seer to what is seen, the toucher to what is touched, and sight and visibility to touch and tactility.⁹

We are all both seers and part of the spectacle of the world, the philosopher argues in *The Visible and the Invisible*. Each of us also touches, and is touched, and there is a “reciprocal insertion and intertwining” of the visual in the tactile, and the tactile in the visual.¹⁰ Since these faculties belong to the same body, we cannot separate them, but we also cannot weave them into a seamless whole by exercising all of them at once, or by being simultaneously the seer and what is seen, the toucher and what is touched. We shuttle back and forth between these aspects of our Being, at one moment a seer or toucher, and at the next moment what is seen or touched.

If we were alone in the world, there would be no communication between these

“selves,” and our non-identity would be a source of perpetual unhappiness. Since, however, we share this world with others, who also see and are seen, and touch and are touched, they provide the “rejoinder” for which we would otherwise wait in vain, and we do the same for them. We see because they are visible, and we are visible because they see us. Through their gaze, we are also able to see our own, and when gazing at them, to experience our own visibility. Merleau-Ponty metaphorizes this relationship as “two mirrors facing one another [in which] two indefinite series of images [. . .] arise which belong really to neither of the two [mirror] surfaces.” Through the images reflected in them, he adds, these mirrors form a “couple,” which is “more real” than either of them could be alone.¹¹ This couple has no fixed constituency, and its members belong to many other couples. I invoke it here not to suggest that it is the building block of society, but rather to make the following point: we are not “ourselves” when we are isolated from others. Two is the smallest unit of Being.

Chiasmus is also operative within a closely related domain: that of personhood. “Consciousness of self is only experienced by contrast,” Emile Benveniste writes in *Problems in General Linguistics*. “I use *I* only when I am speaking to someone who will be a *you* in my address. It is this condition of dialogue that is constitutive of *person*, for it implies that reciprocally *I* becomes *you* in the address of the one who in his turn designates himself as *I*.”¹² Personhood consequently depends on the utterance of these two reversible and mutually defining pronouns. This pronominal chiasmus is closely related to the one described by Merleau-Ponty. Giving and receiving the “you,” as Martin Buber puts it,¹³ is one of the most important means we have for affirming our ontological kinship with another human being.

The Oxford English Dictionary’s definition of “chiasmus” can be effortlessly applied to the camera obscura. As Martin Kemp explains, the latter device was “founded on the principle that rays of light from an object or scene will pass through a small aperture in such a way as to cross and re-emerge on the other side in a divergent configuration.”¹⁴ When this configuration is “intercepted by a flat screen, a reversed and inverted image is formed.” Although most accounts of the pre-optical camera obscura focus on the reversed and inverted stream of images inside the device, the stream of images on the other side of the aperture form an ongoing “recto” to this “verso.” The crossing of the rays of image-bearing light at the aperture also analogizes the crossing of the optic nerve fibers at the optic chiasm.

At first glance, Merleau-Ponty’s and Benveniste’s definitions of the chiasmus have no bearing on the camera obscura, since they involve two players, instead of one, and none of the definitions of the chiasmus seems applicable to chemical photography. Although the photographic negative reverses the light values of its so-called referent, and the positive prints those of the negative, these reversals are generally assumed to be non-reciprocal. We also subordinate the negative to the positive print; it is the template from which photographs are generated, but it is not a photograph itself.

However, the similarities between the camera obscura and the eye led Leonardo and Kepler to conclude that human perception originates in what is seen, rather than in the seer.¹⁵ They consequently anticipated one of Merleau Ponty’s most important claims: the claim that “it is as though our vision were formed in the heart of the visible, or as

though... the vision we acquire of them seems to come from them.”¹⁶ Although the pre-optical camera obscura was primarily used to view natural and man-made things, there was also nothing to prevent another person from entering the field of vision, and then inviting the viewer to exchange positions with him. Both of these things were, in fact, an ever-present possibility, since they were implied by the structure of the device. Merleau-Ponty seems to have been imagining this kind of enclosure when he wrote that we are “from one side” a seer, and from the other “a thing among things.”¹⁷ And this reversal would have prepared the way for the one described by Benveniste.

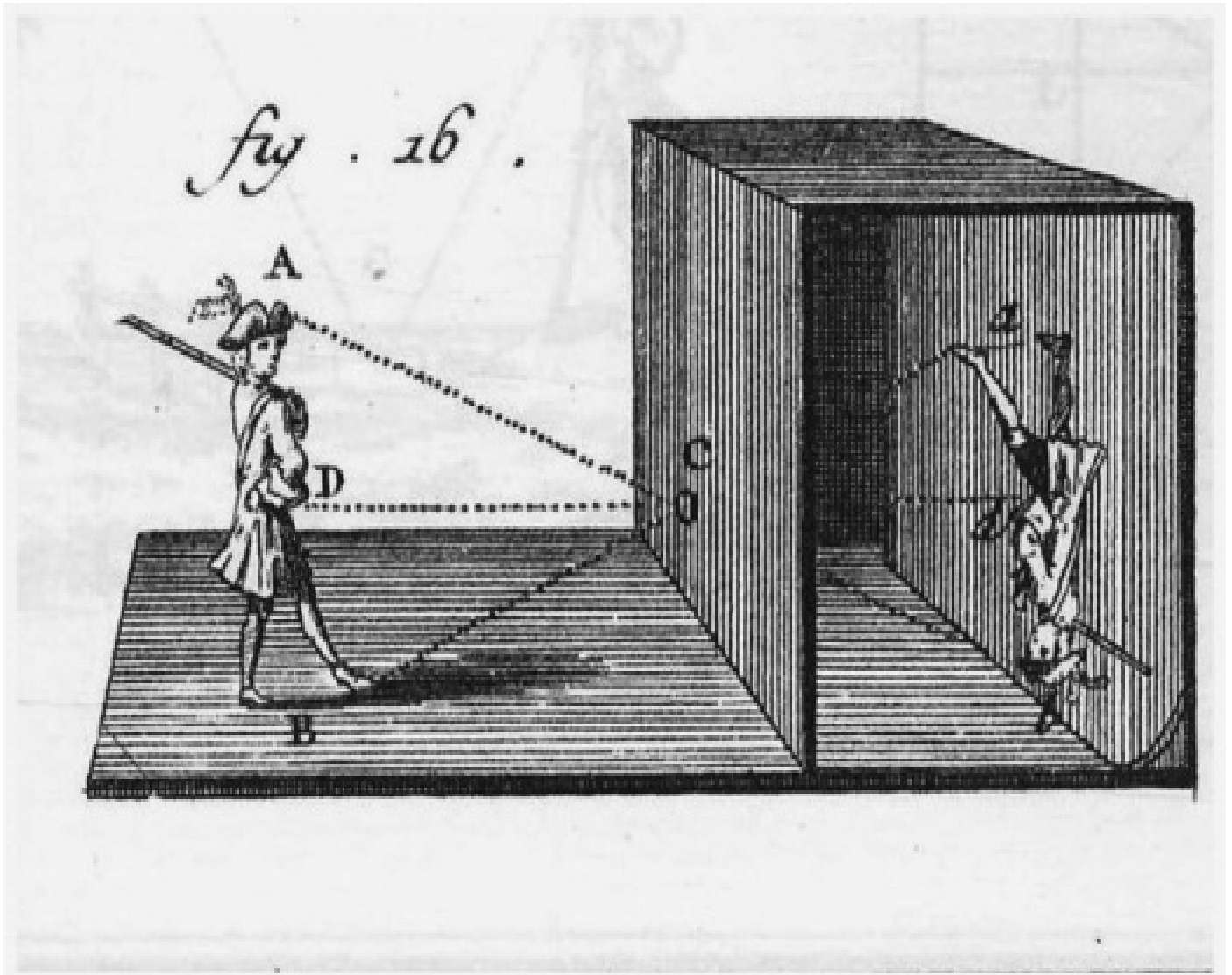


Figure 56. Illustration from Diderot's *Encyclopédie*, 1772.

When the camera obscura was equipped with lenses and mirrors, and transformed into a box into which the viewer peered, rather than a room into which he entered, it lost the capacity to show him that his visible body “subtended” his look, but it recovered this power through Talbot’s photographic process. Unlike Daguerre’s photographs, which were singular positives that morphed into negatives when viewed from a particular angle, all of Talbot’s camera photographs were laterally reversed until 1839.¹⁸ He clearly understood from the very beginning that he could make positive prints from these negatives, since he mentions the possibility in an 1835 notebook entry, but he did not act on this knowledge for years.¹⁹ This was in part because he liked the way the negatives looked; in 1839, he sent a package of photographs to his friend John Herschel, with a note explaining why all

but one of them were negatives. “In the little packet of photogenic drawings which I send today by the Railway,” this note reads, “there is a [positive print] of a fern leaf; [such prints] are easily made but in the estimation of most people are less pretty than the first or white images.”²⁰ But it was also, as the same note shows, because he saw the negative as a full-fledged photograph, and not merely as the template from which to produce one.²¹

Talbot wasn’t disturbed by the fact that the “first or white image” was laterally reversed, because he wasn’t striving to duplicate worldly forms; he sought, rather, to preserve the portraits they made of themselves. He also clearly understood that although these self-portraits were *like* their authors, they were not identical. He attributed his decision to begin experimenting with photography to two thoughts. The first was that it would be “charming” if he could find a way of “caus[ing]” the inimitably beautiful pictures of nature’s paintings that appeared inside the camera obscura “to imprint themselves durably, and remain fixed upon the paper!” The second was that the resulting images would have “a *general resemblance* to the cause which produced [them]” (my emphasis).²² Since worldly forms imprinted themselves on Talbot’s sensitized paper in a negative form, and he understood photography to be about similarity, rather than sameness, he did not see this reversal as something to be corrected.²³ The negative/positive distinction comes not from him, but rather from Herschel, the inventor of the fixative agent, “hypo.”²⁴

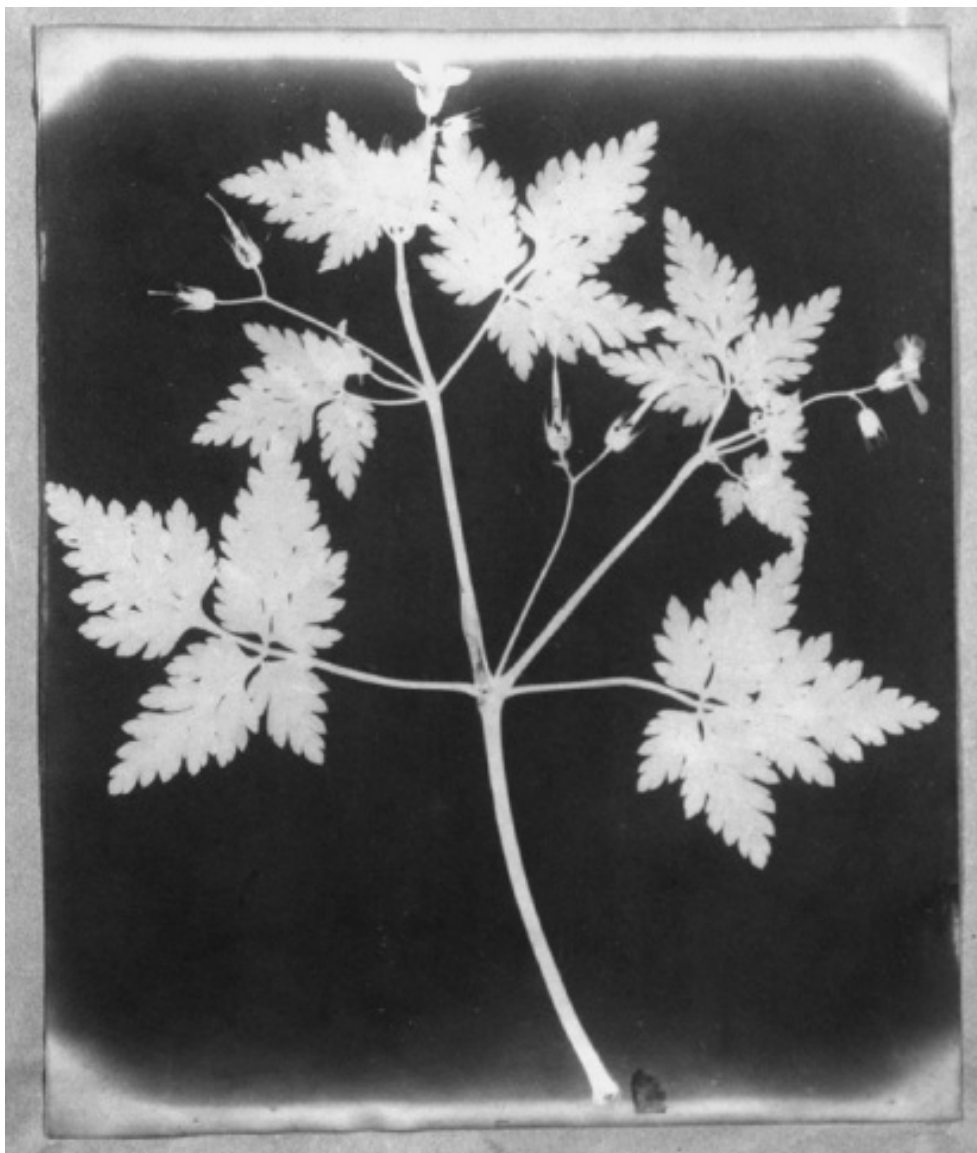


Figure 57. Henry Fox Talbot, salted paper print from a calotype negative, ca. 1838. Courtesy of the National Media Museum/SSPL.

Talbot sought to preserve two kinds of photogenic drawings: those created in a camera obscura, and those created by placing an object directly on the paper and exposing it to light. He describes the second procedure in *The Pencil of Nature*, on the page next to plate 13. “The ordinary effect of light upon white sensitive paper is to *blacken* it. If therefore any object, as a leaf for instance, be laid upon the paper, this, by intercepting the action of the light, preserves the whiteness of the paper beneath it, and accordingly when it is removed there appears the form or shadow of the leaf marked out in white upon the blackened paper; and since shadows are usually dark, and this is the reverse, it is called in the language of photography a *negative* image.”

Talbot used the same method to make positive prints from his camera obscura negatives, but instead of placing an object directly on a piece of sensitive paper before exposing it to light, he put the negative there. Since he waxed it first, so that its white areas were transparent, the light blackened the corresponding areas of the underlying paper. The darkened areas of the negative did the opposite. What was dark in the negative image was consequently light in the print, and vice versa. Talbot thought of this process as a reversal of the negative’s reversal. “If the paper [that is used for the negative] is transparent,” he wrote in 1835, “the first drawing may serve as an object to produce a second drawing, in which the lights would be reversed.”²⁵

Talbot used a similar formulation five years later, when describing the positive prints in an 1839 exhibition; they were “reversed images,” he wrote, that “require[d] the action of light to be TWICE employed.”²⁶ Because these double reversals were effected through direct contact between the first image and a piece of sensitized paper, they showed those who were prepared to see that “every visible is cut out in the tangible, every tactile being is in some manner promised to visibility, and that there is encroachment, infringement... between the tangible and the visible.”²⁷

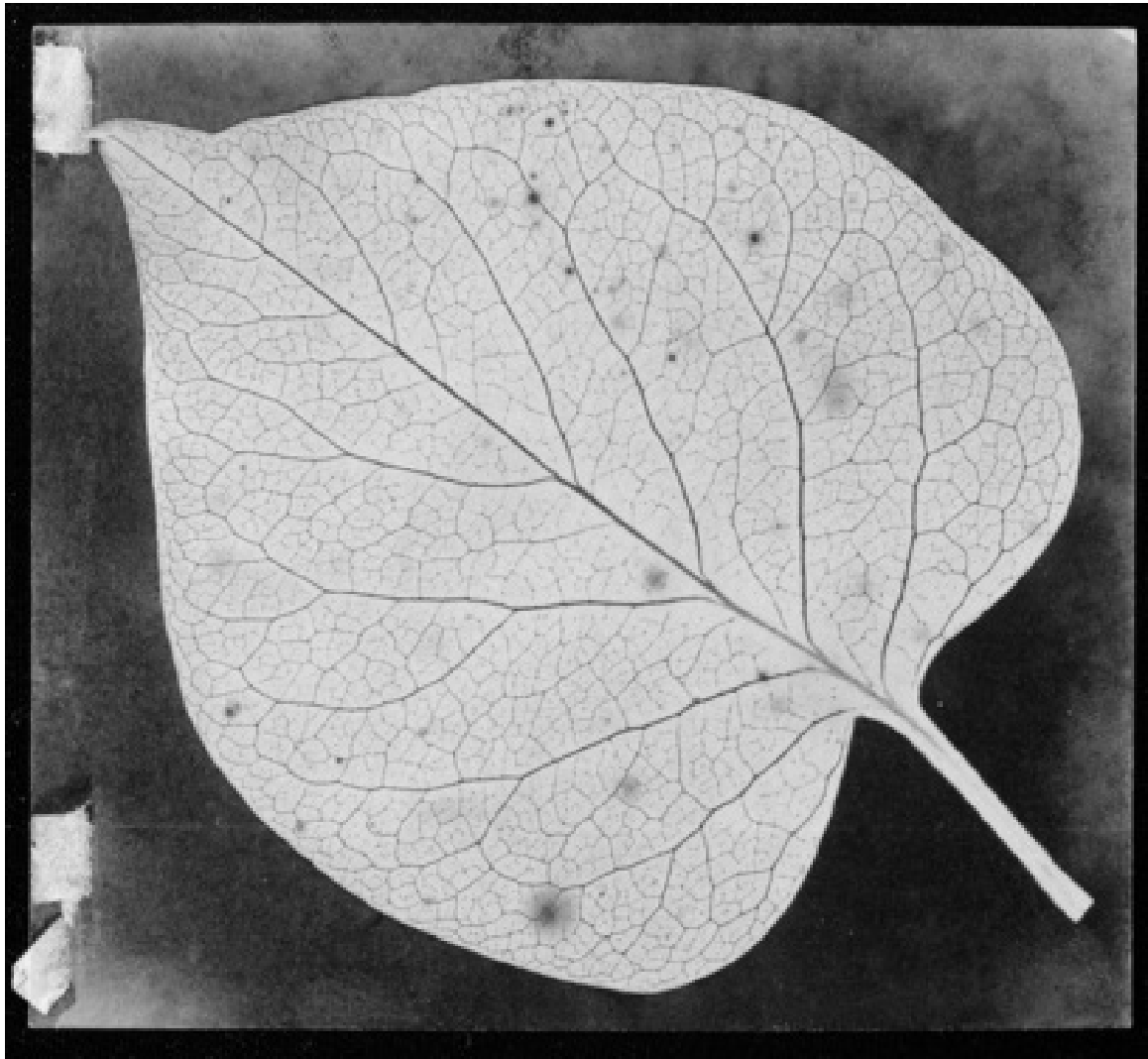


Figure 58. Henry Fox Talbot, *A leaf*, ca. 1840. Photogenic drawing negative. Courtesy of the National Media Museum/SSPL.

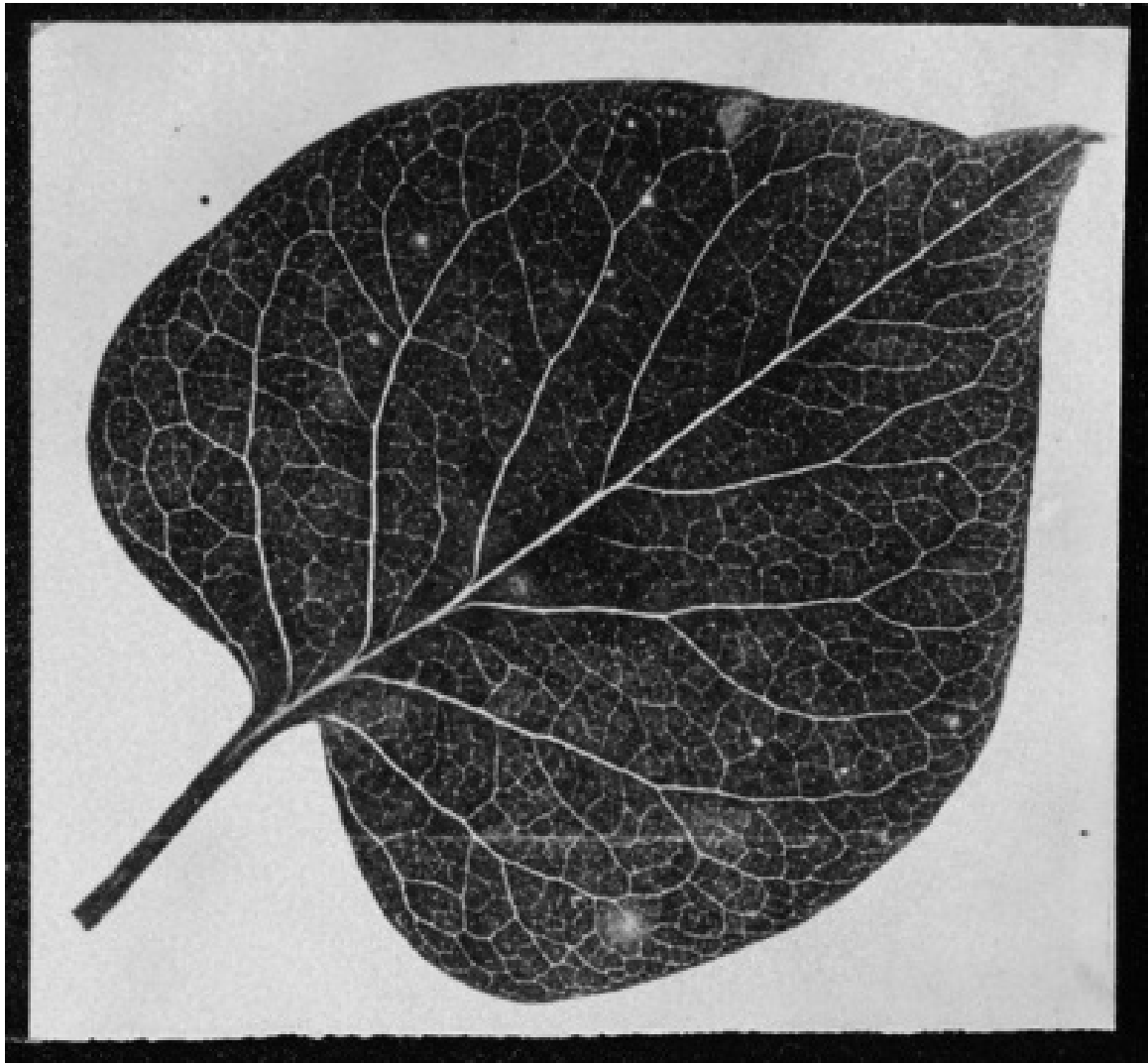


Figure 59. Henry Fox Talbot, *A leaf*, ca. 1840. Salted paper print. Courtesy of the National Media Museum/SSPL.



Figure 60/Colorplate 10. Henry Fox Talbot, *Oriel Window, South Gallery, Lacock Abbey*, April 1839. Photogenic drawing negative. Courtesy of the National Media Museum/SSPL.

Talbot's photographs also correspond with Merleau-Ponty's late philosophy in another way: chromatically. Most of his negative and positive prints are red, purple, yellow, brown, or black. These colors are neither representative nor representational; they are singular, and we experience them directly. Some of them also have a curious texture. This is in part because Talbot continued to use ordinary paper, rather than switching to calotype paper. Each sheet of this paper was slightly different from every other, and since there was no emulsion on which the image could form, it sank into the fibers of the paper. Each sheet of paper also reacted differently to the chemicals that were applied to it, and the chemicals themselves were also variable, as were the amounts used, and the mode of application. The sun, as Larry J. Schaaf puts it, was an even bigger "variable." "Depending on the density of the particular negative, and even more on the fickle nature of the English sun," he writes in *The Photographic Art of William Henry Fox Talbot*, "the exposure time for the print might vary from a few minutes up to many tens of minutes. This had profound effects, not only on productivity, but more importantly on the tonal range and color of the final print."²⁸

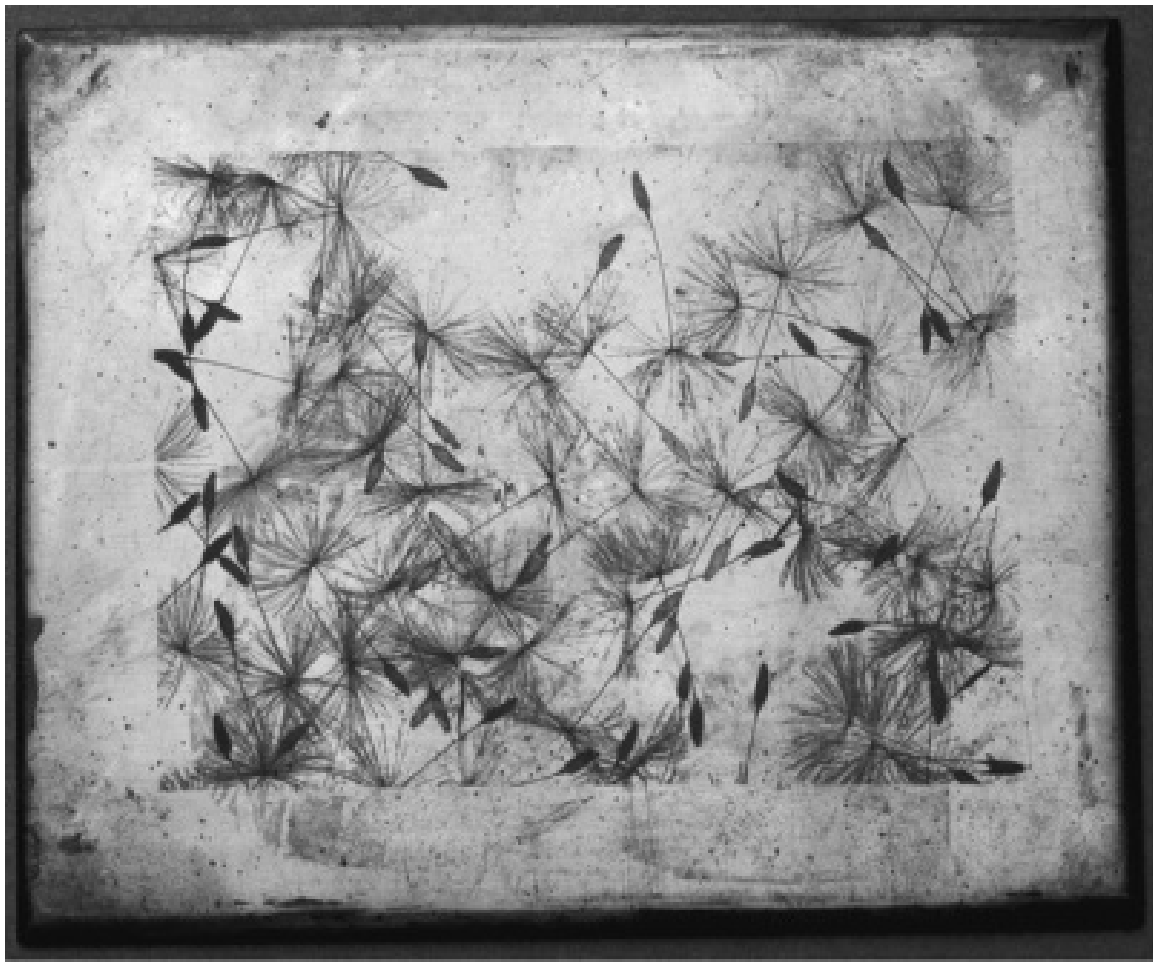


Figure 61/Colorplate 11. Henry Fox Talbot, *Seeds*, 1853. Photogravure. Courtesy of the National Media Museum/SSPL.

The images in *The Pencil of Nature* are actual photographs, and the photographs in one exemplar often differ chromatically from those in another. Talbot talks about these differences in “Brief Historical Sketch of the Invention of the Art,” an essay included in *The Pencil of Nature*. The prints made from the same negative are “almost facsimiles of each other,” he writes there, “but there is some variety in the tint they present.” The phrase with which he describes their relationship to one another—“almost facsimiles”—anticipates the one through which an artist powerfully attuned to the analogical basis of the photographic image would later characterize photography’s relationship to the world. A photograph is “almost nature,” Gerhard Richter observed in 1989.²⁹

It might be possible to “render” the tints of his prints more “uniform,” Talbot writes in the same essay, “if any great advantage appeared likely to result” from this “uniformity.” But in order to regularize the colors, he would have to establish a “norm,” and those with whom he discussed this matter had differing notions of what the norm should be. Since the photographic process “presents us spontaneously with a variety of shades of color,” and different viewers are drawn to different shades, this diversity must be an integral part of the calotype, so Talbot decided to admit all the tints “that appeared pleasing to the eye.” He concludes his essay by commending the photographs in *The Pencil of Nature* “to the indulgence of the Gentle Reader.” Since commendations like this were a convention of the day, this would be an insignificant detail if it were not for one thing. Although Talbot addresses us as readers, it is for our visual rather than our literary indulgence that he asks. Dear Readers, he effectively says to us, be gentle with my photographs; don’t expect all of the prints that I have made from the same negative to be the same color. Although they all

reverse the tonal values of the “first image,” each does so in a different way. They are siblings, not identical twins, and the same is true of the look to which each print appeals.



Figure 62/Colorplate 12. Henry Fox Talbot, *Tree in Winter*, ca. 1842. Salted paper print from calotype negative. Courtesy of the National Media Museum/SSPL.



Figure 63/Colorplate 12. Henry Fox Talbot, *Tree in Winter*, ca. 1842. Salted paper print from calotype negative. Courtesy of the National Media Museum/SSPL.

Merleau-Ponty introduces the topic of color early in the last chapter of *The Visible and the Invisible*, describing it in ways that are surprisingly congruent with Talbot's account of his "tints." Color is neither a "pellicule of being without thickness," he asserts, nor "a chunk of absolutely hard, indivisible being, offered all naked" to our look. It is, rather, thick, "atmospheric," and textured; our eyes sink into it, and wander around inside it. It is also "a sort of straits between exterior horizons and interior horizons." We are drawn to the colors that are the equivalent "on the outside" of what we are "on the inside"—the ones with which we are in a relation of "pre-established harmony."³⁰ These colors are "for our vision and our body"; they are unavailable to other looks. There is consequently something within the chiasmus that is not reversible. Since every seer "envelops" and "palpates" a color that is for his vision and his body, what each of us perceives is only the "surface" of an inexhaustible "depth." This alterity enlivens what would otherwise be a deadening universality, and renders the world unplumbable.³¹



Figure 64/Colorplate 13. Henry Fox Talbot, *China Bridge at Lacock Abbey*, 1841. Salted paper print. Courtesy of the National Media Museum/SSPL.

TALBOT WASN'T THE ONLY PERSON who worked with color in the early years of photography. Between 1843 and 1854, Anna Atkins produced hundreds of exquisite cyanotypes of British algae. She made them available to a select circle of viewers through *Photographs of British Algae: Cyanotype Impressions*, a handmade book consisting of twelve serial parts, which she assembled into two- and three-volume presentation albums.³² Atkins was the daughter of John George Children, a celebrated chemist, zoologist, and mineralogist, and the head of the Royal Society in 1839, when Talbot unveiled his discovery.³³ Atkins learned about photogenic drawing through her father's conversations with Talbot, and about the cyanotype process directly from Herschel its inventor.³⁴



Figure 65/Colorplate 14. Anna Atkins, *Cystoseira granulata*, from *Photographs of British Algae*, 1843. Cyanotype. Courtesy of the National Media Museum/SSPL.

There are very few words in *Photographs of British Algae*, and most of them are names. In the preface to her book, Atkins identifies William Henry Harvey's *A Manual of the British Algae: Containing Generic and Specific Descriptions of All the Known British Species of Sea-weeds, and of Conferae, both Marine and Freshwater* (1841) as the source of these names. However, she also notes that she has "intentionally departed from [the] systematic arrangement" of Harvey's book. As Carol Armstrong shows in *Scenes in a Library*, color is the place where this departure is most marked.³⁵ Harvey divides British algae into distinct groups on the basis of their colors, which he identifies as grass-green, olive-green, and red. He does so, he tells us, because algae's colors are "indicative" of their "structure" and "natural affinities."³⁶ He uses the same colors both to visualize these types and to distinguish them from one another in an illustrated edition of his book. Every engraved plate contains multiple numbered figures, and the numbers are correlated with names at the bottom of the page. Harvey renders this system hyper-legible by positioning the figures against a cream-colored background.

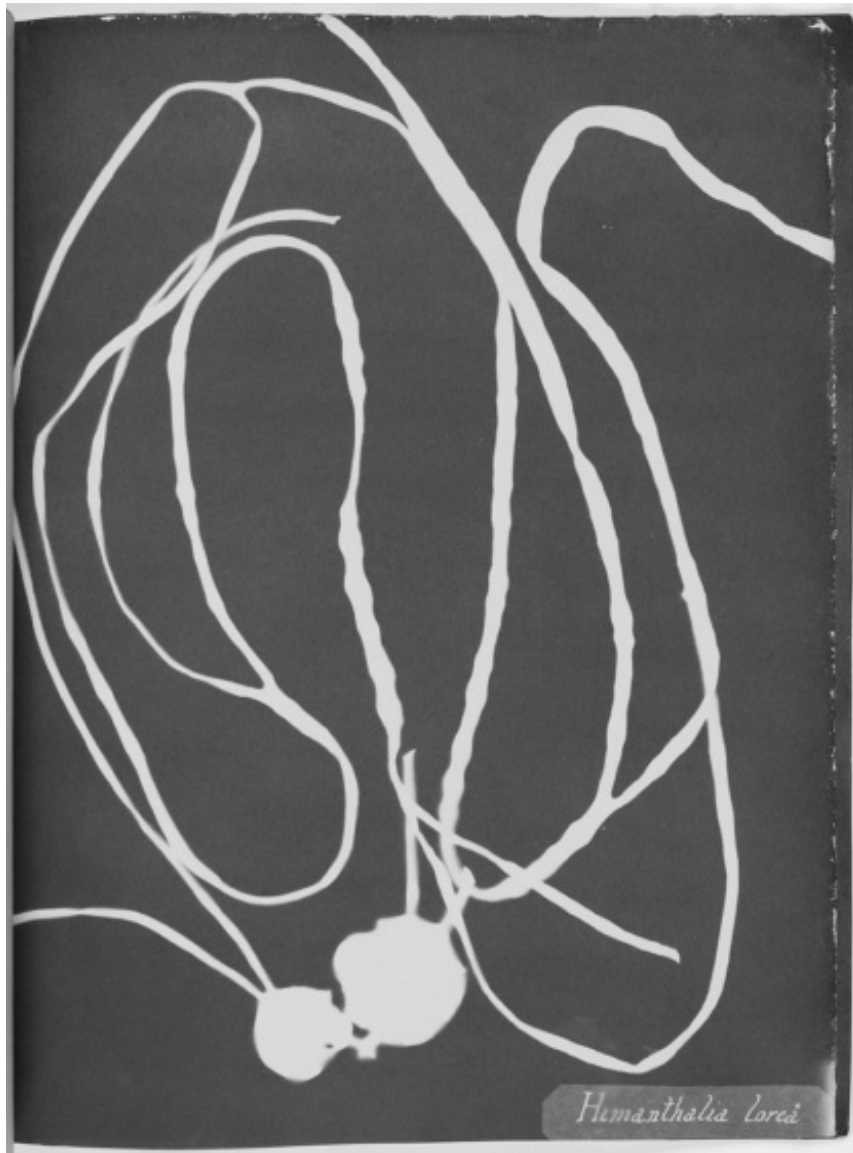


Figure 66/Colorplate 15. Anna Atkins, *Himanthalia lorea*, from *Photographs of British Algae*, 1843. Cyanotype. Courtesy of the National Media Museum/SSPL.

Atkins's cyanotypes, on the other hand, are monochromatic; she produced them by placing specimens of algae on sensitized paper and exposing them to sun. There is only one figure in most of the resulting images, and since these images are contact negatives, it is white, and the surrounding field is deep blue. And not only do these cyanotypes reverse the usual light/dark relationship, but they also blur the distinction between the two parts of the image. In some of them the dark blue of the field seems to have seeped into the area occupied by the specimen. In others, as Armstrong observes, the color seems to have drained out of the specimen and into the paper, as so often happened when an actual specimen was mounted on paper. The plant also seems to have returned to the “oceanic habitat” in which it was colored.³⁷

The name of the species to which each plant belongs appears below it, in a small box, but the box is inside the cyanotype, and the name is handwritten. Both the name and the box also participate in the photograph's “color scheme”; the former is white, like the figure, and the latter a slightly lighter shade of blue than the field. There is no other “information,” and nothing whatever to suggest that the plant pictured in the cyanotype represents a group, or that it is ontologically different from any of the other plants. Last but not least, Atkins's photographs are *pictures*, in the strong sense of the word; we look at

them not because they satisfy our desire to know, but because their blues are “so blue that only blood would be more red.”³⁸

Although Atkins used a photographic process developed by Herschel, her relationship to photography is much closer to Talbot’s. Like him, she regarded a contact negative as a full-fledged photograph. This was, in fact, the only kind of photograph she ever made; instead of generating the photographs for her book by striking numerous positive prints from the same negatives, she produced new negatives. Atkins also privileged “becoming” over “being.” She relied on the same specimen to make numerous contact negatives, and since plants are perishable objects, they changed over time, and her prints registered those changes. *Photographs of British Algae* was also itself forever-in-the-making; Atkins constantly withdrew photographs, added new ones, and altered the order in which her photographs appeared.³⁹

Finally, Atkins was as interested as Talbot was in analogies—those through which her photographs were made, those that emerged when the photographs were brought together, and those through which they continued to develop, long after they had been chemically “fixed.” She describes her algae cyanotypes as “impressions of the plants themselves,”⁴⁰ and one is constantly struck as one turns the pages of her book by the echo in one of the formal attributes of another—echoes that show no respect for the boundaries established by Harvey. The figures in these photographs also correspond in mysterious ways with the words that are written beneath them. The script in which each specimen’s name is written seems to come from the plant world, and Atkins reinforces this point by forming the words “British Algae, Vol. I” on the title page of the first volume of *Photographs of British Algae* out of bits of seaweed, in a similar script. These are—as Carol Armstrong elegantly puts it—“signs made by Nature and out of Nature’s things,”⁴¹ and the same is true of the photographs in a related book, *Cyanotypes of British and Foreign Ferns* (1853), which Atkins co-produced with Anne Dixon.⁴²



Figure 67/Colorplate 16. Anna Atkins, *Equisetum sylvaticum*, from *Cyanotypes of British and Foreign Ferns*, 1853. Cyanotype. Courtesy of the Open Content Program of the Getty Museum, Los Angeles.

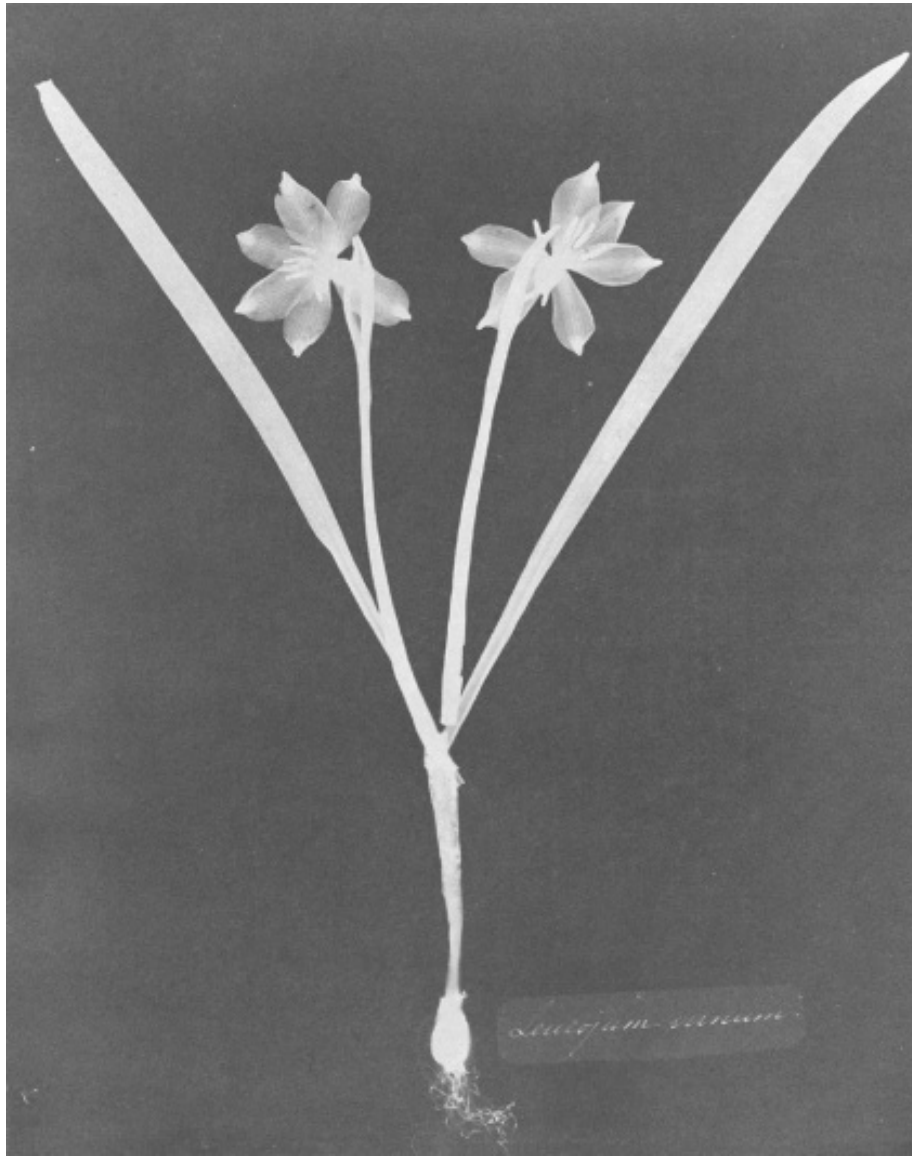


Figure 68/Colorplate 17. Anna Atkins, *Leucojum varium*, from *Cyanotypes of British and Foreign Ferns*, 1853. Cyanotype. Courtesy of the Open Content Program of the Getty Museum, Los Angeles.

Since Atkins limits herself to cyan blue, instead of admitting all the tints “that appeared pleasing to the eye,”⁴³ her relationship to color might seem the opposite of Talbot’s. It is, however, impossible to look at the images in *Photographs of British Algae* without thinking of the ocean, not just because algae are ocean flowers, but also because of the depth and expansiveness of their blues. These blues liquefy the categories that conflate one plant with a number of other plants, and separate it from the rest; all of the algae swim in the same great sea, and their by-now-personal names float with them, carried on tiny rafts. And although Talbot privileged the relationship that links each seer to a specific color, he too thought about his botanical contact negatives in oceanic terms.⁴⁴ In a February 1839 letter to *The Literary Gazette*, he wrote that a photograph of one blossom is as “essential” a part of “the same wonderful Whole” as a photograph of a thousand.⁴⁵

ONCE THE DISTINCTION between the “negative” and the “positive” was firmly established, it became almost impossible to perceive the “first image” as a reversal, and the second as a reversal of this reversal. Not only did these terms seem to relate to each other in a binary fashion, but they also evoked a series of other oppositions: light/dark, white/black, good/evil, truth/falsehood. Holmes satirizes this tendency in “The Stereoscope and the Stereograph.” The “perverse and totally depraved negative” appears

to be the creation of a “magic and diabolic power” that has “wrenched all things from their proprieties,” he writes, transforming “the light of the eye” into “darkness” and gilding “the deepest blackness... with the brightest glare.” It stands for our imperfect world, whose “shadows” a “better world” will turn to “light.”⁴⁶ The gradual standardization of color also encouraged viewers to think about the photographic image in more black-and-white terms.

However, as one contemporary artist has recently proven, both of these things still have the capacity to show us that each of us calls for an other. In 2008, Hiroshi Sugimoto began making large-format gelatin-silver positive prints of early Talbot photographs—photographs that we would call “negatives,” but that predate the negative/positive distinction, and that in some cases have only ever existed in this form. Sugimoto refers to the works in the series the way Talbot referred to his own early photographs: as “photogenic drawings.” He also gives each of them two dates: the one when Talbot made the negative, and the one when he himself made the positive.



Figure 69/Colorplate 18. Hiroshi Sugimoto, *Roofline of Lacock Abbey, Most Likely 1835–1839*, 2009. Toned silver-gelatin print from calotype negative. © Hiroshi Sugimoto, courtesy Pace Gallery.

Sugimoto published some of the prints in a bilingual exhibition catalogue,⁴⁷ whose layout recalls *The Pencil of Nature*, but instead of displaying his photographs on the left page, and the accompanying remarks on the right, as Talbot does, he positions his photographs on the right page and the accompanying remarks on the left.⁴⁸ In the little

essay that he wrote for the catalogue, he also describes the series as a return journey—a pilgrimage back to the place from which the negatives came.⁴⁹ Through this trans-temporal chiasmus, Sugimoto shows us that a negative really is a reversal, and a positive the reversal of this reversal. He also helps us to see that much more is at issue here than two pieces of paper.

Sugimoto used nineteenth-century recipes for his “tones,” and applied them as they would have been applied a hundred and fifty years ago, but he didn’t try to reproduce the color of the negatives “bequeathed” to him by Talbot, nor did he limit himself to red, yellow, purple, brown, and black. Instead, he adhered to the principle enunciated in *The Pencil of Nature*: he admitted “tints” that are “pleasing” to other eyes. The four prints that are most pleasing to my eyes—*Stem of Leaves and Flowers, circa 1834–1839* (2008), *Piece of Lace, circa 1839* (2008), *Botanical Specimen (Erica Mutabilis), March 1839* (2009), and *Roofline of Lacock Abby, circa 1835–1839* (2009)—are deep blue, like the contact prints in *British Algae*. They please me not only because they make room within this trans-temporal chiasmus for Atkins, but also because cyan blue is—quite simply—the color that I most “espouse.”



Figure 70/Colorplate 19. Hiroshi Sugimoto, *Louisa Gallwey and Horatia Feilding, at Lacock Abbey, August 29, 1842*, 2009. Toned silver-gelatin print from calotype negative. © Hiroshi Sugimoto, courtesy Pace Gallery.



Figure 71/Colorplate 20. Hiroshi Sugimoto, *Stem of Leaves and Flowers*, ca. 1834–1839, 2008. Toned silver-gelatin print from calotype negative. © Hiroshi Sugimoto, courtesy Pace Gallery.

HOLMES DOESN'T JUST SATIRIZE the moralization of the negative/positive distinction; he also reinstates Talbot's definition of these terms. The negative is a "reversed picture" of the *object*, he writes; it has "the right part of the object on the left side of the picture, and the left part on its right side."⁵⁰ The positive is a reversed picture of the *negative*; it has the right part of the negative on the left side of the picture, and the left part on its right side.⁵¹ It is also created through direct contact with the negative. Consequently, although everything about the negative may seem "just as wrong as it can be," Holmes wryly observes, "the relations of each wrong to the other wrongs are like the relations of the corresponding rights to each other in the original natural image." And although "every given point of the picture" may seem "as far from the truth as a lie can be, in traveling away from the pattern it has gone round a complete circle, and is [therefore both] as remote from Nature and as near as possible."⁵²

Holmes devotes so much time to the distinction between the negative and the positive in an essay about the stereoscope because the stereoscopic image also has a recto and a verso, and because it, too, alerts us to a much more primordial reversibility: the one that is activated every time we see or touch another body. It is with this last relationship that Holmes begins his essay. "Democritus of Abdera... taught that all bodies were continually

throwing off certain images like themselves, which subtle emanations, striking on our bodily organs, gave rise to our sensations,” he writes in the opening paragraph of “The Stereoscope and the Stereograph.” These images “are perpetually shed from the surfaces of solids, as bark is shed by trees.”⁵³ This passage recalls Leonardo’s description of the constant flow of images through which the world presents itself to us.

In the next paragraph, Holmes encourages us to look at the images that we “shed,” as well as those we receive from others—to view ourselves from the outside, as others see us, as well as from the inside, where we see them. “These evanescent films may be seen in one of their aspects in any clear, calm sheet of water, in a mirror, in the eye of an animal by one who looks at it in front,” he observes, “but better still by the consciousness behind the eye in the ordinary act of vision.”⁵⁴ The body described in these two paragraphs is strikingly similar to the one that Merleau-Ponty would later describe. It sees in response to an external solicitation, which is both tactile and visual, and it solicits a similar response from other perceivers.

A few pages later, Holmes identifies another corporeal aspect of human vision: binocular disparity. As we have already seen, the right retina of a two-sighted person receives a slightly different image than the left. Both of these images are flat, but the brain construes these differences as depth, and fuses them into a single three-dimensional image. Since this image is produced by the brain, it might seem a figment of our physiological “imagination.” Holmes, however, draws the opposite conclusion. He argues that its depth is our body’s way of countering the most dangerous of all optical illusions: the illusion that the world is immaterial. The three-dimensional image that our brain produces by fusing two almost identical flat images allows us to “*feel round*” what we see, to “clasp an object with our eyes, as with our arms, or with our hands, or with our thumb and finger.”⁵⁵ When we look at something in this way, Holmes adds, we “know it to be something more than a surface”—something more, in other words, than a physical or mental representation.

Before chemical photography, it was easy to divorce form from matter, since the images that bodies were “continuously throwing off” perished instantly, but the daguerreotype “[held] them as a picture.”⁵⁶ Because it was so manifestly a gift from the world to us, the early photographic image was also deep; its space extended backward, toward its source. The more photography was “humanized,” the flatter it became, but the stereoscope has restored its depth. “A stereoscope,” Holmes declares, “is an instrument which makes surfaces look solid.” When looking at the stereo card through its lenses, our mind “feels its way into the very depths of the picture.”⁵⁷

As other commentators have already noted, the stereoscopic image has a different kind of depth than we are used to perceiving. It is what Jonathan Crary calls “an assemblage of local zones of three-dimensionality, zones imbued with a hallucinatory clarity, but which taken together never coalesce into a unified field.”⁵⁸ When looking at it, we also have “an insistent sense of ‘in front of’ and ‘in back of.’”⁵⁹ Holmes does not address Crary’s first point, but he does talk about the second. In a striking passage midway through his 1859 essay, he suggests that some things in the stereoscopic image not only seem to be emphatically in front of other elements, but to be approaching us, and even on the verge of

touching us. “The scraggy branches of a tree in the foreground run out at us as if they would scratch our eyes out,” he writes. “The elbow of a figure stands forth so as to make us almost uncomfortable.”⁶⁰



Figure 72. Unknown photographer, *View of the Rock Pond, below the Stride, Chatsworth Pleasure Grounds*, ca. 1859. Albumen print stereocard. © Victoria and Albert Museum, London.

Holmes also refuses to treat this image as a purely human construction. When we are looking at it, he observes, we have “the same sense of infinite complexity [that] Nature gives us.”⁶¹ It also shows us that the boundary separating our body from other bodies is traversable—and in both directions. Not only can we “feel round” what we see, but other bodies can extend into the space we occupy. They are able to cross these borders for the same reason we are: because each of us is already on both sides. Here, too, there are profound affinities between Holmes’s argument and Merleau-Ponty’s phenomenology. The body “unites us directly with [things] through its own ontogenesis,” the philosopher writes in his last book, “by welding to one another the two outlines of which it is made, its two laps: the sensible mass it is and the mass of the sensible wherein it is born by segregation and upon which, as seer, it remains open.”⁶²

Holmes happily crosses over the boundary separating him from the picture—not just once, but over and over again. “I creep over the vast features of Ramses, on the face of his rockhewn Nubian temple,” he enthuses in a passage devoted to the delights of stereoscopic viewing. “I scale the huge mountain-crystal that calls itself the Pyramid of Cheops... I stroll through Rhenish vineyards, I sit under Roman arches.”⁶³ When he is inside the picture, he is also keenly aware of the materiality of the world. He marvels over the marks left on a doorway by the “rubbing of [people’s] hands and shoulders” in three photographs of Anne Hathaway’s cottage, and wonders whether some of them are “scales of epidermis” from “the trembling hand” of “Hathaway’s young suitor, Will Shakespeare.”⁶⁴

However, Holmes is considerably less enthusiastic about incursions from the other side. He finds the tree branches that extend into his space threatening, and the protruding elbow makes him “uncomfortable.” It is perhaps for this reason that he often seems weirdly attached to the oppositions he seeks to dismantle, and that he characterizes the stereoscope as the instrument by means of which form “make[s] itself seen through the world of

intelligence” when introducing the device.⁶⁵ But although there are numerous points in the essay where Holmes deviates from the argument I have been parsing, nothing prepares us for the last section, which contains the passage that I quoted in the introduction to this book—the one that begins “*Form is henceforth divorced from matter*. In fact, matter as a visible object is of no great use any longer, except as the mold on which form is shaped.”⁶⁶

This passage is unabashedly metaphysical, and it shows nineteenth-century rationalization to be the logical extension of the values celebrated by Descartes. Far from challenging this idealism, photography is now the star in its crown, and the means through which it penetrates other domains. A photographic event is like a hunting expedition, Holmes declares; we participate in it only for the “skin.” After we extract it from the world, we abandon what remains, which is of “little worth.” Soon we will have enough of these “skins” to create “a comprehensive and systematic stereographic library, where all men can find the [one that] they particularly desire to see as artists, or as scholars, or as mechanics, or in any other capacity.”⁶⁷ This library will be even more useful when we have standardized our photographic practice, because when we look at stereographs of similar objects that were shot from the same distance and with the same kind of camera lens, we will be able to study them dispassionately, and not be misled by “partialities.” This standardization will also allow us to create a vast “system of exchanges.” The stereograph will become a “universal currency,” minted for us by the sun.⁶⁸

In the penultimate paragraph of the essay, Holmes identifies another of the things that photography is “good” for: capturing and immortalizing iconic images from the battlefield. “It is asserted that a bursting shell can be photographed,” he writes. “The time is perhaps at hand when a flash of light, as sudden and brief as that of the lightning which shows a whirling wheel standing stock still, shall preserve the very instant of the shock of contact of the mighty armies that are even now gathering... . The lightning of clashing sabres and bayonets may be forced to stereograph itself in a stillness as complete as that of the tumbling tide of Niagara as we see it self-pictured.”⁶⁹ Never have the lethal consequences of the medium’s rationalization been more evident. It would also be hard to think of a better way of describing the violence we have done to photography itself.

Every time I read this section of “The Stereoscope and the Stereograph,” I ask myself the same question: is Holmes speaking in his own voice here, or is he ventriloquizing someone else? The last time I searched for the answer to this question, I realized that I had been looking in the wrong place. It resides not in the passage I have just summarized, but in the two sentences that precede it. “What is to come of the stereoscope and the photograph we are almost afraid to guess,” Holmes writes there, “lest we should seem extravagant. But, premising that we are to give a *colored* stereoscopic mental view of their prospect, we will venture on a few glimpses at a conceivable, if not a possible future.”⁷⁰ These sentences are full of equivocations and *double entendres*, which I will not attempt to unpack, but they permit us to say one thing with absolute certainty. Holmes is not describing photography as it exists in the final section of his essay, or even photography as it will later look; he is describing, rather, an imaginable but *unrealizable* future.

Holmes returns to this future in the final sentence of “The Stereoscope and the Stereograph.” “Before another generation has passed away,” he proclaims, “it will be

recognized that a new epoch in the history of human progress dates from the time when He who ‘never but in uncreated light / Dwelt from eternity’ took a pencil of fire from the hand of the ‘angel standing in the sun,’ and placed it in the hands of a mortal.”⁷¹ This sentence is densely packed with literary and visual references to a light that does not belong to man, but that he has in at least one case appropriated. It alludes to the myth of Prometheus, in which fire is stolen from the gods and given to mortals; Milton’s Prologue to *Paradise Lost*,⁷² in which the blind poet appeals to God for illumination, so that he can recount two other stories of “overreaching”—Satan’s expulsion from heaven and the fall of Adam and Eve; Turner’s *An Angel Standing in the Sun*, in which the Angel of the Apocalypse appears in a great circle of light, brandishing a fiery sword; the passage from Revelation that Turner appended to his painting, that begins with the words “And I saw an angel standing in the sun; and he cried with a loud voice, saying to all the fowls that fly in the midst of heaven, Come and gather yourselves together unto the supper of the great God”; and—finally—the pencil of light, with which nature draws the photographic image, but which man is now beginning to arrogate to himself. This is hardly a ringing endorsement for the “new epoch in the history of human progress” that began when the “pencil of fire was placed in the hands of a mortal.” On the contrary: there is a strong sense of impending doom.

Since the future as it is described in the last sentence of the essay closely resembles the past, it is easy to see why it should be “conceivable.” The claim that this future is “not possible,” though, is perplexing, since history seems to have proven otherwise. Holmes wrote “The Stereoscope and the Stereograph” approximately two years before the start of the American Civil War, whose bloody battles and massive casualties decimated the nation, and compounded the oppositions on which it was founded. Over the four years of the war, most of what Holmes describes in the last section of “The Stereoscope and the Stereograph” became a reality.

In 1862, Mathew Brady mounted an exhibition of photographs from the first battle of the Civil War, and a *New York Times* reviewer urged his readers to go and see “the fearful reproductions,” which were “for sale” in Brady’s gallery, and acquire some for themselves. They were, he added, “of a size convenient for albums.”⁷³ The photographers who worked for Brady continued to produce war photographs for his gallery, and Alexander Gardner’s photographers did the same after he stopped working for Brady and established a rival gallery. Gardner advertised his business with the words “Views of the War,” and by 1865 he had accumulated nearly three thousand glass negatives, one hundred of which he published in *Gardner’s Photographic Sketch Book of the War*.⁷⁴ Many of these photographs show corpses that were abandoned after their metaphoric skins had been removed.



Figure 73/Colorplate 21. J. M. W. Turner, *An Angel Standing in the Sun*, 1846. Oil on canvas. The Tate Britain, London. © Tate, London 2014.

Most of Brady and Gardner's "views" were available both as large silver albumen photographs and as stereo cards, and priced accordingly. Thousands of other photographers turned a handsome profit on war portraits, which were aggressively marketed to both soldiers and their families. They were also available in many different forms, which became increasingly standardized, and were pegged to different socio-economic groups. As a contemporary reviewer noted, the American Civil War industrialized both death and photography, and often in tandem. "America swarms with the members of the mighty tribe of cameristas," he wrote, "and the civil war has developed their business in the same way that it has given an impetus to the manufacturers of metallic air-tight coffins and embalmers of the dead. The young Volunteer rushes off at once to the studio when he puts on his uniform, and the soldier of a year's campaign sends home his likeness that the absent ones may see what changes have been produced in him by war's alarms."⁷⁵ In 1862, the United States began taxing photographs, making them a rich source of national as well as personal revenue, and eventually this "vast treasury" of images⁷⁶ found its way into the archives for which they were always destined.

But Holmes was right to say that the nightmarish account of photography that he presents in the last section of "The Stereograph and the Stereoscope" is unrealizable,

because none of this has anything to do with the pencil of nature. No matter how many cameras we train on the world, it will never “scale off its surface for us,” stamp our “banknotes” with the great seal of the sun, or “send us stereographs of battles.” Nor did it stick around when we began arrogating the photographic image to ourselves, and using it as a tool of conquest. Although the world continued speaking to us through individual photographs, most of its self-portraits took other forms in the decades that followed.



Figure 74. John Reekie and Alexander Gardner, *A Burial Party, Cold Harbor, Virginia*, 1865 (printed 1866). Albumen print from collodion wet-plate negative. Courtesy of the Open Content Program of the Getty Museum, Los Angeles.

In the next chapter, I will discuss some of the means through which photography lived on after the industrialization of the chemical medium, but I want to conclude this one with a powerfully disclosive photograph from the 1860s: John Reekie’s *A Burial Party on the Battle-Field of Cold Harbor* (April 1865). The five figures in this photograph are engaged in a grim task: burying the remains of thousands of Union soldiers, who were killed in two battles the preceding year, both of which were fought on this site. Since they have been lying there for a long time, these remains are sparse: some bleached skulls, a jumble of other bones, a boot, and tattered bits of clothing. They are piled on an angled stretcher in the foreground of the photograph, behind which one of the men is crouching. He looks directly out at us, from the left side of the photograph. The skull that is most proximate to him also faces us. The other men have shovels and are dispersed across the field that extends from the stretcher to the trees at the rear of the image. Three of them appear to be digging graves, and the fourth is standing beside a mound of earth. They all look down at the ground, from which they came, and to which they will one day return.

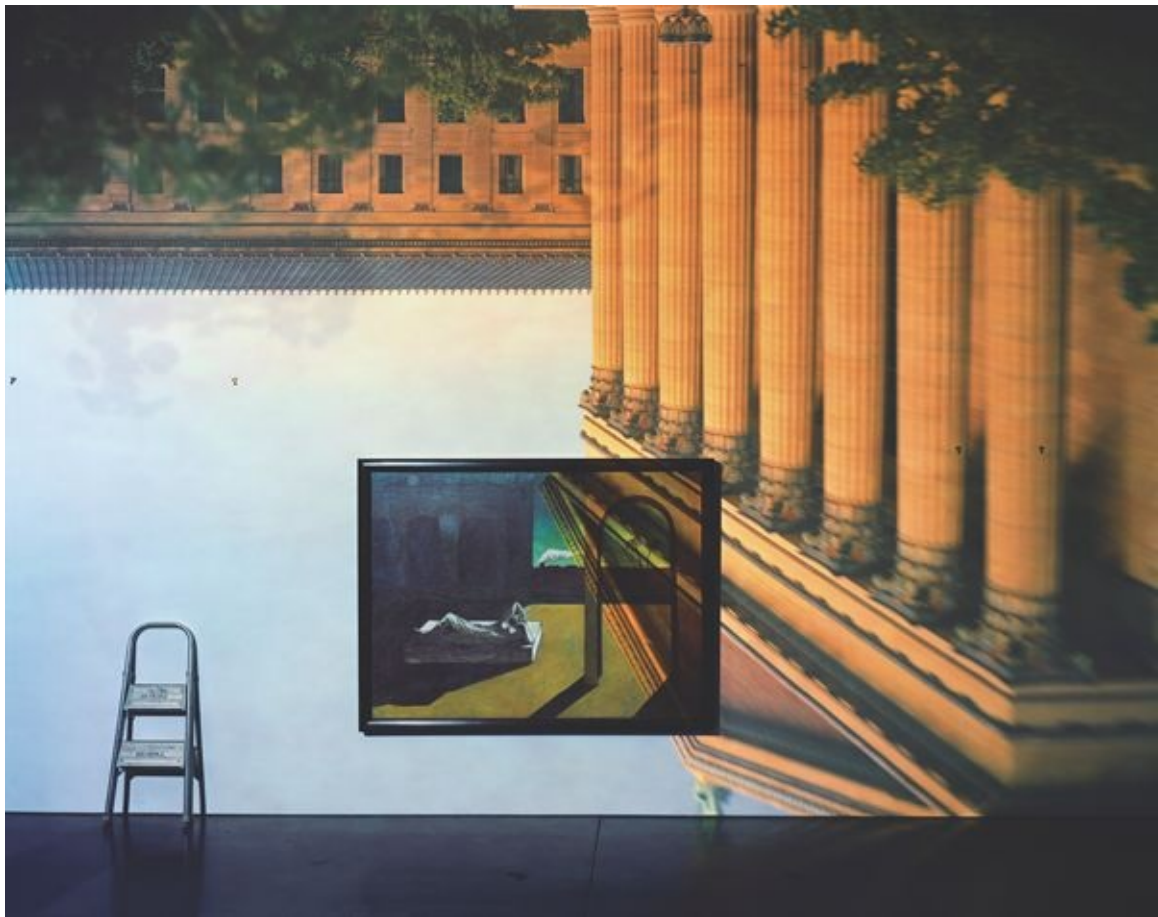
The photograph speaks volumes about America’s still-palpable racial divide. The men in the burial party are all African Americans, and they are interring the remains of

Northern soldiers in Virginia, a slave state. Although they are not slaves,⁷⁷ they are working in a field, and doing a job that the local residents refused to do, or even command their slaves to do. One of the men is wearing a Union Army uniform, indicating that he is a soldier, and suggesting that this may also be the case with the other men. However, although the ostensible goal of the Civil War was the eradication of slavery in the remaining slave states, African Americans were not allowed to join the Union Army until 1863, and when they were finally admitted they were relegated to separate units, and discriminated against in numerous ways. Finally, most—if not all—of the men whose remains they are burying were white.

Burial Party is one of the hundred photographs in Gardner's *Photographic Sketchbook of the American Civil War*. Gardner credits the negative to Reekie, and the positive to himself, just as Sugimoto does with Talbot's photographs in his *Photographic Drawings*. Like Sugimoto, Gardner also positions the photograph on the right page and the commentary on the left. He wrote this commentary, and its first sentence is as remarkable for what it doesn't say as for what it does. Gardner refuses to utter the adjective on the basis of which certain Americans were deemed to be "slaves," or were relegated to a segregated military unit. He identifies the men in the photograph simply as "soldiers."⁷⁸ He also characterizes their relationship to the fallen men in a surprising way. He writes that they are "in the act of collecting the remains of their comrades."⁷⁹

With the last word in this sentence, Gardner declares them to be equal with and ontologically connected to the dead men. The photograph itself goes even further. As Elizabeth Young observes, the "dismembered foot" in the foreground of the photograph "seems an extension of the live African American bodies,"⁸⁰ and the skulls lined up in a row on the stretcher undo *all* binary oppositions—not just "white" and "black," but North and South, rich and poor, and slave and freeman. The skull that faces us also shows us that we are as deep inside this picture as Holmes was in the pictures of Anne Hathaway's cottage when he noticed the rub marks on her doorway.

The skull, however, cannot cross over to our side, because its sockets are empty. The real center of the photograph is not it, but the man whose shoulder it seems to touch. He invites us to join the republic for which he stands "by using [our] own being as a means of participating in [his]."⁸¹ His look is "undiminished by time," as Eleanor Jones Harvey puts it,⁸² because it does not belong to the past. It is headed toward the present: toward the here and now in which a potentially infinite series of later looks will both meet it and greet it.



Colorplate 1/Figure 20. Abelardo Morell, *Camera Obscura: The Philadelphia Museum of Art East Entrance in Gallery #171 with a de Chirico Painting*, 2005. Inkjet print. Image © Abelardo Morell, courtesy of Edwynn Houk Gallery, New York.



Colorplate 2/Figure 21. Abelardo Morell, *Camera Obscura: View of Central Park Looking North—Fall*, 2008. Inkjet print. Image © Abelardo Morell, courtesy of Edwynn Houk Gallery, New York.



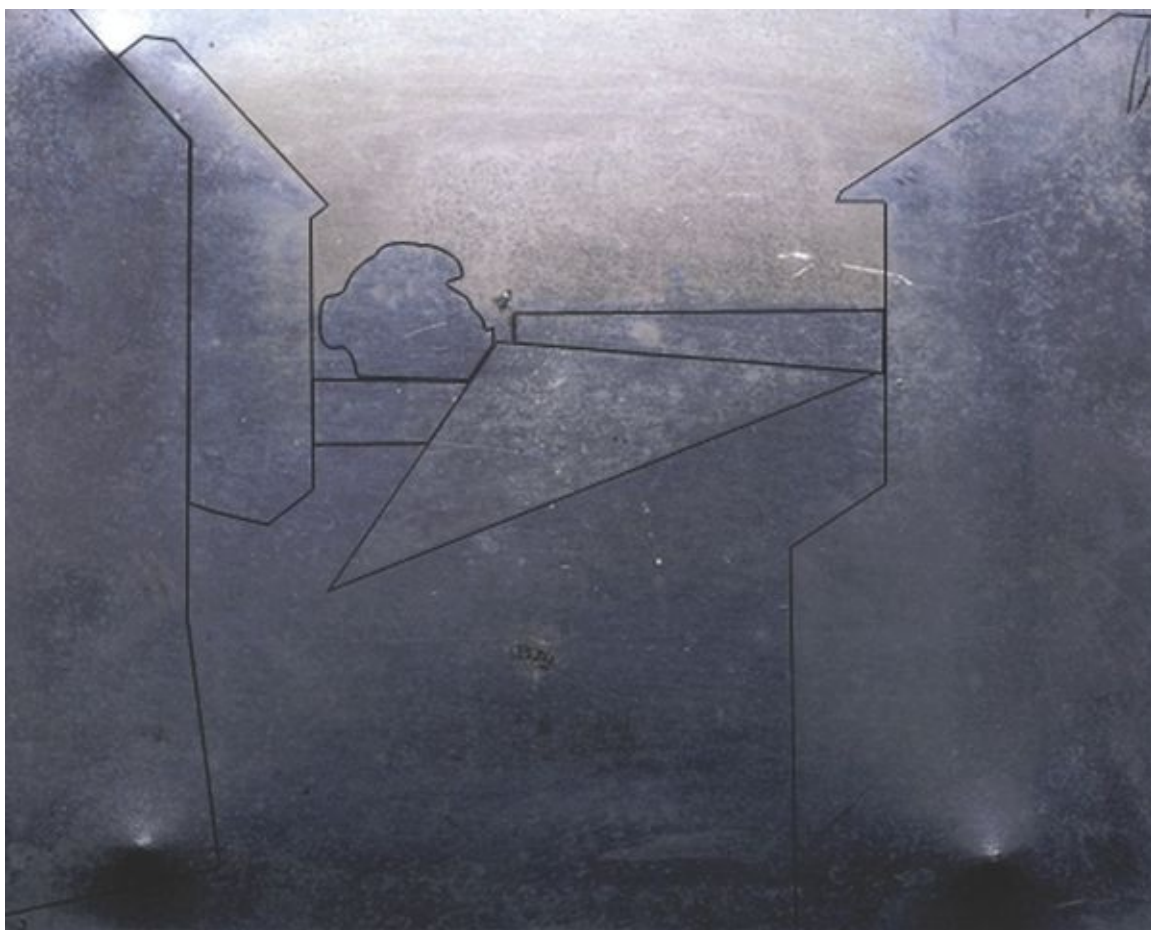
Colorplate 3/Figure 28. Henry Fox Talbot, *The Stable Court, Lacock Abbey*, ca. 1841. Calotype negative. Courtesy of the National Media Museum/SSPL.



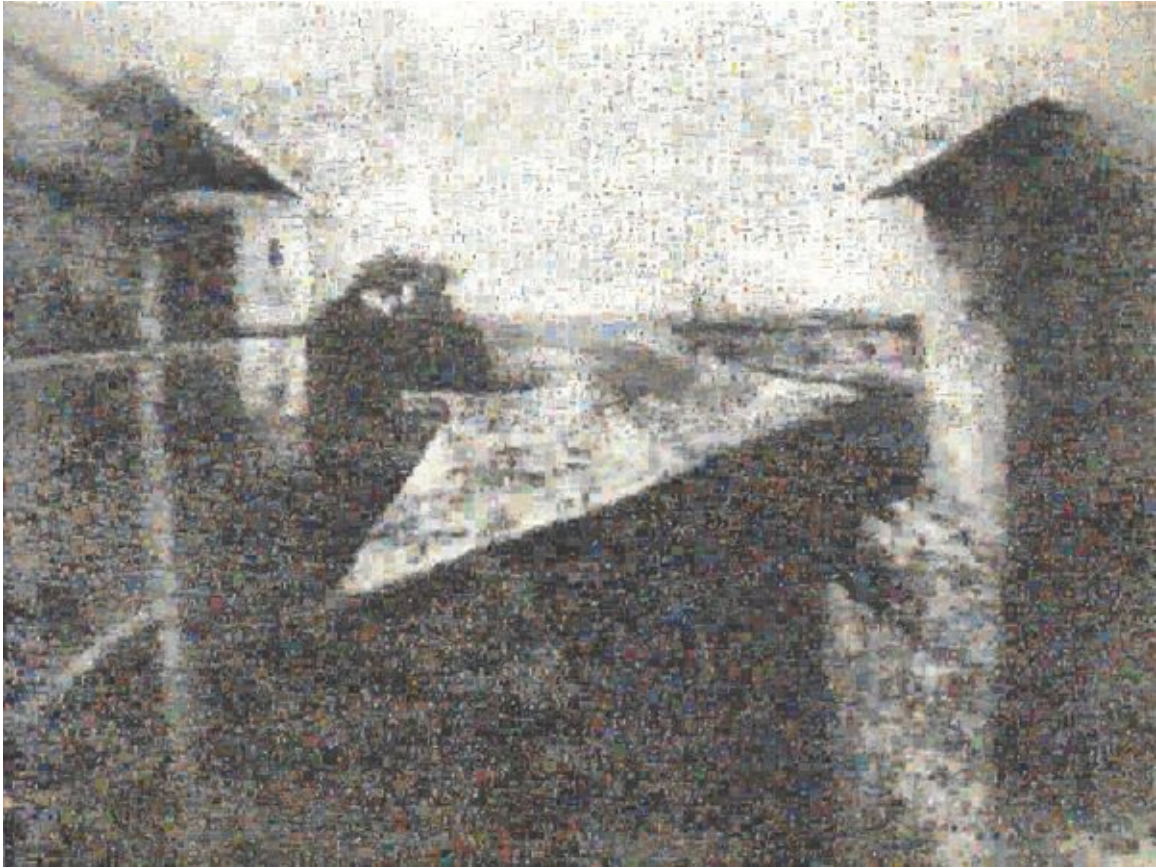
Colorplate 4/Figure 29. Henry Fox Talbot, *Entrance Gate, Abbotsford*, 1845. Calotype negative. Courtesy of the



Colorplate 5/Figure 33. *View from the Window at Le Gras* in its original frame. Courtesy of the Harry Ransom Center at the University of Texas at Austin.



Colorplate 5/Figure 35. *View from the Window at Le Gras* with Gernsheim's pencil drawing superimposed. Courtesy of the Harry Ransom Center at the University of Texas at Austin.



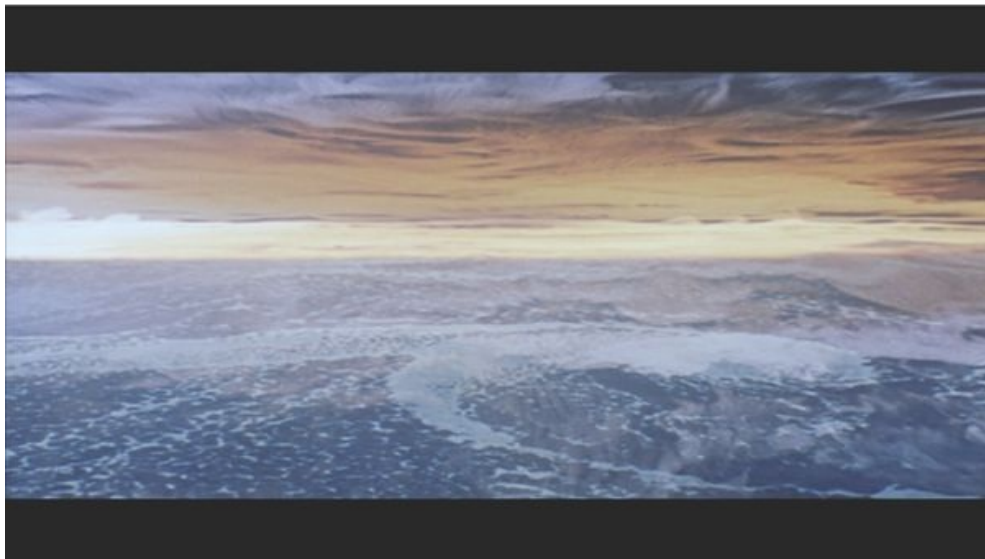
Colorplate 6/Figure 36. Juan Fontcuberta, *Googlegram: Niépce*, 2005. Chromogenic print. Courtesy of the artist.



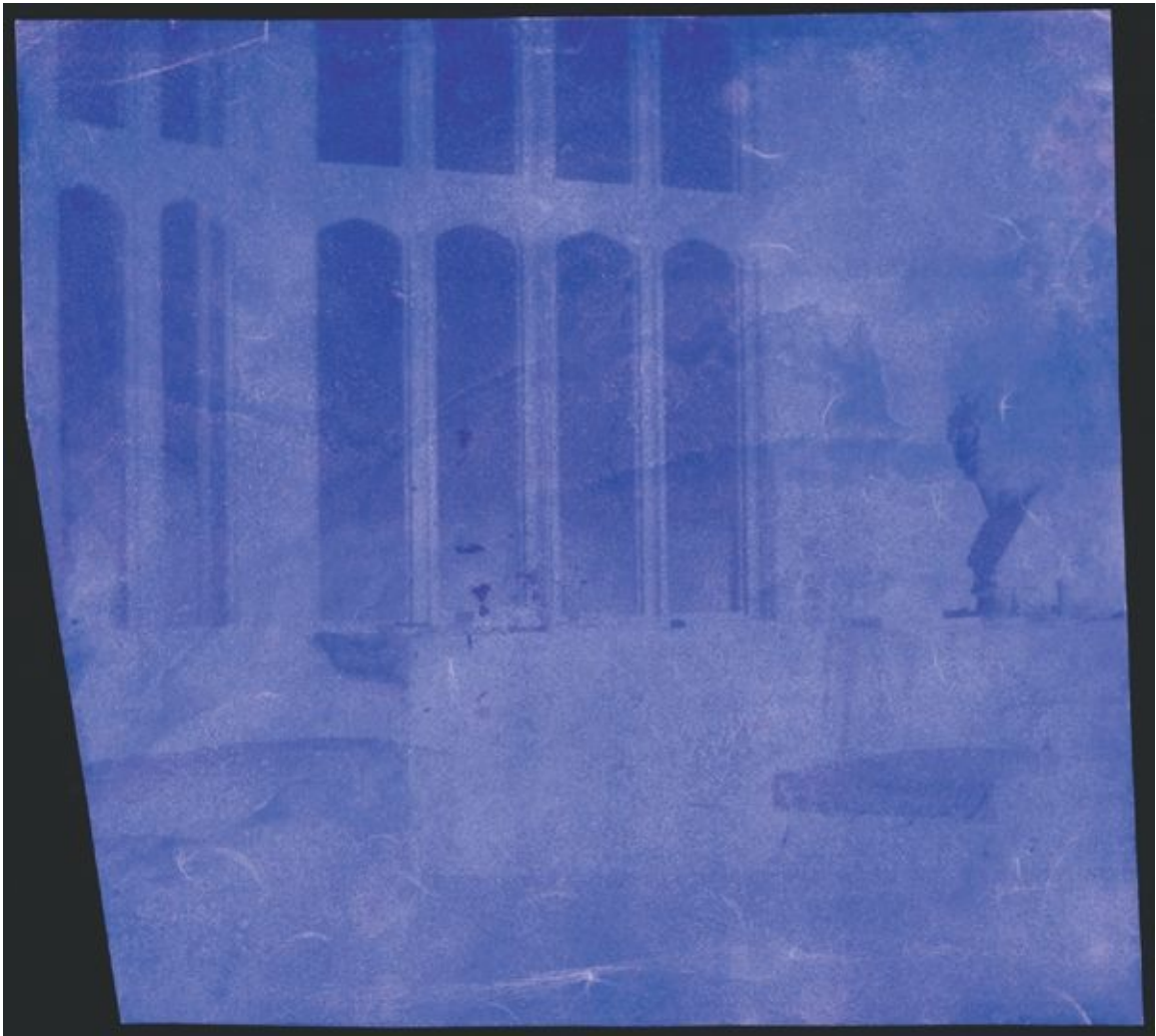
Colorplate 7/Figures 37 & 38. Juan Fontcuberta, *Googlegram: Niépce* (details). Courtesy of the artist.



Colorplate 8/Figure 39. Jeff Wall, *Milk*, 1984. Transparency in light box. Courtesy of the artist.



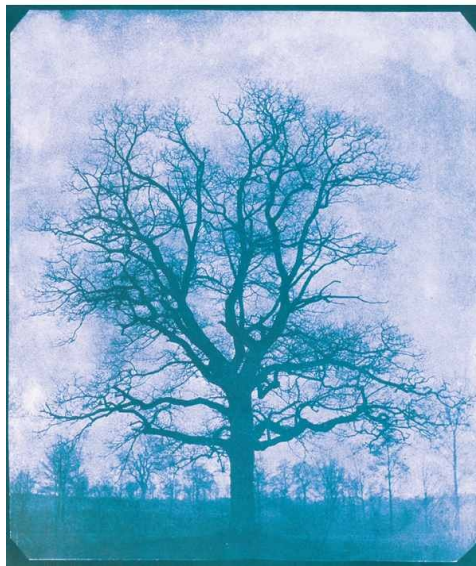
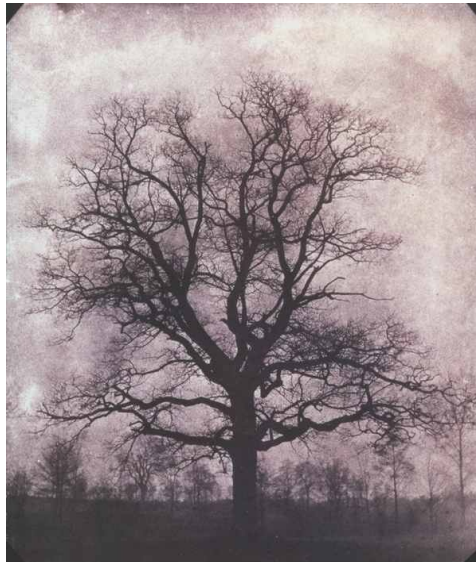
Colorplate 9/Figures 54 & 55. Andrei Tarkovsky, *Solaris*, 1972 (film still).



Colorplate 10/Figure 60. Henry Fox Talbot, *Oriel Window, South Gallery, Lacock Abbey*, April 1839. Photogenic drawing negative. Courtesy of the National Media Museum/SSPL.



Colorplate 11/Figure 61. Henry Fox Talbot, *Seeds*, 1853. Photogravure. Courtesy of the National Media Museum/SSPL.



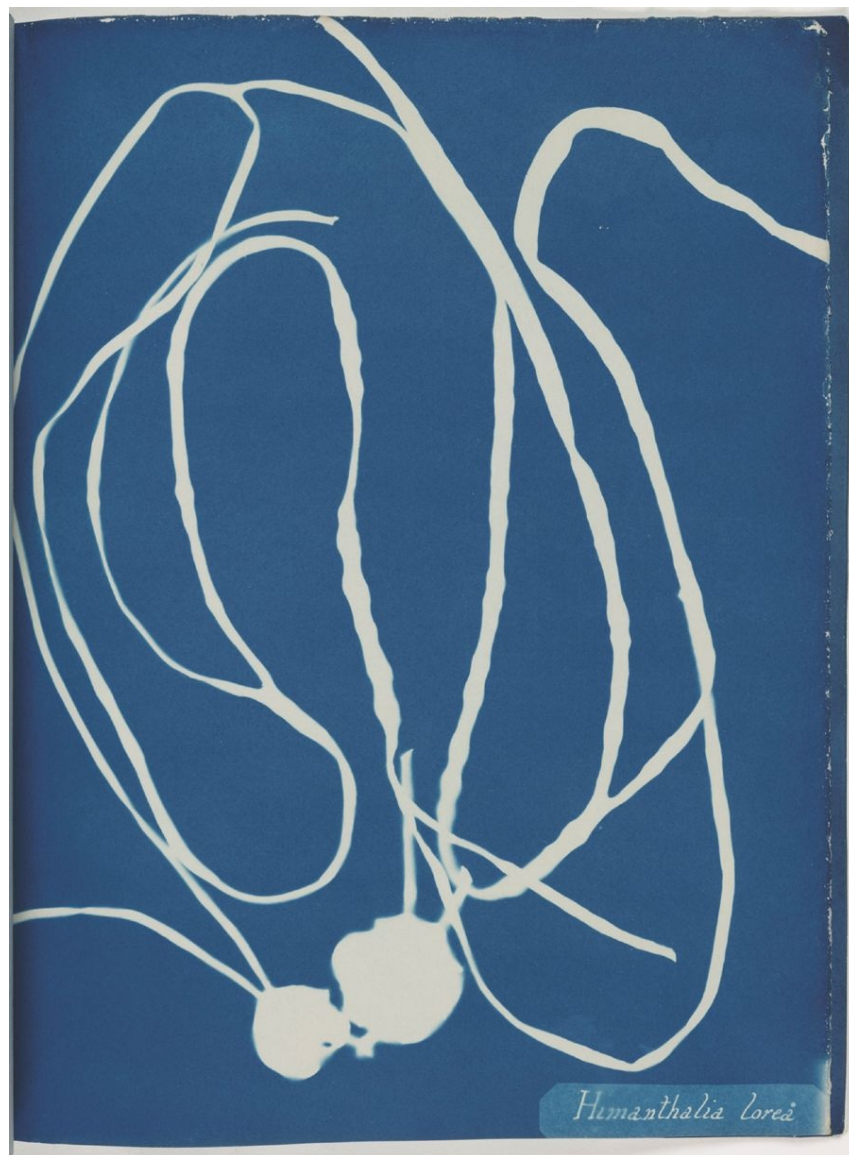
Colorplate 12/Figures 62 & 63. Henry Fox Talbot, *Tree in Winter*, ca. 1842. Salted paper print from calotype negative. Courtesy of the National Media Museum/SSPL.



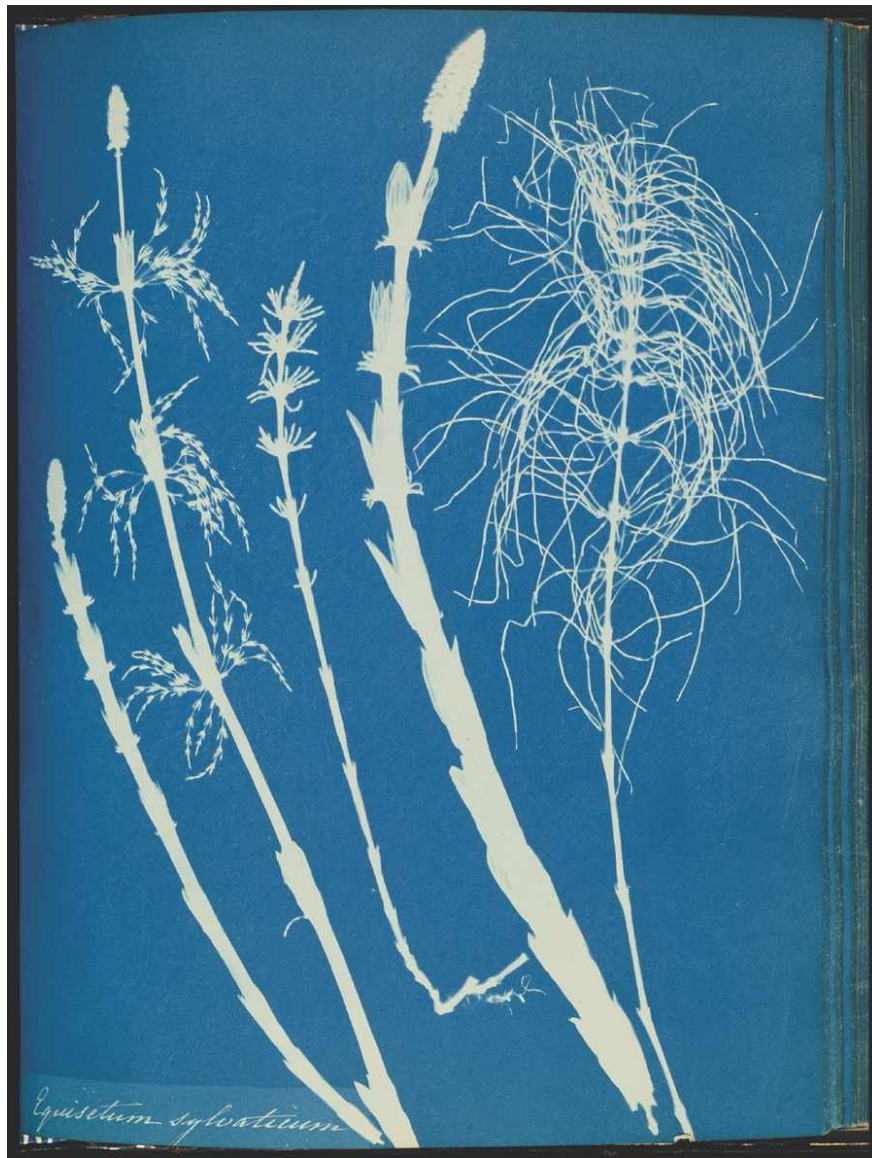
Colorplate 13/Figure 64. Henry Fox Talbot, *China Bridge at Lacock Abbey*, 1841. Salted paper print. Courtesy of the National Media Museum/SSPL.



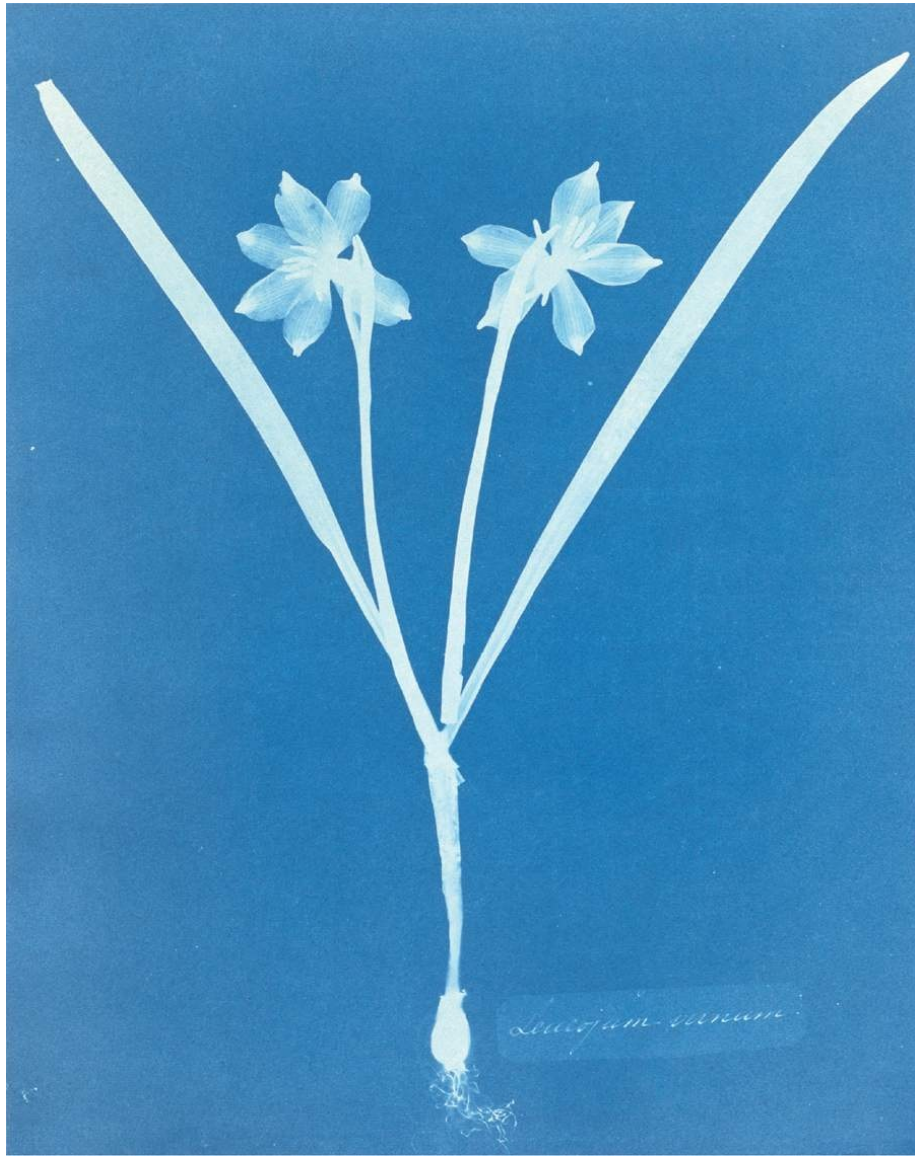
Colorplate 14/Figure 65. Anna Atkins, *Cystoseira granulata*, from *Photographs of British Algae*, 1843. Cyanotype. Courtesy of the National Media Museum/SSPL.



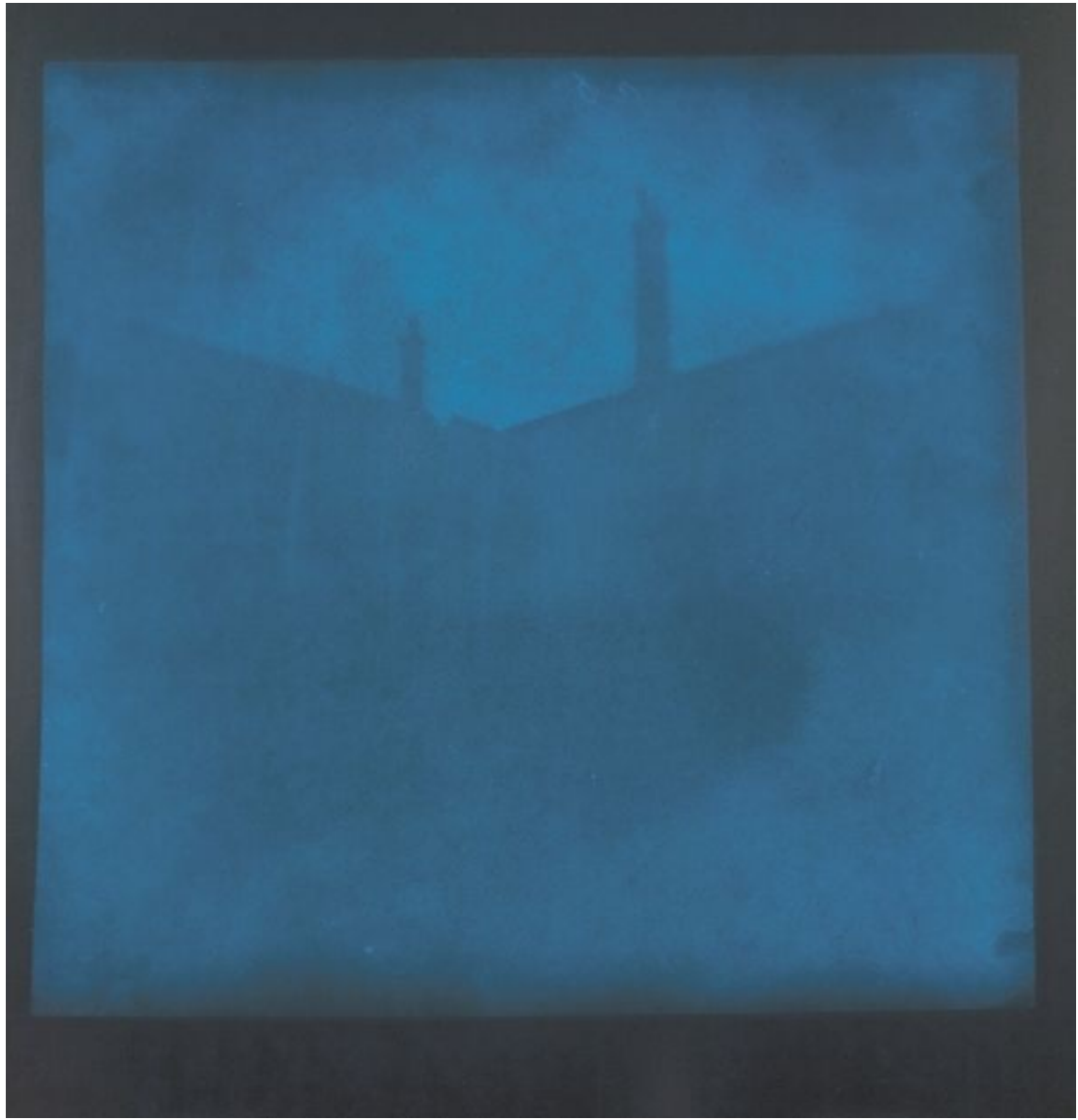
Colorplate 15/Figure 66. Anna Atkins, *Himanthalia lorea*, from *Photographs of British Algae*, 1843. Cyanotype. Courtesy of the National Media Museum/SSPL.



Colorplate 16/Figure 67. Anna Atkins, *Equisetum sylvaticum*, from *Cyanotypes of British and Foreign Ferns*, 1853. Cyanotype. Courtesy of the Open Content Program of the Getty Museum, Los Angeles.



Colorplate 17/Figure 68. Anna Atkins, *Leucojum varium*, from *Cyanotypes of British and Foreign Ferns*, 1853. Cyanotype. Courtesy of the Open Content Program of the Getty Museum, Los Angeles.



Colorplate 18/Figure 69. Hiroshi Sugimoto, *Roofline of Lacock Abbey, Most Likely 1835–1839*, 2009. Toned silver-gelatin print from calotype negative. © Hiroshi Sugimoto, courtesy Pace Gallery.



Colorplate 19/Figure 70. Hiroshi Sugimoto, *Louisa Gallwey and Horatia Feilding, at Lacock Abbey, August 29, 1842*, 2009. Toned silver-gelatin print from calotype negative. © Hiroshi Sugimoto, courtesy Pace Gallery.



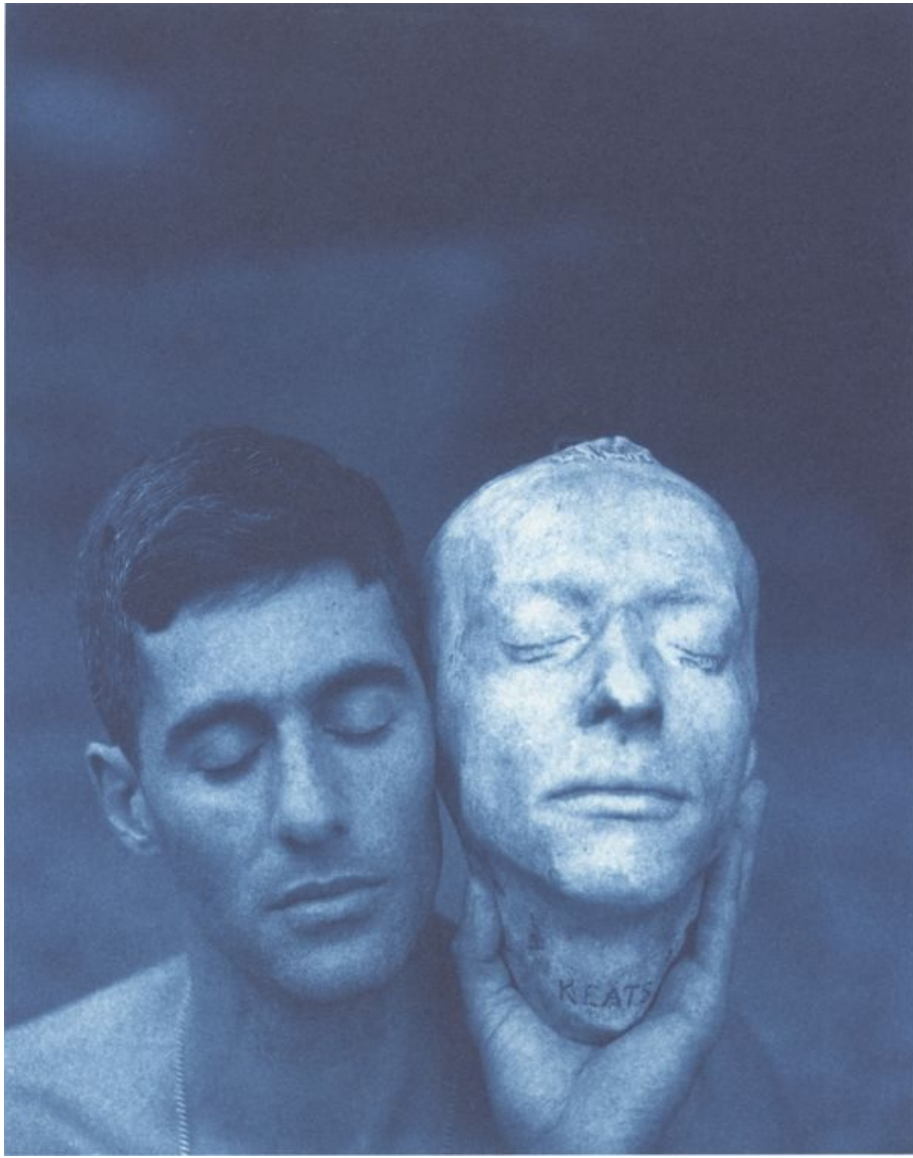
Colorplate 20/Figure 71. Hiroshi Sugimoto, *Stem of Leaves and Flowers*, ca. 1834–1839, 2008. Toned silver-gelatin print from calotype negative. © Hiroshi Sugimoto, courtesy Pace Gallery.



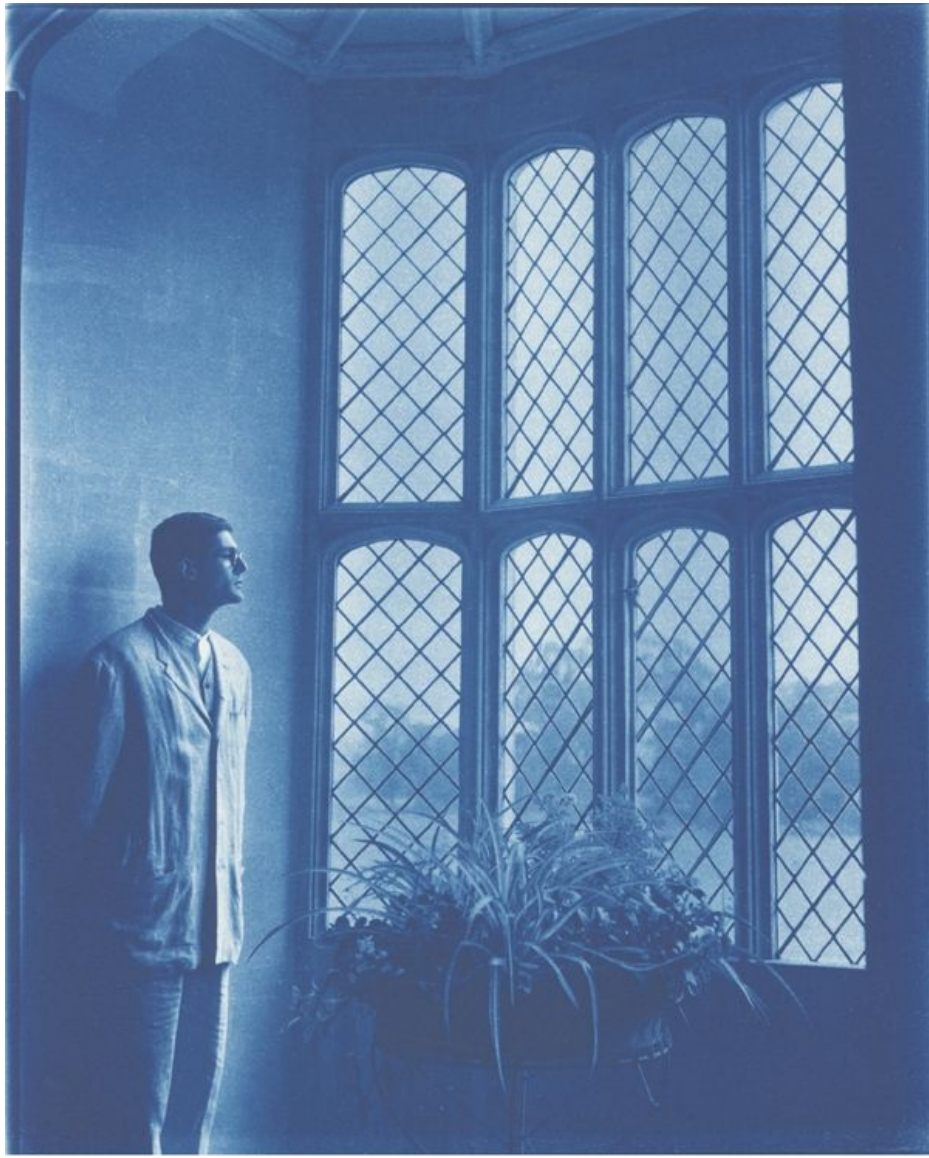
Colorplate 21/Figure 73. J. M. W. Turner, *An Angel Standing in the Sun*, 1846. Oil on canvas. The Tate Britain, London.
© Tate, London 2014.



Colorplate 22/Figures 75–77. Chantal Akerman, *La Captive*, 2001 (film stills).



Colorplate 23/Figure 94. John Dugdale, *Death Mask of John Keats*, 1999. Cyanotype. Courtesy of the artist.



Colorplate 24/Figure 95. John Dugdale, *Self-Portrait at Oriel Window*, 1998. Cyanotype. Courtesy of the artist.

Chapter 5

JE VOUS

IN THE FINAL DECADES of the nineteenth century and the first decades of the twentieth, the tropes that had earlier been associated with the pinhole camera, the camera obscura, and chemical photography began appearing in some surprising places: in painting, literature, and psychoanalysis. When Cézanne described himself as a “recording machine,”¹ and Rilke wrote that *The Sonnets to Orpheus* had been “dictated” to him by a non-human agency,² they echoed what Pope said about the camera obscura and Talbot about the calotype: “It is not the artist who makes the picture, but [rather] the picture which makes ITSELF.”³ They also indicated that they themselves were receivers.

Cézanne and Rilke sought to receive what the world gave them on the “surface” of their psyches, which they conceptualized as a photographic plate. The painter “must silence all the voices of prejudice within him, he must forget, forget, be quiet, become a perfect echo,” Cézanne told Joachim Gasquet. “And then the entire landscape will engrave itself on the sensitive plate of his being.”⁵ “Paris this time was just as I had promised it to myself, difficult,” Rilke wrote Lou Andreas-Salomé in 1913, “and I seem to myself like a photographic plate which is exposed too long, in that I still lie open to what is here, this powerful influence.”⁴ They attempted to transmit what they received to others through their work, just as Leonardo did in the fifteenth century. Unfortunately, though, Cézanne and Rilke weren’t always able to accept what was given to them, because something within them wanted the exact opposite: isolation and autonomy.

Freud also compares the psyche to a photographic plate on which light inscribes images, describes the human subject as the receiver of these images, and talks about an opposing force: one that seeks to exclude the world and replace it with a mental representation. Conscious vision begins with the influx of perceptual stimuli from the external world into the psyche, he writes in *Interpretation of Dreams*. These stimuli are “receive[d]” at the “sensory end” of the psyche, and pass into the unconscious, where—as in the darkened chamber of a photographic camera—they inscribe enduring images. Most perceptual stimuli move from there to the preconscious, and then on to the perception-consciousness “system.” Since this system is incapable of retaining anything, they quickly disappear, making room for new perceptions.⁶

In *Introductory Lectures on Psycho-Analysis*, Freud compares the enduring images that light inscribes on the unconscious to a photographic negative, the unconscious to a room in which negatives are stored, and the images that reach consciousness to a positive print. “Every mental process... exists to begin with in an unconscious stage or phase and that it is only from there that the process passes over into the conscious phase,” he observes, “just as a photographic picture begins as a negative and only becomes a picture after being turned into a positive.” Not every negative “becomes a positive,” though, “nor is it necessary that every unconscious mental process should turn into a conscious one.”⁷ It is also not *possible* for every unconscious mental process to become conscious. Perceptions arrive at consciousness in a “cut-up” form, Freud writes, since only one image can enter at a time.⁸ And some never arrive; they are confined to the unconscious because they are

associated with forbidden wishes.⁹

In a 1924 essay, Freud compares human perception to another implicitly photographic device—one that recalls the pencil of nature, and the kind of “openness” to which Rilke and Cézanne aspired. This device is the “Mystic Writing-Pad,” a children’s notebook with an erasable top layer and an underlying waxy support that retains the traces of what is inscribed with a stylus on the top layer. The unconscious resembles the underlying layer, Freud observes, because its capacity to receive is limited by what has already been inscribed on it. The perception-consciousness system is like the top layer, which retains nothing, but has “an unlimited receptive capacity for new impressions.”¹⁰ A psychic agency with an “unlimited capacity for new impressions” is one into which “fresh ‘vital differences’”¹¹ are constantly flowing—i.e., one similar to the camera obscura and early photography. And although Freud usually privileges the unconscious over the perception-consciousness system, here his sympathies are clearly with the latter.

Elsewhere, though, he associates the psyche with a different kind of photography: the kind that emerged through the industrialization of the medium. Sometimes an image becomes stuck in the “defile” of consciousness, he writes in *Studies in Hysteria*, which prevents new perceptions from entering. It “remains in front of the [subject],” so that he “sees nothing of what is pushing after it, and forgets what has already pushed its way through.”¹² Human desire also resembles a printing press, Freud remarks in “The Dynamics of Transference”; it is continually reproducing the same image. “Each individual... has acquired a specific method of his own in his conduct of his erotic life—that is, in the preconditions to falling in love that he lays down, in the instincts he satisfies and the aims he sets himself in the course of it,” he writes. “This produces what might be described as a stereotype plate (or several such), which is constantly repeated—constantly reprinted afresh—in the course of the person’s life.”¹³

These two kinds of fixity come together in Lacan’s account of the ego, which builds on Freud’s. The ego is the fantasm through which the modern subject attempts to prove that it is sovereign and self-constituting, he argues in several early essays. It is created through a series of unsustainable identifications with external images, which “situate” the subject “in a fictional direction,” which will “only ever asymptotically approach [his] becoming.”¹⁴ The “shadow” of his ego also falls on his objects, rendering his relationship to others narcissistic and rivalrous, and leading to bizarre misrecognitions. A child who beats another child says that he was beaten, and a child who sees another child fall behaves as if he had fallen.¹⁵ The introduction of a third term compounds the problem. The subject now desires “an object desired by someone else,” which not only mechanizes desire, but also diminishes “the special significance of any one particular object.” It becomes “equivalent” to many others,¹⁶ like an industrial photograph. The “rigid structure”¹⁷ of the ego also leads him to project “permanence, identity and substance” onto his objects—qualities that are “very different from the gestalts that experience enables us to isolate in the mobility of the field constructed according to the lines of animal desire.”¹⁸ Lacan characterizes what happens to the phenomenal world when it is perceptually frozen as “formal stagnation,” and compares it to “the faces of actors when a film is suddenly stopped in mid-frame.”¹⁹

The concepts associated with early photography figure even more prominently in *À la*

recherche du temps perdu. Like the Freudian psyche, the one described by Proust—and dramatized by his narrator—is a receptive surface, like a photographic plate, on which sensory “impressions” are traced. These impressions are invisible until we are “back at home” and able to illuminate them with the “lamp” of voluntary memory, and even then our vision is limited, because it casts only a narrow pool of light.²⁰ The stream of images that enters the sensory end of the psyche is as labile as the one that enters the camera obscura, and it retains this lability at the level of the unconscious, or what Proust calls “involuntary memory.” However, it is inert by the time it reaches consciousness because voluntary memory “begins at once to record photographs independent of one another” and to eliminate “every link” and “sequence between the scenes portrayed in the collection which it exposes to our view.”²¹ It also displays only one image at a time, and replaces that one with another only after a long interval; voluntary memory is like a shop in whose window “now one,” and “now another photograph of the same person” is exhibited, and in which each new photograph is “for some time the only one to be seen.”²² Voluntary memory tries to subsume the world to these fixed images. Marcel asks his mother, his grandmother, Gilberte, and Albertine all to play the “leading part” in a play whose plot, incidents, and lines have achieved an “unalterable form.”²³ Consequently, not merely can he visualize only one “photograph” at a time, but it is always the same “photograph”: one structured through and through by an Oedipal logic. “When I lay awake at night and revived old memories of Combray,” the narrator confides, “I saw no more of it than this sort of luminous panel, sharply defined against a vague and shadowy background... broad enough at its base, the little parlor, the dining room... the hall through which I would journey to the first step of that staircase, so painful to climb... and, at the summit, my bedroom, with the little passage through whose glazed door Mama would enter.” It is always summer, and it is always 7 p.m.²⁴

Only “the miracle of an analogy” can lift this spell, and reanimate what the psyche has mortified.²⁵ There is nothing in *À la recherche* that does not rhyme with many other things, but a miraculous analogy requires more than similarity. One half of these double impressions, as Proust calls them, is “sheathed” in an object, and the other half is “prolonged in ourselves.”²⁶ They also link the present to the past, and the psyche to the world. Last, but not least, miraculous analogies issue from a non-human source and reveal themselves to us through a sensory experience that we can neither anticipate nor control. “Whether I considered reminiscences of the kind evoked by the noise of the spoon or the taste of the madeleine, or those truths written with the aid of shapes for whose meaning I searched in my brain,” Proust writes, “where... they composed a magical scrawl, complex and elaborate, their essential character was that I was not free to choose them, that such as they were they were given to me.”²⁷

These “hieroglyphs,” whose “patterns are not traced by us,” form a “book.” Although we are not the author of this volume, it is “the only [one] that really belongs to us.”²⁸ When it arrives, we are able to read it, but no one else can. In order to make this book legible to others, we must give it a form that allows it to be “prolonged” in them, because “every reader is, while he is reading, the reader of his own self.”²⁹ We must develop it, in other words, into a work of art. Although Proust sometimes suggests that the artist has more agency in the aesthetic domain than in the perceptual, at other times he uses the

same terms to describe both of them. “I had arrived... at the conclusion that in fashioning a work of art we are by no means free,” he writes in an important passage in *Time Regained*, “that we do not choose how we shall make it.” The work “preexists” us, and we are obliged “to do what we should have to do if it were a law of nature—to discover it.”³⁰

The most famous of Proust’s miraculous analogies is of course the one activated by the taste of the tea-soaked madeleine, and it establishes the template for the others. When the adult Marcel connects the tea and madeleine that his mother brings him on a rainy Parisian day with the tea and madeleine that his aunt Léonie used to give him in Combray, the parts of her house that he had previously been unable to see rise up “like a stage set” and attach themselves to the “isolated segment” that he could see, “and with the house the town, from morning to night and in all weathers,” and “all the flowers in [his family’s] garden and in M. Swann’s park, and the water-lilies on the Vivonne and the good folk of the village and their little dwellings and the parish church and the whole of Combray and its surroundings.”³¹

IN *The Mottled Screen: Reading Proust Visually*, Mieke Bal refers to the structuring role played by Marcel’s “mental vision” in his narration of *In Search of Lost Time* as a “focalization,” and she shows that many passages in the novel are focalized through the lens of an imaginary camera. “The photographic mechanism can be seen at work in the cutting-out of details, in the conflictual dialectic between the near and the far, and in certain ‘zoom’ effects,” she writes. “It can also be seen in the effects of contrast, which prevent or enable the under- or overexposed image to be seen. It appears in the focusing, when the image oscillates between clarity and indistinction.”³²

In an essay that was the starting point for this book, which I wrote for a volume devoted to Bal, I argued that there are two focalizers in *À la recherche*, “both of whom use the first-person pronoun, have the same name, and are closely related to each other: the Marcel who used to go to bed early, and the one who reflects upon this phenomenon from a subsequent moment in time.”³³ I still think that there are two focalizers in the novel, but I believe that they can be better described through the distinction that I introduced in [chapter 3](#) than the one I used earlier: the distinction between an optical intelligence and a liquid intelligence. I take these concepts from Jeff Wall, who associates optical intelligence with “the projectile or ballistic nature of human vision when it is augmented and intensified” by glass and machinery, and liquid intelligence with “the archaism of water, of liquid chemicals,” that connects photography to memory, the past, and “ancient production-processes.”³⁴ As Wall intimates, optical intelligence is a specifically *human* intelligence. Liquid intelligence is photographic, but it also courses through our psychic veins, and it is the great ocean in which we all swim.

As Brassai points out in his wonderful Proust book,³⁵ when the narrator likens the cup of tea in which he dips his madeleine to the bowl of water in which the Japanese place “little pieces of paper” that are “without character or form” when they are dry, “but, the moment they become wet, stretch and twist and take on colour and distinctive shape, become flowers or houses or people,”³⁶ he is implicitly comparing both of them to the developing bath. The “uneven cobblestones, the stretched napkin, the boot, the spoon tapping a plate, [and] the copy of *François le Champi*” are also “developers.”³⁷ These

miraculous analogies have a profound effect on Marcel's subjectivity. In the opening pages of *Swann's Way*, in which he details some of the memories that were recovered through the tea and madeleine, he, too, stretches and twists, and becomes flowers and houses and people. "For a long time I would go to bed early," the narrator recounts. "Sometimes, the candle barely out, my eyes closed so quickly that I did not have time to tell myself: 'I'm falling asleep.' And half an hour later the thought that it was time to look for sleep would awaken me; I would make as if to put away the book which I imagined was still in my hands, and to blow out the light; I had gone on thinking, while I was asleep, about what I had just been reading, but... it seemed to me that I myself was the immediate subject of my book: a church, a quartet, the rivalry between François I and Charles V."³⁸ During this astonishing meditation, which continues for several pages, there are no "beings," only multitudinous "becomings."

Albertine is another instantiation of liquid intelligence. The first few times Marcel encounters the band of girls, he registers their features, but he has difficulty determining to whom they belong. "Except for one, whose straight nose and dark complexion singled her out from the rest," he confides, ". . . they were known to me only by a pair of hard, obstinate and mocking eyes, for instance, or by cheeks whose pinkness had a coppery tint reminiscent of geraniums; and even these features I had not indissolubly attached to any one of these girls rather than to another."³⁹ Later Marcel "deals" these features into little "heaps,"⁴⁰ attaches names to them, and identifies Albertine as the object of his desire, but she proves as elusive in isolation as she was in the group. Sometimes she is "thin, with a grey complexion, a sullen air, and a violet transparency slanting across her eyes." On other occasions, "happiness [bathes her] cheeks with a radiance so mobile that the skin, grown fluid and vague, [gives] passage to a sort of subcutaneous glaze," or her face draws his desires "on to its varnished surface," but prevents them from "going further."⁴¹

Marcel is "refreshed" by this "spectacle of forms undergoing an incessant process of change," that "recalls that perpetual re-creation of the primordial elements of nature which we contemplate when we stand before the sea,"⁴² and once again it "liquefies" his own ego. "I... developed the habit of becoming a different person," Marcel confides, "according to the particular Albertine to whom my thoughts had turned: a jealous, an indifferent, a voluptuous, a melancholy, a frenzied person."⁴³ So heterogeneous are "the selves who... thought about Albertine," he adds near the end of this passage, that each ought really to have a different name; "I ought still more to give a different name to each of the Albertines who appeared before me, never the same, like those seas... that succeeded one another and against which, a nymph likewise, she was silhouetted."⁴⁴

PROUSTIAN DEVELOPMENT not only resurrects the dead and reanimates the living; it is also conjunctive. The word "and" appears so many times in the periodic sentence with which the madeleine passage ends that we eventually see that there is nothing that could not emerge from Marcel's famous cup of tea. As both Rilke and Benjamin note, this and many other passages in *À la recherche* also connect the novel's readers to the narrator and one another. In a 1914 letter, Rilke describes what would happen if a group of people were to read *Swann's Way* together. "One person or another would read aloud what especially struck home to him out of the inexhaustible pages and would hold it out in a specific way to the general opinion," he writes, ". . . [and] to many a one his own childhood would

appear out of half-oblivion, and one would pass from tale to tale far into the summer night, but also far into the mutually true, rich and alive.”⁴⁵ Benjamin arrives at a similar conclusion in “The Image of Proust.” “When Proust in a well-known passage described the hour that was most his own,” he observes, “he did it in such a way that everyone can find it in his own existence. We might almost call it an everyday hour.”⁴⁶

But important as this community is, it is not the republic for which we have been waiting. Only those who are willing to embrace an even more miraculous analogy are admitted to this republic: the one called “chiasmus.” Marcel acknowledges that the relationship between himself and Albertine is reciprocal and reversible in the passage with which I ended the last section, but he refuses to affirm it. Although he “ought”—as he puts it—to give a different name to each of the Albertines who appeared to him, and each of the selves who thought about her, he does not do so. And in a related passage, in which the narrator uses the distinction between a negative and a positive photograph to describe the similarities that link him to Gilberte and Albertine, thereby showing that he sees the “recto/verso” as a relational principle, he represents himself as the author of this analogy. “If in this craze for amusement Albertine might be said to echo something of the old original Gilberte,” he observes, “that is because a certain similarity exists, although the type evolves, between all the women we successively love, a similarity that is due to the fixity of our temperament... They are, these women, a product of our temperament, an image, an inverted projection, a negative of our sensibility.”⁴⁷

Proust also turns in making this argument to a different definition of photography: the one established through the industrialization of the medium. Suddenly the photographic image is a representation instead of an analogy, a human construct instead of a photogenic drawing, and fixed rather than dynamic. The distinction between the positive and the negative is also absolute, and the development process irreversible. The narrator denies that this is a reciprocal relationship in another way as well: by claiming the first person pronoun not just for himself but for all other men, and by using the third-person pronoun to designate the many women desired by this male monolith.

This is not the only occasion on which the narrator attempts to negate the chiasmus, or that he turns for this purpose to industrial photography. In another passage in *Within a Budding Grove*, Saint-Loup offers to take a photograph of Marcel’s grandmother. Since she knows that she will soon die, and sees this as a way of providing her grandson with a lasting image of herself, she accepts his offer “with a joyful air,” and searches for a flattering hat and her “nicest dress.”⁴⁸ Marcel is extremely irritated by his grandmother’s “vanity,” but rather than accepting her offer to forgo the photograph, he encourages her to have it taken, and then ruins it with a few “sarcastic and wounding words.”⁴⁹ As Bal points out, this story resurfaces a number of times,⁵⁰ and on one of the occasions when Marcel returns to it he admits that what really angered him was not his grandmother’s vanity but rather the fact that she was orienting herself toward Saint-Loup’s look—a look to which he had no access. To make matters worse, the unknowable person she was on her way to becoming would be authenticated and immortalized by the camera, and this would prove that his grandmother was not “created solely” for him.⁵¹ He tries to recover his egoic footing by producing a counter-photograph.

In a related passage, Marcel enters the drawing room and sees his grandmother absorbed in thoughts that she has never allowed him to “see.” For a moment, he becomes a “spectator to [his] own absence”; he realizes that she continues to exist when he is not there, and that even when he is with her, he is not seeing all of her. This alarming thought yields to the bizarre fantasy that a stranger has just entered the room, and is photographing his grandmother as she would appear if he were not there to protect her. What this imaginary camera sees is a “red-faced” woman sitting on a sofa beneath a lamp, who is “heavy and vulgar, sick, day-dreaming, [and] letting her slightly crazed eyes wander over a book.”⁵² Although this apparatus is clearly a fantasmatic extension of his own look, Marcel spends most of the rest of the paragraph deploring the photographer’s cruelty. He also maintains that the unflattering photograph is *objectively* true.

Albertine’s look denotes an even more radical alterity—and one that includes Marcel, thereby making him a stranger to himself. “‘If she had seen me, what could I have represented to her?’” he asks himself later in the same volume. “From the depths of what universe did she discern me? . . . If we thought that the eyes of such a girl were merely two glittering sequins of mica, we should not be athirst to know her and to unite her life to ours. But we sense that what shines in those reflecting discs... [are] the dark shadows, unknown to us, of the ideas that the person cherishes about the people and places she knows.”⁵³

Although there are no explicit references to photography in this passage, Marcel expresses his desire to plumb the depths of this “universe,” and he later attempts to satisfy this desire by kissing her. When he approaches Albertine for this purpose, she turns not just into a grainy photograph, but one that can be viewed from a potentially infinite number of angles, only one of which can be occupied at a time. “At first, as my mouth began gradually to approach the cheeks which my eyes had recommended it to kiss,” Marcel writes, “my eyes, in changing position, saw a different pair of cheeks; the neck, observed at closer range and as though through a magnifying-glass, showed in its coarser grain a robustness which modified the character of the face.”⁵⁴

In all of these passages, what activates the narrator’s anxiety and motivates him to aim a mental camera at the world is the discovery that there are blind spots in his field of vision. He reaches for a Pistolgraph instead of a pistol because these visual occlusions are part of what Benjamin would later call the “optical unconscious.” At its most rudimentary, the optical unconscious consists of those aspects of the visible world that are too small for us to see, or that occur too quickly for us to register, but which photography and film make available through close-ups and slow motion. But photography also reveals another kind of optical unconscious: it shows us that the world presents itself differently to the camera than to the human eye.⁵⁵

If the world discloses a different side of itself to the camera than it does to us, then we can see only what it permits us to see. It must also present different aspects of itself to different looks, and since we are part of the world, we—too—must reveal dimensions of ourselves to others that are unavailable to us. We cannot neutralize the threat that this poses to our unity and autonomy by underscoring the subjectivity of human vision, because perspective is not something we bring to visual phenomena. It is internal to their Being, and it dramatically restricts what we can know about ourselves and the world. The

optical unconscious proved considerably more difficult for the modern subject to assimilate than the discovery that the photographic image derives from an external source, and even some of the most ardent practitioners of photography by other means were unable to accept it.

IN THE PARAGRAPH after the one in which Marcel compares Albertine to a constantly changing photograph, he talks about photographs into which multiple viewpoints have been crammed, presumably so as to overcome the limits of human vision. He emphasizes the absurdity of this project by comparing it to his own attempt to get behind Albertine's eyes by kissing her, and by suggesting that the photographic image has a directly contrary effect upon the human eye. "I can think of nothing that can to so great a degree as a kiss evoke out of what we believed to be a thing with one definite aspect the hundred other things which it may equally well be," he wryly observes, "since each is related to a no less legitimate perspective."⁵⁶

Proust also tries to make room for others in the last volume of his novel by abstracting away from sensory experience to universal laws, but this leads to a generalization of the first-person pronoun, rather than a greater accommodation of the second.⁵⁷ A new Marcel also emerges in some passages in *Time Regained*—one whose perceptual coordinates are closer to "radiography" than to photography. As the narrator suggests in *Within a Budding Grove*, this is a mortifying optic; it peels away the "tiny particles of epidermis whose varied combinations form the florid originality of human flesh" to reveal the "joyless universality of a skeleton."⁵⁸ Marcel recoils from this kind of looking in the second volume of *In Search of Lost Time*, but he later justifies it as the necessary condition for art making. A book is "a huge cemetery in which on the majority of the tombs the names are effaced," he writes in *Time Regained*.⁵⁹

There is one passage in the last volume of Proust's novel, though, where the narrator not only acknowledges that the world reveals different aspects of itself to every seer but also expresses the desire to leave his cork-lined room, and reenter the "loud, clamoring, semi-visible world."⁶⁰ He stops talking about art as the purveyor of universal truths and begins thinking of it as the agency through which looks that would otherwise remain completely sealed off might somehow communicate with one another. "Through art alone are we able to emerge from ourselves," Proust writes in *Time Regained*, "to know what another person sees of a universe that is not the same as our own and of which, without art, the landscapes would remain as unknown to us as those that may exist on the moon."⁶¹ And although he is no closer to uttering the second-person pronoun here than he is when he characterizes Albertine as "a product of [his] temperament," he is clearly trying to make the first-person pronoun a lot more capacious.

THE REVERSE FIELD that was disclosed through the negative/positive distinction did not disappear after the industrialization of photography; it remained stubbornly in place, and although neither Sartre nor Merleau-Ponty links it to the so-called "medium," they are obsessed with it. Both philosophers also respond to the passage in which Proust attempts to make room for other landscapes and looks. In chapter 3 of *Being and Nothingness*, Sartre tells a story about a man who visits a public park. The man is alone at first, and everything seems to radiate out from his look, but then someone else enters the park, who perceives it from a different position, and toward whom the "raw green" of the lawn turns

a different “face.”⁶² The “whole universe” slides away from him, and toward the interloper.⁶³ The man tries to recover his equilibrium by reasoning that since he sees the latter, he is still the perceiving subject, and the Other the object of his look, but he is prevented from doing so by an even more distressing realization: the realization that the Other is also looking at him. What is true of the “raw green” of the lawn is also true of him; he turns a different face to the Other than he does to himself, and it will forever elude him.

This is a reversible but not a reciprocal relationship; either one sees or one is seen. The same principle obtains at the level of language; Sartre narrates the story from the first man’s perspective, in direct discourse, and he refers to the second man with the third-person pronoun. At the outset, “I” means “the one who sees,” and “he” means “the one who is seen,” but at a certain point the speaker realizes that “the truth of ‘seeing-the-Other’” is “‘being-seen-by-the-Other.’” Since this is an unavoidable objectification, “I” must signify the one who is seen. “Thus I, who in so far as I am my possibles, am what I am not and am not what I am—behold, now I am somebody!” he exclaims. “And the one who I am—and who on principle escapes me—I am he in the midst of the world in so far as he escapes me.”⁶⁴ But the first-person pronoun is nothing without the second, and it soon devolves into the third.

Merleau-Ponty responds to this section of *Being and Nothingness* as well as to the passage which Sartre attempts to rebut in *The Visible and Invisible*. He begins by not only agreeing with a number of Sartre’s claims but strengthening them. If two men entered a park, he writes, the “raw green” of the landscape would indeed turn a different “face” to each of them, since we all have our “own depth,” and this depth is “backed up” by what we see. We “espouse” the aspects of the visible world with which we are in “pre-established harmony”—with the things that are the equivalent “on the outside” of what we are “on the inside.”⁶⁵ What the second man saw when he entered the park would also escape the first. The face that the world turns toward us is “only for our vision and our body”; it cannot be seen by anyone else. And since it shows different aspects of itself to other seers, what each of us sees is only the “surface of an inexhaustible depth.”

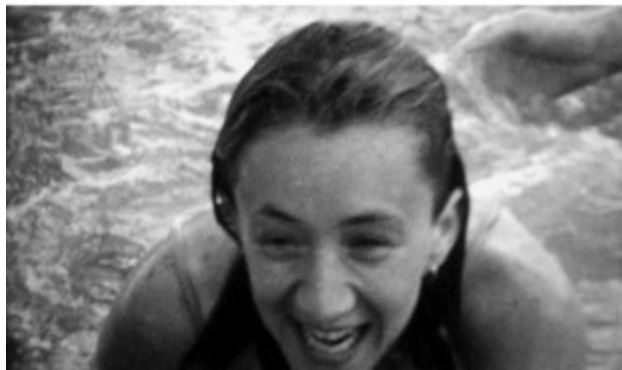
But once he has detailed these points of commonality, Merleau-Ponty parts company with Sartre and aligns himself with Proust. He extends what the novelist says about art to speech, and he makes this linguistic mediation one of the cornerstones of his phenomenology. Our perceptions are not hermetically sealed, Merleau-Ponty argues, because language allows us to share them with one another. When I look at a landscape with someone else, and each of us describes what we see to the other, “the individual green of the meadow under my eyes invades his vision without quitting my own,” and I “recognize” his green in mine. Our landscapes “interweave,” and we realize that “it is not *I* who sees, or *he* who sees,” but rather a “vision in general” that sees, and that “inhabits” both of us.⁶⁶

Merleau-Ponty clearly grasps the significance of the pronominal antithesis that figures so prominently in Sartre’s account of the look, because he emphasizes it here. He also makes dialogue the agency of its resolution. Oddly, though, he does not utter the word on which all dialogue depends; instead of replacing the third-person pronoun with the second, he leaps to “vision in general.” He thus inadvertently promotes *impersonality*, instead of

relationality, just as Proust does in the final volume of his novel. I want to end this chapter with a work that satisfies all three definitions of the chiasmus, and that will help us to see how interdependent they are: Chantal Akerman's filmic "renovation"⁶⁷ of *In Search of Lost Time*, *The Captive* (2001).

THE CAPTIVE opens with credits over a 35mm nocturnal shot of the sea. This shot—which comes slowly and moodily into focus—is accompanied by the sound of crashing waves. The transition from it to the film "proper" is unusually smooth, since the first scene also begins with a frontal shot of a seascape, accompanied by the sound of waves. Now, though, the sun is high in the sky, and a group of girls are playing in the water. This shot is also grainier than the one that precedes it, and it is followed by a series of handheld and equally grainy shots of the girls and the water. The sound of a film projector competes with—and eventually replaces—the sound of waves, and from time to time we hear the "click" of a still camera.

Two girls leave the water and approach the camera: Ariane and Andrée, Akerman's Albertine and Andrée. They pause briefly in front of the camera, allowing the photographer to study their faces, and their friends gather around them. Then the girls begin playing with a soccer ball on the beach, and the image becomes once again hard to read. The photographer attempts to follow their movements, but the jerkiness of his handheld camera renders them even less intelligible. Eventually he manages to isolate Ariane from the others, and he moves from a close-up to an extreme close-up of her face.



Figures 75–77/Colorplate 22. Chantal Akerman, *La Captive*, 2001 (film stills).



Figures 78–80. Chantal Akerman, *La Captive*, 2001 (film stills).

Akerman cuts away from this close-up to a 35mm shot of Simon, the counterpart in her film for the narrator in Proust’s novel. He stands beside a projector, which he is using to screen a film. It is a home movie, presumably shot by him, and the source of the grainy images at which we have been looking. The projector permits us to identify the mechanical “whirr” that competes with and eventually drowns out the crashing waves. At first, it also seems responsible for the mysterious “click,” since Simon repeatedly stops the projector and rewinds a bit of film, and each time he does so, we hear this sound. Before long, though, it becomes evident that the “click” is the auditory exteriorization of a *mental* camera. Akerman also treats the amateur camera and the film projector as perceptual metaphors. She uses the blur that results when unpredictable movements are filmed with a handheld camera, and then re-photographed with a higher-resolution camera, to depict the “spectacle of forms undergoing an incessant process of change”⁶⁸; the clicking sound to dramatize Simon’s perception, which transforms this mobile beauty into a series of still photographs; and the stopping and starting of the projector to suggest another sort of arrestation—that through which the ego attempts to stabilize itself, and master the world.⁶⁹

As the camera holds on Simon, he says, “*Je... je... je... vous.*” Since he looks at Ariane as he utters these words, she is obviously the referent for one of them, but it is impossible to determine which, since he could be speaking either for her or for himself. These

pronouns become even shiftier when the camera cuts back to the home movie. Ariane and Andrée stand together on the beach, against the backdrop of the sea. They are wrapped in towels, and lean into each other like lovers, but—because they stand with their backs to the sun—their faces are difficult to make out. As we look at this ambiguous shot, we hear Simon utter the following words, from an off-screen position: “*je... je vous... je vous... je vous aime bien.*”



Figure 81. Chantal Akerman, *La Captive*, 2001 (film still).



Figure 82. Chantal Akerman, *La Captive*, 2001 (film still).

Since “*vous*” is the plural as well as the formal version of the second-person pronoun in French, its field of possible referents now expands to include Andrée. Initially, this expansion seems to secure Simon in the position of the “*je*,” but before long another possibility emerges: the possibility that the first- and second-person pronouns are reversible designators for Ariane and Andrée. The camera returns to Simon, who repeats these words, but this time he smiles as he speaks, and there is a lilt to his voice. It then

cuts back to the home movie, and remains facing in this direction until the end of the scene. Simon approaches the screen, sits down in front of it, and presses his face against Ariane's image. His head forms an oversized shadow in the lower-left frame. From this strange position, which is simultaneously inside and outside the home movie, Simon again says, "*Je vous aime bien*." The emphasis now falls as much upon the last two words as the first two. In this iteration, "*aimer bien*" means not only "to love a lot," but also "to love well."

In *The Captive*, as in the novel it analogizes, the central male character derives erotic gratification from pressing against the female body. Proust represents this as a masturbatory sexuality, but in *The Mottled Screen* Bal links it to "the image of the breasts of two women pressed flat against one another" that Marcel sees while watching Albertine and Andrée dance together, and that "plunges" him into "jealous rage."⁷⁰ As we have already seen, physical contact is also an important part of Talbot's photographic process, and of Merleau-Ponty's chiasmus, which is tactile as well as visual. Akerman retains this aspect of the Proustian narrative, but she makes it a source of female as well as male pleasure.



Figure 83. Chantal Akerman, *La Captive*, 2001 (film still).



Figure 84. Chantal Akerman, *La Captive*, 2001 (film still).

Simon climaxes twice while pressing against Ariane's body, and both times she also manifests extreme sexual pleasure. She enjoys this activity, she explains later in the film, because it is non-invasive—because it does not encroach upon her physical or (even more importantly) her psychic interiority. She is therefore free to think about Andrée while experiencing corporeal pleasure with Simon, i.e., to be with both of them at the same time.⁷¹ The second time he says "*Je vous aime bien*," he acknowledges that his own pleasure derives from the same source—that he loves Ariane because she and Andrée love each other. The third time, he goes even further: he affirms their right to address these words to each other. And since by doing this, he loves them *well*, he also finds his own way back to the "*je*."

This scene relies heavily upon the shot/reverse shot formation. Since this device is often

used within normative cinema to construct sexual difference and conceal the presence of the camera, Akerman ostentatiously avoids it in two of her most celebrated films, *Jeanne Dielman* (1975) and *News from Home* (1976). This is not, however, the role for which it is “destined.” The shot/reverse shot is structurally linked to the recto and verso of the camera obscura’s image stream and Talbot’s double reversals, and it houses the same power. Akerman mobilizes this power here, through another “renovation.” Ariane and Andrée are separated from Simon by the fourth wall, so they shouldn’t be able to return his look, but they miraculously *do*. After he acknowledges the interdependence of his desire for Ariane, and hers for Andrée, and affirms the girls’ right to say “*je vous aime bien*” to each other, they respond by smiling first at each other, and then at him. And when Simon walks over to the screen, and presses his head against Ariane’s image, *he* responds to *their* response.

Akerman often signals her authorial presence by correlating the height of the camera to her own look—i.e., by positioning it lower than usual.⁷² She follows this practice when filming Simon, but because these shots establish him as the source of the home movie, this is easy to miss. However, in the last shot of this scene, Akerman alerts us to the fact that there is a second focalizer in a number of different ways: by not moving her camera when Simon does; by continuing to film the screen from a standing position after he sits down; by dramatizing the lateral distance separating him from the camera by situating his head in the left corner of the image; and by showing Ariane and Andrée looking away from him, toward another seer.



Figure 85. Chantal Akerman, *La Captive*, 2001 (film still).



Figure 86. Chantal Akerman, *La Captive*, 2001 (film still).

We recognize this focalizer from other Akerman films—not just as a formally rigorous eye, but also as a person named “Chantal,” who is Jewish, Belgian, and a lesbian. The parallels between *The Captive* and *Je tu il elle* (1974) are particularly striking. In the latter film, Akerman plays a lesbian who seduces a former girlfriend, and during their lovemaking the two women press their bodies passionately together. The title of the film also consists entirely of pronouns. Chantal is the only character who appears in every scene, which might seem to entitle her to the “*je*,” but there are also two other claimants to this position, and times when she is more closely aligned with one of the other pronouns. In the second part of the film, she is picked up on the side of a road by a truck driver. He commandeers the first-person pronoun by doing most of the talking, thereby assigning the second-person pronoun to her. Chantal later gives him a “hand-job,” at which point she could be a “you,” a “she,” or an “I,” and he a “you,” a “he,” or an “I.” In the scene in which she visits her former girlfriend, each exercises power, and then has it wrested away from her by the other. The “I” and “you” shift positions at a dizzying rate, both literally and metaphorically, and the surprisingly frank way in which Akerman films their lovemaking marks both of them as a “she.” As Ivone Margulies so elegantly puts it, the four pronouns in the title of the film “seem to be on call, performing rituals of abeyance.”⁷³

Things are every bit as labile in *The Captive*, both within the fiction and at the level of the enunciation. Here, however, Akerman is less contestatory. She emphasizes the impossibility of replacing Simon’s look with hers by depicting it as a blind spot within her own field of vision. She also presents her look as a *second* vantage point from which to observe and desire the band of girls, rather than an alternative to it. Last, but not least, Akerman shows these two looks meeting at the site of Ariane’s body, like the landscape invoked by Proust, Sartre, and Merleau-Ponty. If we were to translate this meeting into language, it would read: “*je... vous... je vous.*” This chapter is the site of a similar exchange. In it, two old friends meet each other through a book they both love, and give and receive the “you.”



Figure 87. Chantal Akerman, *Je tu il elle*, 1976 (film still).



Figure 88. Chantal Akerman, *La Captive*, 2001 (film still).

POSTHUMOUS PRESENCE

IN 1936, Walter Benjamin produced the theory for which George Eastman's 1888 camera seemed to call. The photographic image isn't analogical, he announced in "The Work of Art in the Age of Its Technological Reproducibility," and it doesn't originate in the world; it is, rather, a reproduction, generated by a machine. The medium is also a tool for us to use as we see fit: for generating evidence, disseminating images, expanding the field of human knowledge, and effecting political change. Benjamin's relationship to photography is so unquestioningly instrumental that he even emphasizes the essay's own use-value in its 1938 version. "In what follows," he writes in the introduction, "the concepts which are introduced into the theory of art differ from those now current in that they are completely useless for the purposes of fascism. On the other hand, they are useful for the formulation of revolutionary demands in the politics of art."¹

In *The Promise of Social Happiness*, the companion volume to this book, I will trace the torturous train of thought that led Benjamin to this argument, and explore its consequences for leftist thought and art making. I will also talk about three moments in the postwar period in which the photographic image recovered its saving power: the one in which Susan Weil and Robert Rauschenberg made their cyanotype photograms and Rauschenberg his early combines; the one in which a group of artists began using the photographic image as the basis for a new kind of figurative painting; and the one in which large-format photographs began appearing on the walls of museums and galleries. In the concluding chapter of this book, I want to show how alien "The Work of Art" is to Benjamin's own thought, and to explore his *other* theory of photography—the theory that he develops in an earlier essay.

The central concept in Benjamin's 1936 definition of photography, and the vehicle through which he links it to the "masses," is "sameness." "The stripping of the veil from the object, the destruction of the aura, is the signature of a perception whose 'sense for sameness in the world' has so increased that by reproduction it extracts sameness even from what is unique...," he proclaims in "The Work of Art." "The alignment of reality with the masses and of the masses with reality is a process of immeasurable importance."² Before writing this essay, though, Benjamin was concerned with a very different concept: *similarity*. He returned to it again and again in the 1920s and early 1930s, and defined it in ways that recall Proust's analogies.

This was not entirely fortuitous. In 1925, Benjamin accepted a commission to translate part of the fourth volume of Proust's great novel, *In Search of Lost Time*, and between 1926 and 1930, he and Franz Hessel co-translated three and a half more volumes.³ During this period, Proust was—as Marcus Bullock and Michael W. Jennings put it—"never far from his mind."⁴ Benjamin was absorbed in *The Guermites Way* throughout his 1927 stay in Moscow, and discussed passages from it and other volumes with Asja Lacis and Bernhard Reich.⁵ He also talked about *In Search of Lost Time* with André Gide during a 1928 visit to Paris, and he devotes a large part of his "Conversation with André Gide" to this exchange.⁶

In 1929, Benjamin published an essay about Proust's "impassioned cult of similarity." "The similarity of one thing to another which we are used to, which occupies us in a wakeful state," he writes there, "reflects only vaguely the deeper similarity of the dream work in which everything that happens appears not in identical but in similar guise, opaquely similar to itself."⁷ Every day these analogies "unravel," and every night they are "woven anew." Proust didn't want any of these "intricate arabesques" to "escape him," so he turned his days into nights.⁸ Although Benjamin goes to great lengths to separate himself from the novelist in the second half of this essay, it is clear from this and many other passages in the first half that he is a devotee of the same cult.

In the *Moscow Diary* he not only acknowledges as much, but also compares his own project to Proust's. The passage on Giotto's *Charity* in *Swann's Way* "corresponds at every point to what I myself [try] to subsume under the concept of allegory," he wrote on January 18, 1927, and the novel's "lesbian scene"—which hinges on a photograph—to the "thrust of my baroque book."⁹ There are also many echoes of Proust's novel in *A Berlin Chronicle*, Benjamin's first version of his childhood story. The narrators of both works—as Katja Haustein notes—talk about going to the theater, playing in the park, reading, speaking on the telephone, waiting for an absent mother, and "sleeping, dreaming and awakening in [a] dark room."¹⁰

In 1930, Benjamin conducted two important conversations with Adrienne Monnier, an anonymous writer and the owner of a Parisian bookstore, Aux Amis des Livres, and he describes both of them in his "Paris Diary." In the first, which occurred on February 4, he noted how much easier it is to "enjoy" works of art in photographs than in person, since their complexity is diminished. Monnier defended photographic reproductions of works of art through an argument that Benjamin would later make his own. "Great creations," she told him, "cannot be thought of as the works of individuals. They are collective objects, so powerful that a condition of enjoying them is to reduce them in stature. In the last analysis, the methods of mechanical reproduction are a technique for reducing them. They allow people to obtain the degree of domination over the works without which they cannot enjoy them."¹¹

Benjamin was clearly struck by Monnier's response, because he remarks in the final sentence of this entry that her "theory of reproduction" may prove "valuable" to him, but he was not yet ready to replace similarity with sameness. In the second conversation, which took place six days later, Monnier said that she was revolted by Proust's "transfigur[ation]" of "high society," and the sexual ambiguity of his characters. She spoke "with fanaticism, almost hatred, of Albertine," Benjamin writes, "who was so absurdly like *ce garçon du Ritz*—Albert—whose burly body and masculine gait she could always sense in Albertine."¹² "The hundred doors that offer an entry into his world have remained unopened...," he responded. "In order to understand Proust, it is vital to realize that his true subject is the *reverse side*."¹³

Benjamin seems to have been thinking as he uttered these words about two kinds of Proustian reversal: the gender reversal through which Albertine was created, and the sexual "inversions" through which (according to the doctrine of the day) a man comes to love men, instead of women, and a woman to love women, instead of men. But there are

also two other kind Proustian reversals—the one that lies at the heart of the photographic image, and that Marcel associates with perception, and the one towards which he gestures when he says that Albertine is an “inverted projection” or a “negative” of his “sensibility.” As we saw in the previous chapter, the second of these reversals is reversible, but Marcel tries to arrest it; he refuses to acknowledge that he is also the “inverted projection” or “negative” of Albertine’s “sensibility.”¹⁴

Benjamin was clearly thinking of these reversals as well, either during his conversation with Monnier, or in the months that followed, because in an astonishing May 6, 1931, diary entry, he does what Proust’s narrator is unwilling to do. He confesses that the relationship between himself and the women in his life is a two-way street. “Genuine love makes me resemble the woman I love...,” he writes. “This transformation into the realm of the similar... was something that I experienced most powerfully in my relationship with Asja, with the result that I discovered many things in myself for the first time... [but] I have come to know three different women in the course of my life, and three different men in myself.”¹⁵ And in *A Berlin Chronicle*, Benjamin compares the process through which an unconscious memory becomes conscious to the development of a negative,¹⁶ just as Proust does in *Time Regained*.

But *A Berlin Chronicle* also contains a passage in which Benjamin admonishes himself *not* to indulge his predilection for similarity—i.e., *not* to be like Proust. “He who has once begun to open the fan of memory never comes to the end of its segments,” this passage reads. “No image satisfies him, for he has seen that it can be unfolded, and only in its folds does the truth reside... and now remembrance progresses from small to smallest details, from the smallest to the infinitesimal, while that which it encounters in these microcosms grows ever mightier. Such is the deadly game that Proust began so dilettantishly.”¹⁷ Benjamin wrote *A Berlin Chronicle* while staying in Ibiza for the first time, a period during which he realized that he would soon have to leave Germany. He summoned the memories that would be most likely to awaken homesickness in his exiled psyche, as he explains in the 1938 version of *Berlin Childhood*, in the hope of “inoculating” himself against it. Since a vaccine works only when administered in small quantities, he sought to “limit” the “effect” of these memories by telling himself that the world they represented was not just *personally* unavailable, it was *socially* “irretrievable.”¹⁸ The analogies that connected each of these memories to a host of other memories rendered that task impossible, as did their capacity for entering into new ones.

Benjamin was consequently unable to heed his own admonition. He returned to the topic of similarity again in 1933, through what he calls “natural correspondences.”¹⁹ Like Proust’s analogies, these correspondences are dynamic and unmasterable, and they “flash up fleetingly out of the stream of things,” at a particular moment in time, and then “sink down once more.”²⁰ They also call for a response from us, and “awaken” the faculty through which we provide it: the mimetic faculty.²¹ Although Benjamin cannot prevent himself from pursuing the similarities that link everything to many other things, he again tries to “limit” their “effect,” this time by mobilizing a linguistic shield. Our “mimetic powers” are much weaker than those of our predecessors,” he argues, so we do not apprehend similarity the way they did: through the senses.²² We experience it, instead,

through language,²³ the agency through which we “master” our perceptions and our memories.²⁴

SINCE THERE ARE no references to photography or Proust in “Doctrine of the Similar,” and Benjamin subsequently adopted Monnier’s account of the medium, she might seem to have had the last word in both of their conversations. Three of the most celebrated passages in the essay are, however, at odds with its primary claims. The one that begins “What then is the aura?” locates the beholder in a landscape, instead of a fascist rally or a prestigious museum, and interweaves three sets of ostensibly opposed terms through a kind of call and response between the beholder and the landscape: time and space, proximity and distance, and the human psyche and the physical world.²⁵

The beholder is distant from the mountain and the bough of the tree because he knows that they are not a figment of his imagination; they are real, solid, and unassimilable. But he is also as close to them as any of us can be to another being, because he follows their perceptual lead. The bough casts its shadow on the beholder, and the beholder traces the outlines of this shadow; the mountain range exhales its aura into the atmosphere, and the beholder breathes it in. Every time I read this definition of the aura, I think of a passage from *The Visible and the Invisible*. “The look... envelops, palpates, espouses the visible things, as though it were in a relation of pre-established harmony with them... .,” it reads. “What is this prepossession of the visible, this art of interrogating it according to its own wishes, this inspired exegesis?”²⁶

Benjamin describes the aura in similar terms in another passage from the second version of “The Work of Art,” and this time he attributes an even more active role to the perceptual world: that of beckoning. He also suggests that photography was once the vehicle of this appeal, instead of the agency through which it was silenced. “In the fleeting expression of a human face, the aura beckons from early photographs for the last time,” Benjamin observes. “This is what gives them their melancholy and incomparable beauty.”²⁷ If these two passages constituted everything that he had to say about the aura, his call for its destruction would be incomprehensible. Most of us would not rush to sever the connection between the beholder and the landscape, or greet the withdrawal of the human face with joy. It is not only that the prohibition on beauty is no longer politically justifiable; it is also that the narrative enacted in the first passage and described in the second is dispiritingly Cartesian. Agency is wrested away from perceptual forms, so that it can be transferred to the human look, and this transfer leads to the triumph of instrumental reason, and the derealization of the phenomenal world.

The passage in which Benjamin discusses the optical unconscious is as rife with contradictions as these two accounts of the aura. It begins with a startling claim: the claim that the camera has thrown us off balance, and that the “social function” of film is to help us reestablish our equilibrium. In the middle of the next paragraph, we learn why photography is so destabilizing. The world discloses different aspects of itself to the camera than it does to us. “Clearly, it is another nature which speaks to the camera as compared to the eye,” Benjamin writes. “‘Other’ above all in the sense that a space informed by human consciousness gives way to a space informed by the unconscious.”²⁸ As the frame around the photographic image also compels us to see, every disclosure is a partial disclosure—the world vastly exceeds our capacity to see it, even with the

assistance of the camera. Benjamin refers to this invisibility at the heart of all visibility as the “optical unconscious,” and he likens it to the “instinctual unconscious.”

These three passages feel out of place because they are remnants of an earlier essay, “Little History of Photography” (1931). The second half of this essay is a dry run for “The Work of Art”; it offers a technological account of photography, opposes the medium to art, and associates it with the destruction of the aura.²⁹ Benjamin also treats photography as a tool, and associates the long exposures of early photography with the seemingly limitless amounts of time enjoyed by its bourgeois clients.³⁰ And in the last paragraph of “Little History,” he transforms the camera into a weapon, and turns it against the world. “It is no accident that Atget’s photographs have been likened to those of a crime scene,” he writes there. “But isn’t every square inch of our cities a crime scene? Every passer-by a culprit? Isn’t it the task of the photographer... to reveal guilt and to point out the guilty in his pictures?”³¹ It would be hard to find a clearer articulation of the aesthetics of exposure, or a more vivid dramatization of the politics on which it is based.

However, in the first half of “Little History” Benjamin distinguishes industrial photography from preindustrial photography, instead of art, and privileges the latter, rather than the former. “The fog that surrounds the beginnings of photography” is not “quite as thick as that which shrouds the early days of printing,” he writes in the opening sentence of the essay, since the time was “ripe” for its invention; the camera obscura had been around for centuries, and scientists began trying to “capture” its images long before several of them succeeded in doing so. In spite of our familiarity with the prehistory of photography, though, we know little about the early history of the medium itself, since it was industrialized as soon as its patent problems were solved, and its “rapid ongoing development has long precluded any backward glance.”³²

The motor force behind the technological innovations that have prevented us from looking back is capitalism; the product with which industry made its initial “inroads” into the medium was the calling card, and its first manufacturer became a “millionaire.” Capitalism discouraged us from looking back because it relies on technological “progress.” There may also have been something in early photography that pointed in a different direction—something incompatible with capitalism. “It would not be surprising if the photographic methods which today, for the first time, are harking back to the preindustrial heyday of photography had an underground connection with the crisis of capitalist industry,” Benjamin enigmatically observes.³³ But whether or not this was the case, one thing is undeniable: it was in the decade before its industrialization that photography “flowered.” If we want to know what the medium is, we need to look back, and Benjamin does that in more than one way in the next paragraph.

This paragraph, which is one of the most important passages that he ever wrote, begins with a description of the daguerreotype that emphasizes its uniqueness, its non-reproducibility, and its elusiveness—i.e., everything that distinguishes it from mechanical reproduction. “Daguerre’s photographs were iodized silver plates exposed in the camera obscura,” he writes, “which had to be turned this way and that until, in the proper light, a pale gray image could be discerned. They were one of a kind.”³⁴ Although it is not marked as such, this description of the daguerreotype comes from *Der Geist meines Vaters*, Max

Dauthendey's memoir of his father, Karl Dauthendey.³⁵ This is the first of a series of authorial transpositions that demonstrate how central the "mimetic faculty" was to Benjamin's thought.

Karl Dauthendey was both one of the first German daguerreotypists and an early calotypist, and *Der Geist meines Vaters* documents his life as a photographer and his thoughts about the medium. Although he began his career in Leipzig, he spent most of his adult life in St. Petersburg, and married two Russian women of German descent. The first wife was Jewish, as we learn in Max's memoir, and her family rescued Karl from penury. She committed suicide soon after the birth of their sixth child. The second wife was eighteen years younger than her husband, and also died at a very young age. Max Dauthendey, the last child from Karl's second marriage, was a writer and impressionist painter. I mention all of this because Benjamin is in close dialogue with both Dauthendeys throughout this paragraph, and because Karl's marital history figures prominently in the dialogue.

Although Benjamin looks back to the daguerreotype instead of the calotype at the beginning of "Little History," most of the photographs he discusses are calotypes, and he also echoes many of Talbot's claims. Photography is neither a human representation nor a tool, he argues, but rather one of the primary means through which the world discloses itself to us. What it reveals is uninformed by human consciousness—not just because it exceeds our optical capacities, but also because nature "speaks" a different language to the camera than it does to the human eye: one based on analogy. Photography shows us that the "horse willow" reprises "the forms of ancient columns," that the "ostrich fern" resembles a "bishop's crosier," that "chestnut and maple shoots" recall "totem poles," and that the "fuller's thistle" is like "gothic tracery." The language that nature speaks to the camera is also "physiognomic." Photography shows us that the qualities that we associate with the human face are present even in the "smallest things."³⁶

"Something new and strange" also surfaces in early photographs—a nonhuman agency that authors them from the inside. David Octavius Hill did not attribute any independent value to his photographs, Benjamin writes; they were merely props to be used in painting. It is, however, the "unpretentious makeshifts" that he and Robert Adamson generated for "internal use" that have given him "a place in history," not the paintings over which he labored.³⁷ This a-subjective intentionality makes itself felt through the urge that the photographs awaken in us: the urge to look at what they show us. In Hill's and Adamson's photograph of Mrs. Elizabeth Johnstone Hall, Benjamin observes, "there remains something that goes beyond testimony to the photographer's art, something that cannot be silenced, that fills you with an unruly desire to know what her name was, the woman who was alive there, [*who also really is still here,*] and will never consent to be wholly absorbed in 'art.'"³⁸



Figure 89. David Octavius Hill and Robert Adamson, *Mrs. Elizabeth (Johnstone) Hall, Newhaven fishwife*, 1843–1847. Salted paper print from paper negative. Courtesy of the Metropolitan Museum of Art, New York.

This description of the relationship between Mrs. Hall, her photographic portrait, and the viewer recalls not just Talbot's writings but another of the passages discussed in the first chapter. "Ye artists of all denominations that have so vilified nature as her journeymen, see how she rises up against you, and takes the staff into her own hands," this passage reads. "Your mistress now, with a vengeance, she will show you what she really is... . Every church will show itself to the world without your help. It will make its wants visible and known on paper."³⁹ Like the author of this anonymous essay, Benjamin associates the demonstrative force he ascribes to early photography with presence. This gets lost in translation in the Harvard edition, which renders "*die auch hier noch wirklich ist*" as "who even now is still real," instead of "who is also really still here." There is, as we will see, no necessary connection between presence and reality. Something can be real but not present, or no longer real but nevertheless present.

Benjamin attributes the disclosive power of preindustrial photography to the length of its exposures, which "caused the subject to focus his life in the moment rather than hurrying on past."⁴⁰ Because he inhabited the here and now in such an intense way, the sitter "grew" into the picture, and took "the space in which [he] lived" with him.⁴¹ The long exposures also led to more aesthetically realized photographs than those that came

later, and because they resembled “well-drawn or well-painted pictures,” they made “a more vivid and lasting impression on the beholder.”⁴² Consequently, although those who posed for their portraits in the early years of photography were forced to wear neck clamps and knee braces, they were “at home” in the resulting pictures.

But it is not only that preindustrial photography was “congruent” with the sitter’s being,⁴³ and that its pictorial strengths made it easier for the viewer to see what was shown; what “cannot be silenced” in the photograph of Mrs. Elizabeth Johnstone Hall, Benjamin tells us, is the look implied by the “indolent” and “seductive modesty” of her “downcast eyes.”⁴⁴ “How did the beauty of that hair, / those eyes, beguile our forebears?” he asks through the Stefan George poem to which his meditation leads.⁴⁵ Although language once again plays a central role, this passage confers a new meaning on the act of looking back, one based on the *reversibility* of the visual relationship between the sitter and the viewer: the sitter looks back at the viewer and invites him to reciprocate.

Benjamin also discusses another photograph in which there is “something that cannot be silenced,” and again he links it to a sitter’s look. The photograph is *Karl Dauthendey (Father of the Poet), with his Fiancée* (1857), and it features two people: Dauthendey and Fraulein Friedrich, to whom he was engaged, and whom he later married. Benjamin saw this photograph in Helmuth Bossert and Heinrich Guttman’s book, *Aus der Frühzeit der Photographie, 1840–1870*. According to the editors of this book, it was taken on September 1, 1857, in St. Petersburg, and the following caption is printed beneath it, in German, English and French: “The photographer Karl Dauthendey with his betrothed Miss Friedrich after their first attendance at church.”⁴⁶ I don’t know who wrote the caption, which associates the photograph with an even more specific moment in time, but it is clearly congruent with Dauthendey’s wishes, because he tried to burn the same time stamp into the photograph. Although he and Friedrich are sitting on what appears to be a loveseat in an interior space,⁴⁷ both are wearing their coats, as if they have only just returned from church and haven’t had time yet to remove them. She also holds a hymnal, and he his top hat.

Dauthendey’s attempt to anchor the photograph to a particular moment in time presumably has something to do with his engagement—with his desire to experience and preserve the longed-for “now” in which Friedrich, who was much younger, and reluctant to marry him, was fully and completely what the caption declares her to be: his betrothed. But the photograph was shot in a studio, instead of a place to which we could imagine the couple going after church—Dauthendey’s house, the home of Friedrich’s parents, the domicile of a friend. It was also carefully staged. The loveseat with its curved sides was clearly chosen because it fits perfectly inside the oval shape of the photograph, rather than for comfort, since it’s too small for two people in street clothes. Dauthendey’s coat has also been artfully arranged, so as to provide a full view of his elaborate collar and tie, and a partial view of his vest, watch chain, and sumptuous top hat. The portrait’s careful construction and the manifest irreality of its “here” completely de-realize its “now.”

The photograph also divides the couple, instead of uniting them. It is split into two parts by the lightness of Friedrich’s clothing and the darkness of Dauthendey’s, an effect that is compounded by the lighting and consolidated through the divergence of their looks; he gazes directly and authoritatively at the camera, but she gazes past both him and the

camera, at something unseen and perhaps even unseeable. Finally, the fact that Dauthendey and Friedrich are wearing street clothes in an interior space blurs the distinction between the inside and the outside, and suggests that the photograph may also be serving another function.



Figure 90. Karl Dauthendey, *The Photographer Karl Dauthendey with his betrothed Miss Friedrich after their first attendance at church*, 1857.

Benjamin thinks that the woman in the portrait is Dauthendey's *first* wife, Anna Olswang, who committed suicide in 1855, and he interprets the photograph accordingly. Although we can see from her look that she was already halfway out of the world when the portrait was made, he writes, Dauthendey doesn't notice; "her gaze passes him by... absorbed in an ominous distance."⁴⁸ In actuality, though, as André Gunthert has recently pointed out, the photograph was taken two years after Olswang's death, and shows Dauthendey with the woman who became his *second* wife. Benjamin makes this mistake, Gunthert reasons, because he confuses *Karl Dauthendey and his Fiancée* with another photograph—a photograph of Dauthendey with his *first* wife.⁴⁹

This second photograph, which exists only as a description, derives from the same source as Benjamin's account of the daguerreotype: *Der Geist meines Vaters*. "The youngest of my step-sisters still has in her possession an image that shows this young

woman, her mother, on the veranda of a Russian country estate...,” Max writes at a key juncture. “My father stands outside in a leather hunting suit at the railing of the wooden balcony. He shoulders a gun and a hunting pouch... [and] stands there very slim and towering, as the woman in a wide crinoline skirt... who is sitting on the veranda, watches him with intelligent eyes. There is no trace of her unhappy future in this image, only that my father’s sinister, hard and manly look betrays a juvenile brutality, capable of hurting this woman, who observes him submissively.”⁵⁰

Gunthert’s first claim is indisputable: Benjamin was clearly thinking about this passage when he looked at *Karl Dauthendey and his Fiancée*. He was drawn to the story about Dauthendey’s first wife, I believe, because he had recently spent time in Moscow, the city that he mistakenly substitutes for St. Petersburg; because he, too, was Jewish; and because he, too, had been contemplating suicide.⁵¹ This does not mean, though, that Benjamin didn’t see the photograph in front of him, or that he subordinated it to Max’s description of his sister’s photograph. Benjamin thought of the latter while looking at the former because of their structural similarities. Although Olswang’s eyes are fixed on her husband in the photograph described in *Der Geist meines Vaters*, instead of an unseeable “elsewhere,” he no more meets her gaze than he does Friedrich’s in the engagement photograph, because his eyes rebuff her. And although he is embracing Friedrich in *Karl Dauthendey and his Fiancée*, rather than repudiating her, the look that he directs toward us and the camera is “sinister, hard and manly,” like the one he directs at Olswang. If a look can kill, it probably will, Benjamin is effectively saying—and we know that this one can, because it has done so before.

Max Dauthendey describes the veranda photograph after a long and seemingly exculpatory account of his father’s refusal to satisfy his wife’s desire for love and romance, which was (he implies) the reason for her suicide.⁵² He is so closely identified with Karl throughout this passage that he almost seems to be “channeling” him. When Max comes to the photograph of Dauthendey and Olswang, though, he adopts a very different point of view: one aligned with his stepsister and her mother. The word with which he characterizes Olswang’s eyes—“intelligent”—cancels out the preceding passage, with its belittling account of her romantic desires. The metaphoric connection between Dauthendey’s gun and his look also renders the final sentence affirmative; there is a trace of Olswang’s unhappy future in this image, and it is her husband’s sinister, hard and manly gaze. Benjamin also adopts this vantage point: he looks at the engagement photograph the way Max and his sister looked at the photograph of Karl’s first wife.

Max’s description of this photograph is closely related to three other passages in *Der Geist meines Vaters*, all of which are direct quotes from Karl. In the first, Karl describes his initial encounter with the woman in the engagement photograph, and in the second his subsequent life with her. Both passages revolve around the same thing: Friedrich’s “large eyes and silent doe-eyed look,” which caused him to fall instantly in love with her, and became the emblem of her exemplary wifely compliance. She was “the softest woman in the world,” he repeatedly says, and “[although] I was often violent with her... she never uttered a violent word in return. In fact, she said nothing. [She just looked at me with] her large, silent, timid eyes,” that were “more soothing than any word.”⁵³ We have all encountered eyes that speak volumes, thereby compensating for their owner’s reticence,

but Dauthendey does not say that Friedrich's eyes were more eloquent than words. He says, rather, that they were "timid" and "silent"—i.e., that they communicated nothing. In the third passage, which comes shortly after the other two, Karl says to Max: "You have your mother's eyes, which really worries me. A man should have hard eyes. Try to steel your heart instead. Then things will never go badly for you."⁵⁴

The gender binary could not be more sharply delineated—and it is also highly visible in the engagement photograph. We see not only the "hard eyes" that a man "should" have, but also the "soft eyes" that allowed Karl to love his second wife. These looks cannot meet, because they have been rendered *irreversible*. *Der Geist meines Vaters* is also a one-way street. Karl asked Max to write a memoir based on his father's memories and stories, instead of his own. Most of the book is a paraphrase of Karl's oft-told stories and his unpublished memoir. There are also many direct quotations, some of them so long that it is hard to tell whether the speaker is Karl or Max. The book begins with the sentence "Today I visited my Father's grave."⁵⁵ The last one should be: "And I took his place, so that he could live again."

BENJAMIN RETURNS to the topic of the sitter's look at the end of the paragraph, through another quotation from *Der Geist meines Vaters*. The passage is a paraphrase of things that Karl said to Max, but he treats it as a direct quotation from Karl. "We didn't trust ourselves at first to look long at the first pictures he developed," it reads. "We were abashed by the distinctness of these human images, and believed that the tiny little faces in the picture could see *us*, so powerfully was everyone affected by the unaccustomed clarity and the unaccustomed fidelity to nature of the first daguerreotypes."⁵⁶ As we learn in the passage from which this quotation comes, Karl is not just talking about how it felt to be an early viewer of photographic portraits; he's talking about how it felt to be an early viewer of his *own* photographic portraits.⁵⁷ He was "astonished" by this experience, Max tells us, and we can see why: it catapulted him from the position of the photographer to that of a viewer, thereby stripping him of his authorial credentials. The "little faces" in these pictures also made him feel *seen*. They looked back at him as his ontological equals, and invited him to return the favor.

Dauthendey reacted the way Sartre's voyeur does when he thinks that he is being observed from the place of the Other:⁵⁸ he was ashamed of *himself* and he didn't trust *himself* to return the look. I italicized "himself" because Dauthendey uses reflexive verbs to describe both responses (*sich vertrauen* and *sich scheuen*), and because this helps us to see just how self-referential those responses were. When he felt himself seen by the faces in early photographs, he realized that he was not what he had imagined himself to be: a sovereign subject.

It is odd, to say the least, that someone so unnerved by the faces in his early photographs should have devoted his life to photographic portraiture. It is not only that Dauthendey must have been exposed on an almost daily basis to looks that he did not trust himself to return, but also that the mysterious intentionality that emanated from those looks must have repeatedly challenged his claim to be the source of his photographs. He tried to solve the first problem by rendering the look irreversible—hence his insistence on the "hardness" of the male gaze and the "softness" of its female equivalent. He attempted to solve the second by authoring *Karl Dauthendey and his Fiancée* from the inside, as

well as the outside. With his commanding look, Dauthendey tries to occupy two positions at once: that of the photographer and that of the sitter. Now we understand the photograph's spatial and temporal equivocations: why Karl is wearing a coat and holding his top hat when sitting on a loveseat in an interior space, and why the photograph claims both to issue from a single moment in time and to be the product of a long exposure.

There is no place within this aspirational economy for Friedrich, and she makes no effort to be in the photograph that Dauthendey is trying to make. She sits where he presumably told her to sit, and looks in the direction he presumably told her to look, but she doesn't strike a pose, or assume a role. Dauthendey doesn't appear in this photograph either, because it was never made. When he looked through the viewfinder at the scene he had so carefully constructed, the space next to Friedrich was empty, and when he sat down next to her, he vacated his position in front of the viewfinder. I can't help but think that the breathlessness conveyed by the caption has less to do with being just back from church than it does with his haste in moving from the camera to the sofa. But even if Dauthendey had been able to bridge the gap between those two subject-positions, he wouldn't be the sole author of the engagement portrait. That agency through which the sitter "presences" in early photographs can't be accessed through human consciousness or supplanted by will; it is, indeed, highly resistant to both. Benjamin's eyes were drawn to Friedrich's look rather than to Dauthendey's because it is *unstaged*: because, as Roland Barthes said of his mother, she "lent" herself to the photograph, instead of trying to control it.⁵⁹

Benjamin clearly saw all of this, because he concludes his reading of *Karl Dauthendey and his Fiancée* with a meditation on the radically different kinds of agency that are at work within it. He also indicates yet again where his own allegiances lie. "No matter how artful the photographer," he writes, "the beholder feels an irresistible urge to search such a picture for the tiny spark of contingency, of the here and now, with which reality has... seared the subject, to find the inconspicuous spot where in the immediacy of that long-forgotten moment the future nests so eloquently that we, looking back, may rediscover it."⁶⁰

MY GOAL HERE is not to prove that Dauthendey was a "bad" person, or even that he made both of his wives unhappy. It is, rather, to show that the issues that Benjamin addresses in the first half of "Little History" are ontological as well as pictorial, and that they have profound social consequences. Although nothing is more fundamentally egalitarian than touch and sight, there are more power lines in the field of vision than in the New York subway system. Every culture attempts to colonize the field of vision—to determine who is visible, who is invisible, who is "allowed" to see, and what visibility, invisibility, and vision signify. This colonization has real consequences; we are psychically and socially constrained by the visual categories into which we are slotted. It has particularly deadly consequences for women, since gender is almost always the vehicle through which the chiasmus is first repudiated. The heterosexual couple is also frequently used the way Karl Dauthendey used it: to "prove" that two *isn't* the smallest unit of Being.

Since the early photographic portrait was the ontological extrusion of its sitter, it revealed both aspects of his visual being. He gazed out from it, as well as appearing within it, and his look showed the viewer that he, too, was part of the visible world. And because

the photographic image emerged so slowly in the first decades of its history, and was so manifestly developmental, often changing in tandem with the world, it could not be relegated to the past. It said “this is,” rather than “this was.” It consequently not only lit the pathway leading back to the world, and demonstrated that there is no thought without sensory perception, it also invited its viewers back into the relationship described by Merleau-Ponty: one in which “the seer and the visible reciprocate one another and we no longer know which sees and which is seen.”⁶¹

Since Benjamin was not born until 1892, he could not meet Friedrich in the here and now, but because of how the engagement photograph was created, another kind of chiasmus was available to him: a trans-historical chiasmus. During the relatively long period in which she sat in front of the camera, Friedrich grew into the picture, and this allowed her not only to “presence,” but also to continue “presencing” long after she ceased to exist. The engagement photograph journeyed into the future, in search of a viewer who would do what Dauthendey had failed to do. Fifty-nine years after Friedrich’s death, it found him. By looking back at her both retrospectively and reciprocally, Benjamin rendered her *posthumously present*. He did the same for Mrs. Elizabeth Johnstone Hall.

As Benjamin shows in the second half of “Little History,” the industrialization of chemical photography stripped the photographic image of its capacity to render its sitter present—first by transforming it into a representation, and then by typologizing it. He wholeheartedly embraces the second of these developments, in a passage that anticipates his 1936 account of photography. “Whether one is of the Left or the Right,” Benjamin enthuses, “one will have to get used to be looked at in terms of one’s provenance. And one will have to look at others in the same way.”⁶² Those who don’t know how to do this should consult August Sander’s *Face of Our Time*, which is an “instruction manual” for “comparative” looking. He is highly critical, though, of the first development, partly because it aestheticizes photography, and partly because it severs the sitter from the viewer.

Benjamin blames the transformation of the photographic portrait from an ontological extension of its sitter’s being into a man-made representation on a transitional generation of photographers, who approached portraiture as a business, but marketed their photographs as art. This generation “simulated” the “aura” that was destroyed by industrialization by dressing their clients in elaborate costumes, positioning them in artificial settings that were full of “artistic” props, and retouching the resulting images, to make them more “atmospheric.”⁶³ Benjamin’s primary example of this kind of portrait is a childhood photograph of Franz Kafka that was made around the same time as the first mass-produced camera. The boy in the photograph is dressed in a “humiliatingly tight child’s suit overloaded with trimming, in a sort of greenhouse landscape,” whose “upholstered tropics” are rendered “even stuffier and more oppressive” by the “inordinately large broad-brimmed hat” that he holds in his left hand.⁶⁴ Kafka would be utterly “lost in this setting,” Benjamin observes in the final sentence of the paragraph, “were it not for his immensely sad eyes, which dominate this landscape predestined for them.”



Figure 91. Franz Kafka, about four years old, 1887. Courtesy of the Klaus Wagenbach Archiv, Berlin.

In the next paragraph, Benjamin contrasts Kafka's eyes with those that peer out of earlier photographs. Unlike the gaze of those who sat for their portraits in the preindustrial period, which was "full" and "secure," he writes, the boy in this portrait looks out "at the world" in an "excluded and godforsaken... manner."⁶⁵ Benjamin's characterization of the first kind of look may seem surprising, since Fraulein Friedrich's look is neither "full" nor "secure," but he is talking about a series of midcentury portraits of male representatives of the "rising class," such as *The Philosopher Schelling* (ca. 1850), whose aura extends even to the creases in their clothing,⁶⁶ and whose gaze has the qualities that so unnerved Dauthendey.

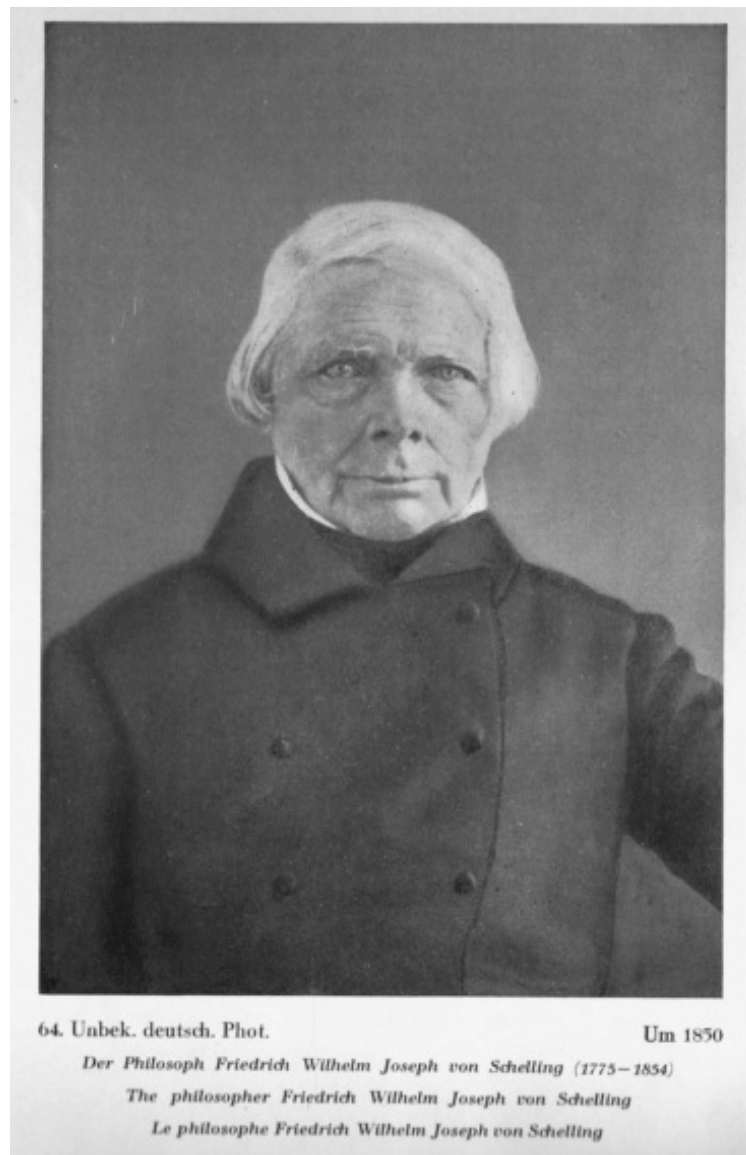


Figure 92. Friedrich Wilhelm Joseph von Schelling, ca. 1850.

But the industrialization of photography cannot prevent a detail in an individual photograph from striking an answering chord in a particular viewer, and Kafka's eyes clearly had this effect on Benjamin. He returns to the Kafka photograph in his 1934 essay about the novelist, and again emphasizes the "sadness" of his look and the mysterious "dominance" that it exercises over the artificial setting.⁶⁷ The photograph also resurfaces in the first version of *Berlin Childhood Around 1900* (1932–1934). In an entry called "The Mummerehlen," a neologism based on a childhood misunderstanding, Benjamin talks about the two very different kinds of similarity that he experienced as a child. The first, which he associates with language, gave him a "foothold on life," and "lit up paths to the world's interior."⁶⁸ It also embedded him in the nineteenth century, like a mollusk in its shell. The second kind of similarity, which he associates with industrial portrait photography, pried him out of that shell. Inserted into a prefabricated picture, and asked to "resemble" the props in his studio surroundings, Benjamin experienced a kind of "fading" of his "being."⁶⁹ "I saw myself surrounded by folding screens, cushions, and pedestals which craved my image much as the shades of Hades craved the blood of the sacrificial animal," he writes. "In the end, I was offered up to a crudely painted prospect of the Alps, and my right hand... cast its shadow on the clouds and snowfields of the backdrop."⁷⁰

However, the real distinction here is not between the similarities enabled by *language* and those mandated by industrial photography; it is between the similarities enabled by *early photography* and those mandated by industrial photography. A mollusk's shell is "ektoskeletal": an extension or outgrowth of the mollusk itself. It is also through this extension that the creature comes into contact with other beings. A mollusk's shell consequently cannot be compared to language, even when the latter assumes a "magical" form. The only likeness that "behaves" the way it does—that is generated by what it analogizes, and that connects this thing to other things—is a photograph of the kind described in "Little History": one into which the referent has "grown."

The passage that precedes the mollusk comparison also suggests that although industrialization marks the end of analogical photography and the beginning of representational photography, it may sometimes be possible to reverse this chronology: to analogize an industrial photograph. It begins with a description of a studio photograph of Benjamin, standing in front of an "Alpine" backdrop, dressed as a "little mountaineer." This image is partly modeled on a *carte-de-visite* photograph of Benjamin and his brother, which shows two boys posed before a similar backdrop, dressed as mountain climbers and holding rustic walking sticks.⁷¹ But no sooner does it emerge than it begins to morph. A "kidskin hat" makes its way into the boy's right hand, and a "giant sombrero" into the left. A potted palm appears on one side of the photograph, and a garden table with a "cluster of ostrich feathers" on the other. No surviving photograph of Benjamin corresponds in any way to this new image. The ostrich feathers, garden table, potted plant, and giant sombrero all come—as others have already noted—from the Kafka photograph.⁷²



Figure 93. Carte-de-visite photograph of Walter Benjamin with his brother Georg, circa 1902. Courtesy of the Österreichische Nationalbibliothek, Vienna.

The “Mummerehlen” chapter of *Berlin Childhood* ends with the story of a painter who entered one of his pictures, and was never seen again.⁷³ The metamorphosis of the Benjamin photograph into the Kafka photograph seems destined to end in a similar way: with the disappearance of one of the boys. Surprisingly, though, that does not happen, because shortly after the garden table and ostrich feathers appear, Benjamin’s mother enters the picture, and what seemed a single image resolves itself into two similar—but not identical—images, like those on a stereo card.

This analogy emerged out of another analogy. Benjamin felt a profound sense of kinship with Kafka, just as he did with Proust. Some of these affinities were biographical; both men were Jewish writers who were products of, but intellectually estranged from, the late-nineteenth-century bourgeoisie. Others were ontological; Kafka was someone whose “style of Being” rhymed with his own.⁷⁴ The look in the boy’s eyes activated these correspondences, allowing Benjamin to transform the childhood photograph from a representation into an analogy. He effected this transformation by elaborating the extra-photographic similarities between himself and the novelist in photographic terms. Although the resulting “stereo card” does not render Kafka posthumously present, it does give him a more attenuated kind of presence: what might be called “past presence.”

SIMILAR RESCUES have been enacted countless times since Benjamin wrote *Berlin Childhood*, some of which Barthes describes in *Camera Lucida*, and on the foundation of which he erects his theory of photography.⁷⁵ Twentieth-century artists have also analogized industrial photographs in other ways, and these analogies have opened the door to a new kind of photographic image: one that allows the viewer and the sitter to meet in the here and now. But these are matters for another book, and it is time to bring this one to a close. I will do so through a brief discussion of the photograph on its cover.

This cyanotype, which is called *John Keats's Death Mask* (1999),⁷⁶ is by John Dugdale, a contemporary artist who makes photographs in preindustrial ways, and who calls Julia Margaret Cameron his “godmother,”⁷⁷ and Talbot an “old soulmate.”⁷⁸ The artist appears in the lower left side of the image, facing the camera, and the eponymous death mask occupies a similar position on the right. Dugdale supports his plaster companion, and grazes the latter's cheek with his own. Like *Dauthendey and his Fiancée*, *John Keats's Death Mask* is thus both a self-portrait and the portrait of a couple. This photograph, however, was not shot in a studio, under tightly controlled conditions. Instead, Dugdale stood at the edge of the woods near Maurice Sendak's home in Ridgefield, Connecticut, at twilight one evening in 1999, while someone else exposed the negative.⁷⁹ And rather than directing a “hard, manly look” at the camera, the artist shut his eyes.

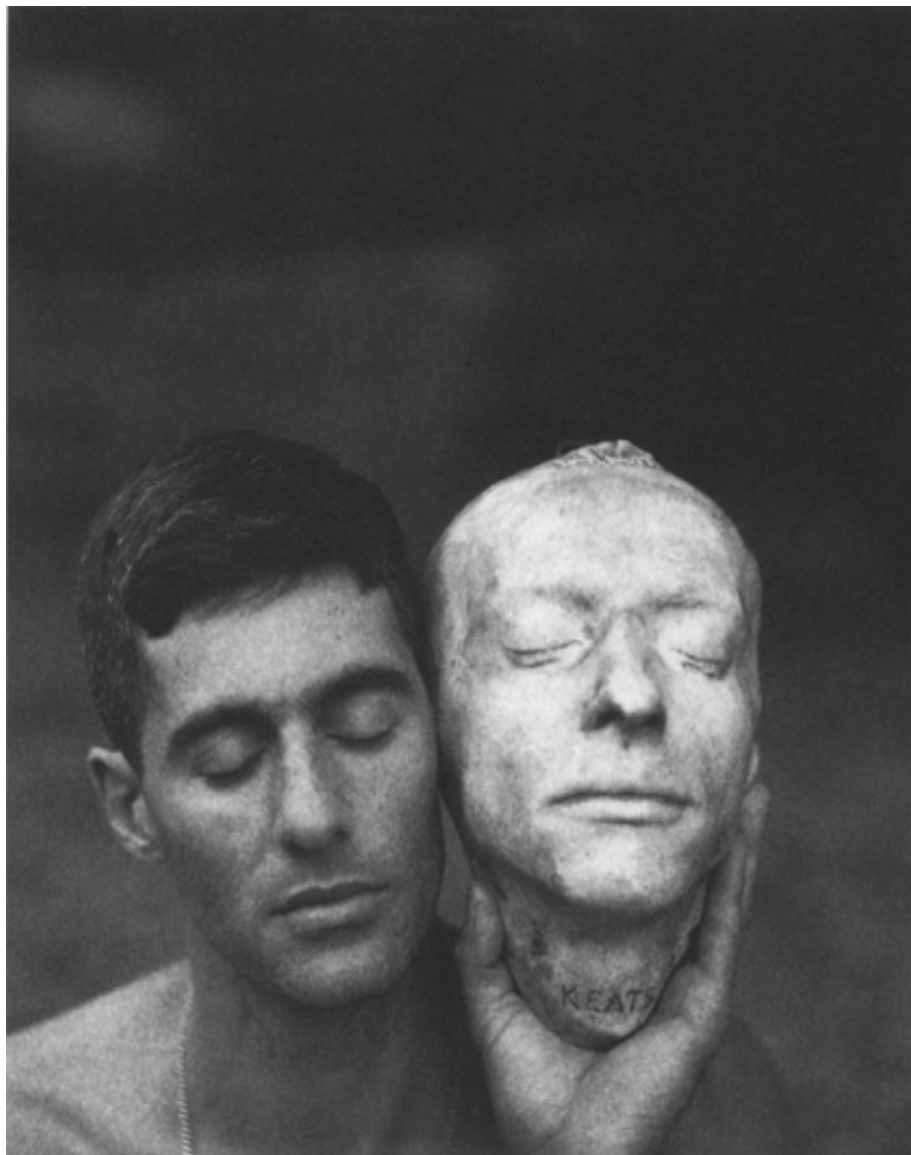


Figure 94/Colorplate 23. John Dugdale, *Death Mask of John Keats*, 1999. Cyanotype. Courtesy of the artist.

Dugdale's eyes are closed in this and many of his other photographs because he is blind. He lost all of his vision in one eye and eighty percent of his vision in the other in 1994, as a result of a cataclysmic series of health crises precipitated by the human autoimmune deficiency virus. He lost his remaining vision in 2010. But Dugdale's eyes would also be closed if this were not the case, because he knows that they are not the locus of vision. "Sight does not exist in your eyes," he declares in *Life's Evening Hour*, his first book of photographs. "[It] exists in your mind and heart."⁸⁰ He also knows that the camera isn't an extension of his look. Photography means "drawing with light," he observes in another passage in *Life's Evening Hour*—and the photographer is the recipient, not the creator, of the resulting images.⁸¹

The passage that I have just quoted accompanies a cyanotype that was made at Lacock Abbey, and that references Talbot's earliest extant photograph: *Oriel Window*. Standing in front of this window, Dugdale recounts in the same passage, he felt "light falling on his body," just as it had fallen on Talbot's sensitized paper. The artist's comparison of his body to a photographic negative is the physical counterpart of the concept mobilized by Cézanne, Rilke, and Proust to describe the receptivity of their artistic practice: the concept of the psychic photographic plate.⁸² Dugdale characterizes himself as a receiver in another

way in a gallery statement, writing: “The quietude that people respond to in my pictures is, in part, because of the way the pictures are made: no flash; no harsh electric light; not even the sound of the shutter—just a lens cap removed, and then gently replaced.”⁸³



Figure 95/Colorplate 24. John Dugdale, *Self-Portrait at Oriel Window*, 1998. Cyanotype. Courtesy of the artist.

Dugdale refers to the photographs in *Life's Evening Hour* as “likenesses.”⁸⁴ Since these photographs are staged, and his sitters often assume fictional personae, their similarity might seem to be the kind to which Benjamin objects, and which he associates with the transitional generation of industrial photographers. Dugdale, however, always introduces us to his models, so that we know whose likeness we are observing, and he often describes the situation out of which the photograph emerged. And not only is *John Keats's Death Mask* a likeness of the artist holding a death mask, but the mask itself is also a likeness of John Keats, and of a very particular kind. Like Talbot's photogenic drawings, which resemble their “cause,” and the shell described by Benjamin, which extends outward from and conforms to the mollusk, a death mask analogizes the face that shaped it.

John Keats's Death Mask also discloses other resemblances that cannot be attributed to a human author. Dugdale's features and the shape of his face are strikingly similar to those of his plaster companion, and the latter's eyes are also closed. Although the photograph is a monochrome, and therefore chromatically non-representative, the field of cyan blue that

fills the upper third of the photograph resembles the light that created it. “The twilight,” Dugdale told me, “is what gives the picture its soft glow.” The chemicals used in the cyanotype process have also sprinkled delicate freckles over the bodies of both figures, transforming plaster into flesh, and making Dugdale’s hand seem like the organic extension of the mask’s face. And instead of rending asunder what analogy has joined together, the composition reinforces these connections. Not only are both figures located in the lower part of the image, with the one on the left occupying a comparable position to the one on the right, but both are “busts,” their heads are level, and they are sheltered beneath the same sky.

Finally, instead of banishing other intentionalities, as Dauthendey attempts to do, Dugdale invites them in. Some of these intentionalities are “objective”; they originate in the phenomenal world, and enter with the light. Others, though, are emphatically human. “The heartfelt grace and love that people bring to my pictures when viewing them is a gift to me of inestimable value,” Dugdale writes in *Life’s Evening Hour*, “. . . a gift that keeps me whole and alive.”⁸⁵ He provides a similar account of his models. “When the floodlight is on and I focus the camera on people,” he confides in another entry, “I find they’re touched by inspiration and our session becomes a give and take between the photographer and the subject. We’re orchestrating, creating a picture together, a process I cherish.”⁸⁶ Instead of telling his sitters what to do, Dugdale “directs” them by adopting the position that he wants them to assume, and he sometimes asks *them* to focus the camera.⁸⁷

Since Dugdale is the only person in *John Keats’s Death Mask*, it might seem less chiasmatic than the photographs described in the previous paragraph. However, the death mask belonged to Sendak, and it was at his request that the cyanotype was made.⁸⁸ Although neither Dugdale nor Sendak may have realized this, the photograph is also a visual antiphon to one of Keats’s own utterances. “Tender is the night,” the poet remarks in “Ode to a Nightingale,” and there has never been one more tender than this. And although there is usually nothing more redolent of absence than a death mask, this mask functions like an early photograph; it is the vehicle through which Keats “presences.” Finally, when placed side by side with eyes that not only cannot see, but that—unlike them—cannot open, something even more miraculous happens: Dugdale’s closed eyes become a return look. Since these transformations occur within the frame of a cyanotype, they reactivate chemical photography’s own presentational powers—its capacity to disclose the world, and to solicit a response. As we gaze at *John Keats’s Death Mask*, the medium becomes again what it was in 1839: the highest form of *poiēsis*.

NOTES

INTRODUCTION

1. Martin Heidegger, "The Age of the World Picture," in *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York: Harper and Row, 1977), 128 and 134.
2. René Descartes, *Discourse on Method and Meditations on First Philosophy*, ed. David Weissman (New Haven: Yale University Press, 1996), 70.
3. Charles Sanders Peirce, "What Is a Sign?," in *The Essential Peirce: Selected Philosophical Writings*, vol. 2, 1893–1913, ed. the Peirce Edition Project (Bloomington: Indiana University Press, 1998), 8.
4. This is also the case with Peirce himself.
5. Roland Barthes, "Rhetoric of the Image," in *Image–Music–Text*, trans. Stephen Heath (New York: Farrar, Straus, and Giroux, 1977), 44.
6. Roland Barthes, *Camera Lucida: Reflections on Photography*, trans. Richard Howard (New York: Farrar, Straus and Giroux, 1981), 96.
7. I am thinking particularly here of Haacke's use of photography in *Shapolsky et al. Manhattan Real Estate Holdings, A Real-Time Social System, as of May 1, 1971*, a work that documents 142 slum properties owned by a few New York City landlords. Haacke adopts a different relationship to photography in a number of his later works, most notably *Oil Painting, Homage to Marcel Broodthaers* (1982). (In 1971, the Guggenheim Museum canceled an exhibition of Haacke's work because it included two pieces that the museum's director, Thomas Messer, deemed to be offensive. *Shapolsky* was one of them. This injustice was rectified by the Whitney Museum in 2007–2008, which included *Shapolsky* in an exhibition of Haacke's work.)
8. Benjamin also maintains that the "hidden political significance" of photography is its capacity to provide "evidence." See "The Work of Art in the Age of Its Technological Reproducibility," in *The Selected Writings of Walter Benjamin*, vol. 3, 1935–1938, ed. Howard Eiland and Michael W. Jennings (Cambridge: Harvard University Press, 2002), 108.
9. George Baker provides a brilliant discussion of this backward turn in the work of three other important artists—Tacita Dean, Zoe Leonard, and Sharon Lockhart—in "Lateness and Longing," in *50 Moons of Saturn: T2 Torino Triennale*, ed. Daniel Birnbaum (Milan: Skira, 2008), 47–97. This essay provided the nucleus for his forthcoming book, *Lateness and Longing: On the Afterlife of Photography* (Chicago: University of Chicago Press, 2015).
10. Barthes, *Camera Lucida*, 117.
11. Walter Benjamin, "Left Wing Melancholy," in Benjamin, *Selected Writings*, vol. 2, 1927–1934, ed. Michael W. Jennings (Cambridge: Harvard University Press, 1999), 425–426.
12. See Karl Marx and Friedrich Engels, *The German Ideology: Part One*, ed. C. J. Arthur (New York: International Publishers, 1974), 64–65.
13. Benjamin wrote the first version of "The Work of Art" in 1935, and the second in 1936.
14. I am drawing here on the second version of "The Work of Art," cited in note 8. Benjamin, "The Work of Art," 104.
15. *Ibid.*, 132n37.
16. *Ibid.*, 104.
17. *Ibid.*, 101, 104, 108, 124n10.
18. Benjamin also knows this. "The dialectic of commodity production in advanced capitalism: the novelty of products... is accorded an unprecedented importance," he writes in *The Arcades Project*, trans. Howard Eiland and Kevin McLaughlin (Cambridge: Harvard University Press, 1999). "At the same time, 'the eternal return of the same' is manifest in mass production" (331).
19. Benjamin, "The Work of Art," 105.
20. *Ibid.*, 113.
21. *Ibid.*, 103 and 110.
22. *Ibid.*, 102.

23. This claim comes from a closely related passage in an earlier essay, the second half of which is a dry run for “The Work of Art.” See Walter Benjamin, “Little History of Photography,” in *Selected Writings*, vol. 2, 1927–1934, ed. Michael W. Jennings (Cambridge: Harvard University Press, 1999), 518.
24. Benjamin, “The Work of Art,” 112–113.
25. *Ibid.*, 112.
26. *Ibid.*, 113.
27. Benjamin, “Little History,” 510.
28. Walter Benjamin, “On the Concept of History,” in *Selected Writings*, vol. 4, 1938–1940, ed. Howard Eiland and Michael W. Jennings (Cambridge: Harvard University Press, 2003), 390.
29. *Ibid.*, 391.
30. Benjamin, *The Arcades Project*, 474.
31. Benjamin, “On the Concept of History,” 391.
32. Benjamin, *The Arcades Project*, 462.
33. *Ibid.*, 482.
34. *Ibid.*, 462.
35. Benjamin makes this claim in both “Doctrine of the Similar,” in *Selected Writings*, 2:698, and “On the Mimetic Faculty,” in *Selected Writings*, 2:721–722.
36. Benjamin, “The Mimetic Faculty,” 721.
37. Benjamin, “Doctrine of the Similar,” 698.
38. I recount the narrative of how Richter got from the concentration camp photographs to *Sechs Fotos* in chapter 7 of *Flesh of My Flesh* (Stanford: Stanford University Press, 2009).
39. Oliver Wendell Holmes, “The Stereoscope and the Stereograph,” *The Atlantic Monthly* 3 (June 1859): 747.
40. Lady Eastlake, “Photography,” in *Classic Essays on Photography*, ed. Alan Trachtenberg (New Haven: Leete’s Island Books, 1980), 65 (hereafter cited as *Classic Essays on Photography*).
41. *Ibid.*, 65.
42. *Ibid.*, 41.
43. William Henry Fox Talbot, “Photogenic Drawing,” letter to the editor, *Literary Gazette; and Journal of the Belles Lettres, Arts, Sciences, etc.*, no. 1150 (February 2, 1939): 72–75. This would seem the point at which to note that this book has been fifteen years in the making. I planned to write it immediately after *World Spectators*, and published two essays shortly after the latter’s completion that were steps toward this goal: “The Author as Receiver,” and “*Je Vous*.” However, as my journey continued, my thoughts became too big and unwieldy for a single book, so I divided them into two. *Flesh of My Flesh* is the first of these books, and *The Miracle of Analogy* the second. Like the mothers in Leonardo’s *Virgin and Child and St. Anne*, these volumes are joined at the hip, and both sit on their predecessor’s “lap.” The same thing happened while I was writing *The Miracle of Analogy*; my thoughts about photography continued to expand, and I eventually realized that I was writing a two-volume work.
44. Although I will be focusing on three of the “inventors” of chemical photography—Joseph Nicéphore Niépce, Louis-Jacques-Mandé Daguerre, and William Henry Fox Talbot—another figure warrants mention here as well: Hippolyte Bayard. For an excellent discussion of his work and his place within the history of photography, see Geoffrey Batchen, *Burning with Desire: The Conception of Photography* (Cambridge: MIT Press, 1997), 157–173.
45. Walt Whitman, *Leaves of Grass*, ed. Richard Maurice Bucke, Thomas R. Harned, and Horace L. Traubel (New York: Doubleday, 1902), 2:22.
46. I am paraphrasing one of Heidegger’s claims. A work of art, he writes in “The Origin of the Work of Art,” “holds open the Open of the world.” See Martin Heidegger, *Poetry, Language, Thought*, trans. Albert Hofstadter (New York: Harper and Row, 1971), 45.
47. See *Flesh of My Flesh*, 173–175.

CHAPTER 1

1. Geoffrey Batchen provides a very helpful account of this history in his immensely learned book, *Burning with Desire*, 24–53. See also Helmut Gernsheim and Alison Gernsheim, *The History of Photography from the Camera*

Obscura to the Beginning of the Modern Era (London: Thames and Hudson, 1969), 30–64.

2. So, we will see, did Niépce. I draw throughout this section on Gernsheim and Gernsheim, *The History of Photography*, 17–29; John H. Hammond, *The Camera Obscura: A Chronicle* (Bristol: Adam Hilger, Ltd., 1981); Martin Kemp, *The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat* (New Haven: Yale University Press, 1990), 167–220; David C. Lindberg, *Theories of Vision from Al-Kindi to Kepler* (Chicago: University of Chicago Press, 1976); Wolfgang Lefèvre, “The Optical Camera Obscura I: A Short Exposition,” in Wolfgang Lefèvre, ed., *Inside the Camera Obscura—Optics and Art under the Spell of the Projected Image* (Berlin: Max Planck Institute für Wissenschaftsgeschichte, 2007), 5–12; Philip Steadman, *Vermeer’s Camera: Uncovering the Truth behind the Masterpieces* (Oxford: Oxford University Press, 2001), and David Hockney, *Secret Knowledge: Rediscovering the Lost Techniques of the Old Masters* (New York: Viking Studio, 2006).

3. Hammond, *The Camera Obscura*, 1–3.

4. Aristotle, *Problems*, ed. and trans. Robert Mayhew, Loeb Classical Library (Cambridge: Harvard University Press, 2011), 471.

5. The Gernsheims state that the original manuscript is located in London’s India Office Library. Gernsheim and Gernsheim, *The History of Photography*, 17.

6. *Ibid.*, 18.

7. Leonardo da Vinci, “How the Images of Objects Received by the Eye Intersect within the Crystalline Humour of the Eye,” in *The Literary Works of Leonardo da Vinci*, vol. 1, trans. Jean Paul Richter (London: Samson Low, Marston, Searle and Rivington, 1883), 44, and Steadman, *Vermeer’s Camera*, 6.

8. Quoted by Gernsheim and Gernsheim in *The History of Photography*, 19.

9. Henry Wotton, *Reliquiae Wottonianae* (London, 1651), 413. Quoted by Steadman, *Vermeer’s Camera*, 11–12, and Norma Wenczel, “The Optical Camera Obscura II Images and Texts,” in Lefèvre, *Inside the Camera Obscura*, 22.

10. Jonathan Crary offers a dramatically different account of the camera obscura in his influential book *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge: MIT Press, 1990). From the late 1500s until the end of the 1700s, he argues, the camera obscura was perceived as a knowledge machine—a device for determining what was “objectively true.” It also privatized subjectivity and disembodied the human eye (39). The camera obscura functioned in this way, Crary argues, because it separated the viewer from what he saw, and because it “imply[ed] a spatial and temporal simultaneity of human subjectivity and objective apparatus” (41).

11. This passage is quoted in Gernsheim and Gernsheim, *The History of Photography*, 22.

12. *Ibid.*, 17–19; Hammond, *The Camera Obscura*, 8–10; Steadman, *Vermeer’s Camera*, 4–5.

13. James S. Ackerman, “Leonardo’s Eye,” *Journal of the Warburg and Courtauld Institutes* 41 (1978): 100–103; Gernsheim and Gernsheim, *The History of Photography*, 19–20.

14. The camera obscura was of abiding interest to Leonardo; he produced 270 diagrams of the device, and wrote about it often in his notebooks. See Kim H. Veltman, “Leonardo and the Camera Obscura,” in *Studi Vinciani in memoria de Nando de Toni* (Brescia: Fratelli Geroldi, 1986), 81–92.

15. Leonardo da Vinci, “Of Painting,” in *The Literary Works of Leonardo da Vinci*, 145; Gernsheim and Gernsheim, *The History of Photography*, 19; Steadman, *Vermeer’s Camera*, 6.

16. As translated in *The Genius of Leonardo da Vinci: Leonardo da Vinci on Art and the Artist*, ed. André Chastel, trans. Ellen Callmann (New York: Orion Press, 1961), 205. For Richter’s 1883 translation, see Leonardo da Vinci, “A way of developing and arousing the mind to various inventions,” in *The Literary Works of Leonardo da Vinci*, 254.

17. Leonardo da Vinci, “Perspective,” in *The Literary Works of Leonardo da Vinci*, 38.

18. Leonardo da Vinci, “Painting,” in *The Literary Works of Leonardo da Vinci*, 253.

19. Ackerman, “Leonardo’s Eye,” 114–115. For a much fuller account of this distinction, see Lindberg, *Theories of Vision*.

20. Paul Valéry, “Introduction to the Method of Leonardo,” in *Leonardo, Poe, Mallarmé*, trans. Malcolm Cowley (Princeton: Princeton University Press, 1972), 18.

21. This is the title of part 1 of Daniel Arasse’s important book *Leonardo da Vinci: The Rhythm of the World*, trans. Rosetta Translations (New York: Konecky and Konecky, 1998).

22. Johannes Kepler, *Paralipomena to Witelo*, in *Optics*, trans. William H. Donahue (Santa Fe: Green Lion Press, 2000), 181.

23. Ibid., 180.
24. Peter Barker and Bernard R. Goldstein, "Theological Foundations of Kepler's Astronomy," *Osiris* 16 (2001): 112.
25. This description was written by Henry Wotton, who visited Kepler. It is quoted in Steadman, *Vermeer's Camera*, 11–12.
26. René Descartes, *Optics*, in *Discourse on Method, Optics, Geometry, and Meteorology*, trans. Paul J. Olscamp (Indianapolis: Hackett Publishing Co., 2001), 91–100. According to Lefèvre, this experiment was also conducted by two other seventeenth-century figures, Christoph Scheiner and Gaspar Schott (*Inside the Camera Obscura*, 8).
27. Descartes, *Optics*, 87.
28. Maurice Merleau-Ponty, "Eye and Mind," in *The Merleau-Ponty Aesthetics Reader*, ed. Michael B. Smith (Evanston: Northwestern University Press, 1993), 130. Norma Wenczel also discusses the schematic nature of Cartesian representation in "The Camera Obscura II," in Lefèvre, *Inside the Camera Obscura*, 25.
29. John Locke, *An Essay Concerning Human Understanding*, trans. A. C. Fraser (Oxford: Clarendon Press, 1894; New York: Prometheus Books, 1995), 107. Citation refers to the Prometheus edition.
30. Crary claims that Leibnitz follows Locke, except for the fact that he attributes "an inherent capacity for structuring the ideas it receives" to the camera obscura; *Techniques*, 51.
31. G. W. Leibnitz, *New Essays on Human Understanding*, trans. Peter Remnant and Jonathan Bennett (Cambridge: Cambridge University Press, 1981), 145–146.
32. Daniele Barbaro, *La pratica della prospettiva* (Venice, 1568), 152. Quoted in Gernsheim and Gernsheim, *The History of Photography*, 22.
33. Giovanni Battista della Porta, *Magiae naturalis*, trans. anonymous (London, 1658), book 17, chapter 6.
34. Hammond, *The Camera Obscura*, 16; Lefèvre, "The Optical Camera Obscura I," 6; Gernsheim and Gernsheim, *The History of Photography*, 22.
35. I quote here from the Barbaro passage I just mentioned, but see also Gernsheim and Gernsheim, *The History of Photography*, 21; Steadman, *Vermeer's Camera*, 8–10; and Michael John Gorman, "Projecting Nature in Early Modern Europe," in *Inside the Camera Obscura*, 42–43.
36. Hammond, *The Camera Obscura*, 24–26; Gernsheim and Gernsheim, *The History of Photography*, 23–24.
37. Hammond, *The Camera Obscura*, 36; Gernsheim and Gernsheim, *The History of Photography*, 25–27.
38. Gernsheim and Gernsheim, *The History of Photography*, 28–29; Steadman, *Vermeer's Camera*, 8–10.
39. Quoted in Gernsheim and Gernsheim, *The History of Photography*, 26.
40. Eliza Meteyard, *The Life of Josiah Wedgwood: From His Private Correspondence and Family Papers* (London: Hurst and Blackett, 1886), 2:282.
41. Horace Walpole, "September 21, 1777: To the Rev. William Mason," in *The Letters of Horace Walpole, Fourth Earl of Orford*, ed. Peter Cunningham (Edinburgh: John Grant, 1906), 483–485.
42. Ibid., 483–484.
43. Gernsheim and Gernsheim, *The History of Photography*, 26.
44. Heidegger, "The Age of the World Picture," 129–130.
45. Quoted by Gorman in "Projecting Nature in Early-Modern Europe," in Lefèvre, *Inside the Camera Obscura*, 45. As can be seen from the title of this essay, Gorman is critical of such claims.
46. Quoted in Arthur Wheelock, ed., *Johannes Vermeer* (Washington, D.C.: National Gallery of Art, 1995), 25–26.
47. Quoted in Hockney, *Secret Knowledge*, 252.
48. Joseph Addison, "Wednesday, June 25: Pleasures of the Imagination," in *The Works of Joseph Addison: The Spectator*, ed. George Washington Greene (New York: G. P. Putnam and Co., 1854), 338; also quoted in Hammond, *The Camera Obscura*, 71.
49. Benjamin Martin, *A New and Compendious System of Optics* (London, 1740), 161; also quoted in Hammon, *The Camera Obscura*, 80.
50. Francesco Algarotti, *An essay on painting written in Italian by Count Algarotti* (London: L. Davis and C. Reymers, 1764), 61–62. Almost a century later, John Ruskin also commented on the aesthetic properties of the camera obscura's image. "I have often been struck, when looking at a camera-obscura on a dark day, with the exact resemblance

the image bore to one of the finest pictures of the old masters,” he wrote in *Modern Painters* (London: Smith, Elder and Co., 1848), vol. 1, sec. 2, ch. 1, 139.

51. Alexander Pope, “To Blount, June 2, 1725,” in *The Works of Alexander Pope*, vol. 6 (London: John Murray, 1871), 383.

52. Algarotti, *An essay on painting*, 60–61.

53. *Ibid.*, 63.

54. *Ibid.*, 62–63.

55. *Ibid.*, 62.

56. Heidegger, “The Question Concerning Technology,” in *The Question Concerning Technology and Other Essays*, 27.

57. *Ibid.*, 10–11.

58. *Ibid.*, 34.

59. *Ibid.*

60. Joseph Nicéphore Niépce, *Notice sur l’Héliographie*, 1827, Harry Ransom Center website, <http://www.hrc.utexas.edu/exhibitions/permanent/firstphotograph/history/#top>.

61. Louis-Jacques-Mandé Daguerre, “Daguerreotype,” in *Classic Essays on Photography*, 12.

62. *Ibid.*

63. Jules Janin, “La Daguerreotype,” in *Court and Lady’s Magazine, Monthly Critic and Museum* 17 (October 1839): 436–439. From the research archive of Gary W. Ewer, ed., *The Daguerreotype: An Archive of Source Material*, <http://www.daguerreotypearchive.org>.

64. Anonymous, “Fine Arts—Royal Society,” *The Literary Gazette; and Journal of the Belles Lettres, Arts, Sciences, etc.*, no. 1150 (February 2, 1839): 75. From the research archive of Gary W. Ewer, ed., *The Daguerreotype: An Archive of Source Material*, <http://www.daguerreotypearchive.org>.

65. Edgar Allan Poe, “The Daguerreotype,” in *Classic Essays on Photography*, 38.

66. “Photogenic Drawing, or Drawing by the Agency of Art,” *The Edinburgh Review* 86, no. 154 (January 1843): 317. Although no author is listed, this essay was apparently written by Sir David Brewster, and I will list him as the author from this point forward.

67. I want both to mention and to endorse the Gernsheim’s claim that by 1685 the camera obscura was “*absolutely ready and waiting for photography*”—i.e., that the camera obscura and chemical photography are part of the same history, a history that defies rational explanation (*The History of Photography*, 27). Cray challenges this claim in *Techniques of the Observer*. He argues that there was an epistemological break between the camera obscura and nineteenth-century photography, because the new technology differentiated the camera from the human look by eliminating the distinction between “inner” and “outer,” locating its viewer within the world, and embodying the human eye (14–17, 24). It was also a “crucial component [in] a new cultural economy of value and exchange” that abolished referentiality (13). Last, but not least, the medium was “part of the complex remaking of the individual as observer into something calculable and regularizable and of human vision into something measurable and thus exchangeable” (16–17). Cray bases his account of photography on the changes that occurred within the field of optics in the nineteenth century. The invention of photography was “part of the reorganization of the field of vision” that occurred after the discovery that human vision is binocular, subject to afterimages, and afflicted by blind spots, he argues, and therefore both an unreliable source of information about the world and difficult to align with the camera, which is monocular (16).

68. Joseph Nicéphore Niépce, “Memoire on the Heliograph,” in *Classic Essays on Photography*, 5–10.

69. Oliver Wendell Holmes, “Doings of the Sunbeam,” *The Atlantic Monthly* 12, no. 69 (July 1863): 1–15.

70. Talbot, “Photogenic Drawing,” 72–75. This would seem the moment to mention Khalip and Mitchell’s edited volume, *Releasing the Image: From Literature to New Media* (Stanford, Stanford University Press, 2011), which contains an excellent introduction to the philosophical questions that are raised by the notion of the “image,” and a section called “Origination and Auto-Origination of the Image,” which includes a very interesting essay by Peter Gerner. Gerner takes Talbot’s claims about the photographic image seriously, and concludes that not every aspect of this image is a human invention. However, he does not consider the possibility that there may be objective forms of intentionality, and so concludes that “photography would never have come into being without the construction of mobile cameras and light-intensive lenses, without successful experimentation and reflection, without information being passed down, without correspondence or meetings” (“‘Self-Generated’ Images,” 40).

71. This is the name of Talbot's 1844–46 book of photographic plates.
72. See—for instance—Talbot's short preface to part 1 of *The Pencil of Nature* (London: Longman, Brown, Green, and Longmans, 1844).
73. Daguerre, "Daguerreotype," in *Classic Essays on Photography*, 12.
74. Brewster, "Photogenic Drawing."
75. Lady Eastlake, "Photography," in *Classic Essays on Photography*, 52.
76. For an excellent account of the relationship between early photography and drawing, see Carol Armstrong, "Cameraless: From Natural Illustrations and Nature Prints to Manual and Photogenic Drawings and Other Bottonographs," in *Ocean Flowers: Impressions from Nature*, ed. Carol Armstrong and Catherine de Zegher (Princeton: Princeton University Press, 2004), 86–165.
77. Sir John Robison, "Notes on Daguerre's Photography," *Edinburgh New Philosophical Journal* 27, no. 53 (July 1839), 155–157. From the research archive of Gary W. Ewer, ed., *The Daguerreotype: An Archive of Source Material*, <http://www.daguerreotypearchive.org>.
78. Samuel F. B. Morse, "The Daguerrotipe" [sic], *New-York Observer* 17, no. 16 (April 20, 1839), 62. From the research archive of Gary W. Ewer, ed., <http://www.daguerreotypearchive.org>.
79. Brewster, "Photogenic Drawing," 317.
80. Talbot, "A Brief Historical Sketch of the Invention of the Art," in *The Pencil of Nature*, n.p.
81. Talbot called his earliest photographs "photogenic drawings." He referred to his later photographs as "calotypes."
82. Anonymous, "Photogenic Drawing," *United States Democratic Review* 5, no. 17 (May 1839): 517.
83. "Editor's Table," *The Journal of Belles Lettres* (March 12, 1839): 2.
84. Brewster, "Photogenic Drawing," 312.
85. Talbot, "A Brief Historical Sketch of the Invention of the Art," in *The Pencil of Nature*.
86. Armstrong also comments on the reflexive properties attributed to the photographic image in the early history of the medium. See "Cameraless," in Armstrong and de Zegher, *Ocean Flowers*, 93–94.
87. Brewster, "Photogenic Drawing," 317.
88. "New Discovery—Engraving and Burnet's Cartoons," *Blackwood's Edinburgh Magazine* 45, no. 281 (March 1839): 382–391. From the research archive of Gary W. Ewer, ed., *The Daguerreotype: An Archive of Source Material*, <http://www.daguerreotypearchive.org>. This essay serves as both the prologue and the epilogue to a letter to the editor from Talbot. The author of the essay, who was clearly one of the journal's editors, is extremely ambivalent about the medium of photography. He worries in the epilogue about what he most emphasizes in the prologue: the self-delineation of fields, rivers, trees, houses, and cities. He also does so in ways that anticipate Baudelaire's attack on photography. Photography is disturbing, he declares, because it dispenses with the "human hand."
89. Lady Eastlake, "Photography," in *Classic Essays on Photography*, 57.
90. This story is recounted in Matthew 25:1–13.
91. Lady Eastlake, "Photography," in *Classic Essays on Photography*, 57.
92. Morell describes this process in an interview in *A Camera in a Room: Photographs by Abelardo Morell* (Washington, D.C.: Smithsonian Institution Press, 1995), 7.
93. This is how the title reads in *A Camera in a Room*, n.p.
94. This is how the title is listed in *Camera Obscura: Photographs by Abelardo Morell* (New York: Bulfinch Press, 2004), 14.
95. Morell links his project to Talbot's in several important ways. In 1999, he made a black-and-white photograph of what appears to be one of Talbot's own cameras pointed at the illuminated page of a book displaying one of the latter's early contact negatives. Morell called this photograph *Book and Camera: In Memory of Fox Talbot*, and he couples it with a famous passage from *The Pencil of Nature* in a 2004 catalogue. This passage is the one in which Talbot cites as the inspiration for his photographic experimentation the thought "how charming it would be if it were possible to cause these natural images to imprint themselves durably, and remain fixed on paper" (*Camera Obscura: Photographs by Abelardo Morell*, 78–79). In 2003, Morell also made a black-and-white camera obscura photograph in the room in Lacock Abbey in which Talbot invented the negative/positive photographic process, which I am using as the frontispiece to this book. It superimposes an upside-down image of the exterior of the building on the "recto" of this interior. Morell

made a similar photograph of the Cloisters at Lacock Abbey. Both of these photographs are published in the same catalogue, on 76 and 80.

96. *A Camera in a Room*, n.p.

97. This is how the title is listed in *Camera Obscura: Photographs by Abelardo Morell*, 16. The catalogue for a recent retrospective offers yet another variant: “*Camera Obscura: Houses Across the Street in Our Bedroom, Quincy, Massachusetts*.” See *Abelardo Morell: The Universe Next Door*, ed. Elizabeth Siegel (Chicago: Art Institute of Chicago, 2013), n.p.

98. Abelardo Morell, “Camera Obscura,” <http://www.abelardomorell.net/posts/camera-obscura/>.

99. Elizabeth Siegel, “Wonderlands,” in *Abelardo Morell: The Universe Next Door*, 16–17. The preposition in the title of this work—*Camera Obscura: The Philadelphia Museum of Art East Entrance in Galley #171 with a de Chirico Painting*—also attests to the collaborative nature of its production (my emphasis).

100. Siegel, “Wonderlands,” 22, and Morell, “Camera Obscura.”

101. Morell, “Camera Obscura.”

CHAPTER 2

1. For an excellent discussion of the difficulties faced by early photographers, see Larry J. Schaaf, *Out of the Shadows: Herschel, Talbot, and the Invention of Photography* (New Haven: Yale University Press, 1992), 75–151.

2. “Taking 1826 as the date of this photograph, it is nine years earlier than Talbot’s first paper negative (1835) showing the lattice window of his library, and eleven years prior to Daguerre’s first successful result, a still life taken in 1837,” Gernsheim and Gernsheim write in *The History of Photography*, 59.

3. In fact, he came to it through lithography, with which he also experimented. See Georges Potonniée, *The History of the Discovery of Photography*, trans. Edward Epstein (New York: Arno Press, 1973), 77–81.

4. I draw here on Geoffrey Batchen’s very helpful description of these experiments in *Burning with Desire*, 120–121.

5. Batchen provides a different account of this language than I do; see *Burning with Desire*, 69–70. He connects it to eighteenth- and early nineteenth-century landscape painting and the picturesque.

6. della Porta, *Magiae naturalis*, book 17, chapter 6, also quoted in Steadman, *Vermeer’s Camera*, 10.

7. Hammond reproduces this diagram in *The Camera Obscura*, 23, as do the Gernsheims in *The History of Photography*, plate 6.

8. Quoted by Potonniée, *The History of the Discovery of Photography*, 82.

9. *Ibid.*, 83.

10. *Ibid.*, 97–99.

11. For a deconstructive reading of these two “points,” see Jacques Lacan, *The Four Fundamental Concepts of Psychoanalysis: The Seminar of Jacques Lacan, Book XI*, ed. Jacques-Alain Miller, trans. Alan Sheridan (New York: Norton, 1981), 67–119, and my *The Threshold of the Visible World* (New York: Routledge, 1996), 125–161.

12. Beaumont Newhall, *The History of Photography* (New York: Museum of Modern Art, 1982), 13; Batchen, *Burning with Desire*, 81.

13. Gernsheim and Gernsheim, *The History of Photography*, 57; Potonniée, *The History of the Discovery of Photography*, 97–98.

14. Goethe discovered the afterimage in 1817. “Goethe’s theory challenged the Aristotelian truthfulness of optical perception by tethering the act of observation with the body, fusing time and vision,” Robert Hirsch writes in *Seizing the Light: A History of Photography* (New York: McGraw-Hill, 2000), 11. For a fuller discussion of the implications of Goethe’s discovery for human vision, see Crary, *Techniques of the Observer*.

15. I discuss this concept in [chapter 1](#).

16. Scholars disagree about the date of the heliograph. Potonniée maintains that it was made in 1822 (*The History of the Discovery of Photography*, 97); Newhall says it was made in 1827 (*The History of Photography*, 15), a claim with which Batchen concurs (*Burning with Desire*, 126); and the Gernsheims argue that it could have been made in either 1826 or 1827 (*The History of Photography*, 59).

17. Gernsheim and Gernsheim, *The History of Photography*, 58–62.

18. Potonniée, *The History of the Discovery of Photography*, 97; Gernsheim and Gernsheim, *The History of*

Photography, 59.

19. Both Paul Valéry and Daniel Arasse talk about the dynamic nature of Leonardo's analogies. See Valéry, "Introduction to the Method of Leonardo," 25–26; Arasse, *Leonardo da Vinci: The Rhythm of the World*.

20. Quoted in Gernsheim and Gernsheim, *The History of Photography*, 61.

21. Gernsheim and Gernsheim, *The History of Photography*, 62; Helmut Gernsheim and Alison Gernsheim, *L. J. M. Daguerre: The History of the Diorama and the Daguerreotype* (New York: Dover, 1968), 63–65.

22. Gernsheim and Gernsheim, *L. J. M. Daguerre*, 63, 67; Batchen, *Burning with Desire*, 121.

23. For a detailed account of the steps through which Daguerre established himself as the source of the photographic image, see Gernsheim and Gernsheim, *L. J. M. Daguerre*, 70–109.

24. Daguerre, "Daguerreotype," in *Classic Essays on Photography*, 12.

25. Ibid.

26. Hippolyte Gaucheraud, "Fine Arts. The Daguerotype," *The Literary Gazette; and Journal of the Belles Lettres, Arts, Sciences, Etc.* 1147 (January 12, 1839): 28. From the research archive of Gary W. Ewer, ed., *The Daguerreotype: An Archive of Source Material*, <http://www.daguerreotypearchive.org>.

27. Anonymous, "New Discovery in the Fine Arts. The Daguerroscope," *New-Yorker: A Weekley Journal of Literature, Politics, Statistics, and General Information* 7, no. 5 (April 20, 1839): 70–71. From the research archive of Gary W. Ewer, ed., *The Daguerreotype: An Archive of Source Material*, <http://www.daguerreotypearchive.org>.

28. Janin, "La Daguerreotype," 436–439.

29. Ibid.

30. Gernsheim and Gernsheim, *The History of Photography*, 66–74; Hirsch, *Seizing the Light*, 12–13.

31. This is an editorial addendum to an essay whose author is unknown: "Chemical and Optical Discovery," *Journal of the American Institute, a Monthly Publication Devoted to the Interests of Agriculture, Commerce, Manufactures, and the Arts* 4, no. 5 (February 1839): 267–277. From the research archive of Gary W. Ewer, ed., *The Daguerreotype: An Archive of Source Material*, <http://www.daguerreotypearchive.org>.

32. This is the date that Batchen assigns it (*Burning with Desire*, 136). Newhall says 1838 (*The History of Photography*, 16–17).

33. Batchen, *Burning with Desire*, 133.

34. Robison, "Notes on Daguerre's Photography," 155–157.

35. Gernsheim and Gernsheim, *L. J. M. Daguerre*, 194; Batchen, *Burning with Desire*, 133.

36. Gaucheraud, "Fine Arts—The Daguerotype," 43–44.

37. Anonymous, "Self-Operating Processes of Fine Art: The Daguerreotype," *Spectator: A Weekly Journal of News, Politics, Literature and Science* 553 (February 2, 1839): 114–115. From the research archive of Gary W. Ewer, ed., *The Daguerreotype: An Archive of Source Material*, <http://www.daguerreotypearchive.org>.

38. Morse, "The Daguerrotipe," 62.

39. Gaucheraud, "Fine Arts—The Daguerotype," 28.

40. Batchen notes the strange elision in Morse's account of the person who is shining the man's boots, and finds traces of this figure in the first daguerreotype (*Burning with Desire*, 133–136). Nicholas Jenkins proves that this is indeed the case through a microscopic visual analysis, and argues that there may also be two other figures in the photograph ("Traces," *Day by Day: A Blog* [blog], August 22, 2007 <http://www.stanford.edu/njenkins/archives/2007/08/traces.html>). Both Batchen and Jenkins relate the shoeshine's semi-invisibility to the lowliness of his social position. Giorgio Agamben sees the daguerreotype as an "image of the Last Judgment" (*Profanations*, trans. Jeff Fort [New York: Zone Books, 2007], 23–27). Since this reading dictates that there be only one person in the daguerreotype, he elides the shoeshine.

41. Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell (New York: Dover, 1998), 302.

42. Gaucheraud, "Fine Arts. The Daguerotype," 28.

43. Robison, "Notes on Daguerre's Photography," 157.

44. Ibid., 155–157.

45. I draw here on Gernsheim and Gernsheim, *The History of Photography*, 75–83; Larry J. Schaaf, *The Photographic*

Art of William Henry Fox Talbot (Princeton: Princeton University Press, 2000); Schaaf, *Out of the Shadows*; and Gail Buckland, *Fox Talbot and the Invention of Photography* (Boston: David R. Godine, 1980).

46. This photograph has almost faded away. The one pictured here was made the same year, from the same position, but with a slightly larger camera.

47. Buckland, *Fox Talbot and the Invention of Photography*, 28.

48. Quoted by Malcolm Daniel, Department of Photographs, “William Henry Fox Talbot (1800–1877) and the Invention of Photography,” in *Heilbrunn Timeline of Art History* (New York: Metropolitan Museum of Art, October 2004), http://www.metmuseum.org/toah/hd/tlbt/hd_tlbt.htm.

49. Buckland, *Fox Talbot and the Invention of Photography*, 33.

50. William Henry Fox Talbot, “Letter to the Editor,” *The Literary Gazette*, no. 1258 (February 19, 1841): 139–140.

51. Brewster, “Photogenic Drawing,” 327.

52. This passage accompanies plate 13 in *The Pencil of Nature*. As Russell Roberts notes, it prefigures Walter Benjamin’s account of the “optical unconscious” (“Specimens and Marvels: The Work of William Henry Fox Talbot,” in *Specimens and Marvels: William Henry Fox Talbot and the Invention of Photography* [New York: Aperture Foundation, 2000], 64–65). Although he has a different understanding of truth, Edgar Allan Poe expresses similar sentiments in his essay on the daguerreotype. He writes that “the Daguerreotyped plate... is *infinitely* more accurate in its representation than any painting by human hand,” and that “the closest scrutiny of the photogenic drawing discloses only a more absolute truth, a more perfect identity of aspect with the thing represented” (“The Daguerreotype,” in *Classic Essays on Photography*, 38). Holmes echoes these claims in the following passage from “The Stereoscope and the Stereograph”: “A perfect photograph is absolutely inexhaustible. In a picture you can find nothing which the artist has not seen before you; but in a perfect photograph there will be as many beauties lurking, unobserved, as there are flowers that blush unseen in forests and meadows.” Even if we were to look at this image a hundred times with the aid of “the best of our common instruments,” Holmes adds, we would not really “know” it, because every time we encounter a photograph, we see something new (“The Stereoscope and the Stereograph,” 744).

53. Talbot, “Letter to the Editor,” *The Literary Gazette*, 139.

54. This passage accompanies plate 6 in *The Pencil of Nature*.

55. For a detailed account of Talbot’s relationship to photographic reproduction, see [chapter 4](#).

56. Joseph Nicéphore Niépce, “Memoir on Heliography,” published in Gernsheim and Gernsheim, *L. J. M. Daguerre*, 67.

57. “The memoir dated ‘Kew, le 8 Décembre, 1827’ was accompanied by several heliographs,” Gernsheim writes; “these, with the exception of this photograph from nature, were reproductions of engravings. The specimens were all referred to him together with the memoir, for the Royal Society felt unable to take cognizance of an invention, the details of which the inventor was unwilling to disclose”; Gernsheim and Gernsheim, “Rediscovery of the World’s First Photograph,” 1.

58. Helmut Gernsheim, “The 150th Anniversary of Photography,” *History of Photography* 1, no. 1 (1977): 6–7.

59. Gernsheim offers the most detailed account of this discovery in “The 150th Anniversary of Photography.”

60. *Ibid.*, 7.

61. *Ibid.*, 8.

62. Gernsheim and Gernsheim, *The History of Photography*, 59.

63. I am quoting here from the Harry Ransom Center website, “Conservation: The First Photograph” (Austin: The University of Texas at Austin, 2003–present), <http://www.hrc.utexas.edu/exhibitions/permanent/firstphotograph/conservation/#top>.

64. This is how Batchen characterizes the over-painted photograph (*Burning with Desire*, 127).

65. Gernsheim, “The 150th Anniversary of Photography,” 8.

66. *Ibid.*, 8.

67. Barbara Brown, “The First Photograph,” *Abbey Newsletter* 26, no. 3 (November 2002). Brown is the head of photograph conservation at the Harry Ransom Humanities Research Center, and participated in the Getty Conservation Institute’s analysis of the photograph.

68. The Getty Conservation Institute, “Scientific Analysis of World’s First Photograph,” J. Paul Getty Trust, 2002,

69. Eduardo Cadava and Gabriela Nouzeilles included an exhibition copy of this work in an excellent photography exhibition at the Princeton University Art Museum in the fall of 2013, “The Itinerant Languages of Photography.” Cadava also discusses it in the exhibition catalogue. Both the exhibition and the catalogue were devoted to the premise that photographs cannot be “fixed in a single time and place,” because they “travel from one forum to another,” and because “with each recontextualization and rereading, they redefine themselves and take on different and expanding significances.” See Cadava and Nouzeilles, introduction to *The Itinerant Languages of Photography*, ed. Cadava and Nouzeilles (Princeton: Princeton University Art Museum, 2013), 17. In the first essay in the catalogue, Cadava writes that “although Fontcuberta stresses the intensification of this circulation and itinerancy today in the era of digitization, he also suggests [through *Googlegram: Niépce*] that this movement has always formed part of the photographic image” (30). Needless to say, I concur strongly with both of these claims.

70. For the sake of clarity, I have described the Google search and the photomosaic program separately, but the two operations happened simultaneously. In fact, Fontcuberta ran the Google search *through* the photomosaic program.

71. Joan Fontcuberta, “Archive Noise,” Artist Statement, www.fontcuberta.com.

72. Ibid.

73. Joan Fontcuberta, “Googlegrams,” Artist Statement, www.fontcuberta.com.

74. I am of course paraphrasing a famous passage from Benjamin’s “On the Concept of History” (390).

CHAPTER 3

1. Jeff Wall, “Photography and Liquid Intelligence,” in *Jeff Wall: Selected Essays and Interviews*, ed. Peter Galassi (New York: Museum of Modern Art, 2007), 109–110.

2. Ibid., 109.

3. Ibid.

4. In *Creative Evolution*, Henri Bergson repeatedly likens the instantaneity and fixity of human perception to a “snapshot.” See *Creative Evolution*, 302, 273, 306. When we want to perceive movement, Bergson argues, we string these snapshots together like a roll of film, and switch on a mental projector (306).

5. Wall, “Photography and Liquid Intelligence,” 109.

6. Ibid.

7. Ibid.

8. Ibid., 110.

9. I am thinking here of two essays: Martin Heidegger, “The Question Concerning Technology,” and “The Age of the World Picture,” in Heidegger, *The Question Concerning Technology and Other Essays*, 3–35 and 115–154, respectively.

10. Wall, “Photography and Liquid Intelligence,” 110.

11. Todd Gustavson, *Camera: A History of Photography from Daguerreotype to Digital* (New York: Sterling Publishing Co., 2009), 101.

12. As George Baker puts it in “Black Mirror,” “We know—or feel like we know—that we have lost... the labor of photography that was its chemistry, its noisome liquids and its baths. The optical now reigns supreme (indeed we face a triumphalism of ‘camerawork’ that ties the entire history of photography, analogue or digital, to ‘lens-based’ aesthetic alone).” See Baker, “Black Mirror,” in *Paul Sietsma*, ed. Christopher Bedford (Columbus: Wexner Center for the Arts, Ohio State University, 2013), 4.

13. Gustavson, *Camera*, 9, and Gernsheim and Gernsheim, *L. J. M. Daguerre*, 96–97 and 112–113.

14. Gustavson, *Camera*, 10–11, 13, 15, 16. This is only a cursory account of each of these devices, and only a partial list of the cameras designed between 1839 and 1851.

15. Gernsheim and Gernsheim, *The History of Photography*, 415. Although Sutton was a well-known figure in his day—he was the author of *A Dictionary of Photography* and a number of other books about photography, the editor for eleven years of *Photographic Notes*, and the inventor of the first wide-angle panoramic camera—we have little information about his single-reflex camera.

16. Gernsheim and Gernsheim, *The History of Photography*, 260; Gustavson, *Camera*, 30–31.

17. Gustavson, *Camera*, 30–31, 78.

18. This information comes from the website of the National Media Museum in Bradford, UK, which has a Revolver Camera in its collection. The Colt revolver's chamber could be fired six times, and the Thompson Revolver Camera's four times. See "Thompson Revolver Camera: Photographic Technology" (Bradford: National Media Museum), <http://www.nationalmediamuseum.org.uk/Collection/Photography/PhotographicTechnology/CollectionItem.aspx?id=1991-5101>.

19. Gernsheim and Gernsheim, *The History of Photography*, 415.

20. "Thompson Revolver Camera," <http://www.nationalmediamuseum.org.uk/Collection/Photography/PhotographicTechnology/CollectionItem.aspx?id=1991-5101>.

21. "Poetus Photographicus," *The Photographic Journal* (February 21, 1854): 210. Quoted by Gernsheim and Gernsheim, *The History of Photography*, 231.

22. Lady Eastlake, "Photography," in *Classic Essays on Photography*, 55.

23. Gernsheim and Gernsheim, *The History of Photography*, 335–336.

24. Hirsch, *Seizing the Light*, 72–73.

25. Holmes, "Doings of the Sunbeam," 5.

26. *Ibid.*, 5–6.

27. David Falk, Dieter Brill, and David Stork, eds., *Seeing the Light: Optics in Nature, Photography, Color, Vision, and Holography* (Hoboken: John Wiley and Sons, 1988), 210–219; Nicholas J. Wade and Michael T. Swanston, *Visual Perception: An Introduction* (East Sussex: Psychology Press, 2013), 207–209.

28. I discuss these challenges in [chapter 1](#).

29. Wade and Swanston, *Visual Perception*, 204–207.

30. Laura Burd Schiavo, "From Phantom Image to Perfect Vision: Physiological Optics, Commercial Photography, and the Popularization of the Stereoscope," in *New Media: 1740–1915*, ed. Lisa Gitelman and Geoffrey B. Pingree (Cambridge: MIT Press, 2003), 113–138.

31. *Ibid.*, 116.

32. Gernsheim and Gernsheim, *The History of Photography*, 256–257.

33. Schiavo, "From Phantom Image to Perfect Vision," 127.

34. Edward W. Earle, ed., *Points of View: The Stereograph in America—A Cultural History* (Rochester: Visual Studies Workshop Press, 1979), 32.

35. Sir David Brewster, *The Stereoscope: Its History, Theory, and Construction* (London: John Murray, 1856), 36.

36. Lady Eastlake, "Photography," in *Classic Essays on Photography*, 53.

37. Antoine Claudet, "Photography in its Relation to the Fine Arts," *The Photographic Journal* 6 (June 15, 1860), 266.

38. James Ellis, *Progress of Photography, Collodion, the Stereoscope* (London: Bell and Daldy, 1856), 50. Quoted by Schiavo, "From Phantom Image to Perfect Vision," 119.

39. Holmes, "The Stereoscope and the Stereograph," 739.

40. *Ibid.*, 744.

41. *Ibid.*

42. Holmes, "Doings of the Sunbeam," 10.

43. Oliver Wendell Holmes, "Sun-Painting and Sun-Sculpture," *The Atlantic Monthly* 8, no. 45 (July 1861), 14.

44. Holmes, "The Stereoscope and the Stereograph," 738.

45. Holmes, "Sun-Painting and Sun-Sculpture," 16.

46. Homes, "The Stereoscope and the Stereograph," 743, 746.

47. *Ibid.*, 745.

48. *Ibid.*

49. See, for instance, *ibid.*, 742.

50. Austin Abbott, "The Eye and the Camera," *Harper's New Monthly Magazine* 39 (1869): 476–482.
51. *Ibid.*, 480.
52. *Ibid.*, 481.
53. See Rosalind E. Krauss, "Photography's Discursive Spaces," in *The Originality of the Avant-Garde and Other Modernist Myths* (Cambridge: MIT Press, 1988), 138–141. Krauss focuses on the naturalization of the stereoscopic "view," the way it becomes embedded in the landscape.
54. John Samson, "Photographs from the High Rockies," *Harper's New Monthly Magazine* 34 (1869): 471.
55. Taupenot's dry-plate process wasn't the first, but it was the most popular (Gernsheim and Gernsheim, *The History of Photography*, 322–325).
56. *Ibid.*, 325–332.
57. *Ibid.*, 422–425, and Hirsch, *Seizing the Light*, 172–173.
58. Gernsheim and Gernsheim, *The History of Photography*, 413–414.
59. Wall, "Photography and Liquid Intelligence," 110.

CHAPTER 4

1. Fox Talbot uses all three words in "A Brief Historical Sketch of the Invention of the Art," in *The Pencil of Nature*.
2. See, for instance, Daguerre, "Daguerreotype," in *Classic Essays on Photography*, 11–13; Poe, "The Daguerreotype," in *Classic Essays on Photography*, 37–38; and Holmes, "The Stereoscope and the Stereograph," 739–748.
3. Brewster, "Photogenic Drawing, or Drawing with the Agency of Light," 330 and 344. See Batchen, *Burning with Desire*, 64, on the long list of possibilities pondered by Niépce.
4. Lady Eastlake, "Photography," in *Classic Essays on Photography*, 65.
5. *Ibid.*, 41.
6. *Ibid.*, 65.
7. *Oxford English Dictionary Online*, s.v. "Chiasmus," accessed December 2013, <http://oxforddictionaries.com/definition/english/chiasmus?q=chiasmus>.
8. Falk, Brill, and Stork, *Seeing the Light*, 182.
9. I am drawing here on the last chapter of Maurice Merleau-Ponty's *The Visible and the Invisible*, trans. Alphonso Lingis (Evanston: Northwestern University Press, 1968), especially 137–139.
10. *Ibid.*, 138.
11. *Ibid.*, 139.
12. Emile Benveniste, "Subjectivity in Language," in *Problems in General Linguistics*, trans. Mary Elizabeth Meek (Coral Gables: University of Florida Press, 1971), 224–225.
13. Martin Buber, *I and Thou*, trans. Walter Kaufmann (New York: Simon and Schuster, 1970), 84.
14. Kemp, *The Science of Art*, 189.
15. I discuss these similarities in [chapters 1](#) and [2](#).
16. Merleau-Ponty, *The Visible and the Invisible*, 131.
17. *Ibid.*, 137.
18. This is, at least, what Larry J. Schaaf thinks, and I find him a very persuasive thinker. See *The Photographic Art of William Henry Fox Talbot*, 19.
19. *Ibid.*, 15.
20. *Ibid.*, 19.
21. For Talbot, a negative was "a real object in and of itself," Schaaf writes in *Records of the Dawn of Photography: Talbot's Notebooks P & Q* (Cambridge: Cambridge University Press, 1996), xviii.
22. Talbot, "A Brief Historical Sketch of the Invention of the Art," in *The Pencil of Nature*, n.p.
23. George Baker, "Black Mirror," 6 and 10.

24. Schaaf, *The Photographic Art of William Henry Fox Talbot*, 19.
25. This passage comes from Talbot's *Scientific Notebook*. It is quoted by Michael Gray in "Henry Fox Talbot, 1800–1977," in *First Photographs: William Henry Fox Talbot and the Birth of Photography*, by Michael Gray, Arthur Ollman, and Carol McCusker (New York: powerHouse Books, 2002), 127.
26. Schaaf, *The Photographic Art of William Henry Fox Talbot*, 15 and 19.
27. Merleau-Ponty, *The Visible and the Invisible*, 134.
28. Schaaf, *The Photographic Art of Henry Fox Talbot*, 25.
29. Gerhard Richter, *The Daily Practice of Painting: Writings and Interviews, 1962–1993*, ed. Hans-Ulrich Obrist (Cambridge: MIT Press, 1995), 187. I discuss the role that analogy plays in Richter's art and thought in *Flesh of My Flesh*, 167–221.
30. Merleau-Ponty, *The Visible and the Invisible*, 132–133.
31. *Ibid.*, 133.
32. Carol Armstrong, *Scenes in a Library: Reading the Photograph in the Book, 1843–1875* (Cambridge: MIT Press, 1998), 184.
33. Geoffrey Batchen, *Each Wild Idea: Writing, Photography, History* (Cambridge: MIT Press, 2001), 156.
34. Larry J. Schaaf, introduction to *Sun Gardens: Victorian Photograms by Anna Atkins* (New York: Aperture Foundation, 1985), 24–31.
35. I draw heavily in my account of Harvey's *Manual of British Algae* on Armstrong's illuminating and deeply informed discussion of it in *Scenes in a Library*, 187–208. I am also indebted both here and elsewhere in this section of chapter 4 to another of Armstrong's writings, "Cameraless," in Armstrong and de Zegher, *Ocean Flowers*, 86–165 and 196.
36. These words come from the introduction to the 1849 rather than the 1841 edition of the book.
37. As Kathryn A. Tuma observes in "The Victorian 'Book of Nature': Modeling, Mimesis, and the Community of Forms," Atkins uses the "analogies given readily in the material specificities of her medium" to return "the specimens to something like a native domain" (in Armstrong and de Zegher, *Ocean Flowers*, 201 and 231).
38. This is Merleau-Ponty's paraphrase of a line from a poem by Paul Claudel (*The Visible and the Invisible*, 132).
39. Armstrong, *Scenes in a Library*, 273–275, and Batchen, *Each Wild Idea*, 158.
40. Armstrong, *Scenes in a Library*, 204.
41. *Ibid.*, 268.
42. Two of the cyanotypes that are reproduced here are from *Photographs of British Algae*, and two are from *Cyanotypes of British and Foreign Ferns*.
43. Talbot, *The Pencil of Nature*, 13.
44. I use the word "oceanic" here in the way that I use it throughout *Flesh of My Flesh*: as a designator for the untotalizable totality to which we all belong, and which has no "outside."
45. Talbot, "Photogenic Drawing," 75.
46. Holmes, "The Stereoscope and the Stereograph," 741.
47. Hiroshi Sugimoto, *Nature of Light* (Shizuoka, Japan: Koko Okano, 2009).
48. Schaaf wrote the commentaries. They are printed in two columns—one English and the other Japanese.
49. Sugimoto, "Photogenic Drawing," in *Nature of Light*, 37.
50. Holmes, "The Stereoscope and the Stereograph," 740.
51. *Ibid.*, 740–741.
52. *Ibid.*, 741.
53. *Ibid.*, 738.
54. *Ibid.*
55. *Ibid.*, 742–743.
56. *Ibid.*, 738.

57. Ibid., 742.

58. Crary, *Techniques of the Observer*, 126.

59. Ibid., 125. Crary finds this last feature of the stereoscopic image unnerving. Things occupy space “aggressively,” he writes, and space has “a disturbing palpability.” He claims that there is a “derangement” of conventional “optical cues” in the stereoscopic image because it is non-referential—because it is a purely physiological construction. He also maintains that the body produces this image in response to the demands of nineteenth-century capitalism, and that it does so over and over again. Like a worker on an assembly line, the viewer’s brain transforms a long series of “dreary parallel images” into “a tantalizing apparatus of depth.” And each time it effects this transformation, it “transubstantiate[s]” the “mass-produced and monotonous cards” into a “compulsory and seductive vision of the ‘real’” (*Techniques of the Observer*, 131–132).

60. Holmes, “The Stereoscope and the Stereograph,” 744.

61. Ibid., 744.

62. Merleau-Ponty, *The Visible and the Invisible*, 136.

63. Holmes, “The Stereoscope and the Stereograph,” 745–746.

64. Ibid., 746.

65. Ibid., 744.

66. Ibid., 747.

67. Ibid., 748.

68. Ibid., 747–748.

69. Ibid., 748.

70. Ibid., 747.

71. There are three related passages in Holmes’s “Sun-Painting and Sun-Sculpture”; see 14, 16, and 28.

72. As Mark Durden notes in *Fifty Key Writers on Photography* (London: Routledge, 2013), Holmes misquotes the line he takes from Milton. The latter says “unapproached light,” not “uncreated light” (127).

73. Jeff L. Rosenheim, *Photography and the American Civil War* (New York: Metropolitan Museum of Art, 2013), 7.

74. Ibid., 1–26.

75. Quoted by Rosenheim, *ibid.*, 147.

76. Ibid., 1.

77. Anthony W. Lee writes that they are “newly emancipated” (“The Image of War,” in *On Alexander Gardner’s “Photographic Sketch Book” of the Civil War*, ed. Anthony W. Lee and Elizabeth Young [Berkeley: University of California Press, 2007], 45).

78. Alexander Gardner, *Gardner’s Photographic Sketchbook of the American Civil War, 1861–1865* (New York: Delano Greenidge Editions, 2001), 198. As Lee notes, Gardner’s commentary is “extraordinarily unusual,” since most “white observers... preferred not to tackle the question of the African American presence after the war” (“The Image of War,” in *On Alexander Gardner’s “Photographic Sketch Book,”* 47).

79. Gardner, *Gardner’s Photographic Sketchbook*, 198.

80. As Young observes, the “dismembered foot” in the foreground of the photograph “seems an extension of the live African American bodies” (“Verbal Battlefields,” in *On Alexander Gardner’s “Photographic Sketch Book” of the Civil War*, 90).

81. Merleau-Ponty, *The Visible and the Invisible*, 137.

82. Eleanor Jones Harvey, *The Civil War and American Art* (New Haven: Yale University Press, 2012), 96.

CHAPTER 5

1. I am of course referring here to Joachim Gasquet’s 1921 account of his conversations with Cézanne in Joachim Gasquet, *Cézanne: A Memoir with Conversations* (London: Thames and Hudson, 1991), 152, rather than to a document produced by the painter himself. It might therefore seem more appropriate to attribute this passage to Gasquet than to Cézanne. However, Rilke describes Cézanne’s project in similar terms in an October 21, 1907, letter. See Rainer Maria Rilke, *Letters on Cézanne*, trans. Joel Agee (New York: North Point Press, 2002), 66.

2. Rainer Maria Rilke, *The Letters of Rainer Maria Rilke, 1910–1926*, trans. Jane Bannard Greene and M. D. Herter Norton (New York: Norton, 1947), 289.
3. Talbot, “Photogenic Drawing,” 73.
4. Gasquet, *Cézanne*, 150.
5. Rilke, *The Letters of Rainer Maria Rilke, 1910–1926*, 96.
6. Sigmund Freud, *The Interpretation of Dreams*, in *The Standard Edition of the Complete Psychological Works*, vol. 5, trans. James Strachey (London: Hogarth Press, 1953–1974), 536–543.
7. Freud, *Introductory Lectures on Psycho-Analysis*, in *The Standard Edition*, 16:295.
8. Freud, “The Psychotherapy of Hysteria,” in Freud and Josef Breuer, *Studies on Hysteria*, in *The Standard Edition*, 2:291.
9. Freud, *The Interpretation of Dreams*, 610–621.
10. Freud, “A Note Upon the ‘Mystic Writing-Pad,’” in *The Standard Edition*, 14:227–232.
11. Freud uses this expression in *Beyond the Pleasure Principle* in *The Standard Edition*, 18:55.
12. Freud, “Psychotherapy of Hysteria,” 291.
13. Freud, “The Dynamics of Transference,” in *The Standard Edition*, 12:99–100.
14. Jacques Lacan, “The Mirror Stage as Formative of the I Function as Revealed in Psychoanalytic Experience,” in *Écrits*, trans. Bruce Fink (New York: Norton, 2006), 76.
15. Lacan, “Aggressiveness in Psychoanalysis,” in *Écrits*, 92.
16. Lacan, “Some Reflections on the Ego,” *International Journal of Psychoanalysis* 34 (1953): 12.
17. Lacan, “Aggressiveness in Psychoanalysis,” in *Écrits*, 96.
18. *Ibid.*, 90.
19. *Ibid.*
20. Marcel Proust, *In Search of Lost Time*, vol. 6, *Time Regained*, trans. Andreas Major, Terence Kilmartin, and D. J. Enright (New York: Modern Library, 1993), 300, and *In Search of Lost Time*, vol. 2, *Within a Budding Grove*, trans. C. K. Scott Moncrieff, Terence Kilmartin, and D. J. Enright (New York: Modern Library, 1992), 616–617.
21. Proust, *Within a Budding Grove*, 621.
22. *Ibid.*, 642.
23. *Ibid.*
24. Proust, *In Search of Lost Time*, vol. 1, *Swann’s Way*, trans. C. K. Scott Moncrieff, Terence Kilmartin, and D. J. Enright (New York: Modern Library, 1992), 58–59.
25. Proust, *Time Regained*, 262–263. The title of my book comes from this passage.
26. *Ibid.*, 292.
27. *Ibid.*, 274.
28. *Ibid.*, 275.
29. *Ibid.*, 322.
30. *Ibid.*, 276–277.
31. Proust, *Swann’s Way*, 64.
32. Mieke Bal, *The Mottled Screen: Reading Proust Visually*, trans. Anna-Louise Milne (Stanford: Stanford University Press, 1997), 201.
33. Kaja Silverman, “Je Vous,” *Art History* 30, no. 3 (June 2007): 453.
34. Wall, “Photography and Liquid Intelligence,” 109–110.
35. Brassai, *Proust in the Power of Photography*, trans. Richard Howard (Chicago: University of Chicago Press, 2001), 136.
36. Proust, *Swann’s Way*, 64.

37. Brassai, *Proust in the Power of Photography*, 136.
38. Proust, *Swann's Way*, 1.
39. Proust, *Within a Budding Grove*, 505.
40. *Ibid.*, 508.
41. *Ibid.*, 718–719.
42. *Ibid.*, 663.
43. *Ibid.*, 719–720.
44. *Ibid.*, 721.
45. Rilke, *The Letters of Rainer Maria Rilke, 1910–1926*, 110.
46. Walter Benjamin, “On the Image of Proust,” *Selected Writings*, 2:238.
47. Proust, *Within a Budding Grove*, 647.
48. *Ibid.*, 500.
49. *Ibid.*, 501.
50. Bal, *The Mottled Screen*, 196. Bal also discusses many of these passages.
51. Proust, *In Search of Lost Time*, vol. 4: *Sodom and Gomorrah*, trans. C. K. Scott Moncrieff, Terence Kilmartin, and D. J. Enright (New York: Modern Library, 1993), 237.
52. Proust, *In Search of Lost Time*, vol. 3, *The Guermantes Way*, trans. C. K. Scott Moncrieff, Terence Kilmartin, and D. J. Enright (New York: Modern Library, 1993, 183–185).
53. Proust, *Within a Budding Grove*, 510–511.
54. Proust, *The Guermantes Way*, 498.
55. Benjamin, “The Work of Art,” 117.
56. Proust, *The Guermantes Way*, 498–499.
57. In a chilling passage in *Time Regained*, Proust maintains that “matter is indifferent,” and that “anything can be grafted upon it by thought” (*Time Regained*, 320–321). He invokes this axiom as proof of his “idealism.”
58. Proust, *Within a Budding Grove*, 648.
59. Proust, *Time Regained*, 310.
60. I take this phrase from Ralph Ellison, who uses it to describe a chiasmus that is closely related to those I discuss in this book, and to which I will return in *The Promise of Social Happiness*. See his *Invisible Man* (New York: Vintage International, 1995), 574.
61. Proust, *Time Regained*, 299.
62. Jean-Paul Sartre, *Being and Nothingness: A Phenomenological Essay on Ontology*, trans. Hazel E. Barnes (New York: Citadel Press, 1956), 231.
63. *Ibid.*
64. *Ibid.*, 239.
65. Merleau-Ponty, *The Visible and the Invisible*, 132–133.
66. *Ibid.*, 141–142.
67. Akerman introduces a narrative element into *The Captive* that is not present in Proust's novel and that suggests that the former is a renovation of the latter, rather than an “adaptation”: workmen are constantly painting and plastering the walls of Simon's apartment.
68. Proust, *Within a Budding Grove*, 661.
69. Proust claims in *Time Regained* that “nothing is further from what we have really perceived than the vision that the cinematograph presents” (*Time Regained*, 279), but it is difficult to place much credence in this assertion, since associational montage works the same way Proustian analogy does; both privilege resemblance over temporal contiguity. As Bal argues in *The Mottled Screen*, *In Search of Lost Time* also evokes a certain kind of avant-garde film: the kind where the diegesis is based on vision rather than narrative (*The Mottled Screen*, 213). *The Captive* provides both an instantiation of, and a reflection upon, this last sort of cinema.

70. Bal, *The Mottled Screen*, 8.

71. Simon is later overcome by the desire to know what Ariane is thinking about, and this desire proves fatal for her.

72. Akerman reflects upon this practice in an interview with the editors of *Camera Obscura*: “Delphine [Seyrig] said, ‘Why do you use such a low angle?’ I said, ‘That’s my size.’ She said, ‘It’s better from a little higher up.’ And I said, ‘No, I don’t want to do that. That’s not how I see the world.’ [Jeanne Dielman] was never shot from the point of view of the son or anyone else. It’s always me” (Chantal Akerman, “*Jeanne Dielman, 23 Quai du Commerce, 1080 Bruxelles*,” *Camera Obscura*, no. 2 [1977]: 119).

73. Ivone Margulies, *Nothing Happens: Chantal Akerman’s Hyperrealist Everyday* (Durham: Duke University Press, 1996), 116.

CHAPTER 6

1. Walter Benjamin, “The Work of Art in the Age of Its Technological Reproducibility,” in *Selected Writings of Walter Benjamin*, vol. 4, 1938–1940, ed. Howard Eiland and Michael W. Jennings (Cambridge: Harvard University Press, 2003), 252.

2. Benjamin, “The Work of Art,” *Selected Writings*, 3:105.

3. Benjamin’s translation of volume 4 was never published, and has been lost. Volumes 1 and 2 were published by Verlag Die Schmiede in 1927 and 1930, respectively, and volume 3 by Piper Verlag in 1930. See Benjamin, *Selected Writings of Walter Benjamin*, vol. 1, 1913–1926, ed. Marcus Bullock and Michael W. Jennings (Cambridge: Harvard University Press, 1996), 513. Gary Smith provides a somewhat different account of this translation project in Walter Benjamin, *Moscow Diary*, trans. Richard Sieburth, ed. Gary Smith (Cambridge: Harvard University Press, 1986), 38 n. 6.

4. *Selected Writings*, ed. Bullock and Jennings, 1:513.

5. Benjamin, *Moscow Diary*, 38, 94–95.

6. Benjamin, “Conversation with André Gide,” in *Selected Writings*, 2:93–94.

7. Benjamin, “On the Image of Proust,” in *Selected Writings*, 2:239.

8. *Ibid.*, 238–239.

9. Proust, *Swann’s Way*, 94–95.

10. Katja Haustein, *Regarding Lost Time: Photography, Identity, and Affect in Proust, Benjamin, and Barthes* (London: Modern Humanities Research Association and Maney Publishing, 2012), 74.

11. Benjamin, “Paris Diary,” in *Selected Writings*, 2:348.

12. *Ibid.*, 348–349.

13. *Ibid.*, 349.

14. Proust, *Within a Budding Grove*, 647.

15. Benjamin, “May–June 1931,” in *Selected Writings*, 2:473.

16. Benjamin, *A Berlin Chronicle*, in *Selected Writings*, 2:632–633.

17. *Ibid.*, 597.

18. Benjamin, *Berlin Childhood around 1900*, trans. Howard Eiland (Cambridge: Harvard University Press, 2006), 37.

19. Benjamin, “Doctrine of the Similar,” in *Selected Writings*, 2:695.

20. *Ibid.*, 698.

21. *Ibid.*, 695.

22. *Ibid.*

23. *Ibid.*, 697.

24. Although Benjamin does not mention Freud in this essay, he is clearly drawing on the psychoanalyst’s discussion of the “binding” properties of language in *Beyond the Pleasure Principle*, a book he invokes both in “Toys and Play” (1928) and in “On Some Motifs in Baudelaire” (1940). See Benjamin, *Selected Writings*, 2:120, and *Selected Writings*, vol. 4, 1938–1940, 316–319; and Freud, *The Standard Edition*, 18:12–23.

25. Benjamin, “The Work of Art,” *Selected Writings*, 3:104–105. Both here and in the remainder of this chapter, I

quote from the second version of the essay.

26. Merleau-Ponty, *The Visible and the Invisible*, 133. As Miriam Bratu Hansen notes in her superb essay “Benjamin’s Aura” (*Critical Inquiry*, no. 34 [Winter 2008], 342), the Benjaminian aura often seems to imply “a phenomenal structure that enables the manifestation of the gaze”—a structure based on reciprocity. Kathrin Yacavone makes a similar observation in *Benjamin, Barthes, and the Singularity of Photography* (New York: Continuum, 2012), 57. Both Hansen and Yacavone invoke the passage in “On Some Motifs in Baudelaire” in which Benjamin explicitly links the aura to the possibility of a return look (*Selected Writings*, 4:338–340). This possibility is foreclosed in “On Some Motifs in Baudelaire,” through Benjamin’s discussion of Baudelaire’s “Passante.”

27. Benjamin, “The Work of Art,” 108.

28. *Ibid.*, 117.

29. Benjamin, “Little History,” in *Selected Writings*, 2:517–528.

30. *Ibid.*, 517.

31. *Ibid.*, 527.

32. *Ibid.*, 507.

33. *Ibid.*

34. *Ibid.*, 508.

35. Max Dauthendey, *Der Geist meines Vaters: Ein Lebensbild* (Hamburg: Tredition Classics, n.d.), 35.

36. Benjamin, “Little History,” 512.

37. *Ibid.*, 510.

38. *Ibid.*; my emphasis.

39. Anonymous, “New Discovery—Engraving and Burnet’s Cartoons,” 382–391.

40. Benjamin, “Little History,” 514.

41. *Ibid.*, 514 and 519.

42. As Benjamin notes, he’s quoting Emil Orlik here. The editors of volume 2 of *Selected Writings*, identify the source of the quotation as Orlik, *Kleine Aufsätze* (Berlin: Propyläen Verlag, 1924), 38 ff.

43. Benjamin, “Little History,” 517.

44. *Ibid.*, 510.

45. The poem is “Standbilder, das Sechste,” and comes from Stefan George, *Der Teppich des Lebens und die Lieder von Traum und Tod* (Berlin: Georg Bondi, 1921).

46. Helmuth Th. Bossert and Heinrich Guttman, *Aus der Frühzeit der Photographie, 1840–70* (Frankfurt am Main: Societäts-Verlag, 1930), n.p.

47. As Michael Ann Holly suggested to me, it may also be two contiguous chairs.

48. Benjamin, “Little History,” 510.

49. André Gunthert, “Le complexe de Gradiva: Théorie de la photographie, deuil et résurrection,” *Etudes photographiques*, no. 2 (May 1997): paragraphs 10–12.

50. Dauthendey, *Der Geist meines Vaters*, 121.

51. In a 1931 diary entry, Benjamin described his “growing willingness” to take his own life (Benjamin, *Selected Writings*, 2:470). As Hansen points out in “Benjamin’s Aura,” 341, the story also anticipates his actual death, which was self-induced.

52. Dauthendey, *Der Geist meines Vaters*, 118–120.

53. *Ibid.*, 23.

54. *Ibid.*, 24.

55. *Ibid.*, 7.

56. Benjamin, “Little History,” 512.

57. Dauthendey, *Der Geist meines Vaters*, 49–50.

58. Sartre, *Being and Nothingness*, 235–237.
59. Barthes, *Camera Lucida*, 67.
60. Benjamin, “Little History,” 510.
61. Merleau-Ponty, *The Visible and the Invisible*, 139.
62. Benjamin, “Little History,” 520.
63. *Ibid.*, 514–517.
64. *Ibid.*, 515.
65. *Ibid.*
66. *Ibid.*, 517.
67. Benjamin, “Franz Kafka,” in *Selected Writings*, 2:800.
68. Benjamin, *Berlin Childhood*, 130–131.
69. I am echoing, but also reformulating, Jacques Lacan’s account of “aphanisis”—associating it with representation, rather than the entry into language, and questioning its inevitability. See *The Four Fundamental Concepts of Psychoanalysis*, 203–227.
70. Benjamin, *Berlin Childhood*, 131–132. Eduardo Cadava also talks about this “disappearance” in *Words of Light: Theses on the Photography of History* (Princeton: Princeton University Press, 1997). “The *Berliner Kindheit* . . . presents itself as an epitaph for the ‘one’ who, now dead, still speaks,” he writes (126). Carolin Duttlinger provides a similar account of this passage in “Imaginary Encounters: Walter Benjamin and the Aura of Photography,” *Poetics Today* 21, no. 1 (Spring 2008), 91.
71. Yacavone discusses the relationship between the two images in *Benjamin, Barthes, and the Singularity of Photography*, 63–64.
72. See, for instance, Cadava, *Words of Light*, 76–115; Yacavone, *Benjamin, Barthes*, 75–80; and Duttlinger, “Imaginary Encounters,” 92.
73. Benjamin, *Berlin Childhood*, 134.
74. In *The Visible and the Invisible*, Merleau-Ponty writes that there is “a style of being wherever there is a fragment of being” (139).
75. I am referring, of course, to *Camera Lucida*, and the notion of the “punctum.”
76. I want to thank James Sawyer for drawing Dugdale’s work to my attention, and Khalip for showing me *John Keats’s Death Mask*, which he has the privilege of owning, and for introducing me to the artist. (The only other print of the cyanotype is in the permanent collection of the Metropolitan Museum of Art.) Khalip recently curated an exhibition of Dugdale’s work at Brown University (“My Friend is Mine: The Photography of John Dugdale,” 2014) and will also be writing about this photograph.
77. The artist made this observation in conversation with Khalip and me.
78. John Dugdale, *Life’s Evening Hour* (New York: Arno Press, 2000), from Dugdale’s commentary on figure 25, *Talismanic China* (1997). Because this book is unpaginated, I will identify all of the passages that I quote from it through the photographs to which they are linked.
79. The artist conveyed this information to me through an e-mail message.
80. From Dugdale’s commentary on figure 2, *Our Minds Dwell Together* (1999).
81. From Dugdale’s commentary on figure 27, *Self-Portrait in Oriel Window* (1997).
82. See [chapter 5](#) for a discussion of this concept.
83. Quoted on the website of the Scheinbaum & Russek LTD gallery, www.photographydealers.com/artists/john-dugdale/.
84. From Dugdale’s commentary on figure 52, *Self-Portrait in Summer Haze* (1999).
85. *Ibid.*
86. From Dugdale’s commentary on figure 7, *Expulsion* (1996).
87. *Ibid.*
88. Dugdale described Sendak’s role in his conversation with Khalip and me.

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INDEX

Page numbers in italics refer to illustrations.

Abbott, Austin, [80–81](#)

Ackerman, James S., [17](#)

Adamson, Robert, [142](#), [143](#)

Addison, Joseph, [23](#)

Agamben, Giorgio, [171n40](#)

aggression, [1](#), [6](#), [178n59](#)

Akerman, Chantal, [126–134](#), [181n67](#), [172n67](#), [182n72](#); *The Captive* (film), [127–134](#); *Jeanne Dielman*, [132](#), [182n72](#); *Je tu il elle*, [133](#), [134](#); *News from Home*, [132](#)

Algarotti, Count Francesco, [23–24](#), [39](#), [166n50](#)

Alhazen, [14–15](#)

alterity, [122–123](#)

analogy, [11–12](#), [16–18](#), [42](#), [60](#), [78](#), [87](#), [89](#), [170n19](#); and Anna Atkins, [99–100](#), [177n37](#); and Walter Benjamin, [7–9](#), [135–138](#), [141–142](#), [153–155](#); and the camera obscura, [14](#), [23–24](#); and John Dugdale, [158](#); and Oliver Wendell Holmes, [78](#); and Johannes Kepler, [18](#); Lady Eastlake's use of in her account of early photography, [30–33](#), [87](#); and John Locke, [19–20](#); and Marcel Proust, [118–122](#), [136](#), [181n69](#); and Gerhard Richter, [95](#), [177n29](#); and the stereo camera, [80–81](#); and Henry Fox Talbot, [14](#), [54](#), [94–95](#); and *View from the Window at Le Gras*, [58–60](#); and "Photography and Liquid Intelligence" (Wall), [69–70](#), [83–84](#). *See also* chiasmus; similarity

aperture: of camera obscura, [14–15](#), [18](#), [21](#), [89](#); of stereo camera, [81](#)

Arasse, Daniel, [17](#), [165n21](#), [170n19](#)

Archer, Frederick Scott, [74](#)

Aristotle, [14](#), [170n14](#)

Armstrong, Carol, [98](#), [100–101](#), [168n76](#), [168n86](#), [177n35](#)

Atget, Eugène, [3](#), [140](#)

Atkins, Anna, [97–101](#), [103](#), [177n37](#); *Cyanotypes of British and Foreign Ferns*, [99–100](#), [101](#); *Photographs of British Algae: Cyanotype Impressions*, [97–98](#), [99–101](#)

aura, [6–7](#), [135](#), [139–140](#), [150](#), [152](#), [183n26](#), [184n51](#), [184n70](#). *See also* Benjamin, Walter

Bacon, Francis, [15](#)

Baker, George, [161n9](#), [174n12](#)

Bal, Mieke, [119](#), [122](#), [130](#), [181n69](#)

Barbaro, Daniele, [15](#), [20](#), [165n35](#)

Barthes, Roland, [2–4](#), [155](#), [184n75](#); "Winter Garden" portrait of Barthes' mother, [12](#), [149](#)

Batchen, Geoffrey, [163n44](#), [163n1](#), [170n4](#), [170n16](#), [171n32](#), [171n40](#), [173n64](#), [176n3](#)

Baudelaire, Charles, [169n88](#), [183n26](#)

Bauer, Francis, [55](#)

Bayard, Hippolyte, [163n44](#)

Being, [61](#), [123](#), [150](#), [153](#), [155](#), [184n74](#); two as the smallest unit of, [11](#), [88](#), [149](#). *See also* Benjamin, Walter; Heidegger, Martin; Merleau-Ponty, Maurice

Benjamin, Georg. *See* Benjamin, Walter, carte-de-visite portrait of

Benjamin, Walter, [3–10](#), [123](#), [135–153](#), [158](#), [161n8](#), [162n18](#), [162n23](#), [162n35](#), [172n52](#), [174n74](#), [182n3](#), [183n24–26](#), [183n42](#), [184n51](#), [184n70](#); *The Arcades Project*, [8](#), [162n18](#); *Berlin Childhood Around 1900*, [138](#), [153](#), [155](#); *A Berlin Chronicle*, [136](#), [138](#); carte-de-visite portrait of, [153](#), [154](#), [155](#); "Doctrine of the Similar," [138–139](#), [162n35](#); "On the Image of Proust," [121](#); "Left Wing Melancholy," [4](#); "Little History of Photography," [7–8](#), [140–141](#), [149–150](#), [153](#),

162n23; *Moscow Diary*, 136, 182n3; “On the Concept of History,” 7–8; “Paris Diary,” 136–137; relationship with Asja Lacis, 136–137; sense of kinship with Franz Kafka, 155; “On Some Motifs in Baudelaire,” 183n24; “Toys and Play,” 183n24; “The Work of Art in the Age of its Mechanical Reproducibility,” 3, 5–7, 123, 135–136, 139, 140, 161n8, 162n13–14, 161n23, 183n25. *See also* aura; Dauthendey, Karl; Dauthendey, Max; Kafka, Franz

Benveniste, Émile, 88–90

Bergson, Henri, 47, 69, 174n4

Berkeley, Busby, 6

binocular disparity, 75–76, 80–81, 105, 107n67

Blackwood’s Edinburgh Magazine, 168n88

blind spots (vision), 21, 75, 123, 134, 167n67

Bolton, William Blanchard, 81

Bossert, Helmuth, 144

Brady, Matthew, 109–110

Brassaï, 119–120

Brewster, David, 26, 52–53, 75–76, 167n66

Brown, Barbara, 60, 173n67

Buber, Martin, 88

Buckland, Gail, 51

Bullock, Marcus, 182n3

Cadava, Eduardo, 3–4, 173n69, 184n70, 184n72

calotype, 33, 50–51, 53, 74, 78, 93, 95, 115, 141, 168n81. *See also* Talbot, William Henry Fox

camera: bellows, 71; daguerreotype, 71, 72; digital, *see* digital photography; Kodak, 82–83; Monocular Duplex, 81, 82; Pistolgraph, 72, 73, 123; reflex, 72; stereo, 80–81; Thompson’s Revolver Camera, 73, 174n18

camera obscura, 10, 12, 69, 116–117, 164n14; in Benjamin’s “Little History,” 140–141; and chiasmus, 89, 132; comparison to the stereoscope, 79–80; and Daguerre, 45; early development of, 14–16; and John Dugdale, 158; Robert Hooke’s, 22, 40, 70, 82; and Kepler, 15, 17–20; lenses of, 18, 21, 25, 36–37, 90; and Leonardo, 15–20; and Abelardo Morell, 34–38; and Nicéphore Niépce, 39–42, 55; and Talbot, 28, 49–53, 90–92

Cameron, Julia Margaret, 30, 31, 32, 33, 155

capitalism, 5–6, 140–141, 162n18, 178n19

Cartesian dream, 29, 44, 80. *See also* Descartes, René

certainty, 4; and Descartes, 18–19

Cesariano, Cesare, 15

Cézanne, Paul, 115–116, 158, 179n1

chiaroscuro, 24, 78

chiasmus, 87–89, 121–122, 159, 181n60; and Akerman’s *The Captive*, 126, 130; Merleau-Ponty’s concept, 12, 88, 96, 130; repudiation of, 121, 149; trans-temporal, 102–103, 150. *See also* analogy; reversibility

Children, John George, 97. *See also* Anna Atkins

cinema, 5–7, 117, 123, 174n4, 181n69. *See also* Akerman, Chantal; Benjamin, Walter, “The Work of Art”; shot/reverse shot; Tarkovsky, Andrei

Civil War (U. S.), 109–113

Claudel, Paul, 177n38

Claudet, Antoine, 77

cogito. *See* Descartes, René

collodion: dry plate process, 81–82, 176n55; wet-plate process, 74, 75, 78

color, [16–17](#), [58](#), [61](#), [78](#), [108](#); and the camera obscura, [20–21](#), [23](#), [24](#); of cyanotypes, [97–101](#), [158](#); and the development of photographs, [30](#), [33](#), [49](#), [75](#); and Merleau-Ponty, [93](#), [96](#), [125–126](#); and Morell, [37–38](#); Hiroshi Sugimoto's treatment of Talbot's, [101–103](#); and Talbot, [93–96](#)

commodity fetishism, [5–6](#), [162n18](#)

Crary, Jonathan, [106](#), [164n10](#), [165n30](#), [167n67](#), [170n14](#), [178n59](#)

cyanotype. *See* Atkins, Anna; Dugdale, John; Herschel, Sir J. F. W., Rauschenberg, Robert; Weil, Susan

Daguerre, Louis-Jacques-Mandé, [13–14](#), [25–26](#), [52–53](#), [71](#), [90](#), [141](#), [163n44](#), [167n63](#), [168n88](#), [171n23](#), [176n2](#); *The Boulevard du Temple*, [45](#), [46](#), [47](#), [48](#), [49](#), [51](#); collaboration with Niépce, [43–45](#). *See also* daguerreotype

daguerreotype, [25–28](#), [33](#), [72](#), [90](#), [106](#); Benjamin on, [141](#), [146](#), [148](#); non-reproducibility of, [43](#), [55](#), [74](#); preservation of, [45](#), [172n46](#). *See also* Daguerre, Louis

Daniel, Malcolm, [172n48](#)

darkroom, [70](#), [75](#), [81](#)

Dauthendey, Karl, [141](#), [144](#), [145](#), [146–150](#), [158](#)

Dauthendey, Max, [141](#), [144–150](#), [152](#)

de Chirico, Giorgio, [36](#)

de Zegher, Catherine, [168n76](#), [168n86](#), [177n35](#)

della Porta, Giovanni Battista, [20](#)

Democritus, [105](#)

Descartes, René, [18–20](#), [22](#), [29–30](#), [33](#), [44](#), [80](#), [107](#), [139](#), [165n26](#), [165n28](#); *cogito*, [1](#); *Discourse on Method*, [19](#); *Optics*, [18–19](#). *See also* Cartesian dream

digital photography, [11–12](#), [70](#), [173n69](#), [174n12](#); and Morell, [36–37](#); and *View from the Window at Le Gras*, [58](#), [60](#). *See also* Fontcuberta, Joan; jpeg (digital image format)

disclosive value, [7](#), [10](#), [37](#), [78](#), [112](#), [143](#). *See also* evidentiary value

Dixon, Anne, [101](#)

Dubosq, Jules, [76](#)

Dugdale, John, [156–159](#), [184n76](#), [185n77–82](#), [185n88](#); *John Keats's Death Mask*, [155](#), [156](#), [157–158](#), [184n76](#); *Life's Evening Hour*, [157–159](#), [185n78](#); *Self-Portrait at Oriel Window*, [157](#), [158](#), [185n82](#)

Durden, Mark, [179n72](#)

Duttlinger, Carolin, [184n70](#), [184n72](#)

Eastman Kodak Research Laboratory (Harrow, UK), [56–59](#)

Eastman, George, [82–83](#)

eclipse, solar, [14–16](#)

Ellis, John, [77](#)

Ellison, Ralph, [181n60](#)

Engels, Friedrich, [162n12](#)

engraving, [22](#), [29](#), [39](#), [55](#), [87](#), [173n57](#)

evidentiary value, [3](#), [4](#), [7](#), [10](#), [57](#), [59](#). *See also* disclosive value

exposure time (photography), [58](#), [72](#), [74](#), [81–82](#), [140](#), [143](#), [148](#); and Daguerre, [25](#), [45–49](#); and Morell, [34](#), [37](#); and Talbot, [50](#), [94](#); of *View from the Window at Le Gras*, [41–43](#), [46](#)

fading (of photographs), [39](#), [50–51](#), [53](#), [74](#), [172n46](#)

fascism, [5](#), [135](#), [139](#)

focus (photography), [29](#), [34](#), [36](#), [71–72](#), [82](#), [89](#), [119](#), [159](#); and the camera obscura, [15](#); in film, [126](#)

Fontcuberta, Joan, [60–65](#), [173n69](#); *Googlegram: Niépce*, [60–61](#), [62](#), [63](#), [64](#)

fourth wall, [132](#)

Fox Talbot. *See* Talbot, William Henry Fox
 Freud, Sigmund, [115–117](#), [180n11](#), [183n24](#)
 Freudians, [70](#)
 Friedrich, Caroline. *See* Dauthendey, Karl
 Gardner, Alexander, [109–110](#); *A Burial Party, Cold Harbor, Virginia*, [111](#), [112–113](#), *Washington Navy Yard, D. C. Lewis Payne, in sweater, seated and manacled, 1865*, [2](#), [3](#).
 Gasquet, Joachim, [115](#), [179n1](#)
 Gaucheraud, Hippolyte, [43](#), [47](#), [49](#)
 the gaze, [88](#), [144–145](#), [147](#), [148](#), [152](#)
 George, Stefan, [143](#), [183n45](#)
 Gerner, Peter, [163n43](#)
 Gernsheim, Helmut and Alison, [42](#), [76](#), [163n2](#), [164n5](#), [167n67](#), [169n2](#), [176n55](#); rediscovery of *View from the Window at Le Gras*, [55–63](#)
 Getty Conservation Institute (Los Angeles), [57–58](#), [60](#), [63](#), [173n67](#)
 Gide, André, [136](#)
 Giotto di Bodone, [136](#)
 Goethe, Johann Wolfgang von, [170n14](#)
 Google image search, [61–62](#), [64](#)
 Gorman, Michael John, [165n35](#), [166n45](#)
 Gray, Michael, [177n25](#)
 Guggenheim Museum (New York), [161n7](#)
 Gustavson, Todd, [70](#), [174n14](#)
 Guttman, Heinrich, [144](#)
 Haacke, Hans, [3](#), [161n7](#)
 Hansen, Miriam Bratu, [183n26](#)
Harper's New Monthly Magazine, [80–81](#)
 Harris, John, [23](#)
 Harry Ransom Center (Austin, Texas), [57–58](#), [60](#)
 Harvey, Eleanor Jones, [113](#)
 Harvey, William Henry, [98](#), [100](#), [177n35](#)
 Hathaway, Anne, [107](#), [113](#)
 Haustein, Katja, [136](#)
 Heidegger, Martin, [23](#), [24](#), [69](#), [163n46](#), [174n9](#)
 heliograph, [25–26](#), [33](#). *See also* Niépce, Joseph Nicéphore
 Herschel, Sir J. F. W. (John), [13](#), [90–91](#), [98–99](#); and cyanotypes, [97–99](#); “hypo” solution, [13](#), [51](#), [91](#)
 the heterosexual couple, [149](#)
 Hill, David Octavius and Robert Adamson, [142](#), [143](#)
 Hitler, Adolf, [5](#)
 Holly, Michael Ann, [183n47](#)
 Holmes, Oliver Wendell: “Doings of the Sunbeam,” [26](#), [75](#), [78](#); handheld stereoscope, [77–78](#); “The Stereoscope and the Stereograph,” [9–10](#), [78–80](#), [101](#), [104–109](#), [111](#), [113](#), [172n52](#), [176n49](#), [176n2](#); “Sun-Painting and Sun-Sculpture,” [78](#), [179n71](#)
 homosexuality, [133](#), [137](#)

Hooke, Robert, [22](#), [40](#), [70](#), [82](#)

Huygens, Constantijn, [23](#)

indexicality, [1–2](#), [7](#), [12](#), [37](#)

India Office Library (London), [164n5](#)

intention and intentionality, [7–8](#), [83](#), [143](#), [148](#), [158](#), [163n43](#); and Fontcuberta, [60–64](#); and Gernsheim's retouching of *View from the Window at Le Gras*, [59–60](#)

Janin, Jules, [26](#), [30](#)

Jenkins, Nicholas, [171n40](#)

Jennings, Michael W., [182n3](#)

Jetztzeit, [8](#)

Jewishness, [5](#), [133](#), [141](#), [146](#), [155](#)

jpeg (digital image format), [61–64](#)

Kafka, Franz, [150](#), [151](#), [152–155](#)

Keats, John, [159](#)

Kemp, Martin, [89](#),

Kepler, Johannes, [15–20](#), [23](#), [41](#), [75](#), [89](#)

Khalip, Jacques, [167n70](#), [184n76](#), [185n77](#), [185n88](#)

Kircher, Athanasius, [23](#)

Krauss, Rosalind, [81](#), [176n53](#)

Lacan, Jacques, [117](#), [170n11](#), [184n69](#)

Lacis, Asja, [136–137](#). *See also* Benjamin, Walter

Lady Eastlake, [10](#), [26–27](#), [30](#), [33](#), [74](#), [76](#), [87](#)

Lee, Anthony W., [179n77–78](#)

Lefèvre, Wolfgang, [165n26](#)

Leibnitz, Gottfried Wilhelm von, [20](#), [165n30](#)

Lemaître, Augustin François, [43](#)

Leonardo da Vinci, [15–20](#), [42](#), [89](#), [105](#), [115](#), [161n9](#), [164n14](#), [165n16](#)

Lindberg, David C., [165n19](#)

liquid and optical intelligence. *See* Wall, Jeff

Literary Gazette, and Journal of the Belles Lettres, Arts, Sciences, etc. (periodical), [10](#), [28](#), [163n43](#). *See also* Talbot, William Henry Fox

Locke, John, [19–20](#), [165n30](#)

London Stereoscopic Company, [76](#)

Maddox, Richard Leach, [81](#)

Martin, Benjamin, [23](#)

Marx, Karl, [5](#), [162n12](#)

Mason, Rev. William, [22](#)

Mendieta, Ana, [3](#), [4](#)

Messer, Thomas, [161n7](#)

Merleau-Ponty, Maurice, [12](#), [93](#), [96](#), [105](#), [107](#), [130](#), [134](#), [150](#), [165n28](#); "Eye and Mind," [18](#); *The Visible and the Invisible*, [88–90](#), [124–126](#), [150](#), [176n9](#), [177n38](#). *See also* chiasmus; color

Metropolitan Museum of Art (New York), [184n76](#)

Milton, John, [109](#), [179n72](#)

mirrors, [55](#), [59](#), [88](#), [105](#); and the camera obscura, [21](#), [25](#), [90](#); and the film camera, [72](#), [87](#); and the stereoscope, [75](#)

mise-en-abyme, [6](#)

Mitchell, Robert, [163n43](#)

Mo Ti, [14](#)

Monglond, André, [8](#)

Monnier, Adrienne, [136–138](#)

Morell, Abelardo, [33–38](#), [169n92–95](#), [169n97](#); *Camera Obscura: The Philadelphia Museum of Art East Entrance in Gallery #171 with a de Chirico Painting*, [36](#), [169n99](#); *Camera Obscura: View of Central Park Looking North—Fall*, [37](#), [38](#); *Houses Across the Street in Our Bedroom, Quincy, MA*, [34](#), [35](#); *Houses Across the Street in Our Living Room, Quincy, Massachusetts*, [35](#), [36](#)

Morse, Samuel, [27](#), [46–47](#), [49](#), [171n40](#)

National Gallery, London, [36](#)

National Media Museum (Bradford, UK), [174n18](#)

National Socialism, [5](#)

negative (photographic), [10–12](#), [78](#), [80](#), [89](#), [90](#), [110](#), [124](#), [156](#), [158](#); in Benjamin’s analogy, [138](#); and the collodion wet-plate process, [74–75](#); and cyanotypes, [98–99](#); and daguerreotypes, [45](#); in Freud’s analogy, [116](#); and the Kodak camera, [82–83](#); and Morell, [34](#), [169n95](#); and Niépce, [39](#), [41](#); regarded as finished work in itself, [90](#), [98](#), [177n21](#); in Proust’s analogy, [121–122](#), [137](#); Reekie’s as printed by Gardner, [112](#); and Talbot, [49–52](#), [55](#), [90–98](#), [169n95](#), [169n2](#); Talbot’s as printed by Sugimoto, [101–104](#). *See also* calotype; chiasmus; reversibility

Newhall, Beaumont, [170n16](#), [171n32](#)

New York Times, [109](#)

Niépce, Claude, [41](#), [55](#)

Niépce, Joseph Nicéphore, [13](#), [25–26](#), [39](#), [41–43](#), [64](#), [74](#), [80](#), [163n44](#), [163n2](#), [176n3](#); collaboration with Daguerre, [43](#); coinage of term “heliograph,” [26](#); *View from the Window at Le Gras*, [13](#), [49](#), [50](#), [170n16](#); creation of, [41](#), [42](#), [43](#); date of, [169n2](#), [170n16](#); disappearance and rediscovery, [55](#); and the Harry Ransom Center, [57–58](#), [60](#); reproduction commissioned by Gernsheim, [56](#), [57](#); Gernsheim’s retouching, [42](#), [59–60](#); [56](#), [57](#), [58](#), [61](#), [170n16](#). *See also* Fontcuberta, Joan; Gernsheim, Helmut and Alison; Harry Ransom Center (Austin, Texas)

non-identity, [77–78](#), [88](#)

Nottage, George Swan, [76](#)

Nouzeilles, Gabriela, [173n69](#)

O’Sullivan, Timothy, [81](#)

the oceanic, [119](#), [178n44](#)

Olswang, Anna. *See* Dauthendey, Karl

Orlik, Emil, [183n42](#)

the Other, [125](#), [158](#)

The Oxford English Dictionary, [87](#), [89](#)

Payne, Lewis. *See* Gardner, Alexander

Peckham, John, [15](#)

Peirce, Charles Sanders, [1](#), [161n4](#)

the pencil of nature *and* pencil of light, [26](#), [29](#), [51](#), [59](#), [109](#), [111](#), [116](#). *See also* Holmes, Oliver Wendell; Talbot, William Henry Fox

perspective, [15](#), [20](#), [24](#), [41](#), [71](#), [76](#), [123](#)

Philadelphia Museum of Art, [36](#)

photogenic drawing. *See* Talbot, William Henry Fox; the pencil of nature

photomosaic, [61–64](#), [173n70](#)

pinhole camera. *See* camera obscura

Pirandello, Luigi, [7](#)

Pius VII, Pope, [39](#)

Platonism, [15](#)

Poe, Edgar Allan, [26](#), [172n52](#), [176n2](#)

poiēsis, [24](#), [159](#)

Pope, Alexander, [23](#), [37](#), [39](#), [115](#)

Potonniée, Georges, [42](#), [170n16](#)

prisms, [28](#), [36–37](#), [57](#)

Proust, Marcel, [117–126](#), [129–138](#), [155](#), [158](#), [181n57](#), [181n67](#), [181n69](#); *François le Champi*, [120](#); *In Search of Lost Time*: vol. 1, *Swann's Way*, [117–120](#); [136](#); vol. 2, *Within a Budding Grove* [117–118](#), [120–121](#), [123–124](#), [129](#), [137](#); vol. 3, *The Guermantes Way* [122–124](#), [136](#); vol. 4, *Sodom and Gomorrah*, [122](#); vol. 5, *The Captive*, [130](#), [181n69](#); vol. 6, *Time Regained*, [117–118](#), [124](#), [129](#); involuntary and voluntary memory, [117–118](#)

psychoanalysis, [10](#), [115–118](#), [183n24](#)

race relations, [112–113](#)

the Rapture, [30](#), [109](#)

Rauschenberg, Robert, [135](#)

“receiving” of images, [14–15](#), [17](#), [22](#), [26](#), [39](#), [70](#), [80](#), [105](#), [115–116](#), [158](#). *See also* “taking” of images

reciprocity, [8](#), [17](#), [20](#), [88](#), [89](#), [121–122](#), [125](#), [150](#), [183n26](#)

recto and verso, [89](#), [105](#), [121](#), [132](#), [169n95](#)

Reich, Bernhard, [136](#)

reproduction (of images), [74](#), [116](#), [137](#); in Benjamin's “Little History,” [140–141](#); in Benjamin's “The Work of Art,” [3](#), [6–7](#), [135](#); and daguerreotypes, [43](#), [55](#), [141](#); Niépce's goal of, [25](#), [39](#), [55](#), [74](#), [173n57](#); and Talbot, [26](#), [54](#), [90–96](#); of *View from the Window at Le Gras*, [55–60](#)

retina, [17–18](#), [23](#), [75](#), [105](#); and the optic chiasm, [87–88](#). *See also* retinal images

retinal images, [17–20](#), [23](#), [87–88](#), [105](#); and binocular disparity, [75–76](#), [81](#), [105](#); and Niépce, [41](#)

Revelation, Book of, [109](#)

reversibility, [8](#), [89](#), [96](#), [105](#), [121–122](#), [125](#), [144](#), [147](#), [148](#); of gender in Proust, [137](#); in language, [88](#), [90](#), [130](#); of reversals, [12](#), [36](#), [92](#), [101–102](#), [132](#), [137](#). *See also* chiasmus; reciprocity; recto and verso; shot/reverse shot

Richter, Gerhard, [9](#), [95](#), [163n38](#), [177n29](#)

Riefenstahl, Leni, [5](#)

Rilke, Rainer Maria, [115–117](#), [121](#), [158](#), [179n1](#)

Roberts, Russell, [172n52](#)

Robison, Sir John, [27](#), [43–44](#), [49](#)

Royal Society (UK), [22](#), [40](#), [55](#), [97](#), [173n57](#)

Royal Photographic Society (UK), [74](#)

Ruskin, John, [166n50](#)

Sala, Angelo, [13](#)

Samson, John, [81](#)

Sander, August, [150](#)

Sartre, Jean-Paul, [124–126](#), [148](#). *See also* the Other

Sawyer, James, [184n76](#)

Sayce, B. J., [81](#)

Schaaf, Larry J., [94](#), [169n1](#), [172n45](#), [177n18](#), [177n21](#), [178n48](#)

Schelling, Friedrich Wilhelm Joseph von, [152](#)

Schiavo, Laura Burd, [75](#)

Scotland Yard, [56–57](#)

Sebald, W.G., [3](#)

Sendak, Maurice, [155](#), [159](#), [185n88](#)

Shakespeare, William, [107](#)

shot/reverse shot, [12](#), [41](#), [132](#)

shutter (camera), [68](#), [71–72](#), [158](#)

Siegel, Elizabeth, [36](#), [169n97](#), [169n99](#)

Silverman, Kaja, [5](#), [12](#), [135](#), [163n38](#), [163n43](#), [177n29](#), [178n44](#), [181n60](#)

similarity, [11](#), [121](#), [158](#); in “The Doctrine of the Similar,” [136](#); in “The Work of Art,” [8–9](#); in Benjamin’s reading of Proust, [138](#); in Benjamin’s reading of Kafka, [155](#); as contained within analogy, [11–12](#); contrasted with sameness, [90–91](#), [137](#); revealed by photography, [78](#). *See also* analogy; chiasmus

slavery, [112–113](#)

Smith, Gary, [182n3](#)

Soviet Union, [5](#). *See also* Benjamin, Walter, *Moscow Diary*

Steadman, Philip, [165n25](#), [165n35](#)

stereoscope, [10](#), [12](#), [105](#), [110–111](#), [117](#), [155](#), [176n53](#); development of, [75](#), [76](#); Holmes’ handheld, [77](#), [78](#); perception of depth when viewing, [106–108](#), [178n59](#); relationship with photography, [76–79](#); stereo camera, [80–81](#); stereocards, [76–80](#), [85](#); stereoscopic image, [10](#), [12](#), [77–78](#), [105–108](#)

Sugimoto, Hiroshi, [101](#), [102](#), [103](#), [104](#), [105](#), [112](#). *See also* Talbot, William Henry Fox

Sutton, Thomas, [72–73](#), [174n15](#)

“taking” of images, [22](#), [24–26](#), [28](#), [39](#), [41](#), [45](#), [55](#), [70](#), [80](#), [81](#). *See also* “receiving” of images

Talbot, William Henry Fox, [10](#), [13–14](#), [26–29](#), [78](#), [87](#), [90–102](#), [104](#), [112](#), [115](#), [130](#), [132](#), [141](#), [143](#), [155](#), [158](#), [163n43–44](#), [167n70–71](#), [168n88](#), [169n95](#), [169n2](#), [176n1](#), [177n18](#), [177n25](#); “Brief Historical Sketch of the Invention of the Art,” [9](#); letters to the *Literary Gazette*, and *Journal of the Belles Lettres, Arts, Sciences, etc.*, [51](#), [101](#), [115](#), [163n43](#); *The Oriel Window, South Gallery, Lacock Abbey*, [49–50](#), [157](#); *The Pencil of Nature*, [51](#), [53–54](#), [55](#), [74](#), [87](#), [91–92](#), [94](#), [95](#), [102](#), [103](#), [168n72](#), [169n95](#), [172n52](#), [176n1](#); *Photographic Drawings*, [112](#). *See also* calotype; Dugdale, John; pencil of nature; Sugimoto, Hiroshi

Tarkovsky, Andrei, [83–85](#)

Taupenot, J. M., [81](#), [176n55](#)

The Ten Virgins (Christian parable), [30–33](#)

Tuma, Kathryn A., [177n37](#)

Turner, J. M. W., [109–110](#)

the unconscious, [17](#), [43](#), [45](#), [53](#); Freud, [115–117](#); the “optical unconscious” (Benjamin), [123](#), [139–140](#), [172n52](#)

United States Democratic Review, [28](#)

Valéry, Paul, [17](#), [20](#), [170n19](#)

Veltman, Kim H., [164n14](#)

verso. *See* recto and verso

Vitruvius, [15](#)

Wall, Jeff, [67–70](#), [83–84](#); liquid and optical intelligence, [67–70](#), [75](#), [79](#), [83–85](#), [119–120](#); *Milk*, [68](#)

Walpole, Horace, [22](#)

Wedgwood, Josiah, [22](#)

Wedgwood, Thomas, [13](#)

Weil, Susan, [135](#)

Weimar Republic, [5](#)

wet plate. *See* collodion wet plate process

Wheatstone, Charles, [75–76](#)

Whitman, Walt, [11](#)

Whitney Museum (New York), [161n8](#)

Wollaston, Sir William Hyde, [28](#)

Wotton, Sir Henry, [15](#), [165n25](#)

Yacavone, Kathrin, [183n26](#), [184n71](#)

Young, Elizabeth, [113](#), [179n80](#)

Zahn, Johann, [21](#)