DANCING WITH IMAGES: EMBODIED PHOTOGRAPHIC VIEWING
Ellen Handy

Abstract
This essay discusses nineteenth-century photographs by Nicéphore Niépce, Joseph Saxton, and Gabriel Lippmann, made with processes that render the images literally difficult to see. It argues that these images impose protocols of fully embodied seeing upon viewers. Their difficulty of viewing slows down what is otherwise immediate and automatic, rendering that process accessible to analysis. By attending to the experience of seeing, we necessarily engage directly with the images as objects, privileging the viewer’s and the object’s materiality while de-emphasizing the photograph’s indexicality. These image-objects embody a photography that refuses to operate within traditional categories of representation and invites material, embodied, experiential approaches. Contemporary photographers’ return to these archaic processes emphasizes their materiality’s call for an embodied viewing. In this essay, John Dewey’s description of art as transactional process incorporating viewer as well as artwork provides a useful model for such engagement, and offers an opportunity to satisfy James Elkins’ call for genuine discussion of materiality of works of art.

Keywords: photography, daguerreotype, heliograph, Lippmann plate, Nicéphore Niépce, Joseph Saxton, Gabriel Lippmann, embodied viewing; photographic objects, art as experience, vision, materiality, John Dewey, James Elkins

Full text: https://openartsjournal.org/issue-7/article-2
DOI: http://dx.doi.org/10.5456/issn.2050-3679/2019s02

Biographical note
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Banner image: Photogram of maggots, larvae and flies on bacteria culture in Edgar Lissel’s Bakterium – Vanitas from his Bakterium-series (1999–2001). (Courtesy Edgar Lissel)
DANCING WITH IMAGES: EMBODIED PHOTOGRAPHIC VIEWING

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Much have I travell’d in the realms of gold,
And many goodly states and kingdoms seen;
Round many western islands have I been
Which bards in fealty to Apollo hold.
Oft of one wide expanse had I been told
That deep-browed Homer ruled as his desmesne;
Yet did I never breathe its pure serene
Till I heard Chapman speak out loud and bold:
Then felt I like some watcher of the skies
When a new planet swims into his ken;
Or like stout Cortez when with eagle eyes
He star’d at the Pacific – and all his men
Look’d at each other with a wild surmise –
Silent, upon a peak in Darien.

John Keats, ‘On First Looking into Chapman’s Homer’, 1816

Introduction

Is looking at early photographs like astronomical observation, or similar to reading an inspired translation of a classic text, or like exploring in challenging terrain? What embodied aspects do those types of perceptual experience share? How does the perceiver’s situation in place and space shape embodied perception? Keats’ poem about the revelation of encountering a work of literature mediated through translation epitomises romantic sensibility regarding aesthetic experience. Poetry, translation, and the natural world are all conflated and held as equivalent, because what matters most is the experience of the reader/perceiver. Though the poem argues that looking into an ancient text is

aesthetic experience. Poetry, translation, and the natural translation epitomises romantic sensibility regarding the perceiver’s situation in place and space shape embodied perception. Keats’ poem about the revelation of encountering a work of literature mediated through translation epitomises romantic sensibility regarding aesthetic experience. Poetry, translation, and the natural world are all conflated and held as equivalent, because what matters most is the experience of the reader/perceiver. Though the poem argues that looking into a binding text, an experience whose importance to him demands that he employ the force of heavy metaphor to honour it. But is it possible to convey an experience of such power through direct description of the encounter and to redirect attention from the subject matter to the experience of the perceiver? What are the perils and possibilities implicit in such attempts?

Susan Sontag (1966) famously called for an ‘erotics’ of art rather than a hermeneutics, a directive indicative of radical style more than a workable method she (and others) could actually employ (p.14). John Dewey’s 1934 treatise Art as Experience argues that art is neither concept nor material entity, but rather a highly conscious and complex transaction between object, maker, and perceiver. Although Tim Ingold’s more recent response to object-oriented-ontology helpfully emphasises the status of the materials of which objects are comprised, Dewey’s presentation of experience rather than object as a primary affords the most useful basis for making sense of how we make sense of artworks with our senses. Yet as a philosopher rather than an art critic, he failed to concern himself with analyses of the experiences which constitute individual artworks.

James Elkins (2008) has argued that art historians typically recoil before the object when it comes to sustained engagement with its materiality. He writes: ‘It is relatively easy to build theories about materiality, but relatively difficult to talk about materiality in front of individual objects’ (p. 26). His argument goes on to oppose what he calls ‘the slowness of the studio’ with standard art-historical practices, making it clear that it is painting and other traditional studio art media he is imagining. His descriptions can hold for photography and historians of photography as well, although many photographs and photographic practices lack that slowness. This article discusses several photographs, each of which is difficult – and thus slow – to see, and each of which mandates more embodied viewing protocols than do most images or texts. I attempt to place the materiality of those image-objects at the centre of the analysis by describing the experience of viewing them in somatic terms, or, in other words, treating the experience of the works as the art, in Deweyan terms. In particular, the spatial, geographical positions of both maker and perceiver of the image-objects that I discuss are key aspects of their embodied perception.

Nicéphore Niépce’s View from the Window at Le Gras (1826) is the earliest surviving successful photographic image in history, Joseph Saxton’s Central High School, Philadelphia (1839) is the oldest surviving daguerreotype made in North America, and Gabriel Lippmann’s Untitled [spectrum] (1891) is an example of the first successful direct colour photographic process. All are somewhat uncharacteristic photographs: unique images on weighty yet delicate metal or glass plates requiring complex alignment of image plate, hand, eye, and light source to be visible at all. Work, performance, and bodily participation are involved in looking at them. Their qualities flout today’s entrenched presumptions about photographic images’ miraculous clarity, detail, and ease of decipherment. The heliograph is like a mirage, without defined contours; viewed in person,
the Saxton plate appears more negative than positive; and Lippmann plates are dark monochromes until the viewer is correctly aligned with them, when their blast of colour appears. The elusiveness of these images elicits spectatorial embodiment which becomes part of the works.

From the 1850s to the beginning of this century, a photograph was most often a replicable image on paper, generated from a common matrix (negative) in potentially great number, portable and easily viewed. Perhaps paradoxically, today’s digital photography has in a sense returned to its roots, with the majority of photographs taken residing in cell phones and (when not being ‘shared’ via social media), viewed on the small screens of devices held intimately in the hand, legible only in specific conditions of lighting, and oriented to the viewing posture of one or two people at a time. Passing a phone hand to hand to display a digital image today is an experience not unlike viewing daguerreotypes and other early photographic images on plates, a type of looking that engages more than just mind and eye.

One merit of Niépce, Saxton, and Lippmann’s plates is that they direct our attention to the activity of looking. Art historians typically concern themselves with images more than with the experience of seeing those images, but both the practice of the very earliest photographers and the choices of some artists working today prompt consideration of the viewing process required by their photographs. What exactly is the experience when we gaze at unique images on metal and glass plates? And how is that experience involved with the meaning of the images? In the act of viewing these three photographs, we cannot over-estimate the importance of touch and of alert body posture, the focus of a viewer’s eyes, the presence or absence of corrective lenses, the positioning of the image in relation to the viewer’s face, the arrangement of the viewer’s centre of gravity to make this happen, and the necessity for examining the image one person at a time. Ingold’s conclusion that ‘the properties of materials, in short, are not attributes but histories’ prompts the reflection that the properties of sensory experience of works of art are histories as well, with the implication of change over time (2007, p.15; italics in original).

Despite its much-discussed transparency, indexicality, and reduction of image to content, photography is a medium with ties to the corporeal aspects of perception, often presented as a metaphor for vision itself, through association of the camera’s mechanics with those of the eyeball. In particular, photographers’ framing of images is equated with the selectivity of human visual attention. Claims for photography as impersonally indexical documentation and as instrument of subjectivity in representation abound, though positions at both extremes fail to engage with the materiality of images and somatic perception of their viewers. Considering specific instances of photographic images that are difficult to view, facilitates close observation of that process of viewing, particularly in its somatic aspects. The difficulty of viewing slows down what is otherwise automatic, and unconsidered, rendering it accessible to analysis.

Niépce’s View is radiant but without defined contours. It is displayed in a darkened, shrine-like room. Both the distance from its vitrine at which one stands to view it and the angle of one’s sightline to the plate are strictly prescribed. By moving out of position even slightly, one loses the image. The Saxton plate (like most daguerreotypes) must be held in one’s hand and tilted until the image resolves, but it is apt to appear more negative than positive under normal viewing conditions. More demanding still, the Lippmann plate remains an inscrutable dark rectangle until correctly aligned with the perceiving eye and illuminated, whereupon a blaze of colour appears and the image leaps from the darkness. Photographic process historian Mark Osterman calls the kind of postural alignment these photographs require of the viewer ‘dancing’ with the image.1 An unnamed early critic of photography described just such embodied viewing as problematic, and characteristic of the infancy of the medium:

In the early days of Daguerreotype, our readers will remember what fragile and unsatisfactory things sun portraits were; how they needed to be always kept snug in Morocco cases safe from the action of the sun and the air; and how the spectator was obliged, before he could catch the proper light and see the likeness at all, to turn and twist it, and look sidewise, and at every possible angle, and with every practicable species of squint and visual contortion, like a magpie peering into a marrow bone.

(Anon, 1851, p.61)

Such acrobatic looking is required not only by daguerreotypes, but also by the heliograph, and by Lippmann plates.

Returning to Keats, we might wonder what it would have been like if his poem was about the smell of the

1 Mark Osterman’s vivid characterisation of such photographic viewing as ‘dancing with’ the images is description, not metaphor. When he used this phrase in conversation with me in the George Eastman Museum’s Gannett Foundation Photographic Study Center on 7 April 2015, I was immediately struck by its literal accuracy.
calfskin binding of his copy of Homer, the spacing of type as arranged on the page, the phantasmagoric patterns of the marbled endpapers, the sound of turning leaves and the texture of their paper against the sensitive skin of his hands. The sky watcher and stout Cortez might have been left on the cutting room floor in the writing of that poem, because itemising the operation of the sensorium does not require narrative simile. But imagining Keats writing a different poem is just as fanciful as his poem’s description of the wrong Spaniard viewing the Pacific – Vasco Nunez de Balboa having been the actual conquistador to struggle through jungle to look upon a new sea with wild surmise. One purpose of this article is an attempt to address Elkins’ critique through sustained attention to several early photographic images whose material qualities are stubbornly emphatic, with engagement akin to that of Keats reading Chapman.

Niépce

Nicéphore Niépce’s heliograph is a unique positive on a polished pewter plate (Fig. 2.1). In the summer of 1826 (or possibly 1827), Niépce coated his plate with a form of asphalt, called bitumen of Judea, and placed it inside a camera obscura set in the window of his workroom on the second floor of his country house near Chalons-sur-Saône in France. During an exposure of at least eight hours, the camera faced the courtyard, trees, and outbuildings opposite Niépce’s house, and slowly the light entering the camera hardened those portions of the bitumen which corresponded to the light areas of the image. When Niépce removed the plate from the camera, he washed it with lavender oil and white petroleum, which softened and removed the bitumen not hardened in exposure, revealing the surface of the plate in the darker areas of the image (Gernsheim & Gernsheim, pp.58–9).

Figure 2.1: Nicéphore Niépce, View Out The Window, 1826. Heliograph, 16.2 × 20.2cm. (Gernsheim Collection, The Harry Ransom Center, University of Texas, Austin)
The first image of the world drawn by light itself is thus a perfect romantic image of a view from a window, opposing the wide world to the realm within and commemorating a process of observation. But it is by no means what is often meant by ‘photographic’: it is not minutely detailed or instantly legible. Indeed, the image is extremely unclear, owing to the relative insensitivity of the materials Niépce employed and the day-long exposure. The highly reflective plate further resists decipherment, and during the course of the day, the sun travelled across the sky, first casting shadows in one direction and later in the other, causing the image to lack definition.

The heliograph is 16.2 by 20.2cm. Originally it would have been examined by candle or lamplight in a shadowy salon; its inconstant image responding to the glow of the light source. Approaching it today, one instinctively seeks spatial location and finds not a horizon per se, but an imprecise division of lighter sky and darker framing elements. A pale triangle hovers near the centre of the plate, while at left and right architectural elements bulk. A cursory scan of its surface can be disrupted by one’s movement before its reflective surface, dimming the hazy image that appears to float within the plate. Like many paintings by Turner, it gives an initial impression of veiled form amidst light and shadow. Several factors create a tension with Niépce’s gauzily immaterial image. Three prominent dents or protrusions break the plane of the plate to give evidence of its three dimensionality. The rather ornate period frame of the plate is pitched at a 45-degree angle within a formidable vitrine enclosed by an elaborate, bunker-like setting. Approaching the plate is something like the ritual procession into the temple of a cult object’s sacred precinct. Or perhaps it only seems so to a dedicated historian of photography, making a pilgrimage to Texas to encounter the fons et orrigo of the medium.

Moving closer, one loses the image; as one steps away, it flashes brighter. The flickering scan of the image makes it unstable in relation to the viewer’s gaze. An intake of breath moves one’s body slightly backward and disarranges viewing the orientation. Since the plate is fixed within its vitrine, one cannot compensate for that motion by adjusting the plate’s angle and distance to the eye as one could if holding it in one’s hand. Its protective immobilisation neutralises the experience of viewing it, like encountering a fish behind glass in aquarium rather than diving into its waters. So in seeing the thing we almost cannot see, we become intensely aware of the power and the work of looking, as much as we attend to what is actually visible. The photograph, which stands at the earliest point of origin in the history of the medium, is so elusive as to seem all but anti-photographic, and the viewing distance of two feet or so from the plate underscores the remoteness of the hazy image in space and time even as it emblematises Dewey’s triad of art as experience: Niépce’s alignment of camera in space and time, the metal plate acted upon by light, and the spectator’s bodily orientation before the object are inseparable elements.

For Proust, the memories of a lifetime were available via a tea-soaked cake. For Niépce, a whole summer’s day was inscribed on small metal plate. The sun rose, it arced across the sky, shadows fell first to the left, disappeared, then fell to the right, muddling the definition of forms. The inventor set up his camera and then went about his business. Surely luncheon, if not more than one meal, must have been served during the exposure, as Niépce came and went from the upper chamber where the camera was positioned and his household went about its business. Birds sang, breezes blew, and, I would like to think, the perfume of new mown hay suffused the air. The heliograph mingled bitumen of Judea and local lavender oil, the earth and its flowers, in its substance. Yet despite that specificity of terroir, the subject of the photograph is almost abstract: the presence of light in the world, or perhaps we could say the revelation of the world to us by light, and the extraordinary power of our vision as a means of perception. Indeed, Niépce’s plate tells us little about its subject, less about the materials of which it is composed, much about our own somatic engagement with it, and more about the trope of the view from an open window. The earliest and greatest extant invention of photography, the heliograph nevertheless was a process immediately superseded by technical improvements: a beginning without a conclusion, an invention with almost no history of its own other than that of its evolution.

**Saxton**

The direct descendent of the heliograph, a daguerreotype is made by meticulously polishing a silver-plated copper etching plate, sensitising the silver mirrored plate with iodine fumes, exposing it in a camera, developing it with mercury vapour, fixing it with salt, and protecting it behind glass in some kind of frame or case. The process is named for Niépce’s collaborator Daguerre and nicknamed ‘mirror with a memory’. The daguerreotype’s surface is fragile, and its image can be permanently smudged or erased by contact, so its protective package is an essential part of the object. One normally holds a daguerreotype in the hands, tilting it to find the optimal viewing angle.
in relation to one’s eyes and available light source. As with the heliograph, some angles of viewing return the viewer’s reflection, while at others the image reverses itself tonally to appear negative. Daguerreotypes improved enormously upon the heliograph’s ability to represent the world.

_Central High School, Philadelphia_ was made in October 1839 by Joseph Saxton, a watchmaker, engraver, and inventor in Philadelphia, by pointing an improvised camera out of an upper-story window of the United States Mint (Fig. 2.2). No longer the first city of the nation by 1839, Philadelphia was nevertheless to become a great centre of daguerreotypy in America, boasting upwards of 100 daguerreotype studios by 1856 (Weatherwax, 2010). According to Beaumont Newhall (1961, p.28), word of the invention of the daguerreotype process first came to the United States via the steamer _British Queen_, which docked in New York on 20 September 1839. Daguerreotypes were immediately attempted in New York by painter and inventor Samuel Morse and D.W. Seager, but none of their early successes survive today. The Saxton plate is thus the oldest surviving photographic image known to exist in the United States, and a celebratory local history marker stands on the city street at the approximate site of its making to commemorate his accomplishment. Nevertheless, Saxton’s photograph is relatively obscure within the history of photography, and it is a humble object. Residing in the Pennsylvania Historical Society, it is paged to a reading room by request for readers like any other historical document. Sealed in an archival mat that expands its modest dimensions (5.7 by 7.2cm) and makes handling possible, but conceals some of its qualities as an object, it is quite heavy in the hand. Probably the plate was never enclosed in one of the Morocco cases which quickly became ubiquitous for commercially produced American photographs.

An unusual coppery colour, _Central High School, Philadelphia_ has less flash and sparkle than most daguerreotypes. More readily appearing negative than positive, it is an unusually recalcitrant photographic

Figure 2.2: Joseph Saxton, _Central High School, Philadelphia_, 1839. Daguerreotype, 5.7 × 7.2cm. (Cased Image Collection, Historical Society of Pennsylvania, Philadelphia)
The plate’s exhibition history is not well documented, but it does not seem to have been intended for public display. Neither its subject nor its composition would have impressed contemporary audiences, and we can hazard a guess that its meaning and purpose was simply the making of the photograph. Twentieth-century photographer Gary Winogrand famously said ‘I photograph to see what something looks like in a photograph’ (quoted in Diamondstein, 1982, p.57) and Saxton could have said ‘I photograph to see whether it is possible to photograph.’ In this sense, the photograph depicts the coming of photographic imaging to North America as surely as it does the irregular roofline of two undistinguished Philadelphia buildings.

Lippmann

Viewing a Lippmann plate recalls the moment in the film of *The Wizard of Oz*, when Dorothy’s house reaches Oz: suddenly colour blossoms in the monochrome world. More so even than the other processes discussed here, Lippmann images are dependent on a precise viewing alignment of image, light, and eye. Yet they possess the illusion of life, almost of movement, when the dance of viewing aligns viewer and plate to produce the burst of colour. Incorrectly aligned, a Lippmann plate is either flat and solid dark gray or else resembles a very dark ambrotype which has lost its backing: a murky, tonally reversed image seeming to lurk beneath the surface of a glass plate.

Lippmann plates are small sheets of glass, often cemented to prisms, wedges of glass that tilt the plates’ viewing orientation. As a result, the extent to which one must look into the image to see it is not unlike a viewer’s physical relationship to viewing tools like microscopes of telescopes, recalling Ines Nicole Echevarria De Asis’s (2016, p.2) argument that ‘photographs are not just ontologically similar to microscopes and telescopes, but also epistemically akin to them’. The prisms — and the images’ nature — prevent the Lippmann plates from hanging on the wall, or being held in one’s hands for viewing. Ideally, they sit on a table and a light source is arranged directly above them while the viewer arranges — dances — into place. Arriving at that correct viewing orientation has the effect of flipping a switch to turn on the lights in a darkened room: suddenly illumination and colour blaze forth. But unlike experiencing the effect of electrical light in darkness, viewing a Lippmann plate requires the bodily discipline of a strict adherence to a particular spatial orientation. Moving even slightly out of alignment causes the images to go dark and dead in an instant.
As the first successful direct colour process, Lippmann plates introduced a new level of reality to imaging, fulfilling the desire of those ungrateful early critics of the daguerreotype who wanted that miracle to take place in full living colour. Part of the power of the medium lies in its purity of concept and effect. In a sense, we could say the Lippmann plate is the first complete attainment of the promise of photography. It is also a virtually extinct process today, little practised and less discussed. Technically difficult, able to produce only unique images, and demanding in its viewing protocols, a Lippmann plate is more like a heliograph or daguerreotype than a print from a colour negative or a colour Polaroid.

Gabriel Lippmann, a physicist, received the Nobel Prize for this invention in 1908, a greater distinction than achieved by any other photographic inventor to date. As a scientist solving a problem, he succeeded completely, though as an inventor of photographic technology, he seems to have presided over a dead end in the evolution of the medium. Ross Knapper, Collections Manager of the George Eastman Museum, points out that the Lippmann process is the purest possible imaging of colour, dependent not on pigment, dye or other secondary materials, but rather is a phenomenon of selective reflection of light. The interference effect of the light itself makes the image, which essentially represents nothing but the process itself: the action of light on emulsion on plate, and a challenge to expectation and to vision. Lippmann (1908) explained his process in his Nobel Prize lecture:

The method is very simple. A plate is covered with a sensitive transparent layer that is even and grainless. This is placed in a holder containing mercury. During the take, the mercury touches the sensitive layer and forms a mirror. After exposure, the plate is developed by ordinary processes. After drying the colours appear, visible by reflection and now fixed.

This result is due to a phenomenon of interference which occurs within the sensitive layer. During exposure, interference takes place between the incident rays and those reflected by the mirror, with the formation of interference fringes half a wavelength distant from each other. […] When the shot is afterwards subjected to white light, colour appears because of selective reflection. The plate at each point only sends back to the eye the simple colour imprinted. The other colours are destroyed by interference. The eye thus perceives at each point the constituent colour of the image. […] The print in itself is formed of colourless matter like that of mother-of-pearl or soap film.

(Lippmann, 2018)

The image on a Lippmann plate is analogous to the proverbial unheard tree falling in the forest – until a viewer is precisely aligned to see it. The colour in this particular Lippmann plate glows in a horizontal band like a stained-glass window, cool blues at one side, a surprising zone of darkness in the centre, and the brightest sectors at the right, where yellow yields to orange and reds before the spectrum ends and darkness is restored. Approximately 6.5 by 9.0cm, it occupies a surprisingly solid little package for such an immaterial-seeming image of light broken into its constitutive parts like an image inside a kaleidoscope, and preserved, like a fly in amber. The difficulty of seeing the image – its exigency as a dance partner – de-emphasises its indexicality of representation and privileges the roles of viewer, perception and object materiality.

Labouring while dancing: The fascination of what’s difficult

The Cortes of Keats’ poem stood silent upon the peak in Darien, and a travelling photographic historian making secular pilgrimages to view these three photographs stands silent with emotion before them, both spectators having laboured to attain a view of what is very difficult to see. The explorer trekked through the jungle, the historian ‘danced’ into position for viewing the elusive images, macrocosmic and microcosmic journeys respectively. For the romantic poets, entangling experience in imagination for poetic effect was a given, perhaps because texts necessarily operate at some remove from sensory experience. We master the code of reading, we translate the marks on the page to the sense of the meaning, we check our emotions for a response. Although we are trained to read photographs, on the other hand, as more direct representations of a reality, not as translations of a text, these three photographs demand work in viewing them. They presume that looking is labour, if also pleasure, and the reward of that labour in each of these cases is an image singularly pure, abstract, and free of association, an image which surprisingly seems

I am indebted to Ross Knapper for introducing me to the Lippmann plates in the George Eastman Museum collection, and sharing his understanding of these remarkable objects with me in conversation on 7 April 2015.

My thanks are due to Carole Sandrin and Pascale Pahud of the Musee de l’Elysee, Lausanne, who facilitated my viewing of the Lippmann plates in the museum’s collection.
to speak directly of the medium that produced it more than of a subject. In some sense, however, the images return to the status of difficult texts even as we strive to encompass their material object-hood.

Not purely indexical or expressive, documentary or fine art, these objects each embody a photography that refuses to operate within traditional categories. Having little content other than the processes which produced them – and so their own existence – they represent varied relationships to the question of photograph as substitute for the object of research. Niépce’s image is proof of concept more than replica of the world beyond his window, Saxton’s image is confirmation of replication of Daguerre’s results, and Lippmann’s image depicts light itself as a pure scientific experiment. These images are antecedent to the kind of image ‘atlases’ that Lorraine Daston and Peter Galison (2007) speak of in Objectivity; they represent critical early stages in the evolution toward fully developed photographic/scientific representation of subjects. Examining these first attempts at the imaging systems eventually used to build extensive archives of images illuminates the photographic medium’s journey toward objectivity. But these images are also antecedent to claims for the fine-art status of their medium, and so stand apart from the hurly-burly of aesthetic posturing and conflict within the emerging art history of photography.

Standing apart is what each one does best. Photography, a medium sometimes considered indistinguishable from its subjects and the real world it represents, and often considered the most universal pictorial language, here shows itself to be challenging and prone to withdrawing itself from the viewer’s eye. As described, these photographs are literally difficult to see. The viewer’s dance of alignment with the plate emblematises the physicality of viewing, and the images’ lack of subject matter allows the simple fact of their existence (and the potentiality of the medium at whose origins each is positioned) to assume centre stage. But if no one dances with these photographs, they are like the tree falling in the forest with no one there to hear it make a sound. To speak of an embodied viewing process is both to emphasise the materiality of the objects perceived and to talk about subjectivities. That is, such seeing is necessarily emotionally responsive seeing and not merely the panoply of sensory experience. Since we cannot get outside our own skins, we might as well use our sensory corporeality to engage with an artwork’s materiality. Levi Bryant’s (2011) object-oriented ontology argues that objects maintain their reality regardless of their relations with people, a quality he calls ‘withdrawal’, though of course this quality is precisely what makes the works available to be experienced, and so could be considered a kind of presence.

Contemporary analogues
What do we learn from the dance with these three early photographs? Are they anything more than curiosities? What epistemic value do they possess? How do their difficult and complicated processes relate to the imaging practices of today? In the age of social media, to make an image as restrictive as a Lippmann plate is an unexpected choice; to employ the daguerreotype process in recording a cityscape is equally remarkable; to return to the pre-photographic device of the camera obscura is daring, all three operating where the intensely reactionary meets the vanguard of artistic practice. Like Niépce’s, Saxton’s, and Lippmann’s images, many contemporary works utilising anachronistic processes are intelligible as self-reflexive commentary upon process, vision, and medium. Those images, which are so difficult to see, remind us that photography is not exclusively a hall of mirrors in which infinitely reproducible images become simulacra of the world, nor is it necessarily what William Ivins called an ‘exactly repeatable pictorial statement’ (1953, p. 1). Though these photographic processes fell out of favour with nineteenth-century viewing publics, they and other early or pre-photographic techniques have been rediscovered by contemporary artists, like Filipe da Veiga Ventura Alves (Lippmann plate), Binh Danh (daguerreotype), and Zoe Leonard (the room-sized camera obscura). In an increasingly digital world, and despite Elkins’ claims about visual culture’s fear of the material, contemporary engagement with the materiality of images flourishes to an extent that demands scholars’ engagement with that materiality.

Filipe Alves is one of the finest practitioners of the arcane art of Lippmann interference photography today. He first made a Lippmann plate because he was curious about the process but was not able to find an example of the process to see for himself – a motivation not unlike Saxton’s. Alves’ Lippmann plates are sumptuous, evocative in imagery, and so most unlike Lippmann’s images. Though these photographic processes fell out of favour with nineteenth-century viewing publics, they and other early or pre-photographic techniques have been rediscovered by contemporary artists, like Filipe da Veiga Ventura Alves (Lippmann plate), Binh Danh (daguerreotype), and Zoe Leonard (the room-sized camera obscura). In an increasingly digital world, and despite Elkins’ claims about visual culture’s fear of the material, contemporary engagement with the materiality of images flourishes to an extent that demands scholars’ engagement with that materiality.

The daguerreotype, by contrast, is a medium widely practised today. Both nineteenth-century photographic
re-enactors and emphatically contemporary artists embrace daguerreotypy, typically choosing portraiture, figure studies, and still life as subjects, which also were the most common original applications for the medium. Binh Danh’s cityscapes which subtly address the layering of history, time, and experience in San Francisco are unusual contemporary daguerreotype subjects. In B and C Laundromat Barbary Coast Trail, Chinatown (2014) (Fig. 2.4), a plethora of mirror-reversed signage jostles for position in the composition, complicating the reading of the image and calling attention to the fundamental principle of lateral reversal that is inherent to all camera images, though corrected in most photographs. The lacy patterned ironwork on the buildings’ façades contributes another calligraphic element to this image of ‘old’ Chinatown buildings, which date to just after the great fire of 1906. The daguerreotype presents the passage of time, the rise and fall of architecture, and changing patterns of immigration and ethnicity in the urban palimpsest. Packed with visual incident and subject matter, Danh’s daguerreotype also claims attention for the material

Figure 2.3: Filipe da Veiga Ventura Alves, Travessa da Arrachela, 2014. Lippmann plate, 6 × 6cm. (Courtesy of the artist)

Figure 2.4: Binh Danh, B and C Laundromat, Barbary Coast Trail, Chinatown, 2014. Daguerreotype, plate: 8 × 10in, frame: 12.75 × 14.5in. (Courtesy of Haines Gallery, San Francisco)
qualities of its own medium and of the optics of the camera obscura which is the basis of all photography. Unlike Lippmann plates and daguerreotypes, no one makes heliographs today, presumably because of the process’s difficulty and shortcoming as regards visual acuity. But artists today do engage with the very foundations of photography as Niépce understood it. Zoe Leonard’s 945 Madison Avenue (2014) exemplifies such a return to origins. The work, a room-sized camera obscura constructed within the museum, is viewed from inside. Entering the space and adjusting of one’s eyes to the darkness are whole-body actions. The subject outside the covered window – the ordinary world, the street you walked down minutes ago in order to enter the museum – delineates itself in perfect clarity, colour and motion on the wall of the room opposite, albeit upside down and laterally reversed. Later, when you go outside, you experience the world differently, more aware that it is all a succession of images, and noticing the brightness of daylight rather than taking it for granted. Leonard’s work, not dependent upon studio time for its production, epitomizes unbounded durational attention, turning Elkins’ observation on its head by allocating immersion in the longue durée to viewers at the museum rather than to artists in the privileged space of the studio.

945 Madison Avenue operates in a languorous, expansive timeframe. No real end point of the viewing experience is indicated since in no two moments is it identical, but to spend a day observing it would be an experience much like watching the exposure that created Niépce’s heliograph View. Leonard substituted a corporeal viewing process for a discrete art object, and for the rhetoric of art by inviting viewers into the camera chamber. In this piece, the world dances with you rather than you dancing with the image, but its association of the radiant world outside the window and the mediated experience of viewing it nonetheless recalls Niépce’s image. We cannot recapture the experiences of those who looked upon photographic images for the first time when the medium was new, but we can experience a similar and parallel sense of wonder.

Though Niépce’s view of the exterior world is framed through a window, we nonetheless gaze into it like a crystal ball rather than having the illusion of looking out the window ourselves. Saxton’s image is an informal hieroglyph, a flat scrap of architecture delineated simply in attempt to employ Daguerre’s method, with little evidence of any purpose beyond registering an image on the plate, a matter-of-fact recreation of a miracle of imaging. Lippman sought a tool for rendering subjects in colour, but in photographing the spectrum itself, he redirected the image from the work of representation to become a simple stimulus to perception. Alves recuperates the possibilities implicit in Lippmann’s invention and puts them to work imaging the world, finding potential rather than anachronism in a nearly forgotten process. Danh makes the specificity of the daguerreotype process part of the meaning as he exercises it in new contexts, continuing the history of its practice in North America nearly 170 years after Saxton commenced it. And Leonard replaces concept with experience and image with (mediated) reality. All use the experience of wonder; the sheer sensory impact of direct experience of their work, the physicality of spectatorship demanded by their unusual mediums to underscore the power of the experience of perception.

Ontology, priority, accuracy/indexicality, epistemology, reproducibility, materiality

Many views of photography emphasise its mechanical nature and indexical rendering of the world before the lens; among these are André Bazin’s (1960) conception of the ontology of photography, those of Jerrold Levinson (2014), Catherine Abell (2010), and Roger Scruton (1981) as well as Vilem Flusser’s (2000) insistence that the important aspect of the medium is the camera as an apparatus. Long the dominant paradigm in theorising the photographic image, these views presuppose the importance of the relation of photographic image to referent. Such analyses exclude narratives of viewer experience and disregard the substances of which the images are made. Art historians’ approaches to photography are more likely to concentrate upon the place of individual images in the unfolding development of the medium; in the case of Niépce’s, Saxton’s, and Lippmann’s images, their various claims for priority might assume centrality. Art history and visual culture studies have also been much preoccupied with the status of the image in the age of mechanical (or technical) reproduction so influentially discussed by Walter Benjamin (1939) but also rather differently identified by print curator Ivins (1953). Flusser, an increasingly influential critic of photography, told us less about photographs and viewing photographs than about digital culture in a larger sense, while Roland Barthes (1981), by far the most influential theorist of photography of the last century, told us less about photographs than about certain kinds of immaterial experiences of viewing images. Judging from these examples, philosophising photography seems to require ignoring the materiality of images and the specifics of their making.

Treating photographic images as Ding an sich affords considerable benefits. Doing so for the three photographic objects discussed here shines a light
on elements of the prevailing episteme within which the images were produced. It refutes the premise of photographic reproducibility; raises questions about photographic indexicality, and complicates the significance of priority and origin. The existence of contemporary works in the same or related mediums suggests that these objects have ongoing significance in and continuity with contemporary culture; it also suggests that reproducibility of images may not be of exclusive importance in the digital age, and that the indexicality of the medium is inflected by subjectivities and overshadowed by its materiality in the embodied viewing experience the images require.

Comparing contemporary images in anachronistic mediums with these nineteenth-century works helps make clear how much our response to their elusive, fragmentary, and demanding qualities depends upon the history of late twentieth-century and early twenty-first-century art. Minimalism, conceptualism, installation, performance, post-modern imaging, and the universe of the digital image all provide frameworks for the appreciation of images which might previously have seemed imperfect, incomplete, or illegible. Thus, we can cherish Niépce's, Saxton's, and Lippman's plates both as engaging with the scientific and technological discourse of their own day and as visually expressive works congruent with twentieth-century/twenty-first-century aesthetics of abstraction, conceptualization, improvisation in art.

Art as experience, vision as poetry, prophecy and religion

The adoption of early photographic processes by contemporary artists serves as a reminder of the importance of the materiality of the photograph, and thus of the spectator's viewing of that object. The resulting image-objects require a practice and awareness of an embodied and even emplaced viewing that actively engages the sensorium. Given this, in what ways can a 'new materialism' shape appropriate approaches for art historians and critics? Also, just how material is the 'new materialism'? Despite earnest debate among philosophers and anthropologists, the answer is probably not very material at all. Framing postulates for new materialism is an endeavour dissimilar to weighing the heft of an image-bearing metal plate, studying the prism wedge cemented to a glass plate, or considering the once-fragrant lavender and sticky asphaltum from which an image is produced. Sontag's (1966) now venerable demand for an erotics of art opened space for a sensory, materialist challenge to theorisation, and John Dewey's (1934) even earlier aesthetic position offers further productive foundations for analysis. Dewey's Art as Experience has largely fallen out of today's aesthetic discourse, but its ground-breaking designation of art as transactional experience deserves reconsideration as a starting point for discussion of embodied spectatorship and the inherent materiality of artworks – which are most knowable through the physicality of a viewer's experience.

In a seeming paradox, materiality in art is most fully accessible to consideration when art is addressed as a process of experience rather than as an object. Instead of de-materialising the art object by emphasising process over thing, this approach incorporates human bodily perception as an integral aspect of the artwork. Starting from within embodied human experience, analysis proceeds immediately to the material qualities of the work itself. Only by so categorising art as experience does the role of the viewer receive parity and become available for analysis. Dewey's emphasis on the complex transactions between art object, artist, and viewer activates the category of the aesthetic, making it experiential and therefore human, and – by implication – sensory as much as conceptual. In this sense, the sensuous and the making-sense-of may be seen as related, or as forms of each other rather than as opposed terms.

In the preparation of this special issue, Tilo Reifenstein and Liz Mitchell posed the question: 'If the sensorium of seeing, tasting, feeling and hearing exceeds the rationality of disciplinary categories and the systematisation of knowledge, how can thinking about and through art access affective objects? Is this what constitutes meaning?' In answer, perhaps it does not so much exceed that systematisation, as represent another form of it: embodied perception constitutes meaning. Sontag's erotics of art and Dewey's categorisation of art as experience are process-oriented conceptions which direct historians and critics of art toward analysis of the experience of encounter with works of art. Both Sontag and Dewey thus invite the embodied viewer into the centre of the definition of art. Visual art inevitably privileges the sense of sight above the operation of other forms of sensory perception, often without recognising the engagement with the work of art as a form of somatic perception. Shifting our understanding of the significance of the eye as an organ opens new ways of discussing the process of aesthetic experience. Or does it? Without undue emphasis on the importance of embodiment in the equation, John Ruskin nevertheless proclaimed a credo which anticipates today's preoccupation with the action and significance of vision: 'thousands can think for one who can see. To see clearly is poetry, prophecy and religion – all in one' (1903–12, p.333).
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