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Galassi: Before Photography: Painting and the Invention of Photography

Reviews and Discussion

Peter Galassi. *Before Photography: Painting and the Invention of Photography.* New York: The Museum of Modern Art, 1981. Distributed by the New York Graphic Society, Boston. 151 pp. \$22.50 (cloth), \$12.50 (paper).

Reviewed by Joel Snyder
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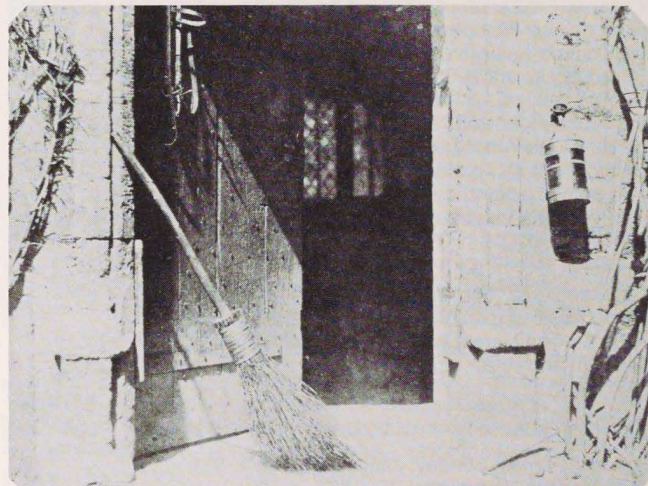
In the introduction to *The Pencil of Nature*, the first book about photography that was illustrated with photographic prints, W. H. F. Talbot described the frustration that led him to invent the positive-negative system of photography eleven years earlier.

One of the first days of the month of October 1833, I was amusing myself on the lovely shores of Lake Como, in Italy, taking sketches with Wollaston's Camera Lucida,¹ or rather I should say, attempting to take them; but with the smallest amount of success. For when the eye was removed from the prism—in which all looked beautiful—I found that the faithless pencil had only left traces on the paper melancholy to behold.

After various fruitless attempts, I laid aside the instrument and came to the conclusion that its use required a previous knowledge of drawing, which unfortunately, I did not possess. [Talbot: 1844-1845]

Talbot's desire was to take the pencil out of his unskilled hand and turn it over to nature. It is emblematic of the period in which he lived that nature, or at least some important part of nature, was understood to be synonymous with the mechanism of the *camera obscura*—the ancient forerunner of the modern camera—and with a set of rather recently synthesized and reasonably pure chemical compounds. What Talbot's introduction underscores and what the remainder of *The Pencil of Nature* demonstrates is that the project to make pictures by mechanical means grew out of the desire to make acceptable pictures and that the standards of acceptability were not only in place prior to the invention of photography, but that the invention of a photographic means of depiction did not challenge those conventions.

Even a cursory glance through Talbot's book of twenty-eight photographs shows how thoroughly conventional his approach to picture-making was.² In fact, the pictures are so totally in keeping with the canons of conventional illustration (e.g., architectural and travel illustrations)—so familiar in terms of subject matter and mode of presentation—that some readers took the photographs to be handmade engravings. Talbot felt obliged to insert a cautionary notice into some copies of his book:



William Henry Fox Talbot. "The Open Door" (c. 1843) salted paper print from Calotype negative. (Arnold H. Crane collection, Chicago)

This print is Talbot's first published attempt to demonstrate one of the many uses he predicted for photography—the making of pictures that were in accord with the canon of high art. Talbot finds the "authority" for the picture in "the Dutch school of art" that flourished more than two centuries before this picture was made. The caption accompanying "The Open Door" states:

Plate VI. The chief object of the present work is to place on record some of the early beginnings of a new art, before the period, which we trust is approaching, of its being brought to maturity by the aid of British talent.

This is one of the trifling efforts of its infancy, which some partial friends have been kind enough to commend.

We have sufficient authority in the Dutch school of art for taking as subjects of representation scenes of daily and familiar occurrence. A painter's eye will often be arrested where ordinary people see nothing remarkable. A casual gleam of sunshine, or a shadow thrown across his path, a time-withered oak, or a moss-covered stone may awaken a train of thoughts and feelings, and picturesque imaginings.

It is apparent from this quotation that Talbot saw no special photographic syntax, no peculiarly photographic features in pictures like these. In fact, he was a thorough-going operationalist who saw photography as a medium with a large set of potential uses and not as a material that necessarily produced certain formal properties in all its products.

The plates of the present work are impressed by the agency of Light alone, without any aid whatever from the artist's pencil. They are the sun pictures themselves, and not, as some persons have imagined, engravings in imitation.

Much of the critical literature on photography, ranging from the perversely innocent ruminations of Susan Sontag and Roland Barthes through the careful and informed studies of recent photographic historians, assumes that photographs are *sui generis* and stand apart from the broad family of handmade pictures. It has been further assumed that because of the alleged essential differences between photographs and other kinds of pictures, there is a total discontinuity between the history of the manipulative graphic arts and the pre- and early history of photography. This has meant that the prehistory of photography has been treated as a set of related scientific-technological issues that necessarily excludes consideration of aesthetic-pictorial problems.

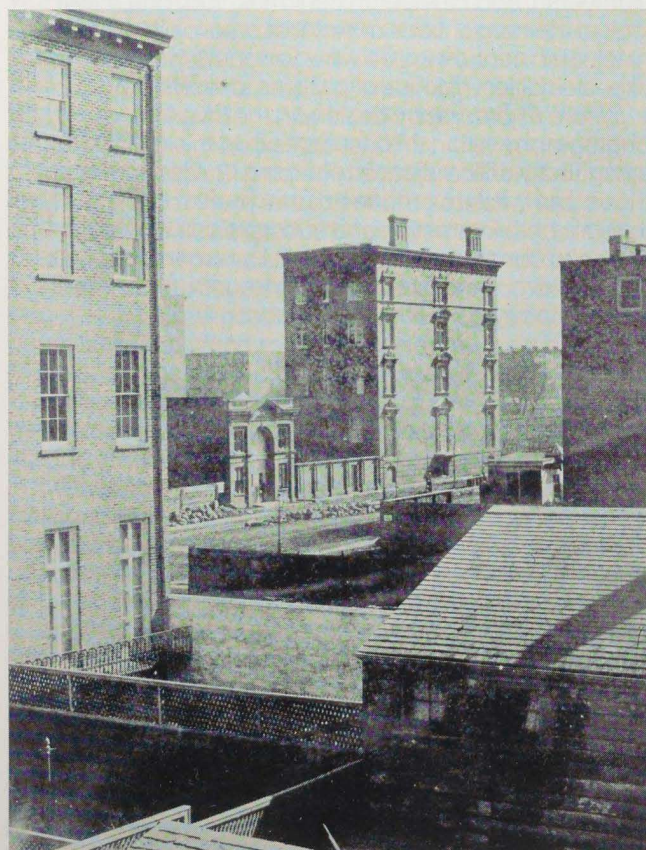
In recent times, just this assumption—that there is some essential difference between photographs and handmade pictures—has come under vigorous attack. The work of the art historian Ernst Gombrich and that of the philosopher Nelson Goodman, while at odds in certain crucial respects, agree on this: photographs and, say, paintings, represent in the same way and for the same reasons.³ The demolition of the conceptual as well as the practical grounds for asserting an essential difference between photographs and handmade pictures is a fact. The effects of this recent work in the theory of pictorial representation are just now being felt by historians of photography. The history of photography, as a discipline, is now in the odd position of having a canon—or, at least, a list of greats and near-greats—but it does not possess a reasoned analysis of why or how photography came into being at all.

Peter Galassi's *Before Photography* is an admirable attempt to show that the invention of photography is continuous with the pictorial practice—or at least one evolving strand of that thread—of the period in which it was invented. In Galassi's words, "photography was not a bastard left by science on the doorstep of art, but a legitimate child of the western pictorial tradition." *Before Photography* deals with the origins of photography and Galassi quite rightly is concerned with finding an appropriate and limited context in which to place the invention of the medium.

Now, there are obviously multiple contexts that one would have to study in order to provide a reasonably exhaustive answer to the question: what were the conditions that were required for the invention of photography in the fourth decade of the nineteenth century? For example, one might look at the developing need for cheap pictures by commercial and industrial interests during the first few decades of the nineteenth century. Or, one might look at the question of the availability of pure chemicals and note that it was not until the early



Edgar Degas. *The Racing Field: Amateur Jockeys near a Carriage* (c. 1877-1880). Oil on canvas. 25 $\frac{1}{16}$ x 31 $\frac{7}{8}$ in. (Musée du Louvre, Paris)



Victor Prevost. *View from East 28th Street, New York City, looking southeast* (1850s). Salt print from a paper negative. 9 $\frac{3}{8}$ x 6 $\frac{7}{8}$ in. (Collection Paul F. Walter, New York)

Paolo Ucello. *A Hunt*
(c. 1460). Panel. 25⁹/₁₆ x
64¹⁵/₁₆ in. (Ashmolean
Museum, Oxford, England)



nineteenth century that some of the essential chemical components of photography were manufactured with predictable characteristics—an obvious necessity for the invention of photography. And one might usefully look at the history of the *camera obscura* in an attempt to find the standards of design, and the origins of those standards, to which cameras were built in the seventeenth, eighteenth, and nineteenth centuries. Too, one might look at the conventions of pictorial practice in the early nineteenth century to see what various audiences expected different kinds of pictures to look like.

Before Photography deals with the invention of photography within this last context. In this review I take a negatively critical stance regarding Galassi's central thesis, but I wish to emphasize that much of what he has to say is both interesting and substantial. It would be wrong to conclude, however, that I am merely at odds with him on certain specifics. The issues do not resolve to details; they concern the entire program.

Galassi's argument takes this form: the technical and aesthetic origins of photography can be traced back to the fifteenth-century invention of linear perspective, a system of representation that "adopted vision as the sole basis for representation." Perspective, however, is only a tool and may be employed to obtain various pictorial goals. Galassi identifies two different and polar opposite uses of the system. In the first case (and here he cites *An Ideal Townscape* from the circle of Piero della Francesca, c. 1470), the artist begins by establishing his point of vantage and the frame of the picture, and this "stage" is then filled in with the various elements that are to form the picture. This process leads to the production of perspicuous pictures in which all the elements combine in a clear and transparent manner. The process is "synthetic," building up the whole from pieces in an ordered and programmatic fashion.

In the opposing and more modern use of perspective, "the world is accepted first as an uninterrupted field of potential pictures. From his chosen point of view, the artist scans this field...forming his pictures by choosing where and when to stop" (p. 16). As a paradigm for this

use of perspective, Galassi cites Edgar Degas's *The Racing Field: Amateur Jockeys near a Carriage* (c. 1877-1880). In this mode of picture-making, the artist is guided by "selective description" and not, as in the former case, by logical construction. As the older use of perspective is characterized as a "synthetic" process, the newer use is said to be an "analytic" one.

There is an ontological principle hiding at the base of all these distinctions: perspective was originally put into the service of an "idealized" art, while the newer use is concerned with something more personal and immediate than the ideal. The old use was employed as a "record of the imagination"; the new use serves the interest of recording *reality*. Galassi contends that photography was invented during a period when art was undergoing a major transformation away from the goal of portraying the imagined and ideal towards the new goal of depicting reality in "straightforward" terms. He summarizes his thesis this way:

The Renaissance theory of perspective harnessed vision as a rational basis for picture making. Initially, however, perspective was conceived only as a tool for the construction of three dimensions out of two. Not until much later was this conception replaced—as the common intuitive standard—by its opposite: the derivation of a frankly flat picture from a given three dimensional world. Photography, which is capable of serving only the latter artistic sense, was born of this fundamental transformation in pictorial strategy. The invention of photography must then coincide with or succeed the accumulation of pictorial experiment that marks the critical period of transformation from the normative procedure of Uccello's era to that of Degas. [p. 18]⁴

Galassi believes that this thesis is demonstrated by the handsome group of forty-four landscape studies, produced between 1782 and 1839, that accompanies his essay. He explains his choice of these pictures as follows:

I have chosen...to focus on that aspect of landscape painting that is the clearest (if ostensibly the most modest) symptom of the broad artistic transformation that catalyzed the invention of photography. The landscape sketches...present a new and fundamentally modern pictorial syntax of immediate, synoptic perceptions and discontinuous, unexpected forms. It is the syntax of an art devoted to the singular and contingent rather than the universal and stable. It is also the syntax of photography. [p. 25]⁵

The argument places the invention of photography within the context of the changing norms of high artistic practice in the late eighteenth and early nineteenth centuries. The invention of photography was "catalyzed" by these changing artistic goals ("photography...was *born* of this fundamental transformation in pictorial strategy"). A new pictorial "syntax" was coming into being and photographs naturally possess this syntax.

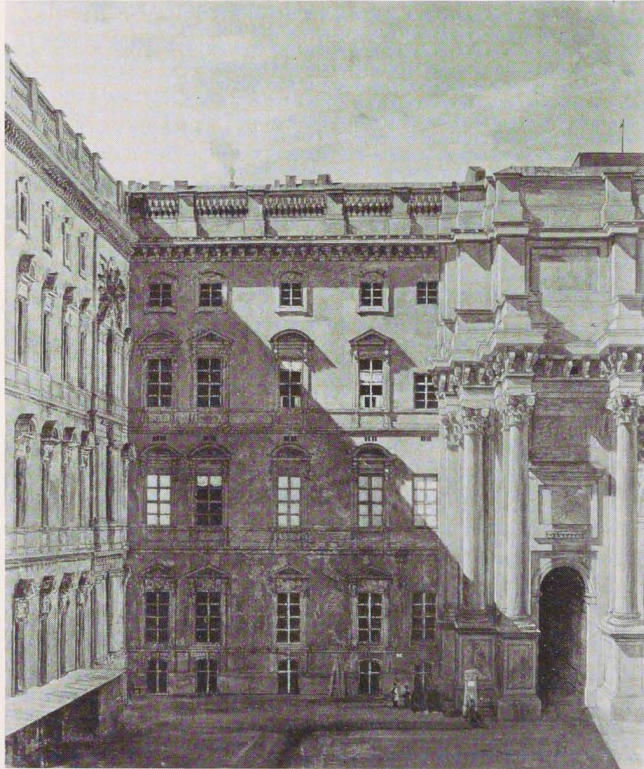
I am frankly baffled by the claim that photography was engendered by the change in pictorial strategies. And I am not much cheered by the alternative locution that has the invention of photography *catalyzed* by changing pictorial programs. I would understand, though I would still disagree with, the claim that changing pictorial interests among self-conscious artists created expectations in an educated audience that were not denied or, perhaps, were fulfilled by the work of the early photographers. My unhappiness with this way of thinking about the invention of photography is that it excludes consideration of functional illustration and places total emphasis on the evolving conventions in the Western high art tradition. I should add that I do not think that the high art context and the context of what I am calling functional illustration are hermetically sealed off from one another—they are not. But to look for the origins of photography in a context that excludes functional illustration makes it look as if the medium were invented to satisfy an exclusively artistic set of problems, and this is demonstrably false.

Nonetheless, Galassi is not merely interested in placing the invention of photography within the context of the high art tradition. Certainly, his use of the expression "was born of" strongly implies some type of causation—if not of the efficient form, then at least of the final variety. This may seem like verbal quibbling, but it is not. *Before Photography* is intended to be explanatory, and it is not mere verbal fussiness that demands to know just what is being explained. Again, it is quite one thing to claim that the "pictorial climate" in the 1820s and 1830s was "right" for the invention of photography and quite another to claim that the climate was somehow causally efficacious. I suspect that there is something of a Panofsky-like way of thinking underlying part of Galassi's argument. Panofsky viewed the invention of pictorial media, e.g., the magnificent development of wood engraving in the hands of Dürer, as responses to specific aesthetic problems that grew out of artistic practice (Panofsky: 1947, 1960). It may be that we are to understand the present

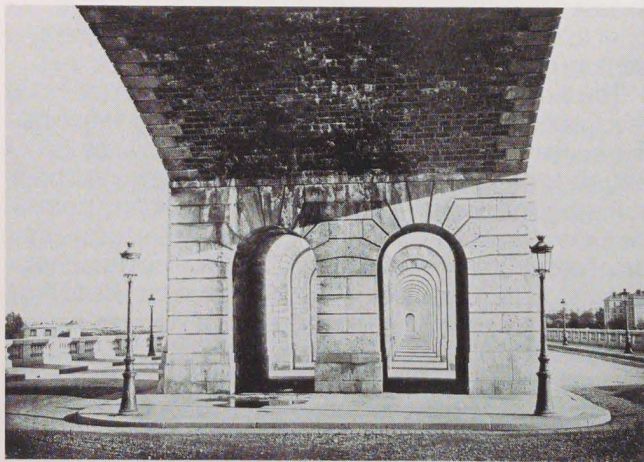
thesis as a sort of generalized Panofsky-ian argument, to wit: as artists came to value "the contingent qualities of perception," photography was invented as one solution to the pictorial problems engendered by the new value. The problem here is that at least in the Panofsky scheme of things, new media are self-consciously devised by artists in quest of pictorial solutions, and the invention of photography does not fit this scheme.

At the outset of the essay, Galassi asks, in effect, why photography was not invented more than a century before the watershed of the 1830s, since "all of the inventors simply combined two scientific principles that had been known for quite some time." The clear implication, which is in fact worked out in the rest of the essay, is that the invention of photography was technically but not aesthetically feasible in the early eighteenth century. This is something like asking why the technology of atomic energy was not worked out in the 1920s. It would be foolish to attempt to reduce the invention of photography to a technical issue, totally separated from pictorial concerns. Nonetheless, Galassi is quite wrong in stating that the invention of photography came about by the "simple" combination of well-known principles.⁶ The wonder is that given the primitive state of manufacturing chemistry in the early nineteenth century, photography was invented as early as it was. It is useful to recall in this regard that Talbot's early prints were not stable and that he abandoned the use of sodium thiosulfate—today's standard "fixing" agent—for a number of years because of the poor quality of available thiosulfate. The technical issues at stake in the invention of photography are enormously complex and involve an exhaustive study of economics, science, and industry. It is simply wrong to assert that photography could have been invented prior to the critically important work of early-nineteenth-century chemists and manufacturers.

The thesis of *Before Photography* is not quite the revolutionary proposal it first appeared it was going to be. In a sense it is a nonhomogenous thesis insofar as its attitude toward pictures is concerned. The essential pivot in the argument is this: photographs are different from pictures made in keeping with the use of perspective as practiced prior to the eighteenth century. Photographs possess all the syntactical "oddities" (by reference to the early pictures) of the transformed artistic vision of the early nineteenth century. In other words, photographs are inherently different from the older kind of pictures, but are very much like the newer kind. But unlike the newer kind that derive their formal characteristics from the new purpose of representation (to record "the contingent qualities of perception" and in a "straightforward" way), photographs necessarily possess these characteristics since they are inherent features of the medium. While the form of a painting is arrived at conventionally, the form of a photograph results from the qualities of the medium. It is not terribly surprising that an interim pre-history of photography would attempt to do the impos-



Eduard Gaertner. Corner of the Eosander-Hof, or Outer Courtyard, of the Royal Palace, Berlin (c. 1831). Oil on canvas. 22¹³/₁₆ x 18¹¹/₁₆ in. (Verwaltung der Staatlichen Schlösser und Gärten, Berlin)



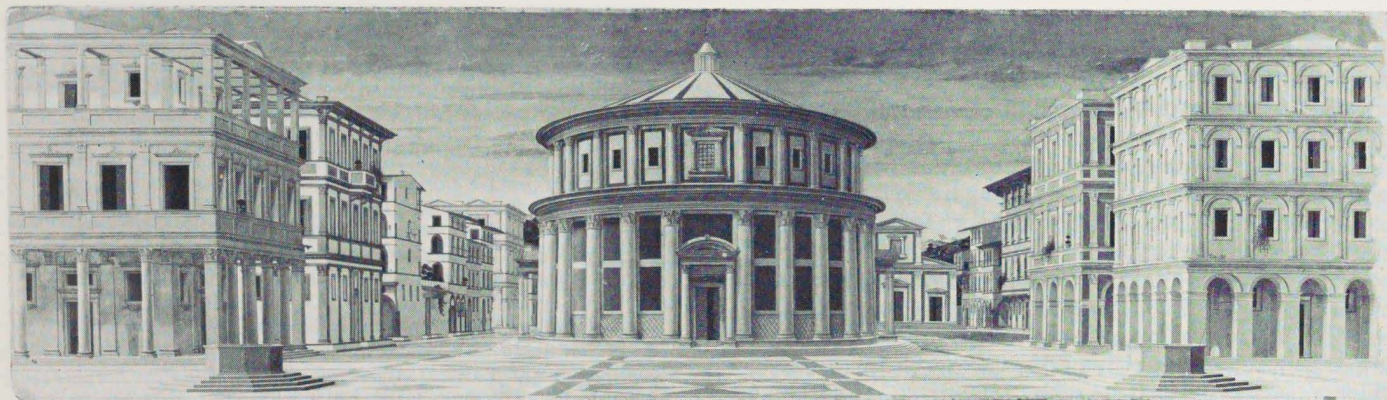
A. Collard. "The Auteuil Viaduct at the Pont du Point du Jour" (1870s?). Albumen-silver print from a glass negative. 9¹⁵/₁₆ x 13⁷/₈ in. (Collection Samuel J. Wagstaff, Jr., New York)

sible: to remain faithful both to the older photographic faith that demands an essential difference between photographs and handmade pictures, and to the newer — and, I would maintain, more reasonable — belief that the history of picture-making is a seamless one, at least insofar as the invention of pictorial media is concerned.

The vocabulary of the essay draws heavily upon a post-Kantian philosophical lexicon. Binary oppositions of essentially technical-philosophic terms play an important role in the text — pairs like analytic/synthetic, contingent/necessary, imagination/reality, and ideal/real. To all these, Galassi adds "syntax," a term from the symbolic logician-linguist's bag. Thus, the enterprise is not only art-historical, it is self-consciously philosophical-ontological. Photographs are characterized as coming into being by means of an analytic process; a whole — the field of vision construed as a picture (or as a set of potential pictures) — is analyzed into "bits." The camera "records" these bits, which are "the visible aspect of reality." Photographs are not records of the imagination, but of visible reality. Photographs cannot be composed — they are *taken* (but obviously not in the same way that Talbot attempted to *take* pencil sketches of Lake Como).

What does it mean to say that photographs (all of them) are about the visible aspect of physical reality? All the photographs in *Before Photography* were made with photosensitive materials that were sensitive only to blue radiation. Are these photographs, then, only about the blue portion of visible reality? (Is that why Lincoln always looks so melancholy in his photographs? Does he literally have a case of the blues?) I do not know how to understand this. What part of visible reality is analyzed and presented in a photograph that shows a figure blurred by movement? The photograph does not seem to have a counterpart in either physical or visible reality. The reply that, after all, some *thing* caused the blur misses the point of the question. Something — light — will always cause something to happen to film. But a blur of this kind has no counterpart in *visible reality* (assuming *that* is an appropriate label for the things that we see).

Again, Galassi makes the assertion that the camera cannot compose (he also means that photographers cannot compose with a camera) and this is crucial to his explanation of how it is that photographs necessarily display the syntax of the evolving art of the nineteenth century. I suspect that what he means is this: a photographer cannot compose, he can only *select*; a photographer can only photograph what he sees. But this is surely either false or equivocal. A photograph of Joe DiMaggio, made at 1/1000th of a second, showing him in mid-swing, his face frozen in a contorted grimace, his bat hanging in sharp definition near his shoulder, owes whatever interest it may have precisely to this — that it is not a record of anything anyone might have seen. It is not about anything visible, much less is it a *record* of anything visible.



Circle of Piero della Francesca. *An Ideal Townscape* Panel. 23 $\frac{5}{8}$ × 78 $\frac{1}{16}$ in. (c. 1470). Palazzo Ducale, Urbino, Italy.

Or consider this example: a photographer, say Talbot himself, sets up his camera on a busy London street and photographs it. His exposure lasts five minutes. The print from his negative shows a deserted street with no horses, no carriages, no persons, because none of these items stayed around long enough to reflect enough light to register on the film. (Talbot wrote about this in his journals.) What relation does this photograph have to the visible reality that was present before the camera? Both of these photographs are “purely photographic,” neither is a trick, neither is mysterious. Each has a straightforward and sensible explanation that—and this is very important—does not rely in any way on the character of either visible reality or human vision.

I see no reason whatsoever to deny that photographers can and usually do compose their photographs. It is not quite clear to me what is at stake in the denial of this. Photographers can compose by moving objects around in front of the camera, or by moving the camera around in front of objects. A photographer can put things in or out of focus—there are no constraints upon him in this regard. The original Latin meaning of “compose” is “to bring together or into union.” A photographer, when working with his ground glass, brings a variety of surfaces (not things) together to form some kind of unity. Whether or not a photographer moves objects around in front of his camera, he cannot avoid composing his *picture*. He may, given the conventions of composition that obtain at the time he is working, do this well or poorly—but he cannot avoid doing it.

The notion that there is an inherent photographic syntax is also deeply troublesome. To begin with, syntax is a notion borrowed from the verbal arts, where it may be properly understood in its logical or linguistic sense. Syntax, in its primary sense, is the arrangement of units in specifiable relations without regard to meaning. It would be helpful to know what the units of depiction are and what rules apply to the correct arrangement of these units. It seems to me that even if it were possible

to specify what a pictorial syntax might be for a depictive mode that deals exclusively with continuous tones, the assertion that photography has a singular syntax would still make no sense. (It should be noted, in passing, that William Ivins, Jr., who originally adopted the notion of syntax for his analysis of prints made in discontinuous media,⁷ specifically denies that photography has any syntax at all.) The claim that photography has an inherent and peculiar syntax must mean, if it makes any sense at all, that all photographs are formally quite similar. I do not see that this is the case. I have the sense that in photography, as in painting, drawing, or poetry for that matter, the question of formal properties cannot be reduced to media considerations. Conventions, which are, after all, just shorthand descriptions of ways of arriving at certain goals, are the very bone and flesh of form. One can work conventionally or counterconventionally, but not unconventionally. This is merely an exalted way of saying that form and purpose are inextricably bound in all made objects. And so it seems to me that a reasonably thoughtful analysis of photographs made to serve a variety of ends will show that they differ as much formally as do the ends for which they were made. To my eyes, a portrait of a fisherwoman by Hill and Adamson, a portrait of Thomas Carlyle by Julia Margaret Cameron, and a portrait of George Wallace by Richard Avedon all look quite different, one from the other. I would like to know the relevant “syntactic” respects in which they all look alike.

And this brings us full circle. Galassi’s thesis is that the invention of photography—a medium that is capable of dealing only with the singular and contingent and not the universal and stable—was necessitated by the transforming pictorial concerns of nineteenth-century art. I believe that the pictorial origins of photography might have been brought into sharper focus if Galassi had set his sights lower in his search for the parents of photography. I agree with him—it seems impossible that anyone could intelligently disagree—that photography is the product of the Western pictorial tradition. But the tradition from which

it sprung can be seen across a broad field of pictorial habits that were in place during the years prior to its invention. One need not point to a set of changing artistic concerns as the precipitator of photography. The pictorial tradition that gave rise to photography can be seen clearly in the reasonably stable canon of architectural and travel illustration (as well as in other kinds of functional illustrations including portrait miniatures) that preexisted photography. No artistic transformations, no matter how monumental, necessitated the invention of photography. Photography, like the other great graphic medium that was invented a few years before it—lithography—was born of our multiple needs for and our abiding fascination with pictures.

Notes

- 1 The camera lucida is not a camera at all. It is a prism, mounted to a dowel, that appears to project an image of the field in front of the prism onto a sheet of paper. The artist traces the apparent image on the paper.
- 2 Not all of the illustrations in *The Pencil of Nature* are by Talbot. Some of them were made by his two assistants. Talbot selected all the photographs used in the book.
- 3 See, e.g., Gombrich (1960) and Goodman (1968). I have noted only Goodman and Gombrich because they represent the two major and to some extent opposing views on representation.
- 4 Galassi is exceptionally slippery in dealing with vision. He seems to think that vision is a natural standard that possesses an inherent structure. It seems to me both unwise and unnecessary to do this. Modern views hold that there is a reciprocity between the ways that we see and the ways that we represent, and that our descriptions of what we see are heavily dependent upon the dominating modes of representation. Too, it is misleading to say that perspective was initially concerned with the construction of three dimensions out of two. The notions of two- and three-dimensionality do not arise in the initial discussions of perspective during the fifteenth, sixteenth, and seventeenth centuries. They appear in the literature only after the system enjoyed a near-total domination of picture-making in the West. The original concern of the early writers on perspective was how to give a painting "relief" so that it would look like *what we see*. And the latter is given clear definition.
- 5 It strikes me as somewhat odd for Galassi to concentrate on landscape, given his belief that the newly evolving "pictorial syntax" represents a more modern use of perspective. One does not need a system of perspective in order to paint a landscape. The issue of spatial relations is rarely dealt with in terms of grid patterns in landscape depiction. It does come up in a wonderful way in Paolo Uccello's *A Hunt*, cited by Galassi in the text because Uccello uses the ordered diminution of trees in very much the same way that cityscape painters used the ordered diminution of vertical elements of buildings to indicate depth. Galassi apparently believes that occlusion and diminution in the size of figures in a landscape constitute the use of perspective. They do not. Degas's *The Racing Field* was not produced by means of a perspective system. This does not deny that it appears to have a point of vantage.
- 6 The alleged principles are (1) the optical fact that light passing through an aperture projects an image on a wall placed in back of the aperture, and (2) certain chemicals, especially silver halides, turn dark when exposed to light. He notes Wedgwood, Niepce, Talbot, and Daguerre as nominees for the invention of photography. Wedgwood, together with the chemist Humphry Davy, attempted (from 1799 to 1802) to make light pictures by employing silver nitrate solutions on leather and paper. He succeeded in making unstable photograms of leaves and lace, but was thoroughly unable

to make the prints stable. The solvent properties of sodium thiosulfate on silver halides, an absolute necessity for photography as we know it, were not discovered until 1819 by John Herschel. Wedgwood and Davy failed in their attempts to make pictures by means of the camera (thus, they admitted that they could not combine Galassi's two "simple principles"). The Niepce brothers did not use silver salts as the basis of their photographic system. Their motivation was initially to make lithographic stones and plates that were engraved by the action of the sun on certain oily substances. Their work could not have commenced until after the publication of the principles of lithography in 1813. Daguerre's system is absolutely dependent upon the use of elemental iodine, which was not discovered until 1813 by Gay-Lussac and Humphry Davy and which did not go into commercial production until 1821. Talbot's system required his own discovery (made in 1834) that silver halides (e.g., silver chloride) were highly light-sensitive if made with an excess of silver nitrate and a small amount of some halide, and that the same silver halides were barely sensitive to light if made with low-concentration silver nitrate and high concentrations of halide salts. Talbot's major discoveries concerning the salts of silver could not have been made prior to the early 1830s because many of the compounds he used were not available before then. From a technical perspective, the invention of photography was an extraordinary achievement that could not possibly have been accomplished before it, in fact, was. At least it could not have been brought off given the two "simple principles" adduced by Galassi.

- 7 Ivins (1956). A continuous medium, like drawing or photography, brings off changes in values by using continuous patches of white, various grays, and black. In discontinuous media like etching and engraving, value changes are indicated by the distance or proximity of black lines or dots from one another.

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