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Faded but Not Forgotten: Thinking about the Records and Relics of America's Earliest Forays in Photography

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*Nineteenth Century Collections Online: Photography: The World Through the Lens*

Gale.com/photography
That puzzling piece of discolored paper in your archival repository, darkened by chemicals and seemingly devoid of interest, or marked by a barely readable, faded image, may be the remains of one of the first photographs ever taken in America. The mid-nineteenth-century production of paper negatives in the United States has too often been dismissed as uninteresting or unimportant by books on the history of photography. This article looks at the little known circumstances surrounding the earliest American experiments in photography and proffers an archivist’s perspective on documentation, memory, and the significance of loss as they relate to early photographic media.

The invention of practical methods of photography in the 1830s opened “new worlds of the imagination” and simultaneously became a visual tool for “a world hungry for realism.” The crisp but impermanent pictures seen by means of the camera obscura had piqued the interest of artists as well as those investigating the natural sciences for centuries before the invention of photography. Artist Johannes Vermeer (painter of detailed interior genre scenes) and scientist Roger Bacon (known as “Doctor Mirabilis”) had, for example, used the camera obscura as a visual aid long before any method for preserving its evanescent images was devised. Thomas Wedgwood, Humphry Davy, and Joseph Nicéphore Niépce performed groundbreaking experiments in the late eighteenth and early nineteenth centuries. Niépce’s heliographs in the 1820s were an important scientific breakthrough, but the process never advanced far enough for practical applications.

Following Niépce’s death in 1833, Louis Daguerre transformed the sketchy heliograph process into what we now know as daguerreotypes, astoundingly sharp, one-of-a-kind direct positive images on silvered copper plates made sensitive to light by vapors of iodine. Exposing the sensitized plate produced a latent image (an invisible image produced by the exposure to light of a photosensitive material), which could be developed over a pot of heated mercury. A bath of hot salt solution fixed the image, after which the plate could be washed, dried, and encased for display. Daguerre’s success was trumpeted by François Arago on January 7, 1839, to the Académie des Sciences in Paris, and the inventor was offered a pension by the French government as a reward for revealing his process. Daguerreotypes could not be duplicated without being re-photographed.

William Henry Fox Talbot independently conducted a variety of scientific investigations on his rural English estate, efforts that included experiments attempting to make the images seen in a camera obscura imprint themselves and remain fixed on paper. In 1835 he captured the outline

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1 A noteworthy exception is Hanlon, *Illuminating Shadows*.
3 Watson and Rappaport, *Capturing the Light*, 68.
4 Watson and Rappaport, *Capturing the Light*, 119. The full working details were not publicly revealed until August 19, 1839. Daguerreotypes had to be held or displayed at an angle that allowed the viewer to see a positive image.
5 Watson and Rappaport, *Capturing the Light*, 93. A fascinating excursion into Talbot’s diverse interests in the fertile period from 1839 to 1843 (including chemistry, electricity, optics, and railroad motive power, in addition to photography) is provided in Schaaf, ed., *Records of the Dawn of Photography*.
of an oriel window on his property but may have been reluctant to publicly disclose the nature of his work “until he had achieved results that satisfied his high scientific standards.”  

Four years later, spurred by the publicity given to Daguerre, Talbot went public with his achievement in a paper, “An Account of the Art of Photogenic Drawing; or, The Process by Which Natural Objects May Be Made to Delineate Themselves without the Aid of the Artist’s Pencil,” presented on January 31, 1839, to the Royal Society of London. A follow-up presentation at the society on February 21 fleshed out the practical steps of his photogenic drawing process. Imitators in Great Britain soon followed Talbot’s instructions and learned with varying degrees of success to replicate or approximate his results. Photogenic drawings, after subsequent improvements, were referred to as Talbotypes or calotypes.

Talbot’s process produced a somewhat fuzzy, one-of-a-kind negative on paper. He discovered in due course that he could wax the back of a paper negative to make it translucent, opening the way for creating positive prints. A negative could be laid on top of a piece of sensitized paper on a bright day; the length of exposure to sunlight was dictated by experience and/or taste. As light passed through the uppermost piece (the negative), a positive print took shape on the paper beneath, which could in one way or another, and with varying degrees of success, be “fixed.” Multiple positive prints could be derived from the same negative, but because light passing through paper was diffused by paper fibers, the resulting positives were grainy. Calotypes had a relatively brief span of popularity and were soon supplanted by glass-plate negatives, which had the capacity to produce unlimited copies of sharp positive prints. The negative/positive process conceived by Talbot was his most enduring legacy.

Reasonably useful details of Talbot’s methods for making photogenic drawings reached the United States around the beginning of March 1839 by means of Talbot’s privately printed brochure summarizing his Royal Society remarks, and in reports published in periodicals such as the Journal of the Belles Lettres, Arts, Sciences, etc., and the Daily Intelligencer. Many American readers probably acquired their first knowledge of the step-by-step process in the April 1839 issue of the Journal of the Franklin Institute. The “announcement of photography’s invention . . . fell like a pebble into a pond, and ripples fanned out to lay the shorelines of the reading world.” Talbot’s brochure proclaimed that a “fleeting and momentary” shadow could be fixed by means of his methods; potential uses, he implied, might include silhouette portraits, paintings on glass, copies of engravings, facsimiles of manuscripts, and “many useful and important applications.” But he also cautioned that his experiments had been “few” and that he was “far from supposing that he has reached the limit” of sensitivity in paper.

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Photogenic drawings were produced in two varieties: contact prints made by placing a leaf, a fern, some lace, or some other object on top of sensitized paper and exposing the material to sunlight, and in-camera exposures in which sensitized paper inside a box (modeled after the camera obscura) was subjected to light focused on its surface by a lens. Some early efforts along these lines were undertaken in the United States as early as 1834 by John William Draper in Virginia, before either Daguerre or Talbot had published. Draper undertook a variety of studies using sunlight and light-sensitive material on paper as an aid to his scientific investigations, work that employed many of the basic principles of photography. But he was vexed by difficulties related to fixing the images, or “impressions,” that he made.13 Other experiments around the country ensued shortly after Talbot’s published instructions arrived from England. Documented experiments in America (all dating from the spring of 1839) were conducted by Aaron Denman Chaloner, a medical student in Virginia, before either Daguerre or Talbot had published. Draper undertook a variety of studies using sunlight and light-sensitive material on paper as an aid to his scientific investigations, work that employed many of the basic principles of photography. But he was vexed by difficulties related to fixing the images, or “impressions,” that he made. Other experiments around the country ensued shortly after Talbot’s published instructions arrived from England. Documented experiments in America (all dating from the spring of 1839) were conducted by Aaron Denman Chaloner, a medical student in Virginia; professor of chemistry and pharmacy John Locke in Cincinnati; and a professor of chemistry, mineralogy, and geology, William Henry Ellet, in South Carolina. Tangible evidence of these experiments is not known to have survived, but the circumstances were recorded or convincingly mentioned in contemporary periodicals and reports or in recollections later penned by informed parties.14

Mapes, who combined interests in chemistry and art, was probably the unidentified man who brought a portfolio of his photogenic drawing experiments to the New York Academy of Design to show to colleagues on April 23, 1839. The assembled artists seem to have been very intrigued, but the portfolio’s whereabouts, if any parts of it still exist, are unknown.15 Ellet’s work with daguerreotypes was better known than his forays into photogenic drawing, but it is apparent from a letter penned by one of his friends that he also dabbled in photography on paper at some indeterminate time in the spring of 1839.16

Chaloner’s experiments, probably conducted in mid-April 1839, are known from a letter he published in The North American in which he outlined the essential requirements for photogenic drawing: an instrument for obtaining the images (an oblong rectangular box, painted black on the inside, with a lens at one end), correct preparation of sensitized paper, and a way to fix the resulting images. He had read that the photogenic drawings exhibited by Talbot at the Royal Society had been fixed by iodide of potassium. His experiments with that substance colored the images he captured primrose yellow; he subsequently tried bichromate of potassa in a weak solution, which resulted in a brown or bistre tint.17 Remarkably, he was producing in-camera negative images at a time when others were experimenting with contact prints. No extant examples are known.

In mid-May Locke produced the first set of photogenic drawings completed and placed on exhibit for public viewing. The set consisted of reproductions of astronomical diagrams, all of

14 Significant references have been tracked down (and available technical details and circumstances explained) in Hanlon, Illuminating Shadows, 15–40.
15 See the biography of Mapes in Shaw, History of Essex and Hudson Counties, 658; Cummings, Historic Annals, 135; National Academy of Design Exhibition Record, 9; and Hanlon, Illuminating Shadows, 18–19.
16 Teal, Partners with the Sun, 9–10. See also Hanlon, Illuminating Shadows, 20.
which are now presumed lost. A reporter noted in a news item distributed to many periodicals that the copies looked as though they had been carefully engraved and that “a process was used by which the figures were permanently fixed.” He added, however, a caution about the “difficulty or mystery” of retaining pictures formed by light on paper.18

Gail Buckland’s extensively researched survey First Photographs: People, Places, and Phenomena, as Captured for the First Time by the Camera consists of a captioned gallery of photographic “firsts.” According to her research, for example, the earliest photographs of American cities date from the 1840s, the first photograph of the U.S. Capitol was taken in 1845 or 1846, the first photograph of a Native American village dates from 1853 or 1854, and the first aerial view of America showed Boston (as a seagull may have seen it) in 1860. Lightning was first photographically recorded in 1847 at St. Louis, and the moon was first captured by the camera in 1851 from a location near Boston. By oversight, or because intriguing examples had not yet been found, Buckland’s account does not mention the photogenic drawings made by Draper, Chalon, Mapes, or Ellet, or by an inspired group of undergraduates in Cambridge, Massachusetts. The events at Harvard College in the spring of 1839, which are not as well-known as they should be, afford telling insights into how photography reached new populations and how it was received in the months after the working details of Talbot’s method became known. Anecdotal evidence about undergraduate culture and the character of American education in the mid-nineteenth century is also of substantial interest.

Harvard senior Edward Everett Hale probably first heard about photographic processes from reports in a newspaper, the Boston Daily Advertiser, owned and edited by his father, leading him to seek additional knowledge in other periodicals. Hale and his best friend, Samuel Longfellow (youngest brother of the poet Henry Wadsworth Longfellow), started tinkering with Talbot’s photogenic drawing process as soon as the working details were available to them.19 The Philosophical Magazine, for example, provided a recipe for making what Talbot referred to as “photogenized paper”: select smooth surfaced paper, such as “superfine writing paper”; dip it in a weak solution of common salt; wipe it dry for uniform distribution; spread a solution of nitrate of silver over the surface; allow to dry; and so on. Talbot recommended fixing exposed images with iodide of potassium and common salt, which could be washed over the picture. The Harvard students combined unquenchable curiosity with a thirst for hands-on experimentation.20 They were enthusiastic but not completely adept.

Hale had been encouraged from childhood to make things and accordingly occupied himself with building miniature railroad engines, setting up a printing press similar to that seen at his father’s newspaper, and conducting sundry experiments in chemistry. The toys of his upbringing

19 Talbot’s 1839 articles and related materials preserved among the collections at Harvard’s Houghton Library furnish some insights into the type of technical information on which the Harvard students would have been relying. Houghton has a rich collection of early articles and manuals describing pioneer photographic processes, including various iterations of the instructions published by Talbot. Titles at Houghton include “Method of Obtaining Facsimiles of Objects”; “Painting by the Action of Light”; Philosophical Magazine; and Talbot’s Some Account of the Art of Photogenic Drawing.
20 Anecdotes about Hale’s childhood and non-photographic activities at Harvard, ca. 1836–1839, are derived from Hale, ed., Life and Letters, 7–9, 16–51, and Hale, A New England Boyhood, 166–188.
consisted primarily of mechanical gadgets and chemical supplies. Bursting with energy on his arrival at Harvard, he deplored the paucity of college learning based on experiment and direct observation. His colorful journals and lively memoir, *A New England Boyhood*, detail the humdrum college routines, compulsory chapel, and numbing ennui of learning by rote. He and his classmates tried to dispel their boredom by joining scientific societies and “dabblings in science.” In the spring of 1839 much of their unstructured time focused on photogenic drawing, or “photogenizing,” as the boys termed the practice. The first result considered truly successful (according to Hale’s recollections, provided to a historian of photography some fifty-five years after the event) was a picture of Harvard Hall taken from Hale’s third-floor dormitory room in Massachusetts Hall. In 1894 he remembered that

> Mr. Samuel Longfellow . . . and I were intimate friends in Massachusetts Hall in Cambridge. We had the nitrate of silver of commerce—poor stuff it was—and followed Talbot’s directions as closely as possible. With these directions, and with an artist’s camera, which I still have, I took a picture of the windows opposite, in Harvard Hall. In especial, there was a bust of Apollo in the window, which came out very well, black on white ground, the bust being itself white on the black of the room beyond. I thought at the time, and I think now, that this was the first experiment in a Talbotype, which was made in this country.\(^{21}\)

In a slightly different retelling of the same event, he recalled two years later that

> My classmate and dear friend, Mr. Samuel Longfellow . . . and I were both much interested, and . . . repeated Talbot’s experiments at once. I took from my window in Massachusetts Hall a picture of the college library—Harvard Hall—opposite me. The camera was a little camera made for the convenience of draughtsmen, with a common lens of an inch and a quarter. We were delighted, because, in a window of the building which “sat for us,” a bust of Apollo “came out” so distinctly as it did. It came out dark brown—all the lights and shades being marked.\(^{22}\)

The overall context of the undergraduate fervor for photography is fleshed out by passages in Longfellow’s diary, alluding to the exposure of other images. The photographic dabblers included, among others, Alexander Washburn, who kept “photogenic mixture” in a room at the school’s Divinity Hall. Longfellow remarked in a diary entry for May 30, 1839, that photography was the subject “which now appears to occupy the attention of the scientific world”:

> I wandered around a little & went down to Divinity Hall to get Alex Washburn’s “photogenic mixture” or nitrate of silver with which we have been experimenting of late—Staid there some time eating crackers & talking about various matters in the usual desultory way—that is a pleasant room of his . . . & then came home and photogenized, working away in my darkened closet with nitrate & salt & water till dinner. . . . Having


\(^{22}\) Davis, “The Daguerreotype in America,” 10. The smallest of the cameras tried by Talbot in 1835 kept the sensitized paper inside very close to the lens, allowing exposures as short as ten minutes, and produced images typically smaller than two inches square. See Hanlon, *Illuminating Shadows*, 37n2. Some of Talbot’s other exposures lasted between ten minutes and one hour. See Hanlon, *Illuminating Shadows*, 37n12.
dispatched that I tried some of the prepared papers and produced a very good man’s-hand-with-a-bell upon a chocolate ground, which I pride myself upon as being the first distinct picture we have accomplished.23

Longfellow’s diary is not necessarily in direct conflict with Hale’s old-age recollections. Perceived discrepancies can readily be attributed to the vicissitudes of an elderly man’s memory, or to a difference of opinion about quality. No pictures exposed at Harvard in the spring of 1839 are known to have survived,24 although an intriguing, brownish piece of sensitized paper is preserved among Longfellow’s manuscripts at the Longfellow House–Washington’s Headquarters National Historic Site Archives in Cambridge. A partially legible pencil inscription scribbled in the margin by an unknown hand reads “. . . Salt/One. . . .”25

It is safe to infer that the photogenic drawings made at Harvard in the spring of 1839 were among the first photographs ever taken in America, and that they are the earliest documented photographs taken in New England. But there are too many potential candidates for any one person or group to be identified as the creator of the first successful American photograph. Undoubtedly other scientifically inclined experimenters worked at producing their own contact prints (and perhaps in-camera images as well) in America that year, as spring turned to summer and brighter sunlight afforded greater advantages for photography. According to historian David R. Hanlon, “The number who actually were working with photography in late March and April 1839 in the U.S. will probably never be known with much certainty, as paper materials were hidden away, diaries [came to be] discarded, and results were not thought . . . important enough to save for posterity. Time, and more deliberate sleuthing, may yield more information.”26

Specific information about Daguerre’s rival technique, the working details of which were not released in France until August 1839, reached American shores shortly thereafter.27 American courses of instruction commenced in New York City in December 1839, offered by Daguerre’s American agent, François Gourand, who brought a similar course to Boston in March and April of the following year.28 In March 1840 Hale learned daguerreotype technique (as did many others). He claimed that a self-portrait he took that year on the steps of South Congregational Church was “the first daguerreotype portrait taken in Boston.”29 Hale’s choice of venue for the

23 “Private Journal at Cambridge,” May 30, 1839, Samuel Longfellow Papers, box 1, folder 2. Unfortunately, Hale’s diary entries for the spring of 1839 do not mention photographic experiments. See also Hanlon, Illuminating Shadows, 38n35.
24 The earliest extant photograph of Harvard, taken in 1844 by freshman Josiah Parsons Cooke (Class of 1848; he later became a noted chemist) is a Talbotype showing the Gothic towers of Gore Hall, the impressive new college library. It is preserved at Harvard’s Houghton Library. See Houghton Library, MS Am 2208, and Harrison, “Unimaginable Visions,” 76.
25 See the document removed from box 1, folder 2, and separately housed, with its place marked by separation sheet 33705, Samuel Longfellow Papers.
28 Davis, “The Daguerreotype in America,” 10. Gourand arrived in New York on September 20, 1839, and mounted the first exhibit of daguerreotypes in the United States on December 4. In the following weeks he started giving instructions and selling equipment. He traveled to Boston and provided lessons to small groups in March and April 1840 at the Massachusetts Historical Society and made popular presentations to larger audiences at the Masonic Temple. Hanlon, Illuminating Shadows, 39n54.
picture neatly foreshadowed his future role as the church’s Unitarian minister from 1856 to 1899. His journals for 1840 contain scattered references to bulbs, shutters, and photographic experiments, praising especially the usefulness of “photogeny” for printing maps.  

What did their fledgling attempts at photography, however faltering, mean to Longfellow, Hale, Washburn, and other Harvard students in the spring of 1839? Consider the following: Hale and Longfellow both speculated (or fantasized) during their college years that sea serpents might still exist as the descendants of prehistoric creatures. Published reports of sea serpent sightings off the Massachusetts coast appeared from time to time in the legitimate press in the nineteenth century. One such “sighting,” witnessed by seemingly reputable spectators, occurred in 1817 in the harbor at Gloucester.  

The boys may have felt that an observer armed with a camera and accomplished in the photographic arts could resolve such controversies once and for all. Or they may have imagined that photography held the key to supersensory perceptions and special powers, a fancy exploited by mid-nineteenth-century writers of fiction. In Nathaniel Hawthorne’s The House of the Seven Gables, for example, daguerreotypes reveal not only the familiar personality of a subject but also his or her true character, otherwise hidden from observers. The photographer Holgrave explains in the novel that “while we give [sunshine] credit only for depicting the merest surface, it actually brings out the secret character with a truth that no painter would ever venture upon, even could he detect it.”  

The natural world, or parts thereof, could be frozen in time and recorded in unprecedented detail by photography—things could be studied with the aid of the camera that no one thought would ever be seen. Photography was a concept that fed the imagination and opened unlimited avenues of curiosity for the enthusiasts who first encountered its wonders.

If the 1839 American photogenic drawings had not disappeared, one or more examples would be reproduced in nearly every history of photography. But awareness of the 1839 events is by itself important, and the disappearance of the first American photographs needs to be carefully considered. Their loss is essential to our understanding of the early photographic adventures in the United States. A photograph’s diverse meanings are rooted in its production and use, a combination of intention, action, accidents, and context. Photogenic drawings were experimental. Talbot himself recommended that those attempting to replicate his results be sufficiently patient to experiment. In 1839 Talbot did not adequately understand how to fix images, and his chemical preparations had not yet been perfected—pictures so produced were prone to fading. Talbot often enclosed photogenic drawings in letters to his relatives and friends, images that simply faded away, leaving only discolored paper. Hale recalled in 1894, reflecting on the 1839 student wave of “photogenizing” in Harvard Yard, that he “found out afterward that our difficulty was in buying the nitrate of silver which apothecaries then sold merely for its use.

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31 Brown, “A Natural History of the Gloucester Sea Serpent.”  
32 Hawthorne, The House of the Seven Gables, 91.  
34 Hanlon, Illuminating Shadows, 37n12.  
35 “Re-Picturing Photographic History.” See also a reference from the 1830s to the fading phenomenon, quoted by Hanlon, Illuminating Shadows, 37n1.
in the treatment of throats, which had already lost most of the properties for which we wanted it. So soon as we learned this, and made our own nitrate of silver . . . we did better.”  

Early dabblers in the photogenic drawing process were more eager than they were prepared.

It is also likely that the earliest experiments in photogenic drawing, which experimenters found enthralling at first, seemed insignificant and dispensable after the more impressive pictures produced by daguerreotypes, improved calotypes, wet plates, and dry plates became available. Historical understanding of how Americans learned to make photogenic drawings and reacted to their mysteries can be partially reconstructed from surviving documentation. But the story of shifting attitudes toward the earliest images is best inferred from the circumstances of their disappearance. Art historian Thierry de Duve writes that the photograph can be seen as a “live witness . . . of a vanished past” or as a reminder of bygone days now obscured by oblivion. He would probably consider faded scraps of sensitized paper to be examples of irretrievable aspects of the past. But, as photographic historian Eduardo Cadava suggests, the “possibility of history” is often tied to the survival of traces and our ability to read them in whatever forms they assume.

Documents, memories, and artifacts work well in combination as evidence for knowing, or approximating, what happened in history, and we may now attach much importance to a trace of the past that was in previous eras considered inconsequential. Thinking about old photographs—how and why they came to be; how and when they were appreciated or disparaged; and how they were preserved, ruined, or discarded—nudges us closer to understanding the mentality of photography’s earliest practitioners. The “photogenized paper” at Longfellow House, elusively blank, is nevertheless a tangible connection to the past, affording researchers (as well as archivists) an opportunity to contemplate its surface and consider its deeper implications. Faded images can be highly evocative, and as historian Arlette Farge reminds us, “to use the archives is to translate . . . incompleteness into a question.”

Philosopher Paul Ricoeur suggests that a “document sleeping in the archives is not just silent, it is an orphan,” adding that archivists should “question” the orphan documents sequestered in their collections. One of the main undercurrents of Raphael Samuel’s classic compilation of essays *Theatres of Memory* is that archivists, curators, librarians, and others whose labors combine to make the past more knowable are no less important for shaping historical understanding than

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38 Cadava, *Words of Light*, 64.
39 As historian David Lowenthal indicates, “Artifacts of initially transient and diminishing value that fall into the limbo of rubbish are often later resurrected as highly valued relics.” Lowenthal, *The Past Is a Foreign Country*, 240.
40 Historian Arlette Farge refers to “the tactile and direct approach to the material, the feel of touching traces of the past.” Farge, *The Allure of the Archives*, 15. Photographic historian Geoffrey Batchen elaborates on a similar theme: “To make a contact print or photogram, objects . . . are placed directly on a material made sensitive to the difference between the presence and absence of light. Here object and image, reality and representation, come face to face, literally touching each other . . . as a single merged entity, as inseparable as a mirror and its image, as one and its other.” Batchen, *Each Wild Idea*, 160.
41 Farge, *The Allure of the Archives*, 55.
academic historians. Perhaps some more of the photogenic drawings produced in America in the 1830s still lurk unnoticed among family papers in private hands, or sit unidentified in some collection in a college archives, house museum, or historical society. As archivists, we should never allow our curiosity to flag about the contents of our collections, however inscrutable or seemingly drab. Archivists would be well advised to take a closer look at what they have. A nondescript scrap of nineteenth-century paper could well be a relic of America’s first foray into the transformative medium of photography.

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