

the making of english photography

*allegories*

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a veritable eruption of images, which gives rise to a chaotic mass of metaphors

—Walter Benjamin, *The Origin of German Tragic Drama*

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It is customary to say that errors are the author's sole responsibility, but this lot really ought to have set me straight, so I see no reason why they should not share at least a portion of any blame. This book is dedicated to Gail Day, for everything.

## introduction

### *photography, writing, resentment*

1861 was a decisive year for the making of English photography: it was at this point that professional photographers decided to call themselves artists. But photography simultaneously appeared in a very different, less elevated context. Karl Marx argued in the same year that new branches of production and novel "fields of labour" were formed through patterns of mechanization, but activities of this sort far from dominated the economy. The numbers of people employed in these industries, Marx suggested, were proportional to the demand "for the crudest form of mechanical labour." He wrote:

The chief industries of this kind are, at present, gas-works, telegraphs, photography, steam navigation, and railways. According to the census of 1861 for England and Wales, we find in the gas industry (gas-works, production of mechanical apparatus, servants of the gas companies, &c.), 15,211 persons; in telegraphy, 2,399; in photography, 2,366; steam navigation, 3,570; and in railways, 70,599, of whom the unskilled "navvies," more or less permanently employed, and the whole administrative and commercial staff, make up about 28,000. The total number of persons, therefore, employed in these five new industries amounts to 94,145.<sup>1</sup>

Let me put to one side Marx's comment about the unimportance of these industries, not because it is insignificant—if anything, this point demands

serious attention, as it suggests that he did not see the Industrial Revolution as a simple march of “machinofacture”—but because I want to draw out the full force of this strange industrial series.<sup>2</sup> Admittedly, photography is the smallest “industry” in this list—considerably smaller than the railways—but its presence among some of the central forces of modern production suggests another kind of history for photographs. We can easily imagine the industrial and social histories that could be written for the other terms in the series; we can probably envisage the kinds of social relations that characterized these new industries and the kinds of social struggle that ensued. This is, after all, the narrative of the “new unionism.” Finding photography in this company complicates the story of art.

The strange logic of adjacency that Marx discovered in the 1861 census was not so unusual. William Henry Fox Talbot first exhibited his new photogenic drawings at the Birmingham meeting of the British Association for the Advancement of Science. When he displayed these images at the Royal Society, they featured among *papier mâché* ornaments, specimens of artificial fuel, and sixteenth-century engravings.<sup>3</sup> Richard Beard, a coal merchant, opened the first commercial photographic studio in Britain. (As far as we know, he never touched a camera.) The studio of Antoine Claudet—the second commercial photographic studio in Britain—was housed in one of those paradigmatic spaces of practical science, the Adelaide Gallery. Just for good measure, in 1851, Claudet mounted a number of medallion busts around his studio, interlacing portraits of photographic luminaries with the images of Roger Bacon, Porta, Da Vinci, Newton, Davy, and Wedgwood.<sup>4</sup> The standard histories of photography have kept their distance from these grubby patterns of identity, choosing instead to find their object in the pristine story of art. Yet, according to Marx, photography was called into being by the new forces of production—and its historical place lies with such forms.<sup>5</sup> This book examines the relation between these capitalist forms and the emergent ideology of photographic art. I argue that the values associated with the photographic picture are entwined with industrial and commercial practices. (The humble document provides a central mediating category for this argument.)<sup>6</sup> I cannot claim, though, that the book constitutes the missing social history of English photography; we need much more research before a study of that kind could be written. In any case, the commercial, or industrial, image and the work of art cannot be lined up as distinct histories. Aesthetic questions were integral to the *business* of photography and to the objective image elaborated on by the men of science. As Walter Benjamin put it, “Photography’s claim to be an art was contemporaneous with its



Antoine Claudet  
(107 Regent Street,  
London), carte de visite  
of unidentified man,  
c. 1852–68

emergence as a commodity.”<sup>7</sup> An adequately social account of photography thus requires attention to art, as much (if not more) than explorations of photographic “art” must refer to the processes of social history. My account treats the aesthetic as a generative *social* form. In this sense, the industrial referent figures here as a way to signal a kind of attention.

While my first chapter examines some grounding themes in the thought of the men of science during the 1840s and 1850s, this book focuses on a reading of a number of key nineteenth-century photographic journals from a slightly later point. These periodicals are the *Journal of the Photographic Society of London* (later of *Great Britain*), founded in 1853, which in 1859 changed its title to *The Photographic Journal*; the *British Journal of Photography*, founded 1860; and *The Photographic News*, established in 1858. *The Photographic Journal* was issued monthly and began with a print run of 2,000 selling at 3d a copy. At its high point, in 1854, it was printing 4,000 copies and retailing at 5d; thereafter circulation fell, and rose, and fell again until by 1868 it printed

only 1,000 copies. The *British Journal of Photography*, initially published by the Liverpool Photographic Society in 1853, began as a monthly publication. In 1857 it became fortnightly, and then, in 1865, weekly. *The Photographic News*—always the most popular of these journals—produced an edition of 7,000 by 1869. There were numerous similar journals, often with a short life, but these were the main ones. Of these periodicals, *The Photographic News* is particularly significant for my account, because it dedicated less space than the others to society proceedings and paid more attention to the photographers' aspirations—and grumbles.<sup>8</sup>

When the Manchester photographer James Mudd suggested, with his characteristic eye for a pun, that the photographic journals were not light literature but "heavy reading," he was undoubtedly correct.<sup>9</sup> These journals represent a mass of material on photography running to tens of thousands of pages. I want to treat this writing as an archive and attempt, through a process of close reading, to interrogate the ideological world of mid-nineteenth-century photographers.<sup>10</sup> Joanne Shattock and Michael Wolff observed in 1982 that "the systematic and general study" of the Victorian press had "hardly begun"—and twenty years on, we have got no further with the photographic press.<sup>11</sup> The last remnants of the stamp duty on newspapers and periodicals were finally lifted in 1855, and with the end of this backdoor censorship, mass journalism took off in England.<sup>12</sup> Although the photographic journals issued from the photographic societies, they were part of this new phenomenon of mass periodical reading. The photographic press catered for a novel constituency, which certainly contained amateur dabblers, but was made up, in the main, of professional studio photographers. The writing that emerged was out of joint with wider critical trends. Unlike the "adjectival criticism" that some have identified as playing a defining role in the quarterlies and the literary journals (and, it is argued, that centered the performance of the critic over that of the text under scrutiny), photographic literature set about defending a professional interest.<sup>13</sup> Often what we have to go on when reading these journals is a model of writing drawn from poetry reviewing or art criticism. The problem is that these forms of high criticism are only partially relevant: the Tory or Whig orientation evident in the major journals, for instance, provides few leads for deciphering this material. Rather, the photographic press seems to blend the voices of the art theorist and the writer from some small trade magazine—a druggist or other shopkeeper. This is a strange, hybrid literature. The counterpart to this pattern of mass reading was the development of a professional cadre of journalists alongside recently fledged professional art critics.<sup>14</sup> The journals I have examined contained contributions from a ragtag lot, including amateur and profes-

sional photographers, various men of science, and artists with some interest in photography. And though he would have denied it, there was at least one professional writer among the ranks of contributors: Alfred H. Wall.<sup>15</sup> If any photographic writer in the 1860s could be described as an "adjectival critic," it was Wall. He could start a fight in an empty room—and, probably because of this cantankerousness, he occupies a key place in this book.

In what follows, I veer off into accounts of work relations in the 1830s; the rhetorical structure of scientific "objectivity"; characterizations of the petite bourgeoisie; street music; art theory and its modes; and the classificatory model employed in the International Exhibitions. This seems a necessary, if ungainly, narrative maneuver if the archival material in question is to be read. (In any case, discourse analysis usually smuggles in material of this kind.) The trick is to avoid the kind of identification witnessed in social history writing of the "turnip crop" variety, which seems to believe that agricultural yields *are* an artwork's meaning. The best of the social history of art works to keep its archives, objects, and narrative deviations apart while employing them to illuminate each other. One way of maintaining this productive disjuncture, or moment of non-identity, is to insist, as Adrian Rifkin puts it, on the "non-isomorphic" relation of criticism to its object of study.<sup>16</sup> Photographic literature, like other forms of criticism, has to be seen as non-identical with its object. Criticism has its own temporality, which is distinct from that of the artwork (or the photograph) under consideration. As Michael Baxandall suggests, criticism is "a minor literary genre," with its own conventional and normative content.<sup>17</sup> Rifkin's negative term may be inelegant, but it makes the important point that criticism—whether it is photographic criticism or art criticism does not much matter—is a form of writing as much as it is an account of pictures. Criticism sometimes makes contact with the image it attempts to characterize, but it also invariably deviates from it. If anything, photographic criticism is even less isomorphic than art criticism, because it involves recourse to art theory. I am interested in photographic criticism as a mode of writing and the problems it attests to; often this writing follows its own track and leaves the photograph somewhere else. (One reason that Rifkin's discussion of the non-isomorphic character of criticism seems relevant for my account is that, as we will see, it is a concept rooted in nineteenth-century chemistry.) The problem, of course, is not confined to art criticism. Book introductions are notoriously non-isomorphic with *their* objects of study. Sustaining the project outlined in this sort of preamble always proves difficult, as the narrative power of the material begins to impose its own order.

While this book focuses on photographic "theory" in order to examine the forms of knowledge from which photographs were made, its ambition is to do more, and less, than this. Less, because, as I have said, criticism frequently goes off on its own jag; more, because this non-isomorphic form takes us down some other paths. In one respect, I have always thought of this project as a sort of archaeology of contemporary photographic practice. Analogies between the look of past work and present preoccupations seem to suggest themselves in direct ways. This is the case, I think, with much contemporary writing that establishes too close a link between the proper name Sherman and a Cameron or a Hawarden (though critics seem altogether less interested in the conjuncture between Victor Burgin and Oscar Rejlander or Jeff Wall and H. P. Robinson!). I have not paid a great deal of attention to individual images in this book. Rather, my analysis aims to explore the constitutive discourse of photography, the grounding categories and distinctions that produced our understanding of photographs. The divisions of contemporary photography—straight practice and the constructed or staged image, art and documentary, modernism and postmodernism—are often, knowingly or not, rooted in the defining oppositions of photography's first thirty years.

In this seemingly endless effervescence of writing, these journals give access, indirect and strained as it might be, to the world of a particularly vocal section of the petite bourgeoisie.<sup>18</sup> Indeed, there could have been few members of that class—or class fraction, or whatever it is—who wrote quite so much and who poured out their desires and fears so readily. Art history has paid remarkably little attention to the petite bourgeoisie. This is a striking omission, given that artists in the modern period (and historians or theorists in the present) themselves occupy this class position. The major exception is to be found in the work of T. J. Clark. In *The Painting of Modern Life*, Clark suggests that modernist painters misrecognized the ambiguous class location of the petite bourgeoisie—they were, he says, "the *shifters* of class society"—for the defining characteristic of, or key metaphor for, modernity.<sup>19</sup> In Clark's hands, this thesis yields a compelling and astute account of emergent modernism as critical culture *and* ideology. In his account, the contradictory class situation of clerks, shopworkers, and the like was internalized in the images of Manet and his followers as a powerful homology for modern subjectivity and experience. At the same time, these artists remained blind to the structuring conditions and fundamental contradictions of capitalist social life. When the petite bourgeoisie became an established part of the bourgeoisie, he argues, the depiction of modern

life ceased. It should be clear that for him, the petite bourgeoisie constitutes a "dialectical image." Clark's attention falls on an external conception of the petit-bourgeois stratum as it was interpreted by avant-garde painters. In contrast, I have taken this ambiguous class position as the constitutive heart of photographic ideology, and have done so, as it were, from within. There are some advantages to be had from this shift—the invisible social glue that is the petite bourgeoisie becomes visible, for instance, and some founding conceptions of photography emerge as petit-bourgeois definitions—but categories such as "modernity" and "modernism" drop from view. The works I examine lack a redeeming utopian or critical moment like that found in "the New," as the Parisian avant-garde articulated it. I hope there are some gains to offset the critical losses.

I have cited the writing of midcentury photographers extensively to give voice to these concerns. The photographic press at this time was far from homogeneous; there were different positions and different interests at stake. Arguments for art sat alongside material on a faster chemical preparation or a new lens configuration. As Mudd noted, this could be daunting stuff for the beginner confronted with "atomic symbols" and "unpronounceable" terms like "Methylethylamylophenylammonium." A typical article, he observed, would proceed thus: "conjugate foci' at A B"; observe "'refraction of a ray of light' at C"; note "'refrangability' at D and E."<sup>20</sup> The modern reader often fares no better with this material than Mudd's tyro would. It can indeed be difficult to unpack this literature. Texts were often published anonymously or under unrecoverable pseudonyms; it remains unclear which contributions came from the editors' pens.<sup>21</sup> As one commentator on Victorian journalism has pointed out, anonymous articles could hide authorship by several hands or cover over the significant intervention of the editor.<sup>22</sup> In the 1860s, anonymous criticism began to give way to signed journalism, but it was an uneven process.<sup>23</sup> A great deal of work has now been done on identifying the members of the mid-Victorian clerisy who wrote the "higher journalism." Unsurprisingly, no one has paid much attention to anonymous writers on photography: there were a lot of them.<sup>24</sup> Writing "behind the mask" obviously worked for photographers just as it did for literary men. It prevented controversy from spilling over into personal fractiousness, at least sometimes. Unsigned articles also unified a periodical, giving it an overall voice. Detecting different valences is important under these conditions. I have drawn on biographical material where it is readily available. Otherwise, biography figures here as it crops up in, and circulates through, the pages of the journals. This approach undoubtedly represents a problem insofar as

many commentators engaged in dialogue with individuals they knew personally. A great deal goes on off the page, but as modern readers, we have to make do with what we have. I am sure that further research will reveal that I have cast a writer against himself, or pitted allies in mortal combat. The advantage of this kind of reading, though, is that it does not begin from an assumed coherence in the discourse of individuals. There are enough contradictions, even in the authored texts, to make this seem a feasible strategy. Such contradictions are treated here as the result of positions made available through social patterns of figuration. The fragmentary nature of my account at least has the merit of calling attention to problems of historical reading and reconstruction.

This book concentrates on a number of photographic controversies from the 1860s that highlight class anxieties. Class analysis has become unfashionable in art history and cultural studies over the last twenty years. Even for those who ritually invoke the nexus of gender, ethnicity, sexuality, and class, the last term all too often seems to slip from view. I make no apologies for this attention: social class still seems to me to provide the framework that explains the most about my material, and not only mine. According to Grace Seiberling, sometime during the late 1850s, the hegemony of the amateur gentlemen over photography was broken, and the new professional photographer came to the fore.<sup>25</sup> Seiberling mourns the passing of this amateur and aristocratic interest in photography; I find most interesting those developing ideologies—and fears—of professional photographers. Debate in the journals was at its most intense during the 1860s, when disturbing controversies bubbled to the surface. The disputes I have latched on to, whether over photographic backgrounds or the way to focus a picture, provide symptomatic points of entry into the strange world of the petit-bourgeois photographer. Invariably, these concerns are wrapped up with the sign of “art.”

One danger with my approach is that the journals’ official perspective occludes other voices and experiences. Throughout the period of my study, there are very few moments when these displaced voices could be heard. Occasionally, they appear tucked away in published letters, or in an editor’s response to them. In one such instance, the editor of *The Photographic News*—George Wharton Simpson—responded to an “operative” who worked in Notting Hill. Simpson wrote:

We always feel pleasure in advocating the interests of every class of photographic operatives; but we must remind our readers that the bargain between employers and employed, whether it refer to the hours of labour, the work done, or remuneration received, is entirely

a personal question between the parties to the contract. . . . We do not think there is much danger of over-work or under pay in the present state of the profession, inasmuch as the market is not so much stocked with thoroughly skilled workmen to induce any of them to accept injustice. . . . An employer who, under such circumstances, attempted to grind his people would soon find them leaving him for more liberal employers.<sup>26</sup>

introduction

This comment drew a reply from no less a photographer than William England, who saw himself implicated as the employer in question. England had run an early daguerreotype studio in London before becoming chief photographer at the London Stereoscopic Company. In 1863 he again set up his own business. He wrote that those in his employ worked seven and one-half hours in the winter, but with the longer days, he required the men to work nine hours, and the boys nine and a half, for no extra pay. He argued: “A notion seems to have entered their heads that they should work the same hours only as operators employed in the close confinement of the dark room, and at that requiring infinitely more head work than printing, divided, as it is, into different branches, each one to his own apartment.”<sup>27</sup> England insisted that he treated his workmen well. He had kept them all on over the winter and had paid a lad to warm the studio before they arrived. He then added a postscript: “Since writing the above I have discovered the chief mover in the affair to be an apprentice *in* the house, of whose character the best I can say (after an experience of five years) is that it is very difficult to get him out of bed before 9 o’clock in the morning.”<sup>28</sup>

No more was heard of this apprentice. I have cited these short texts because they provide a rare insight into the workers’ experience in the photographic industries. But at no point does the apprentice speak for himself. Operative criticisms may be fleetingly glimpsed in the reply of the editor and England’s comments, but their positions cannot be accessed directly. The absence of these critical voices is doubly inscribed in the history of English photography, where no workers’ rising or syndicalist document maker can structure our narrative.<sup>29</sup> The “subaltern” circulates through this archive as a phantom presence, though I would argue that the “answering word” of this imaginary interlocutor shapes the hegemonic voice.<sup>30</sup> Nevertheless, this absence means that there is no easy point of identification in these texts, no author with whom to cathect and through whom critique might flow. Tales of trade unionism and stories of sweating and the misuse of labor only began to appear in the photographic press during the 1890s, beyond the scope of this study.<sup>31</sup> Not until the closing years of the century, for instance,

did John A. Randall publish his fine analysis of the photographic industries' division of labor and the treatment of workers in the small houses.<sup>32</sup> When criticism of the large concerns did appear in the 1860s, it came from a different, less savory perspective. This is, then, a book without heroes or heroines. The absence of surrogate points of identification, at least, dramatizes the historian's place in a transferential production of meaning, because the object of identification is not available as an anthropological object. One weakness, or so it seems to me, of even the best social history writing is that it rarely pauses to access the social gap between the author and those whose lives are narrated. The investments of academic historians in their objects of study are hardly raised. While the worker shapes these narratives of photography, we cannot directly spy on his or her life. Instead, what we have to go on is the worker as he or she appears in petit-bourgeois fantasy. This phantom presence should foreground *our* purview.

The writings I have considered are casual, uncrafted texts. Neither a Baudelaire nor a Ruskin emerges here. The banality and repetition is, in fact, the point: the work of ideology is typically done in writing of this type. But the absence of critical moments of rupture within these texts means that it is necessary to find an alternative way of organizing this history. I have settled for a "volumetrics" of reading—a concern with the incessant, everyday speech of photographers and their champions as it appeared in these journals. Sorting this material is a problem; sometimes its sheer narrative dynamic seems to impose a structure. The enormous volume of these texts would seem, nevertheless, to offer possibilities for exploring matters of some historical weight, key among them the relation of art to work. To pick up on my opening point from Marx, photography often seemed to belong with the world of labor, not the history of art. Here is A. H. Wall on the diverse subjects discussed in meetings of the photographic societies:

The rules of art, the laws of chemistry, the principles of optics, and the secrets of certain mechanical crafts, seem in the non-photographic mind to possess so little in common, that strangers wonder when they hear each, or all, of these dissimilar subjects blending in a discussion following some paper on one or other of the processes of photography. This is very apparent in glancing over the reports of such societies in the photographic journals. Now they appear like societies of fine art students, enthusiastically dwelling upon aesthetics; and anon you could imagine them congregations of unpretending cabinet-makers, every man with a six foot rule in his trousers-pocket, and a big square lead pencil in his waistcoat. Again

they show like learned chemists, investigating the hidden mysteries of nature, . . . and yet again they show like grave opticians.<sup>33</sup>

By the 1860s, some writers would argue that photography belonged among the fine arts, while others insisted that it should properly be understood as an objective scientific practice untouched by human hands. Still others believed that photography was all of these things at once. Jabez Hughes, for instance, distinguishes between "Mechanical Photography," which aims at "simple representations" of things depicted exactly as they are, and "Art-Photography," in which the photographer infuses the image with his mind.<sup>34</sup> As we will see, the terror posed by photography's proximity to "mechanical labour" acted as an organizing theme for these debates. After all, how is making a photograph different from operating a carding machine? Photography has been haunted by this question. In many ways, it is a legal matter, turning on the distinction between ownership (deemed free) and labor (characterized as servile). The commodity in its image form, though, seems to make all the difference. The complexity of nineteenth-century photography often lies in that fraught relation between the elevated art picture and the base document. As Robinson put it, the "alchemy" of Rembrandt's chiaroscuro transformed his badly drawn works from "dross into pure gold."<sup>35</sup> But wherever the document takes hold, photography assumes the form of an inverse alchemy, one that transforms silver into dross or filth. Early photographers struggled all too often with the authority that kept practices like photography and art separate and the competing desire to see this gap closed.

Rather than dismissing documentary truth claims, the best writing on photography emphasizes the double or "paradoxical" nature of these images.<sup>36</sup> In this body of writing, a photograph simultaneously appears as "document" and "art," "denotative" and "connotative," "index" and "icon," "the thing itself" and "sign," "literal" and "conventional." Richard Schiff's distinction between what he calls "the figured" and "the proper" seems to me to be particularly productive.<sup>37</sup> Schiff suggests that throughout the history of art, particular forms, or genres, have been cast in the role of the unfigured, proper term. The proper is not a literal copy, but a representation sanctioned to perform the literal role. The forms of representation cast in this position—usually lowly modes—are perceived to hover at the threshold of sense, and they often threaten to collapse back into their object. The proper image constitutes a moment of identity in a field of distinctions. At particular points in history, certain forms of art have seemed artless: think of the dumb belligerence of the Dutch school, in contrast to the learned eloquence

of the Italians, or consider Caravaggio, who, according to Poussin, was sent to destroy painting. Think, too, of Hazlitt's account of the naturalism of the Parthenon marbles contrasted with Greco-Roman statues, or the grunge aesthetic of Courbet played off against the norms of the Salon, or against "straight" photography as against Pictorialism. Shiff's terms are relational: in fact, both the proper and the figured are figured. Proper images and figured forms require each other to establish their meanings. The proper can be seen as objective, or as a simple record of raw nature, because it is located at some distance from those forms that are understood to be figured. The figured appears as art, or as an ideal, because it can shine forth against a proper term.

It makes sense to suggest that photography plays the role of proper term to art's figuration. The "mechanical" nature of photography meant that it was deemed simply to reproduce external reality; in the process, it seemed to eliminate the self. But Shiff holds back from this conclusion. Because photography possessed no cultural authority, he argues, it could not assume the proper position. Instead, Shiff compellingly claims, photography occupies a catachrestic position in relation to painting's metaphor. Some have suggested that catachresis is a "false metaphor" or accrued error, but Shiff argues that it is best seen as a metaphor in the absense of a non-metaphoric term; his example is "an arm of a chair." The problem is that Shiff views this matter exclusively from the perspective of painting and thus reduces photography to a singular form. But photography is a "double body," in Mikhail Bakhtin's sense.<sup>38</sup> The distinction between art and documentary, Shiff says, is unhelpful.<sup>39</sup> It seems to me, though, that the distinction is crucial, because it internalizes figured and proper moments into the history of photography.

In this book, I work with a distinction between "pictures" and "documents" that echoes Shiff's opposition of the "figured" to the "proper." Pictures (paintings, drawings, some prints, and even, in particular instances, some photographs) bear the imprints of their makers. This family of images attests to intention, subjectivity, and affect; it follows the rules of art theory; it lays claim to moral import. We admire such images for their dazzling aesthetic effects and exceptional skill—even when a guiding precept instructs that the latter must be disguised. Pictures simultaneously elude words and inhabit the high-flown discourses of the connoisseur, philosopher, and artist. Documents, in contrast, appear to be generated automatically without a maker. They are typically thought of as written records, but they also have their image form. The document is devoid of style: we typically ignore its form and focus on the things depicted, such as a prize pig, a newfangled

engine, or Uncle Harry. Documents are lowly, workaday carriers of information. Like the "figured" and the "proper," pictures and documents are relational terms. Their effects and functions are, at least in part, secured negatively through the alternate position.

Shiff's catachresis seems to capture something of photography's odd, unclassifiable character. But if this peculiar tension between the picture and the document requires a tropological category to illuminate it, we could do no better than to suggest that photography is an allotropic practice.<sup>40</sup> Nineteenth-century chemists employed the term "allotropism," along with the related concepts of "isomerism," "isomorphism," and "dimorphism," to explain elements and compounds that seemed to have divergent forms despite sharing an underlying atomic composition: butylene and ethylene, fulminic acid and cyanic acid, and so on. As J. J. Berzelius put it in 1846, "I have proposed to call substances of similar composition and dissimilar properties isomeric."<sup>41</sup> Isomorphism and dimorphism referred to these same phenomena in crystalline structures. (If criticism were to be isomorphic with the image it seeks to account for, we might say, it would need somehow to replicate the properties of that image inside itself.) Berzelius pursued the idea that the cause for the similarities and differences in the substances he examined must be sought in changes of relation among the constituent particles. He called this phenomenon allotropy, after the Greek *allos* ("different") and *tropos* ("manner"). In his essay, he listed seventeen elements that existed in allotropic form, but the textbook example is carbon, found as both graphite/coal and diamond.<sup>42</sup> Perhaps he could have listed photography as the eighteenth example, because it likewise occurs in simultaneous forms: on the one hand, it is a glistening picture, and on the other, a filthy document. Like soot, the document is combusted matter, a mere residue of meaning. The picture, in contrast, shines. Coal leaves only ashes and soot, whereas the diamond sparkles with a clear, pristine beauty. But there can be no doubt that the despised lower term drove industrial Britain. Diamonds make for a good display of riches, but nineteenth-century wealth and power were produced from coal. In the International Exhibition of 1851, the koh-i-noor, or "mountain of light"—the Indian jewel that proved such a hit with the visitors—was illuminated from below with gas light. *Punch* could not resist the joke: the diamond and gas were the same substance and yet, it suggested, "the Koh-i-noors of society only shine with the borrowed light of those working beneath them in station!"<sup>43</sup> And so it would prove with photographic pictures and *their* underlings.

The point I want to make about this allotropic form is not simply that photography is both art and document—the one figured by the "objective

reality" in front of the camera, and the other by the "genius" who directs the apparatus—but that these elements exist as the fragments of an allegory of labor. Wherever detail appears in this literature, a chain of contiguity leads to the workers' world. Photographic writing was, and is, a "twice-told tale." When photographers made their claims for art or defined the document, they simultaneously told another story. The identity of photography, and its practitioners, was produced in opposition to the workers' world. Technically speaking, this is a project of allegoresis—allegorical reading—because the allegory was unconscious.<sup>44</sup> These texts are dense with references to the oppressed and exploited. Photography is frequently cast as a servant (usually, but not always, a maidservant) to art. Photographers had to work against this conception to create a manly space for their practice. In another register, the metaphor of slavery routinely crops up in these debates, suggesting that photographers struggled to attain the status and freedom associated with European ideas of whiteness. The image of "mechanical" work appears everywhere in these accounts. Often these figured persons were interchangeable: a servant might be called a "slavey," or a worker referred to as a servant or a wage slave.<sup>45</sup> The connections suggest that we are dealing with "a horizontal sort of beast."<sup>46</sup> The metaphoric language of photographic theory seems to restage, in ghastly form, the earlier formation of the "motley proletariat." In their great book on the making of the Atlantic working class in the seventeenth and eighteenth centuries, Peter Linebaugh and Marcus Rediker have illuminated the multiple points of connection between race and gender in this process of formation. That is to say, they have reworked E. P. Thompson's account of the making of the working class with an attention to his blind spots.<sup>47</sup> The working class, for Linebaugh and Rediker, is not singular but multiple; it is "motley." This motley proletariat should not, however, be seen as another fragmenting account of difference, nor, for that matter, as the amorphous, unspecifiable "multitude" that has occupied so much recent attention.<sup>48</sup> The idea of the motley proletariat asserts a "universalism from below." It is a radical collectivity forged in the common experience of exploitation and oppression, demonization and violence. These motley subjects understood, before modern philosophers, that justice and equality required universalizing claims.<sup>49</sup> If I sometimes use the word "multitude" in this book it should be understood not as "the Multitude," but as a synonym for the motley proletariat. The aspiration to universal humanity emanating from below had its counterpart in a totalization from above. The powers that be positioned this class as a monstrous, many-headed hydra—lop off one head and two more would sprout to take its place—and cast themselves in the role of Hercules. At the end

of the eighteenth century, the ruling classes of the Atlantic world pursued a conscious policy of fostering and aggravating internal divisions among the motley crew. Art history has found it difficult to follow the project of history from below: for a discipline concerned with professional image makers and their patrons, this point of view is inherently problematic. Putting the aesthetic into the frame as a generative social form only makes this project seem well-nigh impossible. And yet the cluster of metaphors that photographers employed in the middle of the nineteenth century followed the pattern identified in Linebaugh and Rediker's *Many-Headed Hydra*, sometimes to the letter. Photographers had to deal with an imaginary uprising. In this book, I have tried to use the allotropic form of the photograph to explore this totalization from above. The archive emerges here as a crossing point between social fantasy and its mental blockages. If this cannot be art history from below, I have, nevertheless, tried to place that topology in the foreground.<sup>50</sup> The "making" in my title is, then, a grim reflection of Thompson's history.

This double movement of the allotrope wreaked havoc with the ideological claims of nineteenth-century photographers. Its latter-day champions have fared little better. Mike Weaver, for example, has attempted to redeem a number of Talbot's images of work and everyday affairs at Lacock for "Art." Talbot, he suggests, was interested in "picture making" and not in merely representing objects. Photographs like *The Open Door*, Weaver argues, produce their meanings metonymically, setting up a chain of associations that work to "transcend" ordinary realism. But Weaver establishes his connections unidirectionally. He might be right that this chain of contiguity elevates Talbot's images out of their quotidian immediacy, but, because this is a *metonym*, a simultaneous movement rubs these grand "metaphysical" claims back into the dirt.<sup>51</sup> The crossing of borders and confounding of safe distinctions, which the allotropic form introduces into normally stable conceptualizations, means that the strange case of photography enables an attentive reader to examine relations and inter-determinations in different forms of knowledge. The distinction between art and work provides the key structuring point for my project. These categories are normally taken to be antinomies: art is seen as free and creative, while work is servile and repetitive.<sup>52</sup> Like most antinomies, however, these two depend upon one another for their meanings and effects. Art is what it is because it is not work, and vice versa. But for all the mutual determination of these terms, critical writing has overwhelmingly held them apart.<sup>53</sup>

The most striking feature of nineteenth-century English writing on photography is its overall sense of unease. The writers examined here could



William Henry Fox Talbot, *The Open Door*, 1844, salt print from a calotype negative, 23.1 × 18.9 cm. Plate vi in *The Pencil of Nature* (London: Longman, Brown, Green and Longman's, 1844). Courtesy National Museum of Photography, Film and Television

never be quite certain about the exact nature of their practice. Many of them wanted, or needed, to present photography as one of the fine arts, but they were troubled by nagging doubts. The more strident their assertions about photography's identity, the more likely their texts were to unravel before their eyes. Dialectical thought has an interest in fixing on this riddle, in seeing what tales it has to tell and what secrets it can be made to unlock. To be certain about photography would, after all, have meant knowing in advance about the divisions of knowledge emerging throughout capitalist society, a matter of no small importance—or difficulty—for those who lived through this process. I intend to stay with that moment of doubt and to insist on photography's strangeness and confusion. I do not understand photography.

Recent critical histories, in the face of such a contradictory practice, have sometimes seen the question of photography's relationship to art as passé and have taken up less elevated and benign practices. Foucault's work on the disciplined body has figured prominently in this shift of attention, leading theorists to turn away from prestigious artifacts and to concentrate instead on the throwaway and the dubious. Photographic historians and theorists working in Foucault's wake have focused on the images of the file index and the archive: the work produced in the asylum, the hospital, the prison, and the mission hall.<sup>54</sup> Allan Sekula has strikingly characterized these images as performing "the dirty work of modernization."<sup>55</sup> This critical writing has been enormously productive, enabling a fundamental reconsideration of practices that have been dismissed as "marginal" and "unworthy" by art-historical criticism. This work has encouraged attention to the dark side of photographic practice, the ignoble work of surveillance and classification that has been practiced on the bodies of the exploited and the oppressed. Locating this work in relation to the wider photographic field, however, is not without its problems.<sup>56</sup> Sekula has argued that the photographic field is composed of both the celebratory portrait and the image of control. It is, he says, "a double system: a system of representation capable of functioning both *honorifically* and *repressively*." Any adequate account of photographic practice must encompass these "torn halves."<sup>57</sup> He suggests that photography is made up of private and public looks: a look up, at one's betters, and a look down on one's inferiors. Every proper portrait, he argues, finds its objectifying inverse in police files.<sup>58</sup> Sekula's essay constitutes a powerful critique of the role of photography in the reifying process of nineteenth-century social classification, but I am uneasy about the seeming pattern of equality in these "looks." In 1870, the Home Secretary announced that it would be mandatory for all jails in England and Wales to photograph their inmates

and submit the images to the Metropolitan Police. In the key trial period of British penal photography—from November 1871 until the act's coming into force on December 31, 1872—43,634 photographs were sent to the Metropolitan Police archive.<sup>59</sup> This number is not inconsiderable, but placed alongside the output of the portrait studios, it is small beer. A brief count of the entries in the *Post Office London Directory* indicates that there were 323 commercial studios operating in the capital in the same two years (and this is unquestionably an underestimation of their number).<sup>60</sup> As Andrew Winter suggested, "Silvi [*sic*] alone has the negatives of sitters in number equal to the inhabitants of a large country town, and our great thoroughfares are filled with photographers; there are not less than thirty-five in Regent Street alone, and every suburban road swarms with them; can we doubt therefore that photographic portraits have been taken by the million?"<sup>61</sup>

Instrumental photographic work was significant, both in terms of the meanings and revenue it generated, but this new hierarchy of attention should not be accepted uncritically. As historians search for the ruptural, the unusual, and (now) the subjected body, they risk missing the mass of everyday images that perform so much signifying work. The photographs produced under the direction of Dr. Diamond at the Surrey County Lunatic Asylum might be noticed, but Diamond's work as the editor of *The Photographic Journal*—and the production of everyday nineteenth-century photography—should not go without comment. Whether photography figures as a component of psychiatry, comparative anatomy, germ theory, sanitation, and the other professional disciplines that come to bear on the body or as the practice of notable artists, there has been a tendency to render the profession of photography itself invisible.<sup>62</sup> Middle-class bodies, in the process, disappear from view. (They have long preferred it that way.) In contrast, I want to pay attention to the kinds of photographs that Roland Barthes once described as "one of the thousand manifestations of the 'ordinary.'"<sup>63</sup> In the end, only when we pay attention to the divisions within photography can we understand why, or how, state institutions came to invest so much trust in the veracity of the photographic document. In the Foucauldian accounts of the photographic "archive," the truth content of these images is deemed to reside in the power of the institutions that deployed them. But this still leaves unanswered a different question: Why was photography selected to play this role? This book suggests that the answer rests on an understanding of the document as one term in an allegory of labor.

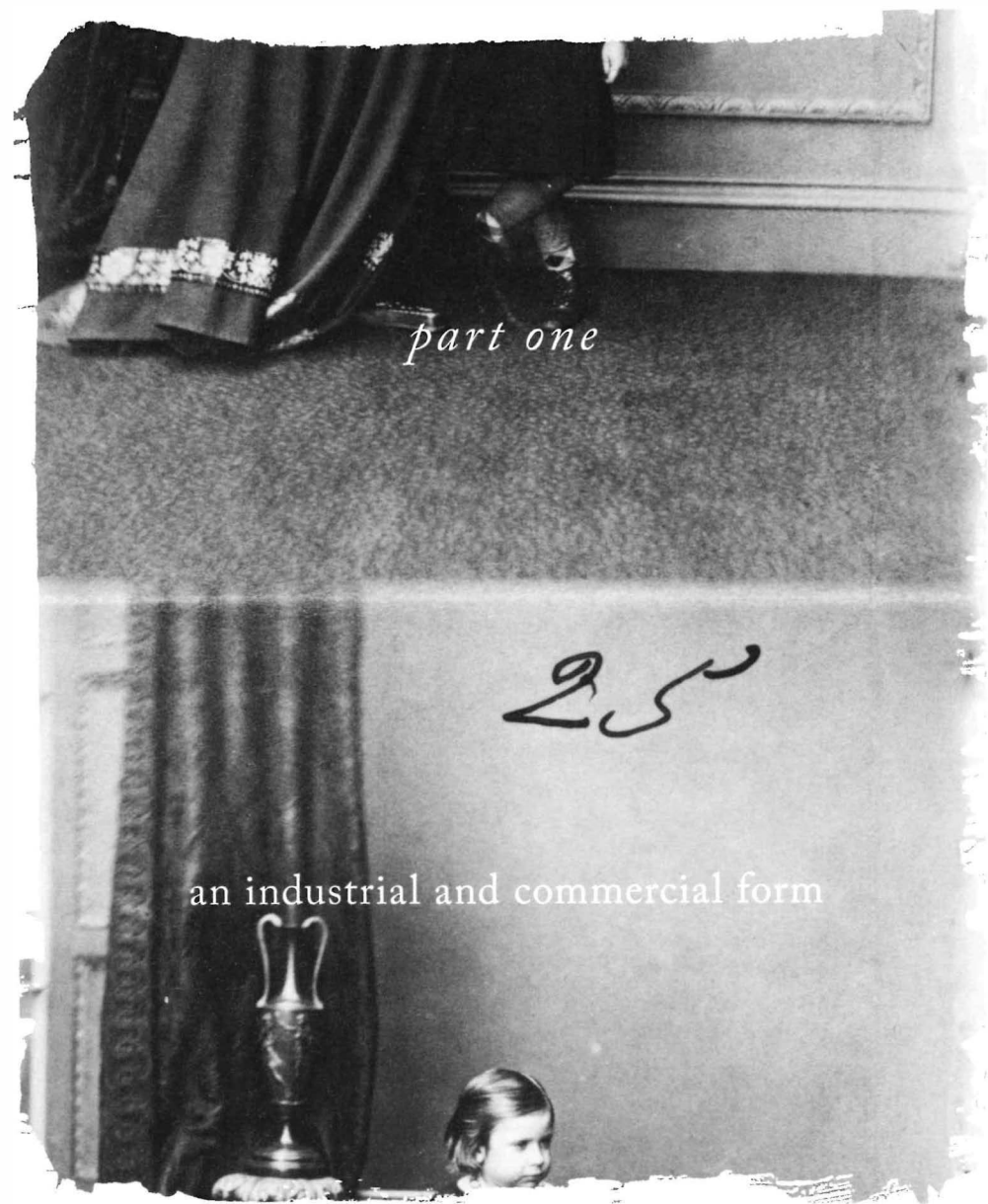


SARONY, Photo.

Oliver Sarony  
(Scarborough), carte de  
visite of unidentified man



Pousty (18 King Street,  
Hereford), carte de visite  
of unidentified group



*part one*

25

an industrial and commercial form

1.

“fairy pictures” and “fairy fingers”  
*the photographic imagination and the subsumption of skill*

The guides, the wardens of our faculties,  
And stewards of our labour, watchful men  
And skilful in the usury of time,  
Sages who in their prescience would control  
All accidents, and to the very road  
Which they have fashioned would confine us down,  
Like engines

—WILLIAM WORDSWORTH, *The Prelude*

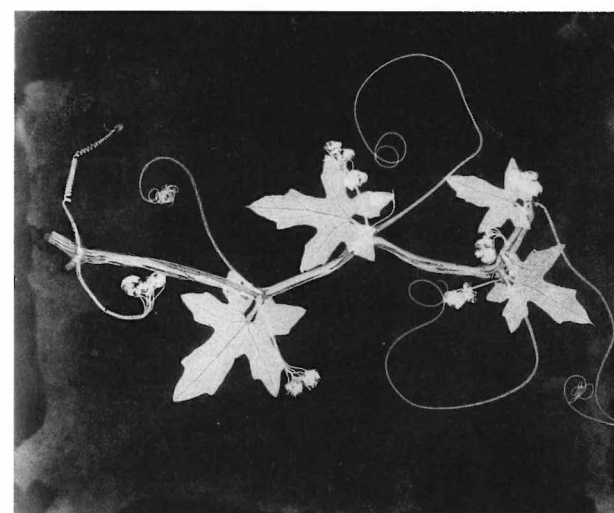
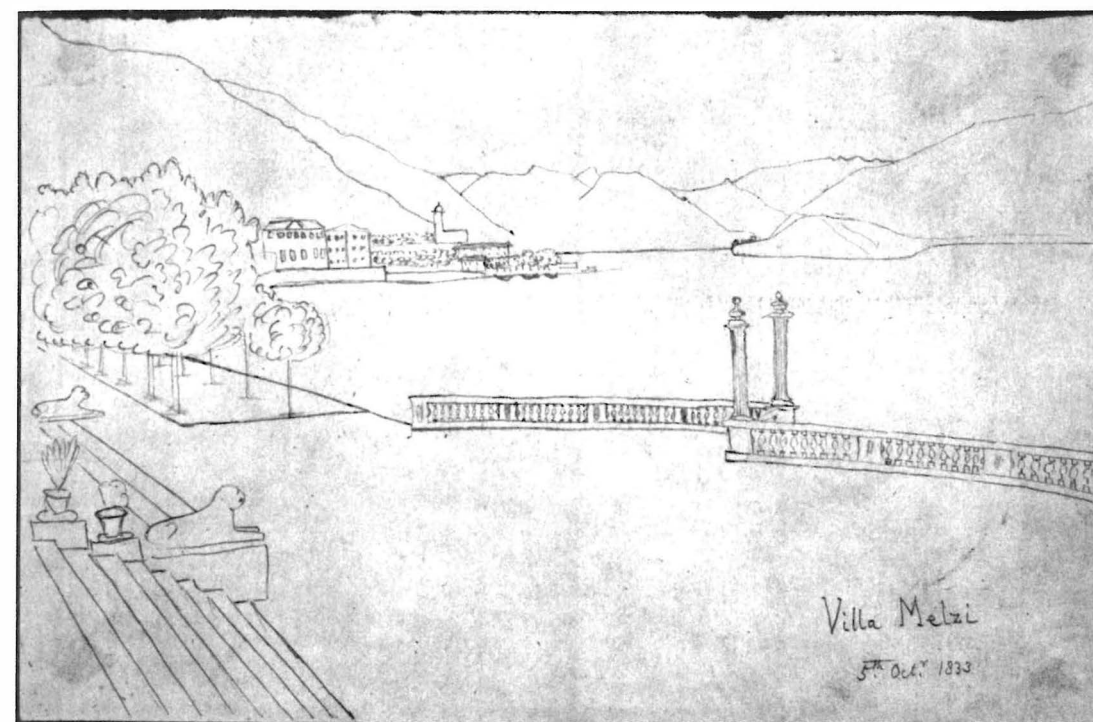
A “FAITHLESS PENCIL”

In the introduction to his *Pencil of Nature*, William Henry Fox Talbot famously reflected on the events that, he suggested, had led to his discovery of photography. He wrote: “One of the first days of the month of October 1833, I was amusing myself on the lovely shores of the Lake Como, in Italy, taking sketches with Wollaston’s Camera Lucida, or rather I should say, attempting to take them: but with the smallest possible amount of success. For when the eye was removed from the prism—in which all looked beautiful—I found the faithless pencil had only left traces melancholy to behold.” The problem with the camera lucida, according to Talbot, was that

basic drawing skills were required for its operation. As a consequence, his thoughts turned to the camera obscura that he had used on a previous occasion. With this apparatus, the scene could be “traced . . . with some degree of accuracy, though not without much time and trouble.” But, we are told, he also found the camera obscura difficult to manage because “the pressure of the hand and pencil” shook the instrument. Talbot thought that no amateur could be expected to master copying details, even with these drawing machines. The frustrated sketcher would be left with “a mere souvenir of the scene,” one incomparable to the “fairy pictures” seen on the ground glass. Dismayed by the transitory nature of this “image,” Talbot claims that he contemplated other ways of rendering permanent the fleeting scene: “It was during these thoughts that the idea occurred to me . . . how charming it would be if it were possible to cause these natural images to imprint themselves durably, and remain fixed upon the paper!”<sup>1</sup> He went on to imagine a “picture” constituted from different intensities of light, and he experimented with substances known to be chemically transformed by the sun’s rays. Talbot’s story—frequently repeated in the pages of history books marked “origins”—is a good tale, brimming with sunlight and genius.

Historians of science would characterize Talbot’s account of his discovery as an “invention story.” The “eureka moment” is particularly telling in this respect. Invention stories are “mentalist” and “individualist” accounts that divorce discovery from research networks and fix it at a particular moment.<sup>2</sup> That is to say, they focus a series of ideas and events on an author. Talbot’s story may or may not have happened as he narrates it here, but it was undoubtedly shaped by his desire to stake a claim to priority of invention, because this would confirm him as a significant man of science and serve to legitimize his patent. The account of invention he gave in *The Pencil of Nature* certainly differed, in important details, from the version of the invention story he told at the end of his life, when he suggested that his interest in the possibility of photography stemmed from a concern with fixing an image in a solar microscope rather than from an appreciation of picturesque views.<sup>3</sup>

Joel Snyder has paid particularly close attention to Talbot’s story. In the process, he has cast doubt on the presumed continuity between events at Lake Como and experiments at Lacock Abbey—the discovery story and the experimental emergence of photography.<sup>4</sup> Snyder, who examines the first photographs (and negatives) against Talbot’s early experimental writing, scrutinizes the language of the discovery story. He argues that Talbot’s “natural image” referred to the camera obscura, not the camera lucida, because



ABOVE: William Henry Fox Talbot, *Terrace of the Villa Melzi with Lake Como*, October 5, 1833, camera lucida drawing, pencil on paper, 21.8 × 14.2 cm. Courtesy National Museum of Photography, Film and Television

LEFT: William Henry Fox Talbot, *Photogenic Drawing of a Vine, Convolvulus*, c. 1835, photogenic drawing, 18.3 × 22.4 cm. Courtesy National Museum of Photography, Film and Television



William Henry Fox Talbot, *Lacock Abbey in Wiltshire*, before September 1844, salt print from a calotype negative, 20.2 × 15.1 cm. Plate xv in *The Pencil of Nature* (London: Longman, Brown, Green and Longman's, 1844). Courtesy National Museum of Photography, Film and Television

we can only speak of a cast image in relation to this apparatus. Unlike those historians who have claimed that the idea of photography preceded (and was a necessary condition for) its invention, Snyder contends that what was imagined, described, or seen on the ground glass of the camera obscura was not what there is to see in the first negatives or in early photographs.<sup>5</sup> The “pioneer investigators,” he suggests, hoped to discover a “mechanical means for drawing pictures.” They envisaged this process as a printing technique that would “transfer” the image to paper, plate, or stone, and they “figured” this process as “fixing” the image of the camera obscura.<sup>6</sup> The image that Talbot wanted to fix, however, was not the contingent and particular view that entered the lens. As Snyder puts it, “this image does not exist in the camera—it exists only in the meeting ground between what continuously appears and changes in the flux projected onto the tracing paper and the mind of the man with the pencil.”<sup>7</sup> What Talbot depicted was not what he saw in the apparatus but a picturesque view shaped by the cultural values and aesthetic tastes of his class. The trope of “fixing” the image cast in the camera obscura enabled early investigators to explore, “in a muddled

manner,” the conjuncture of cameras, sensitive materials, and pictures without artists. Snyder suggests that photography emerged from these concerns experimentally.

Talbot could not draw, but his mother, sister, and wife were all accomplished amateurs with a taste for the picturesque. He made his famous trip to Lake Como on his honeymoon with Constance Mundy, accompanied by his half-sister Caroline and her husband, Lord Valletort. As a member of this party, he visited local sites of aesthetic and picturesque interest and took part in regular sketching expeditions. Talbot’s story, we might say, occupies a strange space that combines picturesque tourism with sex. Constance, a confident amateur sketcher, used the camera lucida with ease; Caroline, according to one authority, was even more “accomplished” in her use of the apparatus.<sup>8</sup> Drawing had long played a role in the cultural life of Talbot’s family. In 1822 Caroline received instruction from a drawing master in Florence. Talbot himself took lessons as an eight-year-old. (He was simply irredeemably talentless.)<sup>9</sup>

Talbot’s failure with the pencil at Lake Como may have been exacerbated by the presence of the accomplished women in his party.<sup>10</sup> By this point, as Ann Bermingham has argued, the tradition of picturesque sketching had been thoroughly feminized.<sup>11</sup> Rudolph Ackermann’s commodification of amateur art and his aggressive marketing of cultural refinement for bourgeois women had the effect, she argues, of conflating feminization and commercialization. In this way, female accomplishment in drawing doubly compromised the practice for men. According to Bermingham, the cult of amateur drawing among men, which she reads as a form of “self-fashioning,” reached its high point in the eighteenth century with the picturesque, or “landscape of sensibility.”<sup>12</sup> During the nineteenth century, cultural and aesthetic refinement migrated from the public sphere to the domestic environment.<sup>13</sup> Professional artists such as Benjamin Robert Haydon responded by asserting the distance between true art—the art of the Academy—and commerce. This argument both defined the public sphere against commercial interests and sought to reassert its masculinity.<sup>14</sup> Genius and history painting were male activities; sketching and fancy work, the domain of women. Talbot, conventionally enough, thought sketching a suitable activity for a lady, but he believed that painting was too much like work to be appropriate for a gentlewoman.<sup>15</sup> Bermingham suggests that Talbot’s amateur—Talbot as amateur, and the amateur figured in his texts—is a direct consequence of Ackermann’s commercialization of art and transformation of the art public. Talbot’s sketcher was not seeking aesthetic experience or the virtue secured

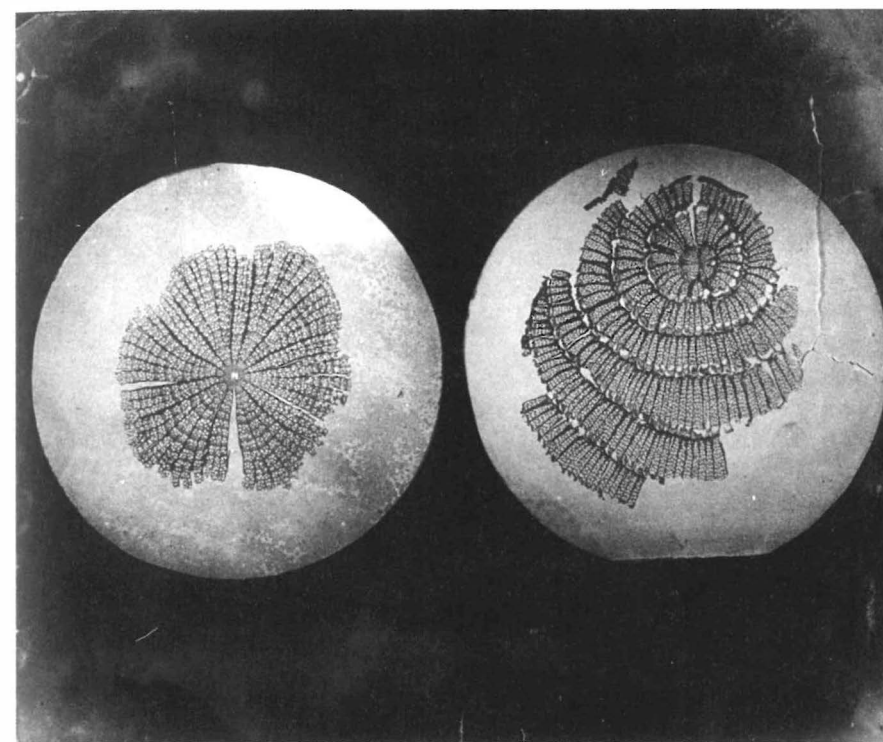
“fairy pictures”  
and “fairy fingers”

by history painting. Instead, he wants art to perform the role of record, or aide-mémoire. He “finds his natural medium in Talbot’s photography.”<sup>16</sup> Photography reinforced the commercialization of the sketch while redefining a masculine space for its use. Machines and chemicals drew picturesque views into Talbot’s domain.

These views played an important part in the development of British photography. (They did, at least, in the story Talbot told about that development—and Snyder claims no more than this.) Here, though, my principal interest in Talbot’s invention lies elsewhere: specifically, with the way in which men of science established metaphoric patterns for photography and their determining effect on subsequent accounts. By the time *The Pencil of Nature* appeared in 1844, picturesque views sat alongside other kinds of images: botanical specimens; facsimiles of documents and prints; reproductions of artworks; records of glass, china, and other cherished possessions. We should add to this list Talbot’s interest in photomicroscopy, which he articulated in an essay from 1839.<sup>17</sup> In many ways, *The Pencil of Nature* can be seen as a demonstration album that tried to anticipate possible uses for the new process.<sup>18</sup> Some of these images seem to have been created as aids for men of science; others, as designs for manufacturers; yet others, as specimen reproductions for connoisseurs or the mass market. Some were, quite probably, meant as genre studies for artists. Still others seem to have had the status of legal records. (As Talbot noted, “should a thief afterwards purloin the treasures—if the mute testimony of the picture were to be reproduced against him in court—it would certainly be evidence of a novel kind.”)<sup>19</sup> Allan Sekula put this well when he described Talbot’s book as “a compendium of wide-ranging and prescient meditations on the promise of photography.”<sup>20</sup> “Meditations,” though, is probably too conscious and definite a word, because it is not at all certain that Talbot knew what he had done. The hybrid character of *The Pencil of Nature* is instructive. It indicates, I think, that Talbot never really settled on a coherent account of the photographic image. His uncertainties and hesitations, pragmatic changes of mind, and diverse claims all played their part in shaping photographic ideology.<sup>21</sup> The confusion was set to continue.

#### DISCIPLINING TALENT

Talbot may not have known how to account for the images he produced, but he had a much clearer idea of what he wanted from his “discovery.” The tension in his account between the beautiful images seen in the camera



William Henry Fox Talbot, *Two Photomicrographs of Plant Stems*, 1839, salt print from photogenic drawing negative, 22.9 x 19 cm. Courtesy National Museum of Photography, Film and Television

“fairy pictures”  
and “fairy fingers”

obscura and the abject failure of drawing machines to substitute for manual skill is especially important. The opposition to skill provides the pivot for my account of Talbot’s discovery texts. His narrative turns on deskilling and the forms of knowledge and control that can occur once a machine has been substituted for manual labor. If his decision to employ terms such as “photogenic drawing,” the “pencil” of nature, “prints,” “picturesque views,” “still life,” and “portrait” framed photography with the language of art, it simultaneously pitched art into the orbit of industrial knowledge. Indeed, Talbot’s story of drawing technologies and photographic cameras relates to contemporary fantasies circling the labor process.

As we have seen, Talbot’s invention story claimed that the motivation for his photographic experimentation was his lack of skill with the pencil. In *The Pencil of Nature* he suggested that while there was no royal road to learning, he had discovered the “royal road to Drawing.” It was, he believed, one that would be “much frequented,” and amateurs were already abandoning their pencils for chemical solutions.<sup>22</sup> But in this important text, Tal-



William Henry Fox Talbot, *Articles of China*, 1844, salt print from a calotype negative, 22.4 x 18.2 cm. Plate III in *The Pencil of Nature* (London: Longman, Brown, Green and Longman's, 1844). Courtesy National Museum of Photography, Film and Television

bot argued that amateurs too “lazy” to learn perspective were not the only ones turning to photography. “Accomplished artists,” he said, were realizing that the camera reproduced in “moments” the details of Gothic architecture that they could not copy with a full day’s labor. (Buildings and their details were to become one of the structuring tropes of photographic thinking.) Here, the story spreads outward from Talbot’s inability to draw to become a general argument about skill. It is difficult to determine whether Talbot wanted to do away with the skill of the professional artist or merely replace the technical facility required by the amateur sketcher. While he may not have intended to exclude artists from his Republic, he clearly envisaged an apparatus that would eradicate the amateur’s need for even a modicum of skill. He wrote, “Up to a certain point, these inventions [the camera lucida and the camera obscura] are excellent; beyond that point they do not go. They assist the artist in his work; they do not work for him. They do not dispense with his time; nor with his skill; nor his attention. All they can do is guide his eye and correct his judgement; but the actual performance of a drawing must be his own.” Talbot wanted an apparatus that would dispense

with the need to expend time, attention, and the skill he did not possess. He argued that his invention differed totally from the camera lucida and camera obscura, because with his “contrivance it is not the artist who makes the picture, but the picture which makes ITSELF.”<sup>23</sup> This is a strange notion. Trying to imagine what it must have been like to witness the first photographs emerge can help us account, in part, for his amazement. But even then, Talbot’s fetishistic insistence on the picture’s self-making remains striking. His description is remarkably similar to contemporary accounts of the labor process as they appeared in the technical literature on the cotton mill. Andrew Ure, for instance, opened his infamous *The Philosophy of Manufactures* with one such definition. On the first page, he insisted that machines produce “with little or no aid of the human hand; so that the most perfect manufacture is that which dispenses entirely with manual labour. The philosophy of manufactures is therefore an exposition of the general principles on which productive industry should be conducted by self-acting machines.”<sup>24</sup> For Ure, labor—particularly skilled male labor—hindered capitalist production. Working-class skill was “refractory.” Self-acting machines occupied a central place in his vision because they allowed factory masters to dispense with workers and their skills and thus produce an unceasing flood of commodities.

In order to demonstrate his thesis that machinery would defeat union and strike, Ure took as his example the case of coarse-yarn mule spinners. These men, he claimed, had “abused their powers beyond endurance.” A strike, however, forced the manufacturers to seek the aid of the machinists Sharp and Co. of Manchester and their partner Mr. Roberts, who turned his “genius” to the construction of the self-acting mule. This “spinning automaton,” Ure believed, was destined to “emancipate the trade from galling slavery and impending ruin.” The resulting machine—the “Iron Man,” as the operatives called it—had 300,000–400,000 spindles, which allowed the manufacturers to dispense with a large number of male spinners.<sup>25</sup> This case demonstrated to Ure that when “capital enlists science in her service, the refractory hand of labour will always be taught docility.” As Linebaugh and Rediker suggest, Ure fancied himself a Hercules, slaying the “Hydra of misrule.”<sup>26</sup>

The parallel between Talbot’s self-acting apparatus and Ure’s “spinning automaton” is illuminating. Locating Talbot alongside Ure in the field of capitalist ideology may, though, appear problematic. The central objection to doing so seems to turn on his “gentlemanly” status, and Carol Armstrong’s *Scenes in a Library* offers the most sustained version of this argu-

“fairy pictures”  
and “fairy fingers”

ment. Talbot's work, Armstrong suggests, belongs to a landed, or gentlemanly, purview.<sup>27</sup> The idea of a gentlemanly, or amateur, frame for early photography is not in itself new—Walter Benjamin had something like this in mind when he reflected on the first “flowering of photography,” which, he believed, had preceded its industrial fading. Gisèle Freund saw things in much the same light.<sup>28</sup> Armstrong's reading of the landed culture that pervades *The Pencil of Nature* has much to recommend it. Talbot's book, she suggests, should be read as a self-portrait of a man of possessions rather than a professional man—“a man whose objects and ownings, and amateur preoccupations define his identity.” As she indicates, the images in his volume memorialize the sites and property of a landed gentleman amateur: *his* books, *his* china and glass, *his* prints and statues, *his* house and estate. (Some historians add, unreflectively, *his* workers and servants.) Even the Oxford colleges and churches that figure prominently in *The Pencil of Nature* can be seen as part of this vision.<sup>29</sup> Talbot's discovery of photography can be thought of as emerging directly from this gentlemanly culture. As Snyder notes, his interest in amateur sketching and picturesque aesthetics belong to this world. But after the debates on English social formation, the landed gentry cannot simply be counterposed to the capitalist class.<sup>30</sup> Many issues may be left open from this discussion, but it now seems clear that capitalism developed in Britain as an agrarian formation. For E. P. Thompson, the Settlement of 1688 established the “form of rule for an agrarian bourgeoisie.” By the middle of the eighteenth century, and arguably by the middle of the previous one, the English gentry was a *capitalist* class.<sup>31</sup> Much of the business, of course, was unfinished: the customary use rights that constituted the “moral economy of the poor” hampered and constrained the full extent of the capitalist “market.”<sup>32</sup> By Talbot's day, however, this capitalist process was in full spate. No account that sets landed gentlemen on one side and industrial capitalists on the other can do justice to British class formation. Rather, a strange osmotic relationship between these groups made English capitalism. Historians of British imperialism have, for instance, argued that the major beneficiaries of “overseas expansion” were a group of “gentlemanly capitalists.”<sup>33</sup> Talbot seems to belong to this bloc, which comprised commercially oriented landowners along with manufacturers, merchants, and bankers.

Because Talbot's discovery texts provide only a preliminary point of discussion for this book, I do not intend to treat his social position in any detail. It is worth remembering, though, that Talbot patented his photographic inventions and rigorously prosecuted those who infringed on his legal rights.



William Henry Fox Talbot,  
*Lace*, c. 1840, salt print  
from a photogenic  
drawing negative, 18.7  
× 23.1 cm. Courtesy  
National Museum of  
Photography, Film and  
Television

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and “fairy fingers”

In some photographic circles, his reputation never recovered from this merciless defense of his interests. The list of works included in the first public display of his photogenic drawings, shown at the 1839 meeting in Birmingham of the British Association for the Advancement of Science, indicates that he thought of photography as a transfer technique or reproductive technology from the outset. Copies of lithographs, lace, and textiles dominated this collection of ninety-three images.<sup>34</sup> Undoubtedly, he had his eye on the market for mass images. This interest in cheap forms of reproduction continued with the establishment of the Reading printing establishment, his work on photoglyphic engraving, and his venture with the marquis de Bassano to establish a business—the Société Calotype—for the commercial production of paper photographs in France.<sup>35</sup> Talbot's search for commercial returns on his scientific inquiries does not dovetail neatly with the image of the disinterested amateur gentleman.<sup>36</sup> In this respect, there is a great deal to be said for Mike Weaver's account of Talbot's almost hysterical insistence on his landed estate as a direct response to his ambiguous class position.<sup>37</sup> In any case, if Talbot was an amateur and a landed gentleman, he was clearly

also an intermittent capitalist entrepreneur, one constantly on the lookout for the main chance. I will not claim that he was *either* an amateur gent who dabbled in Egyptology, botany, philology, and general science (and a dozen other things besides) *or* a hard-nosed Gradgrind. Individuals with this "mixed corpus" of interests and values made English capitalism. Stripped of the narrative of "other countries," there were precious few ideologically pure capitalists to rear their ugly heads.<sup>38</sup>

Armstrong's tabulation of the themes of landed England in *The Pencil of Nature* is helpful, but her focus on Oxford as a signifier of the landed world indicates an important slippage in this account. Oxford probably provided Talbot with a convenient site for picturesque views. It may also have played a role as a geographic center in the life of his family, at least when in residence in Wiltshire.<sup>39</sup> But Talbot was a Cambridge man. The difference matters. Talbot's intellectual network centered on the "Cambridge men of science": his relationship with Sir John Herschel is well known; the Liberal radical Charles Babbage was a close friend; William Whewell was a member of his circle. His most important scientific connection outside of the Cambridge network was with the Edinburgh savant Sir David Brewster, who was a reform-oriented Whig with decided Utilitarian leanings. Talbot fits perfectly the profile of the British scientific establishment. Liberal in politics and religion, he was committed to "progress" and concerned with advancing science in the service of empire.<sup>40</sup> He was a moderate, reform-minded, broad-church Whig.<sup>41</sup> If he dabbled in science and had antiquarian interests, so did many of his scientific peers. (Herschel wrote poetry, for instance, while Whewell translated the classics and wrote theology.) The specialized intellectual division of labor was far from secure in the 1830s. For men like Talbot and Whewell, this professionalization of knowledge loomed as a disturbing phenomenon, because it challenged their ability to oversee scientific labor and threatened to fragment society. This does not mean, though, that they opposed capital accumulation.<sup>42</sup> Even Whewell, on the right of this formation, would declare for industrial wealth.<sup>43</sup> Talbot was a landed gent; what is at issue is the political significance that writers on photography regularly attribute to this class characterization.

It may be that the Swing riots, which chilled the marrow of landowners in the agricultural counties, provided an impetus for Talbot's desire to replace hand labor with a technical apparatus. Between the first months of 1830 and the end of 1832, there were numerous instances of machine burning, riot, assault, and whatnot in Wiltshire. Four Swing letters were posted in the county. Talbot's estate at Lacock was edged by these events, and in 1831,

there was a case of "furze burning" on his property. It is said that he intervened personally to prevent the incendiaries from being transported. As it was, they were found guilty and sentenced to one month's hard labor—or a fine of £1.<sup>44</sup> (Landed gents: as ever, generous to a fault!) We do not need this firsthand encounter with the motley proletariat, though, to explain Talbot's interest in dispensing with skill. In recent years, historians of science have paid a great deal of attention to the Cambridge network's role in transforming the labor process and redefining the social relations of science.

During the 1830s, skill was still one of the central battlefields in the capitalist struggle to transform the social relations of production. Skill gave workers some control over the labor process: it allowed them to negotiate the pace of work and right of entry into the trade. As long as work depended on skill, the master needed skilled workmen who were in a relatively strong position to strike a bargain over wages and conditions of labor. Skill was also a defining characteristic of laboring masculinity. The completion of an apprenticeship had long been understood to provide the right to work at a particular trade. Apprenticeship, at least in theory, guaranteed not only a livelihood but also a form of artisan independence. To possess a skill held out the promise of rising to head a workshop; moreover, it provided the opportunity to establish a family and to protect dependents. But in the artisans' world, skill was not an individual possession. Rather, it was a collective property that belonged to the trade. Deskilling is never a simple matter: it always produces new skills, and the introduction of machinery into the labor process often creates a new layer of better paid, if numerically fewer, workers.<sup>45</sup> In this case, though, it is clear that the capitalist market decisively decomposed the workshop culture. The introduction of the market into the multiple fields of work split the trades horizontally, pitting masters against their workmen, but also ripped vertically through the masters' alliance. Some small masters refused to break with the customs and practices of the workshop and lined up alongside those hostile to the incursions of the market. These men—referred to in the laboring community as "honourable masters"—sometimes turn up in the records as union officers, or among the lists of those arrested in times of riot and social unrest.

Many more small masters, however, were drawn by the market into a web of credit dependency. They accepted the homilies of political economy and attempted to foist new forms of work discipline on those in their employ. In this process of change, manufacturers and their ideologues redefined "property in skill" as an individual possession. This transformation was far from smooth. Male workers fought to defend not only their skills but

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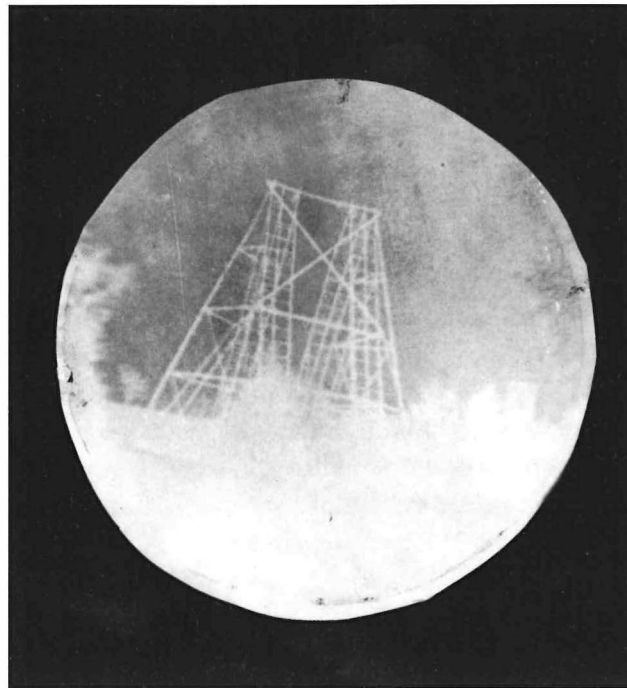
also their conception of skill.<sup>46</sup> At this time, any attack on skill involved an assault on male workers' traditions, culture, livelihood, and authority in the family. Intended or not, Talbot's tirade against skill cannot but take its place in this field of struggle. By stripping away skill, he implied not only a capitalist assault on the worker but also a demasculinization of the artisan. (This applies to those skilled artisans called "artists" as much as it does to cotton spinners, shoemakers, and other tradespeople.) The struggle to define who controlled technology was no less than a struggle to decide who would be called a man. In the history of the victors, men came to be viewed not as those who possessed a property in skill, but as those persons who owned and controlled a different kind of property—the kind that Talbot owned.

The men of science were centrally involved in the process of transforming work and deskilling labor. Babbage and Herschel were regular factory visitors, and the industrial organization of work and knowledge played an important role in their thought. It has been suggested that their conception of mind and knowledge was modeled on factory organization: like the factory, the mind had to be properly organized to process information.<sup>47</sup> (As one historian of science suggests, the chief target of these "factory apologists" was artisan dexterity.)<sup>48</sup> Their interest in continental mathematical analysis was central to this process, because analysis could be thought of as a kind of mental labor saving. In 1812 Babbage, Herschel, and George Peacock established the Analytical Society at Cambridge, which was dedicated to the reform of English mathematics and its role in the Cambridge Tripos. English mathematicians were, at this point, highly resistant to continental analysis; the mathematics studied at Cambridge was rooted in geometry and geometrical demonstration, culminating in the study of Newton's *Principia*. The members of the Analytical Society, in contrast, advocated the method of continental mathematics, particularly the work of Lagrange and Laplace. Since the middle of the previous century, this continental approach had proceeded by reducing mathematical problems to formal equations. The symbols in this system were not referential. Instead, they drew their value from their internal positions in the system. For the Analyticals, knowledge was predicated on abstract procedures.<sup>49</sup> Both Babbage and Herschel spoke of analysis in financial terms; both saw in this method the possibility of reordering society on the basis of "economic and rational principles, emancipated from tradition and the continuity of history." For these men, industrial reform needed algebraic analysis to speed up the operations of knowledge. They believed that the future health of industry depended on its employment of industrial analysts, and their own pure work would provide

the necessary condition for the emergence of these professionals.<sup>50</sup> Talbot worked in both forms of mathematics, but it only strains the argument a little to suggest that photography was an algebra of the picturesque—a form of differential calculus applied to a tourist aesthetic.

The division of labor occupied a fundamental place in the Cambridge network's attempts to reform British science. Whether the issue involved eradicating what became known as the "personal equation" in astronomical observation (different observers' recording different transit times for the same satellites), gathering material for projects of imperial mapping, or collecting data on the tides, the Cambridge reformers advocated a rigid division between observers and theorists.<sup>51</sup> As we will see, Babbage employed a strict division of labor in his work on the Difference Engine and the Analytical Engine. This version of the division of labor put into play by the men of science involved a double revision of theoretical authority. In *New Atlantis*, Francis Bacon had laid out a utopia of natural philosophy employing a division of labor in which the lowly work of fact gathering would provide the basis for inductive knowledge.<sup>52</sup> Herschel's account of observation, however, involved a transformation of Bacon's conception of fact gathering into a strict relation of subservience of observers to the elite of mathematically trained theorists. Unsupervised collecting of information came to be viewed, by some men of science, as a downright menace.<sup>53</sup> Just as Bacon's utopia was being transformed by the Cambridge men of science, so was Adam Smith's version of the division of labor. For Smith, the division of labor amounted to an allocation of particular skills among those most suited to perform them. In one sense, Smith's account of the division of labor could be thought of as a distribution of skill in which the divided functions complemented one another in the interests of the social whole; it allowed diverse geniuses to be of service to one another. Even Smith's infamous distinction between porters and philosophers was imagined to result in mutual benefit. The existence of porters enabled philosophers to get on with thinking without having to worry about their baggage—and, simultaneously, philosophers relieved porters of the burden of thinking.<sup>54</sup> Herschel and Babbage, however, wanted to cast Smith's market against the restrictions and monopolies represented by the Royal Society, and in the process they abandoned (for a time) his gentlemanly conception of disinterest in favor of a public and commercial role for science.<sup>55</sup> That is to say, in their hands, labor was not simply divided: it was also subjected to a rigid hierarchical organization. Theory and abstraction were frequently used to distance professional men from those who were supposedly debased

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Sir John Herschel,  
*Herschel's Telescope*,  
c. 1839, salt print,  
diameter approx. 9.9 cm.  
Courtesy National  
Museum of Photography,  
Film and Television

by manual labor. It separated philosophers from porters, anatomists from surgeons, doctors from midwives, and artists from copyists. Theory also differentiated men like Ure and Babbage from “mere” engineers, however skilled the latter might be.<sup>56</sup> Observers would occupy the lower position in this topography. Subjected to moral and social discipline, they would be placed under close control, either monitored by supervisors or regulated by mechanical means. George Airy—Astronomer Royal, ex-Cambridge mathematician, and sometime correspondent of Talbot—reorganized the Greenwich Observatory on these principles. His regime was characterized at the time as a “sweating” of observers.<sup>57</sup>

Charles Babbage’s work on his calculating engines serves here as an important condensation of these themes. Babbage saw his engines as a means to speed up mental labor further by pursuing Herschel’s dream of calculations “executed by steam.”<sup>58</sup> He did so, as Lorraine Daston suggests, by misreading de Prony’s application of the division of labor to the task of producing logarithmic and trigonometric tables. Babbage interpreted this project through the ideological filter of the Manchester cotton mill and, in so doing, translated de Prony’s concern with the luxury trades into its opposite: a commitment to efficiency and productivity.<sup>59</sup> For Babbage,

knowledge—or mental labor—was the driving force of the economy.<sup>60</sup> According to Peter Linebaugh, “by the middle of the 1820s knowledge had become an aspect of capitalist authority rather than the ‘art and mystery’ of artisan law.”<sup>61</sup> The point here is that the skills and knowledges of the trades were being transferred from the artisan to the control of the capitalist producer and his intellectual agents. Whether this process was definitively achieved by the 1820s, as Linebaugh suggests, is an open question. (Arguably, capitalism can never complete this process, beginning its own labor of Sisypheus with every new technology.) At any rate, Babbage was still worrying over this problem in the middle of the 1830s. In his brilliant work on Babbage, Simon Schaffer has shown that his labor on the calculating engines and his writing on the factory were part of a project concerned with transferring control of the labor process from artisans to men of science, like himself.<sup>62</sup> For Babbage, the social engine of the machine economy required scientific knowledge to ensure its smooth operation.<sup>63</sup> This conception located men like him at the heart of the beast. *On the Economy of Machinery and Manufactures* can be seen both as a gathering of intelligence and as an argument for “knowing machines” that would replace skill and knowledge. As Babbage put it somewhat later, the latest machines substituted “not merely for the skill of the human hand” but also relieved the “human intellect.”<sup>64</sup> Schaffer demonstrates that the construction of the (failed) calculating engines sought to substitute machine labor for the labor of human calculators, but their construction also entailed the disciplining of the skilled Lambeth machinists who worked on them. A struggle over the ownership and control of the machinists’ specialized knowledge and skills ensued. As far as Babbage was concerned, the engines were “the absolute creations of [his] mind.”<sup>65</sup> The master machinist Joseph Clement and his men, employed by Babbage, saw the matter differently. Schaffer argues that the project for calculating engines collapsed under the pressure from these challenges. Babbage’s engines were intended to substitute for human capacities, but they also focused intelligence and control on him rather than the skilled workers who constructed them.

Babbage’s account of factory work involves subordinating artisan skill to the strict control of the manufacturer. The division of labor was central to this process, because it cast workers as “hands” conducting work under the direction of a directing intelligence, whether of the manufacturer or the man of science. The deskilling of the worker accrued intelligence to these other men. Babbage and the men of science understood the key role that the steam engine played in this process:

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It is the same "giant arm" which twists "the largest cable," that spins from the cotton plant an "almost gossamer thread." Obedient to the hand which called into action its resistless powers, it contends with the ocean and the storm, and rides triumphant through dangers and difficulties unattempted by the older modes of navigation. It is the same engine that, in its more regulated action, weaves the canvass it may one day supersede; or, with almost fairy fingers, entwines the meshes of the most delicate fabric that adorns the female form.<sup>66</sup>

The machine obeyed the hand that set it in motion—that is, the hand that belonged to the manufacturer, not to those who actually "called" it "into action." The engine, unlike the skilled worker, was "resistless" before the intelligence and will of this controlling "hand." It ought to be apparent how much this conception mirrors Talbot's account of photography. An apparatus substitutes for recalcitrant skill. The appeal to natural magic—to "fairy pictures" and "fairy fingers"—is directly linked, in each case, to the suppression or "subsumption" of artisan skill.<sup>67</sup>

There was, though, no simple consensus on skill among the men of science. Babbage and Herschel appear to have defined skill as a collective property, whereas Whewell believed it to be the exclusive possession of the individual genius.<sup>68</sup> Airy, Babbage, and Herschel favored a strict hierarchy of labor as a way to dispense with artisan skill; Ure, in contrast, opted for a technical solution to reliance on artisan skill. What the men of science did agree on was that artisan skill had to be controlled, or broken, in the interests of efficient organization, abundant production, and speedy knowledge. Intelligence and control in the labor process thus became a property of the technical specialist. The subordination of the worker produced an eye and a voice for men of science.<sup>69</sup>

Talbot's response to the problem of refractory skill, in fact, came closer to Ure's solution than to that pursued by the men of science in his immediate circle. Talbot did not want to organize teams of artists; the supervisory hierarchy of the division of labor played no significant part in his thought or practice. It is worth contemplating the alternative strategy of dividing labor in the making of drawings. This may seem another fanciful Marxist notion, but, after all, if the work of mathematical calculators could be restructured on industrial lines, then why not that of artists? Artistic labor was *not* organized in this fashion only because Talbot's (and Daguerre's) solution to this problem of skill was technical. He wanted an apparatus to substitute for manual labor.<sup>70</sup> To draw this out we will need to return, via Marx, to Ure.

Ure's text played a key role in Marx's formulation of his important distinction between "formal subsumption" and the "real subsumption" of labor under capital.<sup>71</sup> According to Marx, the "prime mover" is not simply an "automaton," but an "autocrat." Machinery, he argued, not only represented a form of superior competition to the worker: it was "a power inimical to him," a weapon of the manufacturer for "repressing strikes."<sup>72</sup> The steam engine would be central to this process, for, according to Ure, while it made work less "irksome" than manual labor, it also prevented workers from lagging or loitering. Ure saw the steam engine and the factory not just as forces of production but also as forms of labor discipline. This, for Ure, was the function of the factory, of the machine, of instrumental science—to subsume labor under the full control of capital. On the basis of this account, Marx understood that the forces of production could not be "neutral."<sup>73</sup>

The image of social war that pervades Ure's book is familiar enough, but it is worth noting another movement of this text: every time labor is disciplined and defeated, displaced or broken, then abundance flows through his pages.<sup>74</sup> There is a utopia at work here. It is perhaps the strangest of literary forms—a utopia of capital.<sup>75</sup> This is a utopia of commodities produced without labor, of profit without wages, of machines without workers. Ure's text figures the paradise capitalism might become if it could dispense with what he called its "unruly lower members."<sup>76</sup> Ure repeatedly depicts working-class masculinity as an obstruction to the desires of middle-class men. Workers in Ure's imagination are always male, and one of his key objectives entailed feminizing the factory. Workingwomen and machines are interchangeable in his text: both displace unruly masculinity and passively serve the master's desires. Because they fall below the threshold of visibility, for Ure, workingwomen were synonymous with automatic production. Women were akin to machines—mere bodies without a will.

This autogenic vision cannot be separated from a gendered purview. This is not because the gaze is "penetrative"—though it may be that as well—but because autogenesis implies a model of reproduction. Talbot frequently referred to the "birth" of photography, and many subsequent writers have acknowledged his paternity and called him "Father." The literature of photography, then and now, is dense with these gendered tropes.<sup>77</sup> We easily recognize the metaphors of a female nature stripped of her "veil" and her "enigma" uncovered, or "penetrated," or of the male scientist's attempts to usurp female reproductive power and create life—or death—from within himself.<sup>78</sup> But we may also imagine here a kind of asexual reproduction that entirely dispenses with the other. Ure, for instance, appears to envisage

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autogenic production as a kind of asexual generation, one that would circumvent the Malthusian nightmare by enabling capitalist production without the worker's reproduction. In Ure's fantasy of the self-acting apparatus, things beget things and the problem of the "degenerate" working population is thus solved. This is a Herculean vision, and similar elements emerge in Talbot's invention narratives. Talbot certainly saw photographic drawing as a kind of masculinization of reproduction. When he came to consider the mass production of paper images in France, like Ure, he envisaged a manufactory staffed entirely by women and children.<sup>79</sup> In the process, however, Talbot released a troubling gothic element of monstrous reproduction (a "Father-Thing") into the stories of photography.<sup>80</sup>

The idea of self-acting machines constituted one of the deep figures of the Victorian imagination. Everything from mules to trowels was given a self-acting form.<sup>81</sup> This fantasy of autogenesis sets production free from the hindrance of the working class and, in the process, unleashes the possibility of a frenzy of making. Wonder runs through Ure's text. Indeed, astonishment and childish delight frequently accompany his description of machines. Utopian desire—whether for the basic necessity of food or for more luxurious items of consumption—acts to suspend the reality of loss by stockpiling images of endowment.<sup>82</sup> Utopia hinges on the signs of presence but it connects them, in a chain of metonymic contiguity, to a determinate absence. That is to say, surplus works to block out, or at least suspend, the threat posed to the subject by lack or absence. The utopian imagination, like psychic fetishism—or commodity fetishism—hinges on an *idée fixe*, which defensively freezes thought.<sup>83</sup> Ure's model of abundance gives us an account of self-expanding value that runs close to revelry. *The Philosophy of Manufactures*, with its particular constellation of abundance and autogenesis, probably comes as close as any capitalist ideologue has ever managed to a fully Dionysian moment.

The capitalist dream of autogenesis might be given another name: "the fetishism of commodities." In the logic of the commodity form, things possess creative and generative power; they appear to create things. In binding—or perhaps castrating—the "unruly lower members," Ure could depict mechanization as a supersession of working-class men. Ure's utopia is one made for capital by the machine, and, as such, wide-eyed amazement surrounds the new messiah: "The card-making machine of Mr. Dyer, at Manchester, is one of the most complete automatons to which manufactures have given birth. It splits the leather, pierces it, forms the teeth, and implants them, with precision and rapidity. Curious strangers, who are permitted to inspect

it, through the liberality of the proprietor, never fail to express delight and astonishment at its operation."<sup>84</sup> There is little surprise that these visitors experienced "astonishment" and "delight," as the worker is absent from this scene, and the machine appears to accomplish these extraordinary feats by itself. For the external and detached beholder announced by this passage, the autogenic apparatus creates a pattern of identification with the process of industrial production. And in fixing fascination on the self-acting machine, the factory appears as a benign and progressive space, one unhindered by the "unruly lower members" of the laboring community.<sup>85</sup>

Talbot's account of the emergence of photography runs remarkably close to this account of the factory. His narrative is dense with these utopian figures of autogenesis. As we have seen, he felt that the camera obscura and camera lucida might discipline the artist, but they nevertheless allowed his or her skill to remain central to the production of images. It might be said that these drawing machines merely instigated a formal subsumption of the sketcher's labor. In contrast, photogenic drawing allowed skill, and the subject who possessed it, to be dispensed with—and photography, for Talbot at least, implemented a real subsumption of artistic work. English law, of course, agreed with him, defining ownership of the image as the property not of its maker but as that of the owner of capital.

In photogenic drawings, Talbot seemed to believe that the picture produced itself, or that the object depicted did so itself. Both conceptions circumvented artistic skill. If the idea of the picture's self-creation played a significant role in Talbot's experimental writings, there is also another method of image generation that sits alongside this fantasy: Talbot regularly attributed the agency for his images to the sun. Indeed, Snyder argues that this solar agency provided the dominant mode of imagining photography in the 1840s.<sup>86</sup> References to "sun pictures," "pictures painted by light," and "pencils of the sun" abound in the early literature on photography. The prominence of solar agency in these texts would seem to call into question my constellation of Talbot and Ure.<sup>87</sup> It is, though, not at all clear how we should read this solar figuration. One possibility, one that I want to hang on to, is that the men of science thought of the agency of the sun in the same way that they conceived of steam power. Like steam, the sun was a natural force that could be harnessed to drive an apparatus. (To say that cotton was manufactured by steam does not involve denying that machines were central to this process: this applies both to the "prime mover" as well as to spinning and weaving machines.) This view of solar energy as a specifically industrial force is never made explicit in Talbot's writing, but it

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is certainly on display in the thought of Sir David Brewster and Robert Hunt, whose work I will consider in the second half of this chapter. What unites these various autogenic conceptions—pictures make themselves; the apparatus draws the scene; objects draw their own likeness; the sun makes the picture; the self-acting apparatus makes the commodity—is a powerful homologous displacement of human agency from the scene of production. Talbot and the men of science move unsystematically between these different formulations, and the figuration of their texts is, as a consequence, frequently unstable. But in each instance, skill is the central (negative) term. To paraphrase Schaffer, to see these phenomena as capable of agency “hinges on the cultural invisibility of the human skills which accompany them.”<sup>88</sup> Perhaps the relation between these conceptions is simply a homology, but it seems worth pursuing. Whether the picture made itself, or whether the sun made it, photography seemed destined to displace labor and destroy artists’ monopoly on skill.

#### SUBJECTS AND OBJECTIVITY

Despite the immediate parallels between Talbot’s conception of photography and Ure’s description of the cotton factory, there is a contradiction, or what appears to be one, in Talbot’s account that is absent from Ure’s version of autogenic production. For Ure, the skill to be displaced, or subsumed, unequivocally belonged to another. But Talbot’s description of photography, as I have suggested, moves between depicting skill as the property of artists and the attribute of amateurs. In *The Pencil of Nature* and *Some Account of the Art of Photogenic Drawing*, it seems as if artistic skill was to be abolished in its entirety. In 1841, responding to criticisms that photography substitutes mechanical labor for talent, Talbot noted: “I find that in this, as in most other things, there is ample room for the experience of skill and judgment.”<sup>89</sup> By the time he wrote his 1877 retrospective account of his discovery, this second perspective had assumed preeminence in his thought. This is not surprising; this view had assumed a central place in the photographic imagination during the 1860s. Even at this late date, however, Talbot still claimed that no “manual process” could “compare with the truth and fidelity” of an image produced by “solar light.”<sup>90</sup> If the artist was to be left in place in 1877, Talbot’s essay also suggested that the photograph provided a copy of reality, one that even the most skilled and patient artist could not match. There is no clear or coherent position here. What is at stake in Talbot’s abolition of artistic skill hinges on what we take him to mean by the word “art”—and

this question is far more difficult than many historians of photography have supposed. The word “art,” at this time, referred to the skilled trades and not merely to “Fine Art.” Photography could thus be called “art” without this necessarily implying “Art.” Talbot occasionally writes “art” in this sense. Moreover, he sometimes characterizes art (Fine Art?) solely as copying. At other times he appears inclined to admit the importance of judgment, taste, and picturesque precepts. His texts oscillate between these different conceptions. The meaning of Talbot’s text often hinges on the extent to which he writes himself into his metaphors of making.

Insofar as Talbot imagined this process enacted on the artist, it represented a direct extension of Ure’s themes; when applied to amateur sketchers, like himself, the apparatus disciplined and mechanized a bourgeois subject. The fantasies of order appear here to run riot and turn the bourgeois subject into an autogenic machine. Middle-class attempts to strip control of the labor process from artisanal workers often involved seeing workers as nothing more than “hands.”<sup>91</sup> But the “mechanization” of the bourgeois subject has very different implications, and Talbot’s conception of the autogenic apparatus should, I think, be seen as part of a strategy of “objectivity.” This position relates to the deskilling of the labor process directly, because it also constructs the man of science as a “disinterested” specialist. The relation of autogenesis and objectivity is like looking through Brewster’s kaleidoscope: turn the device this way and one pattern emerges into view; turn it another, and you see a different configuration.

In a series of important essays (one co-authored with Peter Galison), Daston has worked out the lineaments of a history of scientific objectivity. We tend to think of objectivity as an essential component in the toolkit of truth, but, as one historian has observed, for the history of objectivity, “truth is beside the point.”<sup>92</sup> Modern objectivity does not, in any direct sense, entail ontological claims. Rather, it involves a rhetorical construction of the observing subject.<sup>93</sup> Objectivity is—if this is not an oxymoron—an engine of subjectivity. It is a negative concept, one that draws its meanings and values from its rejection of varieties of subjectivity and, in the process, constructs a new subjectivity for the men of science. Daston and Galison have argued that scientists in the nineteenth century wanted to eradicate individual viewpoints—a process, they argue, that came to fruition in the latter part of the century. As they put it, during this period, “subjectivity came to be seen as *dangerously* subjective.”<sup>94</sup>

Daston has focused on several key aspects of this new culture of objectivity. For my purposes, the important categories are what she calls “aper-

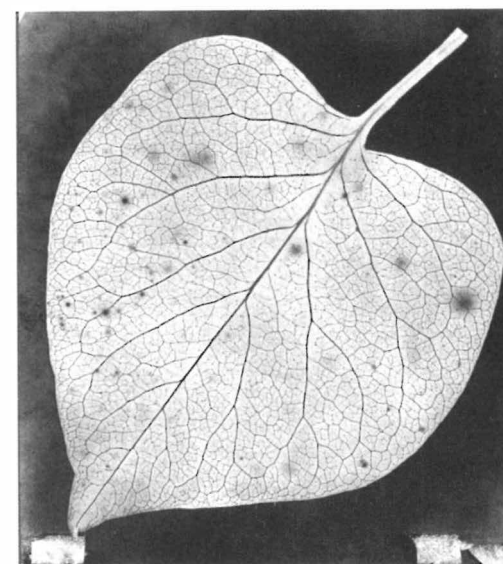
“fairy pictures”  
and “fairy fingers”

spectival objectivity” and “mechanical objectivity.” Aperspectival objectivity seeks to eliminate individual “idiosyncrasies” by eradicating or minimizing the mediating presence of the individual observer. The model of aperspectival objectivity calls for the observer to eliminate all traces of him- or herself from the scene of observation, because the self is deemed to be contingent and particular: it requires self-effacement, restraint, and control. This conception can be called aperspectival because it is a “view from nowhere.”<sup>95</sup>

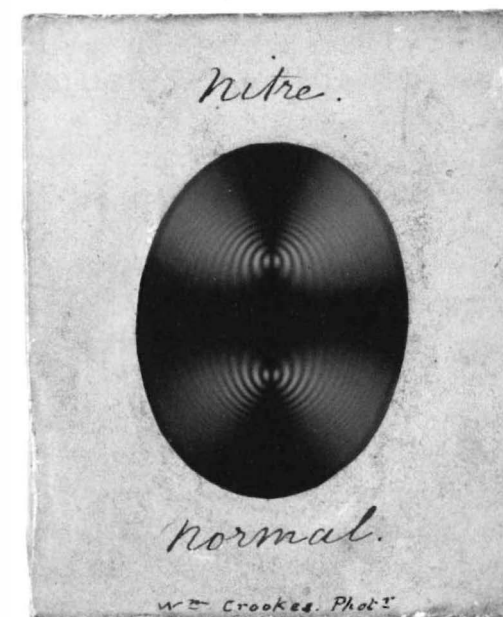
In mechanical objectivity—in many ways, an extension of the aperspectival position—a technical apparatus is employed in observation in order to suppress the perspectival “universal human propensity to judge and to aestheticize.”<sup>96</sup> Technical recording devices allowed observers to argue that they had not imposed themselves on their data. They could then claim, as Shapin and Schaffer suggest, “it is not I who says this; it is the machine.”<sup>97</sup> Talbot, for instance, claimed that his process created a “picture, divested of the ideas that accompany it.”<sup>98</sup> Imagination and judgment (like skill) were viewed, by the men of science, to be “unruly.” Both forms of objectivity share a hostility to idiosyncrasy, the personal viewpoint, local particularities, and (in theory at least) theory projection. Scientific objectivity, in contrast, privileges the standard, the universal, and the generally applicable. What emerges from these practices of observation is a paradoxical subjecthood predicated on its own absence. This was a disciplined, or moralized, self that shook off the character flaws of “self-indulgence, impatience, partiality for one’s own prettiest ideas, sloth, even dishonesty.”<sup>99</sup> The employment of mechanical recording devices served this end very well, and if they were self-acting, then all the better. Because they did not seem to require human labor, photographs played an important role in training or disciplining the eye of the observer.<sup>100</sup> This was also a subjectivity that glorified “the plodding reliability of the bourgeois rather than the moody brilliance of the genius.”<sup>101</sup>

The modern values associated with objectivity emerged as Enlightenment intellectuals began to tackle “the problem of reconciling individual viewpoints.” (In this context, Daston mentions David Hume, the Earl of Shaftesbury, and Adam Smith.)<sup>102</sup> That is, objectivity developed as intellectuals confronted the division of labor and the splintering of the bourgeois public sphere.<sup>103</sup> At this point, Daston argues, “detachment, impartiality, disinterestedness, even self-effacement” were all “enlisted to make shared, public knowledge possible.”<sup>104</sup> The observing subject displaced himself from the scene of observation and, by stepping outside of interest, claimed to speak for all.

Prior to the emergence of a modern scientific culture in the nineteenth century, verification of scientific findings—even those of an experimental



William Henry Fox Talbot,  
*Single Leaf*, c. 1840,  
photogenic drawing  
negative, 8.6 × 8.9 cm.  
Courtesy National  
Museum of Photography,  
Film and Television



William Crookes, *Nitre  
Normal: Photographic  
Image of an Interface  
Pattern*, before 1854,  
collodion on glass  
negative, 5.2 × 6.3 cm.  
Courtesy National  
Museum of Photography,  
Film and Television

nature—was predicated on trust, which, in turn, hinged on gentlemanly status. A gentleman's word—"his bond"—was preferred to firsthand evidence when it emanated from the motley crew.<sup>105</sup> Daston argues that during the nineteenth century, the massive increase in the number of scientific workers and their wide geographic distribution "undermined the old rules of trust and trustworthiness." Science became impersonal. The development of modern "communicative science," which emphasizes the ability to share and test results, required the elimination of all idiosyncrasies and contingent factors.<sup>106</sup>

It is central to Daston's argument that the principal casualty of this transformation in the culture of science was not trust, but skill. She suggests that skill came to be seen as a problem in the nineteenth century for two reasons. First, skill was "rare and expensive," not readily available or equally distributed; second, it was not easily communicable, because its results could only be replicated with enormous effort on the part of less-skilled workers in science. Science came to need cheap and plentiful labor. Enter Babbage and his kind. Daston tends to read skill as "aristocratic," but the skill the men of science frequently came up against was the property of artisans.<sup>107</sup> The interests of men of science in a hierarchical version of the division of labor and deskilling suggest a third key reason for skill's problematic status: the "refractory hand of labour" was likely to resist this restructuring and speeding up. As skill became a defensive rampart in a class war, the men of science set about constructing siege engines. And for them, photography would be one such infernal machine.

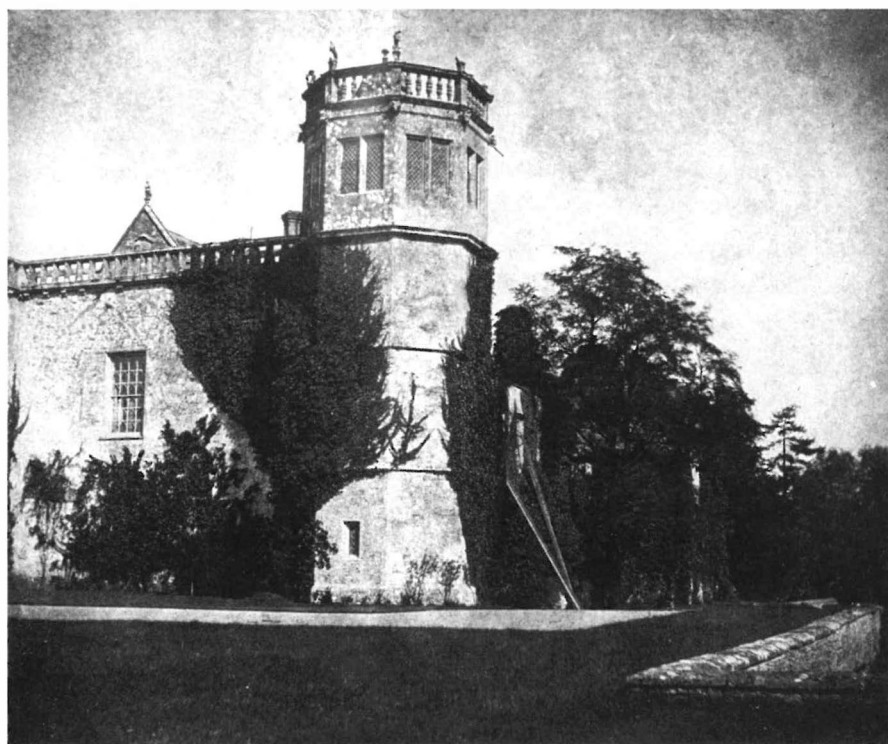
It particularly rankled the men of science that they often depended on artists to produce the images they required. Drawing played the role of handmaiden to natural philosophy, but, as Daston argues, disagreements between "scientists" and artists "about what was seen and how to draw it were commonplace in the sciences of the eye."<sup>108</sup> These disagreements formed a special case in the broader distinction between competent and incompetent observers. Scientific atlas makers relied on artists for their images, but they constantly encountered the artists' personal perspective and aesthetic criteria.<sup>109</sup> Mechanical objectivity would discipline the artist by substituting a technical vision for his taste—or it would substitute for him altogether. Daston and Galison are keen to argue that photography was an extension of the practices of mechanical objectivity, not their founding condition. Nevertheless, they suggest, photography became the "emblem" of mechanical objectivity.<sup>110</sup> The automatic apparatus substituted for the defective human observer, who tired, slackened, lost concentration, and "whose

hand trembled." In this way, the photographic apparatus substituted for "the meddling, weary artist."<sup>111</sup> The precision of the photograph was significant in this respect because it stood in contrast to ambiguity, uncertainty, messiness, and unreliability.<sup>112</sup> Photographs were deemed accurate because they were thought to emerge without human interference. From the perspective of aperspectival objectivity, a machine—the camera—seemed to provide an image that preceded interpretation.<sup>113</sup> We are obviously not that far from Talbot, who, in 1839, claimed that "the hand which is liable to err from the true outline" could not be "compared with the truth and fidelity" of photographic drawing.<sup>114</sup>

Throughout these essays, Daston argues that a fully fledged self-disciplining, or moralizing, objectivity in science emerged only in the *late* nineteenth century. The themes discussed in these histories of objectivity were already in place, however, in Talbot's discovery writings and in the texts by the men of science. Moreover, as I will argue in Chapter 3, Daston and Galison read the "mechanical" in photography much too straightforwardly as "machine." They also want to separate out mechanical objectivity from aperspectival objectivity, explicitly arguing that photography cannot be aperspectival because it is "radically perspectival." Photography is "beatified," they suggest, by mechanical objectivity and not aperspectival objectivity.<sup>115</sup> But it is not at all clear that the shift from perspective as metaphor to the camera as a perspectival machine disqualifies the photograph from aperspectival objectivity: the perspectival/aperspectival distinction is a metaphoric conception of the objective observer. And, presumably, its beholder could still construct an aperspectival viewing position for him- or herself. The distinction between aperspectival and mechanical objectivity is, in any case, probably no more than a heuristic device. Despite these criticisms, Daston's account of scientific objectivity, particularly when taken alongside a consideration of the restructuring of the labor process, seems to provide a key frame for reading Talbot's desire to eradicate skill and to substitute a mechanical apparatus for the artist.<sup>116</sup>

As we have seen, Talbot's account of the emergence of photography always displaces the photographer from the scene. The apparatus, or the sun, or the objects themselves are then imagined to act alone. Like George Airy, Talbot was replacing "eye-and-ear" methods of observation with a technical solution that disciplined the observer.<sup>117</sup> That solution was to employ a recording apparatus to control his own trembling hand and to displace the need for a specialized skill. The self-acting photographic apparatus, which had seemingly suppressed the unruly hand, appeared to secure an accurate

"fairy pictures"  
and "fairy fingers"



William Henry Fox Talbot, *Sharrington's Tower, Lacock Abbey*, before February 1845, salt print from a calotype negative, 22.4 × 18.6 cm. Plate XIX of *The Pencil of Nature* (London: Longman, Brown, Green and Longman's, 1844). Courtesy National Museum of Photography, Film and Television

and faithful transcription of nature.<sup>118</sup> But, pace Daston and Galison, this was also an aperspectival move, one that removed not only the artist but also the man of science himself from the role of authorship. Whereas the metonymic substitution of hand for body and mind produced an occlusion with dire consequences for the worker, here, the same metonym has a truth effect. Ultimately, the apparent contradiction in Talbot's account—which seems to turn on a choice between substituting for the artist or the amateur self—dissolves in the new practices of objectivity. Photography may have done both for him, but it did so in a fashion that allowed him, as a man of science, to reemerge in a position of authority. This was, after all, a form of discipline radically unlike that applied to the worker. Mechanization subjects the worker to an external authority, but aperspectival objectivity enhances the authority of the man of science, who emerges seemingly beyond social interest. (“Nowhere” could be a highly desirable address.) Talbot's “mechanisation” of the middle-class self thus reinstates that subject

in a controlling position.<sup>119</sup> Talbot was, no doubt, happy to subordinate his hands to his mind.

In “the production of beautiful and correct drawings without the aid of the artist” images emerge immediately, and with a compelling force, because neither subjectivity nor skill intervene between the maker (or the viewer) and the scene.<sup>120</sup> Talbot's photographic objectivity was a utopia of autogenesis, just as autogenesis was a utopia of objectivity; the self-acting apparatus conjured up a world in which nature could be induced to reveal “herself” directly to his inquiring gaze.<sup>121</sup> It is in this vein that Talbot could, phantasmagorically, describe Lacock Abbey as the first building “that was ever yet known *to have drawn its own picture*.”<sup>122</sup> The displacement of the laboring body allowed the free-roaming gaze of the man of science to come to the fore.

In *Some 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*—and the title of this piece is surely revealing—Talbot argued that it is natural to associate complexity with the idea of intense labor, but with photogenic drawing, an image that would take the most skilled artist days, or weeks, can be done in a few seconds. In doing so, Talbot appealed to natural magic: with his invention, he suggests, “the most transitory of things, a shadow, the proverbial emblem of all that is fleeting and momentary, may be fettered by spells of our ‘natural magic.’”<sup>123</sup> For Talbot and others, magic was a favorite metaphor for describing early photography, for trying to grasp the way in which objects seemed to reproduce themselves on paper as if of their own volition. Natural magic provided additional metaphors to the existing series that displaced labor from the scene of production. In their use of this figuration, photographic commentators shared a central image with Ure, whose autogenic utopia also centered on the magical self-production of things. Magic, necromancy, spells, and alchemy are figures that the photographic literature also shares with Marx, for whom they provide a language with which to describe the strange contortions that things undergo when they are subject to the law of value—that is, when they become commodities. Here, the photographic commodity appears to stand on its head and evolves, out of its grotesque silver brain, ideas “far more wonderful than ‘table-turning’ ever was.”<sup>124</sup> But it is important to grasp that the fetishism of commodities, as much as it is an account of our relation to things—and it is certainly this—is also a description of a social process of observation. As one commentator put it in 1839 (sounding like a reader of Ure), the effects of photography were perfectly magical, so that they did not even require the operator's presence.<sup>125</sup> Photographic objectivity, embodied in the docu-

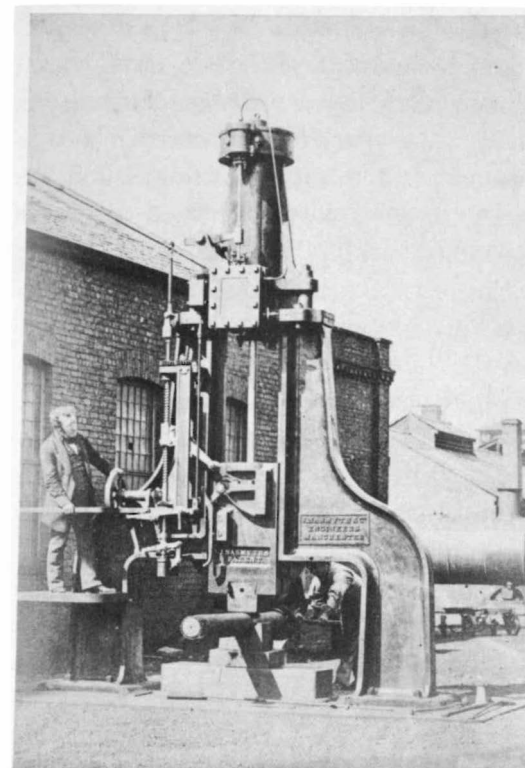
“fairy pictures”  
and “fairy fingers”

ment, emerged at the juncture where two very different kinds of maker were occluded from the process of manufacture: a gentleman in one register, and unruly workers in another. The two occlusions are tied up with one another, but their consequences are far from equal.

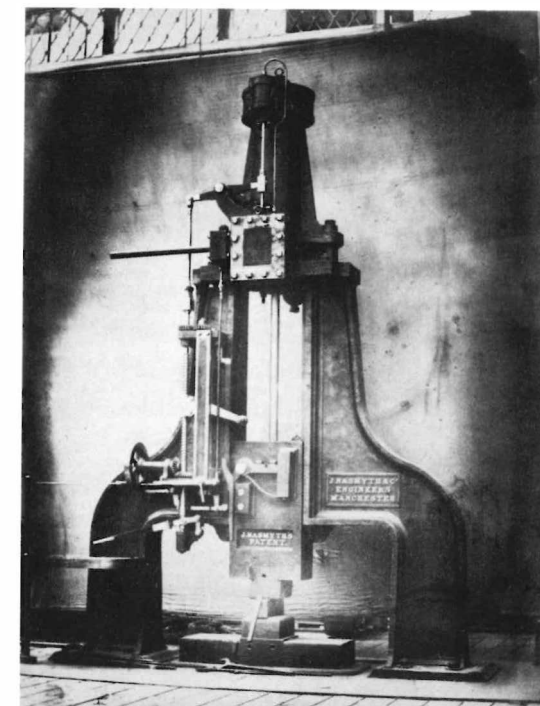
#### THE STEAM ENGINE OF THE FINE ARTS

During the 1840s and the 1850s, the autogenic utopia figured regularly in discussions of photography. It was not uncommon, at this time, to see references to "Miniatures by Machinery" and the like.<sup>126</sup> As a way into this literature, I want to examine Sir David Brewster's essay "Photogenic Drawing, or Drawing by the Agency of Light," which appeared in the *Edinburgh Review* in 1843.<sup>127</sup> This essay is particularly important because it represents a key revision of Talbot's project and significantly inflects the emplotments of the sun in early photographic literature.

Brewster, described by Whewell as "the Kepler of optics," was one of the leading experimentalists of the age.<sup>128</sup> The inventor of the kaleidoscope and the lenticular stereoscope, he was a partisan—perhaps, at this time, *the* partisan—of the particle theory of light.<sup>129</sup> He also served as a Great Exhibition juror, contributed to more than a dozen leading periodicals, and edited the eighteen-volume *Edinburgh Encyclopaedia* as well as four journals.<sup>130</sup> Brewster was hostile to natural magic and took another path.<sup>131</sup> In this essay, he was preoccupied with "progress," which, he assumed, was divinely ordained. Progress, he thought, appeared in two forms. On the one hand, there was progress toward spiritual perfection; on the other, a material progress served as a kind of index for God's intention on earth. Brewster was a religious evangelical who was unsympathetic to the mathematical physics propounded by the Cambridge circle, but he shared this conception of natural theology with the scientific elite of the period.<sup>132</sup> Natural theology, which suggested that the study of nature revealed God's hand and demonstrated the moral order underpinning the universe, was an important plank in the scientific ideology of the period. It is not difficult to see the social impetus of Brewster's version of this doctrine, which yokes the two models of development: those who resist progress fly in the face of "the supreme authority." "From these general views," he wrote, "it is a corollary not to be questioned, that when great inventions and discoveries in the arts and sciences either abridge or supersede labor—when they create new products, or interfere with old ones—they are not on these accounts to be abandoned."<sup>133</sup> It ought to be apparent that this passage represents an explicit continuation



J. B. Dancer, *Nasmyth and His Steam Hammer*, c. 1855, salt print. Courtesy National Museum of Photography, Film and Television



Hugh Owen/G. Ferrier/N. Henneman, *Steam Hammer*, in *Exhibition of the Works of All Nations, 1851: Reports by the Juries on the Subjects in the Thirty Classes into which the Exhibition Was Divided* (London: Spicer Brothers, 1852), 426ff. Courtesy National Museum of Photography, Film and Television

of the project we encountered earlier in this chapter—that of subsuming the worker under the control of capital. Brewster, however, inflected this argument in a very peculiar manner. Resistance to progress, he argued, whether in the form of a “tax [on] inventions and knowledge” or “the blind fury of a mob” that “may stop or destroy machinery,” is doomed in advance, because “cupidity, fanaticism, and rage, have counter checks” built into them. These “counter checks,” he insisted, would always dash those who opposed spiritual and material progress. Brewster’s essay introduced a fantasy of Luddism into the discussion of photography, and with this image, he registered a significant shift in the way the men of science viewed photographs.

The presence of General Ludd in Brewster’s text is directly related to the one human activity that he thought had to be excused from taking the straight road to progress: fine art. Painting and sculpture, he said, “advanced and receded” without “any very adequate cause.” Who would be rash enough, he argued, to suggest that Reynolds or Lawrence had “surpassed” Apelles and Zeuxis, “and still more so that Praxiteles and Phidias must have yielded the palm to Canova and Chantrey”?<sup>134</sup> Fine art, in this narrative, appears to stand as an exception to the march of development, but Brewster was convinced that “extraordinary inventions and discoveries” would provide an “impulse” to this area of endeavor, as they had to so many others.<sup>135</sup> James Watt, we are told, had already developed a machine for “the art of multiplying statues by machinery”—though Brewster felt that Watt had been surpassed by photography, which was “as great a step in the fine arts, as the steam-engine was in the mechanical arts.” (The mechanization of artistic labor was in the air: methods for producing mechanical paintings had been concocted, in the later eighteenth century, by both Matthew Boulton and Joseph Booth. The latter made a direct analogy with the Lancashire cotton factories.)<sup>136</sup> And again, Talbot’s interests were echoed by those of Babage, who also recorded a number of drawing machines in use. He described automata exhibited in the Strand—the Prosopographus and the Corinthian Maid—that could, by means of a pantograph attached to a camera lucida, execute the likeness of sitters.<sup>137</sup> Not surprisingly, Brewster felt certain that photography would “take the highest rank among the inventions of the present age.”

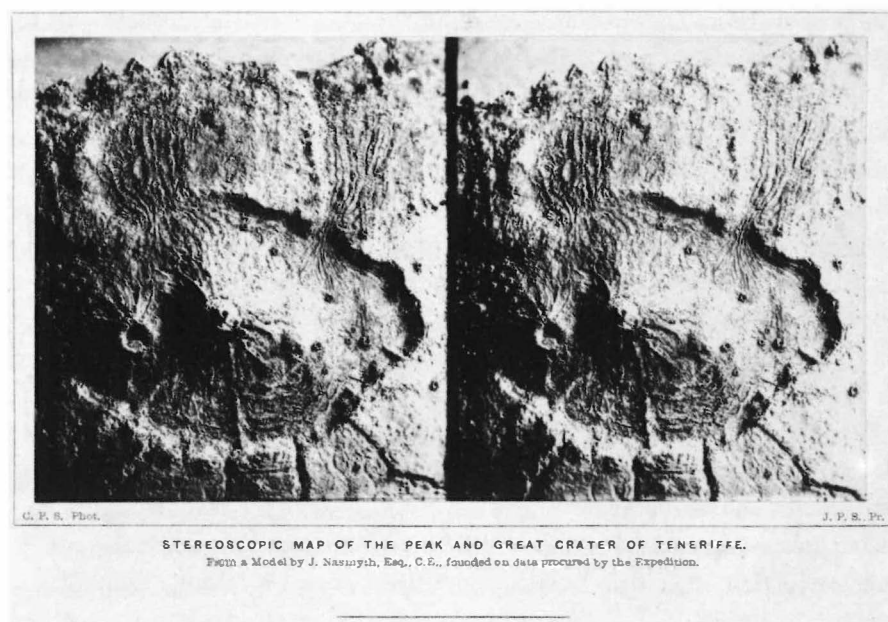
The image of the steam engine in this argument is extraordinary. Photography emerges into this tale of progress as an industrial process for obtaining “perfect representation of all objects.” It also suggests that steam and the sun are analogous forms of energy that can be harnessed to drive machines.<sup>138</sup> Photography was interpreted as the steam engine of the fine arts not only

because of the autogenic reproduction of things but also because, by mechanizing the production of the image, it prevented the kind of artistic decline that resulted from differences in skill and talent. Photography would set the pace for artistic labor, just as Ure’s steam engine regulated work in the cotton mill. As Lady Eastlake put it, with the invention of photography, the sun had ceased to be a “sluggard” and had become “a drudge in a twelve-hours’ factory.”<sup>139</sup> Mechanical objectivity was set to transform art—or so it seemed. At this point in his narrative, though, Brewster suspended the image of the ideal that his contrast of recent artists with those of classical Greece implied. Putting aside the idea of photography as an engine of fine art, he presented a utopia of detail, one in which things are doubled, or mirrored, by the machine. In this account of autogenesis—“self-delineating” is Brewster’s term—photography’s ability to replicate nature in all its detail held out the promise of an industrial and scientific utopia in which nature would be rendered transparent to the vision of the man of science. This autogenic image suggested that such men would enjoy direct access to things without the mediating presence of the recording artist. If Brewster was an evangelical in religious matters, he was a reform-minded Whig in politics, and had a decidedly instrumental conception of science.<sup>140</sup> His account of the role of photography in industrial progress suggests that autogenesis was probably a Liberal ideology. The photograph, he said, “embalmed” objects in a frozen moment of time and space.<sup>141</sup> In embalming nature, the photograph preserved a lost object and thwarted death. (Death seems to have hung about photography for a long time.)

The extent to which the men of science adhered to a Baconian inductive program in nineteenth-century England has been much debated in the history of science.<sup>142</sup> We can say, though, that Bacon’s philosophy provided an essential frame of reference for these men; Daston described Bacon as “the patron saint of objectivity.”<sup>143</sup> Talbot claimed that whatever proved to be the value of applying photogenic drawing to the arts, it would

at least be accepted as a new proof of the value of the inductive methods of modern science, which by noticing the occurrence of unusual circumstances (which accident perhaps first manifests in some small degree), and by following them up with experiments, and varying the conditions of these until the true law of nature which they express is apprehended, conducts us at length to consequences altogether unexpected, remote from usual experience, and contrary to almost universal belief.<sup>144</sup>

*“fairy pictures”  
and “fairy fingers”*



C. Piazz-Smyth, *Stereoscopic Map of the Peak and Great Crater of Teneriffe from a Model by J. Nasmyth*, 13.5 x 7.5 cm., in *Report on the Teneriffe Astronomical Expedition of 1856, Addressed to the Lords' Commissioners of the Admiralty* (London and Edinburgh, 1858), title page. Courtesy National Museum of Photography, Film and Television

There is nothing in this passage about picturesque views or "fairy images." Instead, Talbot presents himself as a good Baconian researcher strictly laboring at inductive procedures. Brewster, for his part, explicitly opposed naïve Baconianism and insisted on the role of deductive speculation in scientific development.<sup>145</sup> In his account of photography, though, he does seem to locate the image at the first rung of the inductive chain.<sup>146</sup> The camera was an apparatus for gathering little "insulated" facts. From this brute information, the natural philosopher would go on to establish the connections and patterns that would lead, through a process of inductive generalizations, to the discovery of general principles and universal laws, or axioms. That is to say, photography occupied a lowly position in the hierarchy of knowledge. From the perspective of Herschel's inductive philosophy, photography appears as a form of "passive" observation.<sup>147</sup> As we have seen, the accumulation of facts was useful, but only a man from "the superior departments of theory" could synthesize the material and draw out the conclusions. The men of science conceived of the photograph as a simple matter-of-fact thing, and in so doing they secured a position for themselves as aperspectival

observers. The photograph was useful to these men because it presented visual impressions of raw nature seemingly prior to the artist's subjective vision. Photography could not fail, Brewster insisted, to be "useful in all the sciences of observation, where visible forms are to be represented." The civil engineer and the architect, he argued, have claimed photography "as an art incalculably useful in their profession; and the meteorologist has seized upon it as a means of registering successive observations of the barometer, thermometer, hygrometer, and magnetometer, in the observer's absence; and thus exhibiting to his eye, at the end of every day, accurate measures of all the atmospheric changes which have taken place."<sup>148</sup> Lists like this would become commonplace in accounts of photography. The self-acting nature of the photograph meant that even in the absence of the observer, little facts of nature—what Darwin would call "trifling facts"—could be brought before the observer's detached eye.

We must return for a moment, however, to that area of human life exempted from the march of scientific progress, because the account of photographic objectivity that emerged during this period is incomplete without Brewster's proviso. For all his initial enthusiasm about mechanizing art, fine art was to be excepted from the vulgar utopia of detail. "Any art," he said, "which should supersede that of the painter, and deprive of employment any of its distinguished cultivators, would scarcely be hailed as a boon conferred upon society. An invention which supersedes animal, or even professional labour, must be viewed in a very different light from an invention which supersedes the efforts of genius."<sup>149</sup> Animal labor, of course, was below significance, because it pertained to the worker. Professional labor could be dispensed with. But genius was another matter altogether. Brewster was an advocate of genius in science, and Newton served as his key example.<sup>150</sup> In Brewster's "Photogenic Drawing," artistic genius appears as a unique form of Luddism, one that *legitimately* resisted industrial progress. In art, the "counter checks" that undermined the "rage" of machine breaking were seen as counterproductive. The machine was an unwarranted and threatening intruder in the world of the imagination. In order to maintain "fancy" and "genius," it was necessary to wreck this apparatus. Some writers have disputed E. P. Thompson's great account of the revolutionary impetus behind Luddism, but there can be little doubt that episodes of machine breaking traumatized the middle-class imagination.<sup>151</sup> Suppose, for a moment, that the revisionists are correct and there was no revolutionary threat. We would still have explain why this demon had colonized middle-class fantasy. As Thompson has suggested, the mid-Victorian sensibility was, in important

"fairy pictures"  
and "fairy fingers"

ways, formed in the 1790s by a frightened gentry.<sup>152</sup> Luddism, as it figured in the imagination of the ruling class, was one playing-out of this narrative, and it is entirely probable that "Luddism" in Brewster's text is a condensation and displacement for the Chartism of his own moment. In any case, the threat had to be put down again—and this time, in thought. Luddism seemed to suggest a moment of rupture, a point at which the motley proletariat had stepped across an imaginary line and refused the bright new world of industrial progress. The process of mechanization that threatened the lives and traditions of artisanal workers was, Brewster felt, both a necessary and unstoppable element of social progress. The response of General Ludd to this process was thus perceived as an irrational and illegitimate interference with the laws of trade. But when this same process alighted at the door of the free bourgeois subject, the principles of political economy were unceremoniously cast aside.

In setting art apart from photography's autogenic drive, Brewster departed from Talbot in a significant way. Brewster seems to have been content to accept Talbot's casting aside of artistic skill insofar as the primacy of mind over hands affirmed the authority of the men of science. What he felt unable to sanction was a Baconian eradication of the artist-subject. Brewster's response—and it was a rather ad hoc move—was to exempt fine art from his embalmed world. Here he (and most of the writers of the 1840s and 1850s) came up against the deskilling of artists in Talbot's writing. I have suggested that an account of objectivity offers a way of reconciling the artist/amateur contradiction in Talbot's thought. The problem that remains is simple: when we cease to think of artists as under-laborers for men of science and consider their status as picture makers, mechanical objectivity threatens to perform a massive work of cultural and ideological vandalism. Talbot does not seem to have been much bothered by this wrecking-job. Brewster was troubled by the prospect, though. He may also have understood that scientific objectivity required a counterpoint in art. In any case, he responded by setting the artist outside this charmed circle of objectivity and made photography's power hinge on its status as a *stupid* inductive practice. Photography was to be a mindless form restricted to copies and details. Pictures were to have no part in it.

A passage from an anonymous article on photogenic drawing that appeared in *The Saturday Magazine* condenses the theme of autogenic stupidity:

At the commencement of the present year, considerable surprise was manifested by the public at the announcement of the startling

discovery of a mode, by which natural objects were made to delineate themselves, without the aid of the artist's pencil. The beautiful miniature landscape, which the camera obscura produces, was made to *paint itself upon paper*; and that with a fidelity and minuteness so extraordinary, that a microscopic examination was necessary to bring out all its details. A distant building represented in one of these landscapes was depicted even to the number of bricks in the facade, and a pane of one of its windows being broken and mended with paper, was faithfully represented and detected by the microscope.<sup>153</sup>

"fairy pictures"  
and "fairy fingers"

The themes in this passage ought now to be familiar—"without the aid of the artist's pencil," "paint itself upon paper"—and on this occasion, it is neither the apparatus nor the sun that produces the image, but the landscape itself. But for all our familiarity with these basic tropes of early photographic literature, it is worth paying attention to this insistence on detail. The fascination with fidelity and exact transcription conveys something of the mesmerizing qualities attributed to the copy in the initial phase of photography. The sentence that appears utterly dazzled by the number of bricks and the broken glass implies a total absorption in, or abandonment to, the image. It is as if microscopic details exhausted consciousness, filled it to excess, so that no room was left for reflection. The microscope was a constant point of reference in these texts, indicating that the image produced some inexhaustible miniaturization of nature. James Nicholl similarly claimed that it was possible to produce a microphotograph "of a giant cathedral wherein you may count every stone, and tell the hour by its great clock."<sup>154</sup> However closely you looked, there was always more to be discovered, always more to engross the beholder's attention. The photograph was perceived, then, as a supplement to the vision of the man of science. It worked as an extension of the sensory apparatus and absorbed the beholder in the full and literal presence of the thing itself. The eye was then free to roam without the inconvenience of having to leave the comfort of the study.

I contend that at this point—the point at which images produced by artists become separated out from autogenic stupidity—the photographic document emerges as a form. This conception was, no doubt, present in Talbot's thought, but it did not crystallize. Aperspectival and mechanical objectivity are essential for the idea of the document and, as we have seen, Talbot explicitly mentions the possibility of photography supplying "mute testimony" in court, but he did not clearly distinguish among the

functions of the image.<sup>155</sup> Despite the interest in documentary photography, there has been virtually no attempt to work out what it means to call the photograph a document.<sup>156</sup> The exception is Molly Nesbit's *Atget's Seven Albums*.<sup>157</sup> Nesbit's book, the best we have on photography and on many other things besides, pushes aside the standard accounts of modernity to examine Eugène Atget's images as a practice of "low modernity." His documents, Nesbit suggests, "put forward a popular Paris, without the high life, without the reveries of an ancien régime, without the bourgeoisie."<sup>158</sup> Atget's vision settled on the objects and spaces of the workers' city: worn-out things, bags of *frites*. He tore up the paving stones of the document to "erect barricades" against the bourgeois viewer.<sup>159</sup> Fascinating as it is, we will need to put all this to one side and focus here on the "zero degree image." The document was Atget's form, and so Nesbit searches it out. It is a "nonaesthetic," workaday form—she calls it a "base line" of visual culture. Operating below the threshold of serious attention, the document is a sort of "optical dust." According to Nesbit, the document possessed two defining characteristics: it "went to work," and it turned on "openness." The document is always an image of use that anticipates an answering word. It is defined by a viewer who brings his or her specialized knowledge and requirements to it. The document was employed by artists, metalworkers, set designers, partisans of *Vieux Paris*, and so forth. Beauty was, for all of them, subordinated to use. The document, Nesbit argues, "would tell the truth about, say, a leaf, a doorway, an animal in motion, an earlobe, or an hysteric. So an architectural photograph would be called a document, as would a chronophotograph, a police i.d., or an X ray." The document has no absolute form, but it must be prepared for employment in the various forms of *connaissance*, so it mobilizes, or builds on, technical signs. It has to be open. (Atget became a specialist in this semantic hollowness, creating images that could serve several constituencies.) Borrowing a category from Roger Fry, Nesbit characterizes the document as a form of "practical vision."<sup>160</sup>

Nesbit's discussion of the document is the most intelligent available, but the image she describes developed considerably later than the document emerging here. So we can note, in addition, that the document is a type carved out of aperspectival objectivity: all traces of authorship, anything suggesting "personality," must be chipped away to leave only "matters of fact." It is also a form of mechanical objectivity, in that the apparatus produces images without the aid of an artist. Addressing the culture of the document, Sekula once suggested that photographic discourse came down

to "a kind of disclaimer, an assertion of neutrality" though which it rendered itself "transparent."<sup>161</sup> The unwritten protocols of the document consist of a series of negative injunctions: no cropping; no retouching; no posing, staging, or introducing extraneous objects; no dramatic light effects; no funny angles; and so on. Documents must be simultaneously empty and full: devoid of the signifiers of personality, yet resonating with detail. Nesbit sums up this condition wonderfully, describing the document as a "detailed blank."<sup>162</sup> Photographic documents are made up of technical signs that simultaneously figure this emptiness and plenitude: frontality, plainness, colorlessness. This "base line" was a proper form. It required art to be located elsewhere, so that it could go to work. Perhaps Brewster understood.

In the accounts of photography that followed Talbot, this insistent and repetitive distinction between the work of genius and the work of the photographer left its mark. As long as photography was seen as an autogenic process that produced images in the absence of a subject, it could not hope to occupy the same place as painting or its "sister arts." In his essay "Photography," Brewster wrote:

The arts of architecture, sculpture, and painting, have in every age called into exercise the loftiest genius and the deepest reason of man. . . . To the cultivation and patronage of such noble arts, the vanity, the hopes, and the holiest affections of man stand irrevocably pledged; and we should deeply deplore any invention or discovery, or any tide in the nation's taste, which should paralyze the artist's pencil, or stay the sculptor's chisel, or divert into new channels the genius which wields them.<sup>163</sup>

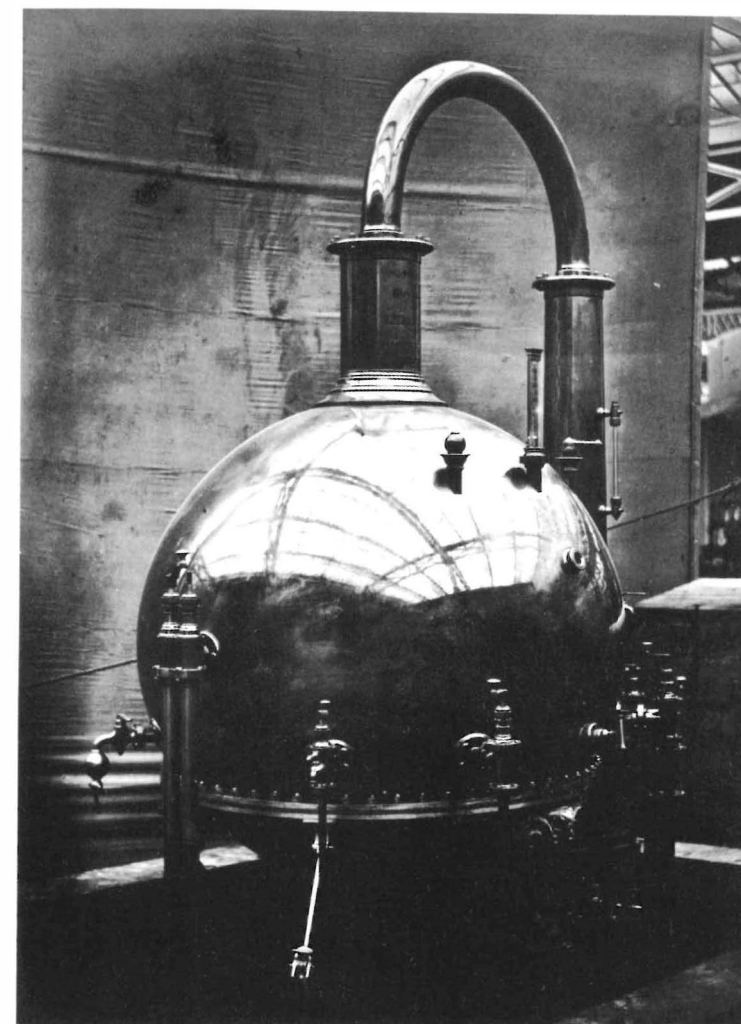
"Genius" is the key term here. The genius of the artist disrupted the circuits of objectivity and autogenesis by insisting on the aberrations of the artist's unique perspective. The phrase "paralyze the artist's pencil" suggests that Brewster recognized that aperspectival or mechanical objectivity would do some serious ideological damage if it were allowed to go to work on art. Brewster was certain, however, that photography was no threat to fine art, and he assigned it the subsidiary role of supplying details of costume, drapery, and figures. These images were allowed to function as documents for artists, but no more. Excluding art from the scientific utopia of the self-generating image was, for the men of science, a productive move. On the one hand, this position confirmed art as free from industry and ratified the artist as a subject (free, autonomous, imbued with genius) who was exempt from the self-discipline of science. On the other hand, it established the

"fairy pictures"  
and "fairy fingers"

document as a form uncontaminated by this artistic subjectivity. The document thus came from nowhere and was subject to a view from nowhere.

In this essay, Brewster scatters the names of Kepler, Newton, Faraday, and other such luminaries among his references to photography, suggesting that this image went beyond natural vision. He wrote, "the photographer presents to Nature an artificial eye, more powerful than his own, which receives the images of external objects. . . . He thus gives permanency to details which the eye itself is too dull to appreciate, and he represents Nature as she is—neither pruned by his taste, nor decked by his imagination."<sup>164</sup> Mechanical and aperspectival objectivity are in play here, but this time it is not the artist who must be subordinated to the man of science, but the photographer. The photographer's "imagination" or "taste" interfered with, or blocked, a direct experience of "Nature as she is." The photographer's presence reduced the image to a small, personal vision. In autogenic documents, meaning seemed to empty itself in the process of signification, thus placing an accumulated mass of detail at the service of a detached scientific observer.<sup>165</sup> The camera appeared to be a model inductive apparatus: photographs, as self-generated documents, would present the brute facts of nature prior to any mediating representation. The autogenic fetish guaranteed the truth of the photographic image.

Any device that could increase the power of vision particularly impressed scientific investigators. (The hold of the microscope and the telescope on the imagination are symptomatic here.)<sup>166</sup> The scientific investigators of the 1840s and 1850s found the idea of photography particularly fascinating because it, rather than history, appeared to be a practice without a subject. Photographic authorship, or art, had to be produced against their logic of autogenesis and vulgar Baconism. But this part of the story is still some way off. Despite what the historians of photography have claimed, the idea that the photographer might be a creative agent only really emerged during the 1860s. The men of science excluded the photographer from all but the most routine part in the production of images. Here is Brewster as late as 1856: "Photography is pre-eminently a scientific art; it requires no peculiar genius in its cultivators. . . . There is no poetry in the pencil of the Sun. The Photographer cannot separate what is beautiful from what is common." Painters and sculptors, in contrast, could analyze and combine, "selecting what is beautiful, suppressing what is offensive."<sup>167</sup> Photography and science stood on one side of a divide; art stood on the other. This had not been Talbot's view.



VACUUM SUGAR APPARATUS.

Hugh Owen/G. Ferrier/N. Henneman, *Vacuum Sugar Apparatus*, in *Exhibition of the Works of All Nations, 1851: Reports by the Juries on the Subjects in the Thirty Classes into which the Exhibition Was Divided* (London: Spicer Brothers, 1852), 432ff. Courtesy National Museum of Photography, Film and Television

Similar themes to those elaborated by Brewster can be found in Robert Hunt's bizarre early manuals, which mixed the most prosaic technical descriptions and banal history of inductive discovery with wild figural passages that gendered nature and racialized peoples according to their exposure to the sun's rays. Hunt—the author of the first book on photography in English, and a key scientific authority—viewed photographs primarily in terms of “extreme fidelity” and “minuteness.” He thought of photographs as autogenic “light-drawn pictures” that were “geometrically true.”<sup>168</sup> “Wherever a shadow falls,” he argued, “a picture is impressed” that demonstrates “unerring fidelity.”<sup>169</sup> But in this early writing about photography, however prolific and exact photography might be, however much things might imprint themselves (or the sun might imprint them) to create exact documents, the artist would have to be exempted from the roll call of professions for whom the self-acting image constituted utopia.

By definition, the automatic nature of photography always indicated the absence of the key artistic mediator: the mind. As I have suggested, mechanical objectivity—the absence of the intelligence—constituted the photograph's peculiar power, as this mental void enabled the scientific intellect to come to the fore. If photography had any bearing on art, at this point, it was as its *antithesis*. The problem, I think, is that the artist was one worker who could not be removed from the scene of production without doing violence to the bourgeois subject. The use of the photograph by the artist would thus serve to increase the gap between two kinds of pictures. As one writer put it,

every moment saved from what is merely mechanical is so much gained for what is purely intellectual. We recommend the Talbotype to artists, not as a substitute for their pencil, but as an aid in the use of the pencil; not to supersede the sketching-book, but to add to the richness of its contents; not to check the play of fancy, but to supply fancy with new starting-points for fresh excursions; not to limit imagination, but to afford the basis on which the imaginative power may erect its creations.<sup>170</sup>

The self-acting photograph, because it was free from the mind of an intervening subject, liberated the artist from the necessity of mechanical work. It freed up time so that the artist could engage in the flights of fancy that testified to intellectual work and an authorial presence. The photograph freed the artist's hands from drudgery so that he could free his mind for more important things. “Mechanical” and “intellectual”: these two terms will

occupy a central place in what is to follow. Their juxtaposition set up a chain of associations indicating a social gulf. Here, I am going to pass over the distinction between the “mechanic” and the machine, which we will need to return to in Chapter 3. At this point it is enough to say that the “mechanical” was that property ascribed to the activity of the worker. Repetitive and immediate, mechanical work testified to his lack of self-determination. It was mindless—at least according to middle-class commentators. In labor of this kind, the worker seemed to disappear. Intellect, in contrast, indicated agency and consciousness. It transformed the stuff of the world according to some plan. This is to say that the intellect signified self-possession: it implied the power and authority to command rather than to take orders.<sup>171</sup> In these texts, the artist remains a unique, productive individual who cannot be replaced by an apparatus, because to do so would eradicate the generative power of his freedom. Indeed, the artist's distance from the activity of automatic copying provided one significant model of a form of self-possession. While the worker must be restrained, the artist had to be left free to pursue his or her desires. In this way, the idea of the artist played an important role in establishing an image of the worker and his or her “other.” In Herschel's terms, photography here occupies the place of a body, what he called the “machinery” of “outward man” as opposed to “inward sentient being.”<sup>172</sup> The distance between artists and workers was akin to that separating pictures from documents.

There was, however—as with all such relations—a danger that the photographic underling would transform the master. Hunt, for example, suggested that the vulgar detail of the photograph threatened to engulf the artistic novice. He wrote:

There is a winning charm about the productions of photography which may well seduce the artist from his true path. The photographic picture of even the rotten stump of an ancient tree is so true—moss, fungus, ligneous structure, bark and all, are represented with so much fidelity, and all effected by light and shadow only—that the more we examine it the more we are delighted with the result. We perfectly understand the desire of the young artist to imitate so perfect a production, and in this desire is the danger which should be avoided.<sup>173</sup>

Photography, according to Hunt (and many others since) endangered art because the “indolence in human nature” meant that artists might copy directly from the photograph. As we have seen, Talbot and his kind found

“fairy pictures”  
and “fairy fingers”

in photography a form of self-discipline, but Hunt imagines it as an unruly (feminine) force that distracts or seduces the artist. While photographic detail confirmed the vision of the men of science, it posed a threat to the artist because it was both mindless and seductive—just like working-class women. For Hunt, the utopia of autogenic images could not be allowed to interfere with the work of the artist. Photography was, he suggested, “a marvellous power,” but it must be kept in its rightful place: servant to the artist, and servant to capital. Autogenesis and objectivity, as they emerged in the writing of the men of science, provided the ground for the photographic document and its diverse employments.

## 2.

### a photographic atlas *divisions of the photographic field*

“And, I’ve wondered—” Gorgik said, “slave, free-  
commoner, lord—if each isn’t somehow a reflection  
of the other; or a reflection of a reflection.”

“They are not,” said Norema with intense conviction.

“That is the most horrendous notion I’ve ever heard.”

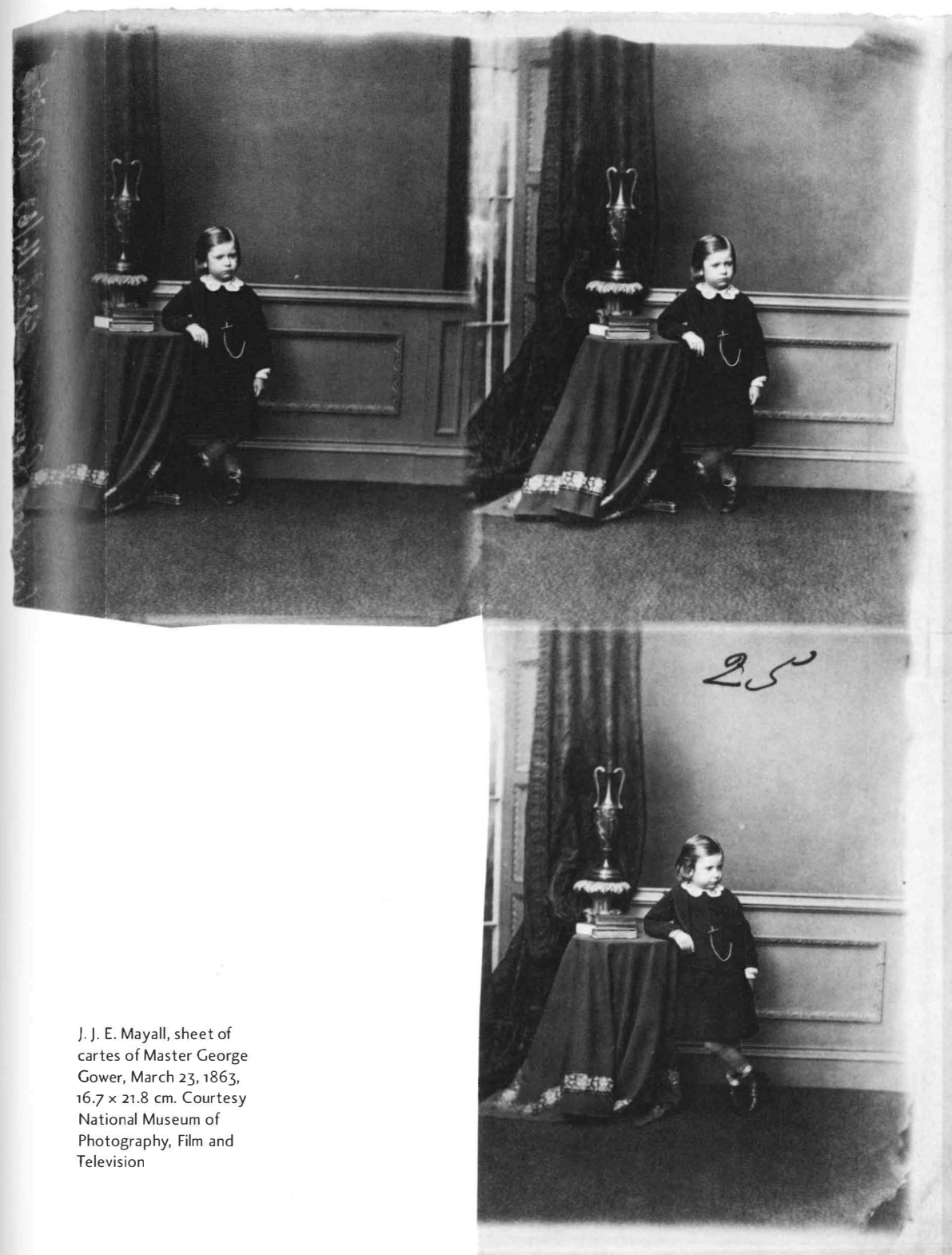
—SAMUEL R. DELANY, *Tales of Nevèrÿon*

The accounts of photography developed during the 1860s continued to revolve around the fraught themes of authorship and autogenic copying, talent, skill, and objectivity, but the rise of professional studio photography did not leave the dreams of the men of science untouched. In this chapter I want to sketch out a rough chart of the English photographic territory in the 1860s. Later, in Part 2 of this book, I describe how a place was found for photography in the long story of art that generated the allegory of labor that continues to haunt our reception of photographs. Part 2 can be seen as a micro-study of the way in which a particular section of the petite bourgeoisie encountered and navigated the tradition of Academic aesthetics. But first, we need to know something of the social interests that shaped the photographic field.<sup>1</sup>

Remarkably little attention has been paid to the commercial portrait trade in England.<sup>2</sup> When commercial studios are mentioned in the existing historiography, they appear as the dark firmament against which photographic stars shine brilliantly. It is not that this traditional focus on art is entirely mistaken; as I have said, it forms a central concern of this book. But outside of the social relations of the commercial studios, the aesthetics of photography strike me as unintelligible. To understand this we need a map of the territory. In contrast to the extensive historical excavations that have been done for nineteenth-century French photography, the English topsoil has hardly been touched. There are no extensive social histories, or business histories, available for British commercial photography. In many ways, this is very odd. The industries in the series observed by Marx, with the exception of photography, have all been studied by historians, and one would think that in these "postmodern times," photographic factories of meaning would have a particular appeal. It may be that the allotropic nature of photography means that it escapes the attention of both social historians and art historians. The account I have put together here is thus limited and patchy—assembled from scattered pieces in the photographic press and a few secondary studies of restricted range. Any significance this montage possesses rests on the production of a "third something."

#### "CARTOMANIA"

By the early 1860s, photographic production in England had undergone a fundamental transformation. The debates in the 1840s and 1850s revolved around scientific experiments, amateur pictures, and tentative commercial exploration, but by the beginning of the 1860s a large body of professional photographers had emerged, geared to supplying cheap portraits for the middle class.<sup>3</sup> The first photographic studios in Britain—primarily producing daguerreotypes—were hampered in the creation of portraits both by the cost of the images they produced and by patent restrictions. Attempts to make paper-based photographic portraits initially fared little better. A series of technical developments during the 1850s, however, made commercial photographic portraiture increasingly viable. These changes included more systematic production of chemicals and paper, faster lenses, and chemical baths, and, most of all, Frederick Scott Archer's introduction of the relatively rapid wet-collodion process in 1851. The enormous expansion of photographic business that subsequently took place was predicated largely on the vogue for the carte de visite portrait—a small-format paper photo-



J. J. E. Mayall, sheet of  
cartes of Master George  
Gower, March 23, 1863,  
16.7 × 21.8 cm. Courtesy  
National Museum of  
Photography, Film and  
Television



graph, measuring roughly  $6 \times 9$  cm, mounted on card—that was patented in Paris by André-Adolphe Disdéri in 1854.<sup>4</sup>

The carte de visite crossed the Channel in 1857 (some *Punch* cartoons depict cartes being sold at this early date). The English carte boom, however, began sometime at the end of 1859 or the beginning of 1860. In the wake of Talbot's decision not to renew his patent, photographic studios sprang up, catering to a middle-class demand for carte portraits and pictures of celebrities.<sup>5</sup> Audrey Linkman's careful analysis of trade directories and other records shows that while there were only 66 photographic firms operating in London in 1855, by 1864 this number had leapt to 284.<sup>6</sup> Prior to 1855, photographers in Manchester were listed oddly in the trade directories as "artists," so it is not possible to determine the number of professionals before this date. Of the fifteen photographers listed in 1855, four featured as camera manufacturers or dealers in chemicals, and one was J. B. Dancer, the scientific instrument maker and amateur photographer.<sup>7</sup> Linkman records a leap to seventy-one photographers in the city over the period of the next ten years. Comparable expansions have been recorded for Liverpool, Bath, Aberdeen, and Nottingham.<sup>8</sup> The years between 1860 and 1864 were seen at the time as a period of "cartomania." Horatio King of Bath, for instance, sold 70,000 portraits per year at this time, while Mason of Norwich was said to produce 50,000 annually. David Lee notes that estimates for British carte production at its peak, in 1862, range as high as 105 million cartes. Even a conservative estimate, he suggests, would put the figure at 20 million.<sup>9</sup> Another historian has suggested that somewhere in the region of 300 or 400 million cartes were sold in Britain between 1861 and 1867.<sup>10</sup> These portraits were usually sold by the dozen for a sum of twelve shillings.

The daybooks of Camille Silvy give an indication of the pattern of business for one particularly fashionable studio in these years. Silvy pasted a copy of every portrait he made into these books, often dating his entries. Lee's detailed examination of these records shows that there were 4,931 entries for 1861; for each entry he would have sold multiple copies. May was the busiest month, with probably as many as thirty sittings a day. The records for June and July demonstrate that those months, too, were popular periods for those seeking portraits. Business remained buoyant in 1862, though it had begun to decline by 1863.<sup>11</sup> A similar pattern held for smaller photography houses. A later report described the early 1860s as "palmy days" for photographers.<sup>12</sup> According to the influential photographer Henry Peach Robinson, "fifteen [sittings] in a morning was considered a good day's work, although in the summer it often rose to twenty and twenty-five."<sup>13</sup> During

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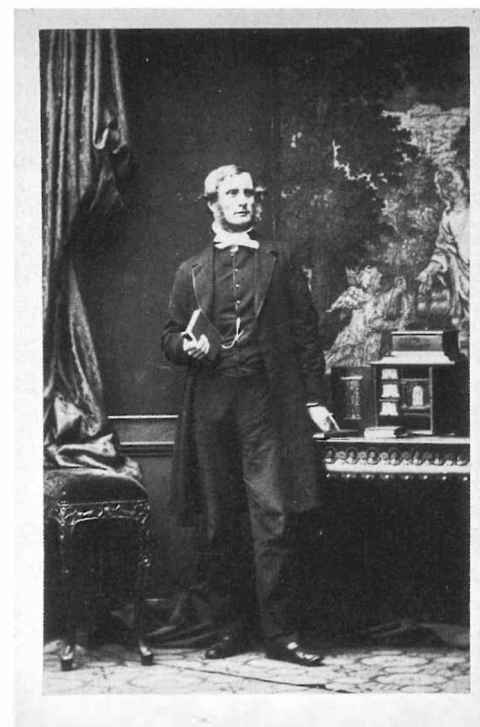
OPPOSITE:  
(clockwise from top left)

Alex J. Grossmann  
(36 Snargate Street,  
Dover), carte de  
visite of unidentified  
woman

Anonymous, carte de  
visite of unidentified  
woman

Henry Lock (248  
Shoreditch, London),  
carte de visite of  
unidentified woman,  
c. 1863–69

Henry Berlon (top  
of Manor Row,  
Manningham Lane,  
Bradford), carte de  
visite of unidentified  
woman



LEFT:  
Camille Silvy (38  
Porchester Terrace,  
Bayswater, London),  
carte de visite of  
unidentified man

OPPOSITE:  
(clockwise from top left)

C. T. Newcombe  
(Hastings; branches  
at 109 Regent Street,  
London, and 135  
Fenchurch Street,  
London), carte de visite  
of unidentified man at  
the Regent Street Studio,  
c. 1863-69

Henry Peach Robinson  
(16 Upper Parade,  
Leamington), carte de  
visite of unidentified  
man, c. 1862-64

George Williams  
(Peartree Cottage,  
358 Holloway Road,  
London), carte de visite  
of unidentified group,  
c. 1866-70

W. Clark (59 North Street,  
Brighton), carte de visite  
of unidentified man

this period, the trade in middle-class faces made photography a huge and profitable industry.

A fascinating article published in the *British Quarterly Review* gives an indication of the impact this output had on the wider forms of production. One large London photographic firm, the author suggested, consumed around 2,000 egg whites daily in the production of albumenized paper. This single company's annual consumption of about 600,000 egg whites would have amounted to about a tenth of those used in British photographic manufacture, putting the total annual figure at 6,000,000 eggs used for photography.<sup>14</sup> (With all those yolks going spare, it comes as little surprise to find a recipe for "photographers' cheesecake" in the trade press.) It was difficult, the author argued, to calculate the consumption of precious metals in photographic manufacture, but he estimated that nearly a hundredweight (112 pounds) of nitrate of silver was used for every 20,000 eggs. This would suggest that 15 tons of silver nitrate were consumed per year in the photographic industries. In his extraordinary survey of the costs of photography, published at the end of the nineteenth century, John A. Randall suggests that the price of silver nitrate was 4s 6d an ounce in 1862.<sup>15</sup> This estimate puts the annual photographic expenditure on silver nitrate alone in 1862 at about £120,960. The *British Quarterly Review* author went on to suggest that Mr. England's production for the London Stereoscopic Company at the International Exhibition of 1862 "amounted to 2,400 ounces of nitrate of silver, nearly 54 ounces of terchloride of gold, 200 gallons of albumen, amounting to the whites of 32,000 eggs, and 70 reams of paper; the issue of pictures approaching to nearly a million, the number of stereoscopic prints amounting to nearly 800,000 copies."<sup>16</sup> These figures might have been significantly inflated (though, as we will see, the related "pirated" images would probably push this estimate upward), but they give some indication of what Marx saw when he looked at the new photographic industry. The secondary effect on poultry farming, paper manufacture, and the chemical industries was likely to have been considerable.<sup>17</sup>

This spread of photography has often been celebrated as a "democracy" of images, so it is worth remembering that at twelve shillings a dozen, the carte portraits produced in these studios were priced beyond the pockets of most working people. These portraits were, for instance, probably too expensive for most workers employed in the photographic industries. Robinson deplored the wage of 25s offered for a "first class gentleman operator."<sup>18</sup> Lee has observed that photographic assistants often earned less than the average laborer.<sup>19</sup> There were, of course, significant variations in prices:

in the 1880s, one provincial photographer was charging 2s 6d for a dozen cartes.<sup>20</sup> At the time there were plenty of reports of "travelling bunglers" and disreputable studios producing 6d portraits (and we will encounter some of them here). No doubt, some working people patronized these producers, but the photography described in the standard histories remained closed to them.<sup>21</sup> In portraits, as in politics, democracy was a restricted concept.

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#### "THE COMMERCIAL VALUE OF THE HUMAN FACE"

This mass portrait industry decisively changed the nature of image making. Traditionally, artisan producers (that is, artists) had made portraits. This is not to say that painted portraits were individually produced: in the studio system, different hands often worked on a single likeness. While the master, or head of the workshop, usually designed the composition, painted the head and hands, and finished the picture, apprentices might scale up the design and work on the background or drapery. Increasingly, this system ossified into a fixed division of labor. Some woke to discover that they had become specialists in skies; others would spend their lives in thrall to silk. For some painters this transformation in the labor process ran along very similar lines to that experienced by cabinetmakers or seamstresses. But despite the best efforts of Boulton and Booth, portrait painting ultimately belonged to Adam Smith's world, not Andrew Ure's. The division of labor in the artist's studio freed the master to concentrate on those areas of the canvas that mattered most, but production remained fixed at the pace of skilled manual labor.

Under these conditions, ordinary middle-class citizens—let alone the mass of the population—found regular portrait makers' fees beyond their means. As Robinson put it, before the advent of photography, "those who could not afford to employ a Reynolds, a Gainsborough, or a Lawrence, had to be content with the merest suggestions of likeness, executed in the most miserable style."<sup>22</sup> The mass of persons who could not even afford "miserable" images went unrecorded. The resulting invisibility entailed a peculiar form of class violence—what Kracauer, in another context, vividly called the "abyss of imageless oblivion."<sup>23</sup> The carte de visite changed all this, at least for those who could spare twelve shillings. The mechanizing of portrait production meant that likenesses could be executed in minutes and delivered, printed, and mounted in hours. The carte trade provided the motor that drove the spread of commercial photography throughout Britain, bringing portraiture within the reach of the solid middle class.

The photographic portrait business, in combining the division of labor in the workshop with small-scale mechanization, transformed an existing luxury trade into a mass industry. Susan Sontag famously compared the camera, as an intrusive technology, with the gun.<sup>24</sup> But photography's standing as a "decisively revolutionary machine" really hinges on its proximity to another exemplary capitalist apparatus: the sewing machine. As with the garment and shoemaking trades that were transformed by the sewing machine, photography was based on the small-scale use of technology, which did not require access to motive power. This technology enabled carte photography to become one of the earliest of the "culture industries" purveying a commodity that had resemblance and memorialization for its use value. Carte images, as a result of their scale and rapidity of production, were frequently banal, employing stock poses and formulaic backgrounds and props. One commentator claimed that the carte resulted in a portrait of a friend that gave "prominence to his best coat and trousers."<sup>25</sup> Robinson later calculated (only somewhat in jest) that 78 percent of all carte portraits made in the early 1860s contained either a balustrade or column. It would be a great service to photography, he thought, if all these columns could be collected together and set alight.<sup>26</sup> Another writer drew out the kind of fetishistic transfer built into these arrangements, pointing out that "the *carte de visite*, even in some of the best show cases in London, is a pedestal with a man near it; it might be catalogued as a portrait of a pedestal, and a column, and a lord."<sup>27</sup> It is easy to see what Gisèle Freund had in mind when she suggested that Disdéri had found the perfect homology for the standardization of bourgeois society.<sup>28</sup>

The acceleration of the commodity trade in likenesses transformed the way in which portraits were made, but it also changed the way in which people experienced portraits. For the first time, portraits appeared severed from the framing discourses of biography. While the painted portraits of grand persons took their place within narratives of public lives, the modernity of the *carte de visite* hinged on its privatizing character. The signs of interiority, self-absorption, and autonomy are present in these images, but they exist as incoherent fragments. Books and letters, Gothic chairs and Italianate views, the twist of a hip, the position of a hand: these elements from traditional painted portraits appear in carte pictures as random signifiers and empty poses. One way to see these images would be to claim, adopting a formulation from Manfredo Tafuri, that they entailed "a monstrous pullulation of symbols devoid of significance."<sup>29</sup> But this is not quite right, because cartes were not *entirely* empty signs. Rather, they were signs with a radically



Anonymous, carte de  
visite inscribed "Capt.  
Hopkins"



Anonymous, carte de  
visite of unidentified  
woman

restricted circulation—signs that moved locally, drawing their values from domestic space rather than the public world. They took their place in what Benjamin described as “the universe for the private citizen.”<sup>30</sup> The carte de visite was a “homely” form. It drew the portrait down from the sphere of world history and inserted it into everyday life.

If, as has frequently been argued, the public display of painted portraits proclaimed the wealth and power of the depicted subjects, the new photographic portraits spoke to the middle class on more intimate terms. Cartes did not declaim the authority of the bourgeoisie to other classes. Instead, they quietly reminded the members of the middle class that they had made it. The individual carte portrait, usually encountered in the drawing room, was not a hegemonic form—that is, unless the bourgeoisie actually needed disciplining and convincing of its own dominance.

Then there were the cartes of the famous. These were public images, of a sort. There was a big trade in these portraits of celebrities and big money to be made. According to Andrew Winter, “public men” were termed “sure cards” in the business.<sup>31</sup> To be lucky enough to gain control of some public figure’s image guaranteed significant profits. Winter suggested that the wholesale houses ordered 10,000 prints of a celebrity with real cachet, paying the princely sum of 400£. These wholesalers, for instance, ordered 60,000 sets of Mayall’s *Royal Album* within a few days of its issue.<sup>32</sup> The numerous prosecutions recorded in *The Photographic News* during the 1860s for “pirating” celebrity cartes attest to just how lucrative the trade was. The troubled extension of copyright protection to photography in 1862 was, in large part, a response to the existing laws’ inability to protect this significant new form of property.

In one passage, Winter provided a fascinating commentary on these cartes. He suggested that “the commercial value of the human face was never tested to such an extent as it is at the present moment in these handy photographs. No man, or woman either, knows but that some accident may elevate them to the position of hero of the hour, and send up the value of their countenance to such a degree they never dreamed of.” Some images, he said, “run like wildfire for a day, and then fall a dead letter.” Some sold locally, while others sold wholly in London; still others would sell continually.<sup>33</sup> Celebrity is a notable new commodity produced in industrial capitalist societies. Fame might predate modern capitalism, but celebrity depends on a mass press and a mass-transport system. Under these conditions, contingent events can be turned into images—and when this happened in the 1860s, an individual might wake to find “himself famous, and in two or three days his



E. Flukes (41 Milsom Street, Bath), carte de visite of unidentified woman



E. Flukes (41 Milsom Street, Bath), carte de visite of unidentified woman



John Jabez Edwin Mayall,  
carte de visite of Albert,  
the Prince Consort, from  
the *Royal Album* (London:  
Marion and Co., c. 1858)



John Jabez Edwin  
Mayall (224 Regent  
Street, London), carte  
de visite of Lord Derby,  
c. 1853–89

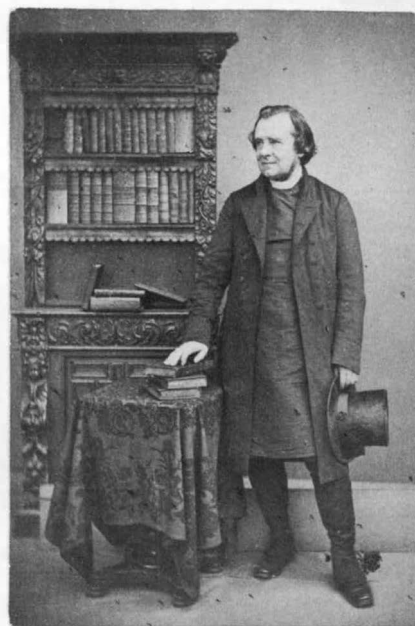
carte-de-visite is staring at him from every window in town.”<sup>34</sup> The carte traded on this individual effect and accelerated it. Celebrity cartes, in this sense, seem to belong to a different universe, far from the private sign of the middle-class portrait.

Commentators found the patterns of adjacency established by the commodity images displayed in photographers’ or print-sellers’ windows particularly disturbing. These “street portrait galleries” drew large crowds of onlookers eager to gawp at those famous for a day. Lynda Nead has suggested that the debates circulating around these displays played a significant role in regulating the emerging mass urban culture and its relation to “obscenity.”<sup>35</sup> The carte image seemed to set up strange and often “distasteful” juxtapositions. A boxer might be located alongside Lord Derby; a courtesan, next to a society lady; a member of the royal family in too close proximity to some louche individual. As a writer in the *Daily Telegraph* put it, “in almost every shop window devoted to the sale of photographic prints there are exhibited, side by side with the portraits of bishops, barristers, duchesses, Ritualistic clergymen, forgers, favourite comedians, and the personages in the Tichbourne drama, a swarm of cartes-de-visite of tenth-rate actresses and fifth-rate ballet girls in an extreme state of *deshabille*.”<sup>36</sup> There were plenty of these accounts in which the proximity of persons seemed all wrong. Exposed legs—belonging to ballet girls and actresses—particularly exercised the guardians of public morality. The commodity’s “grotesque realism” drew the high-flown down low, locating grand heads among sordid legs.

The commodity carte fragmented and dismembered the portrait. It translated people into signs and established patterns of equivalence among them. Winter, in his way, glimpsed this when he argued that “the only principle governing the selection of the *carte de visite* portraits is their commercial value, and that depends upon the notability of the person represented.”<sup>37</sup> In carte displays, he felt, “social equality is carried to its utmost limit.” Winter was describing the perverse democracy of the commodity form, which displayed little regard for propriety. As an article in the *Reader* noted,

we might wish to preserve from decay the semblance of a great man; but our descendants might think the bequest greatly encumbered if it were accompanied by a crowd of the Browns, Joneses, and Robinsons of our generation. Photography is levelling and indiscriminating. Brown and Jones make as good or better photographs than men of the stamp of Newton and Napoleon.<sup>38</sup>

a photographic atlas



W. Kilburn (222 Regent Street, London), carte de visite of Samuel Wilberforce, D.D., Bishop of Oxford, c. 1856–64. Published by Mason and Co., 7 Amen Corner, Paternoster Row, London

This dance of the commodity carte, even in its public form, emptied out the particular narratives of individual lives and rendered persons interchangeable in the circuit of exchange.<sup>39</sup> The photograph was no respecter of persons or faces.

But the performance did not stop there. The display in the shop window was the first act in a drama that returned to the phantasmagoria of domestic space. Celebrity images were destined to reenter the bourgeois home in leather-bound albums resembling bibles. These albums were, as the *London Review* put it, an “indispensable ornament of every lady’s table.”<sup>40</sup> The carte images of politicians, religious leaders, and aristocrats were inserted—usually by women, who controlled these albums—among the pictures of family members, producing a strange conjuncture of public and private worlds.<sup>41</sup> One commentator, observing the connection, described the album as both “a mild form of hero-worship and an illustrated book of genealogy.”<sup>42</sup> Albums allowed for a restricted form of authorship as patterns of contiguity connected family members with the great and the good. The *Saturday Review* author suggested that these albums indicated the “tastes and prejudices of the house” and suggested that visitors might profitably dedicate half an hour to the host’s album before dinner. Such books were essential,

because pictures of the Bishop of Oxford or Cobden and Bright provided “beacons to the incautious sailor in the narrow seas of small talk.”<sup>43</sup> Another critic, however, having initially felt that albums allowed tastes and prejudices to be determined, subsequently argued that these forms of adjacency implied only “universal idolatry.” Cobden, Palmerston, Disraeli, Bright, and so on could all appear in the same album without “indicating the bias in politics” of the collector, while the presence of various religious leaders did not suggest any lack of “orthodoxy in divinity.” But having questioned what might be learned from these patterns of alignment, this author again changed tack: “If the sale of men’s portraits afford any indications of the popularity of their principles, it is tolerably manifest that liberalism obtains very strongly in this country, the circulation of the portraits being in the ratio of ten of Gladstone to one of Derby, who is, however, judged by this standard, the most popular of the conservatives.”<sup>44</sup> The carte trade would seem to confirm some unfashionable connections between the middle class and ideology. The numbers of cartes registered for copyright protection at Stationers Hall suggest that images of royalty outstripped those of any other individuals in both numbers sold and continuity of sales. Only during the 1880s and 1890s did cartes of popular entertainers begin to sell in significant numbers.<sup>45</sup> After the royal family, according to this author, the most popular figures were statesmen, followed by literary figures and clergymen (bishops sold according to their rank), then artists and scientists, with actors and singers last in the list.<sup>46</sup> These are not the lines of consumption that one might have expected. It obviously took some time for the structures of the culture industry to take hold.<sup>47</sup> These albums were designed, according to a commentator in *All the Year Round*, to elicit the response, “what distinguished company you kept.”<sup>48</sup> In establishing continuities between the public narratives of the grand and powerful and the private world of the family, the carte map made authority intimate. Closing the distance between the middle class and their heroes, these small pictures brought power home. The little banal cartes represented all persons on a local scale—and in the imaginary network of connections established by their exchange, everyone appeared familiar.

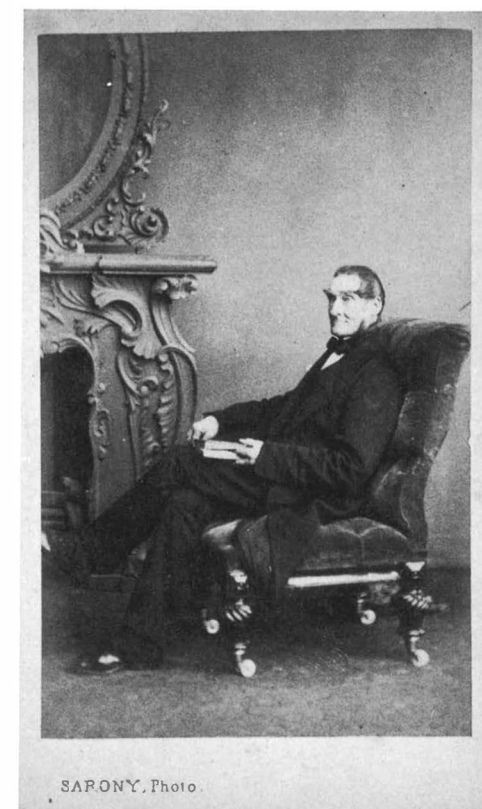
## TWO STUDIOS

Much of the information we have about the photographic studios in the 1860s—their appearance, organization, and symbolic order—comes from two accounts.

*Oliver Sarony, Gainsborough House, Scarborough*

An article published in *The Photographic News* and probably written by the editor, George Wharton Simpson, described the studio of Oliver Sarony in some detail. Sarony, a Canadian based in the fashionable seaside resort of Scarborough, plied a lucrative trade in colored enlargements. His studio—Gainsborough House—was one of the “largest and handsomest establishments devoted to photographic portraiture in the country.” The article explained that limitations on space constrained the London studios, while a lack of business restricted the scale of the provincial houses. But Sarony’s studio, located in a “fashionable watering-place,” was not hemmed in by these forces. He was able to develop a “magnificent building” in the classical style that appeared, at least to the writer, more like a town hall than a photographic studio. Gainsborough House boasted fifty-nine rooms, thirty-three of which were in use. Each of the various reception rooms was dedicated to the display of one kind of photographic commodity. “Here, then,” the author wrote, “each class—plain photographs, photo-crayons, porcelain pictures, water-coloured photographs, and oil paintings—has its appropriate gallery, where its qualities may be fairly examined under fair conditions.” There were “drawing rooms,” painting rooms, enlarging rooms, and so on. Gilt letters, over the door of each of these chambers, proclaimed its particular function. The largest reception room—a “drawing room”—measured 50 × 30 feet and was said to be “magnificently decorated and handsomely furnished.” Sarony had allegedly lavished £2,000 on fitting it out in “exceedingly fine taste.” The author observed that during the course of his visit, a “steam engine of two horse-power was in course of erection.” This engine was intended for use in “making and drying the carbon tissue.” (This is the only example of steam power employed in a photographic studio that I have come across.)<sup>49</sup>

Sarony’s studio was particularly celebrated for its colored work—photographs worked over in watercolor or oil paint. The patron, we are told, employed a large number of artists to carry out this work; some of them were kept on throughout the year. Given the notoriously seasonal nature of photographic labor, this fact alone indicates the volume of Sarony’s production. The author noted that photography was commonly said to have ruined miniature painting but, he argued, five or six of the best artists employed by Sarony each earned between £500–600 a year, while one man was paid in excess of £1,000. The coloring departments of the business were organized according to a strict division of labor, with “some artists being engaged on flesh and some on draperies.” An “artist of high reputation” did the water-



(clockwise from top left)

Oliver Sarony (Sarony Square, Scarborough; branch at 15 Park Place, Leeds), carte de visite of unidentified woman

Oliver Sarony (Sarony Square, Scarborough; branch at 15 Park Place, Leeds), carte de visite of unidentified man

Oliver Sarony (Sarony Square, Scarborough; branch at 15 Park Place, Leeds), carte de visite of unidentified boy

color drapery work, while the skin was colored by a "gentleman with rare skill." The work in oil, the author felt, equaled that of the majority of pictures on display at the Royal Academy. Prices, of course, were commensurate with these abilities: they ranged between twenty and a hundred guineas.<sup>50</sup>

*Camille Silvy, 38 Porchester Terrace, Bayswater, London*

Camille Silvy's studio, located in Porchester Terrace, was one of the grandest in London. As part of his survey of the carte de visite trade in 1862, Winter visited Silvy's studio and recorded his impressions.<sup>51</sup> He observed that Silvy pasted copies of the portraits into a volume—and there were, he said, 7,000 images in this book. For each image taken, he claimed, 50 copies were printed. Although the figure seems extraordinarily high, Winter claimed that Silvy conducted between forty and fifty sittings a day, calculating that by 1862, this studio had produced 700,000 carte portraits.<sup>52</sup> Silvy had moved to London in 1859 and purchased his studio from Caldesi and Montecchi.<sup>53</sup> His clients included large swathes of the European aristocracy and ruling class; one commentator reported seeing "a long row of private carriages commencing at the door."<sup>54</sup> In such things, taste mattered.

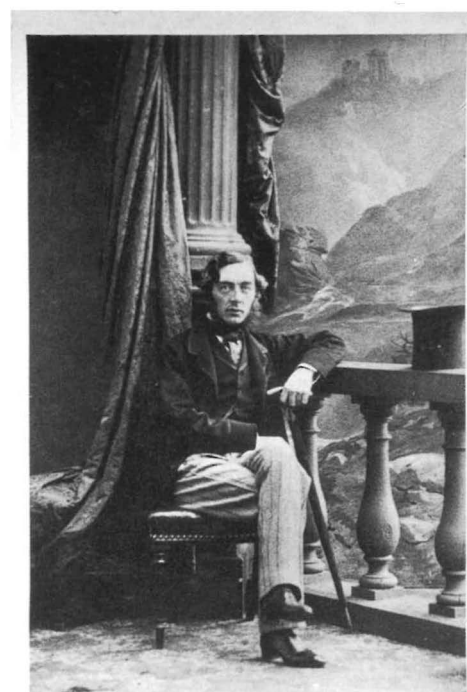
Winter claimed that Silvy approached photography with an "artistic mind." The rooms of the studio were filled with "choice works of art in endless number," and Winter was impressed with the range of accessories and the variety of backgrounds in evidence. For portraits of European royalty, Silvy frequently composed a new background "so as to give a local habitation, as it were, to the figure."<sup>55</sup> When the French photographer Nadar visited this studio in 1863, he felt the "choice arrangement of the objects" provided the "astounded English a glimpse of Latin genius."<sup>56</sup> Among the lavish accessories, Nadar picked out a tapestry from Flanders depicting Charles the Bold. Most telling of all was "THE QUEEN'S ROOM"—a chamber that Silvy reserved exclusively for his anticipated visit by Queen Victoria. It was decorated with an equestrian silver statue that was said to have cost him 30,000 francs. (Nadar, a Republican, regarded all this as a concession to English foibles.) The awaited visit from Victoria never materialized, but Silvy is reported to have said, "... never mind. *It makes a good impression!*"<sup>57</sup> He made sure that every visitor was paraded in front of these open doors and afforded a glimpse of the finery within.

According to Winter, the secret of Silvy's success was that he took every negative himself. His unique taste became a mark of distinction for his clients. This focus on the singular effect of Silvy's images plays a particular role in Winter's essay, where these pictures are contrasted with the



*Princess Alice 1861*

Camille Silvy (38  
Porchester Terrace,  
Bayswater, London),  
carte de visite of Princess  
Alice, 1861



Camille Silvy (38  
Porchester Terrace,  
Bayswater, London),  
carte de visite inscribed  
"4th Earl Annesley"



"A Common Hartist's Studio!" *Punch, or the London Charivari*, October 6, 1860, 140

mass carte's social interchangeability. This point is worth making, because Silvy has come to occupy an important position for photographic historians and antiquarians. His carte portraits were sumptuously toned and featured lavish arrangements, but the construction of his studio as a sign of luxury was probably just as significant for his reputation. This construction did not go unobserved at the time. A writer in *All the Year Round* suggested that Silvy—almost alone in England—"seems to understand the immense importance of shadow as an ingredient of a successful portrait." The editor

of the *British Journal of Photography* responded, "Perhaps M. Silvy—keeps an author."<sup>58</sup> Another commentator, signing himself "A Bayswater Photographer" (and who was, therefore, a neighbor), bemoaned his encounter with a "strong-minded female" who, convinced by this account of Silvy's work, insisted on trying to teach him the rudiments of light and shade. "It is a great pity," he said, "that the shoemaker will go beyond his last."<sup>59</sup> Winter's report played an important role in establishing the glamorous aura that surrounds this work. (His own response followed an established pattern by the middle of the century, which viewed the French luxury trade as superior to all things English in matters of taste.)<sup>60</sup> Lee points out that Silvy operated this studio during the exact period of the carte craze: between 1859 and 1868. In 1868 Silvy abandoned photography to take up the position of French *agent consulaire* in Exeter. This was probably intended as an entrance to a more prestigious diplomatic career.<sup>61</sup> Like many photographers of the period who have been picked out in the subsequent literature, Silvy was an economic passage migrant. Historians seem drawn to the luxury trade.

In part, at least, Silvy's success should be put down to his knowledge of social etiquette. The photographic trade press carried plenty of articles designed to offer photographers tips in the tricky matter of receiving and handling their "betters." One photographer suggested that the operator needed to be "gifted with, or cultivate affability of manner, a kind disposition, fluency of speech becoming a gentleman, ease of deportment, composure and serenity under trying circumstances."<sup>62</sup> This was a tall order. *Punch* had no end of fun with the meeting between the social elite and photographers trying to live up to these demands. Silvy, however, was one photographer who did not need such advice. Nadar recorded that his compatriot wore a fresh pair of white gloves for every sitting. A basket was carefully positioned in the corner of the studio for the discarded hand-ware.<sup>63</sup>

Despite the finery, Winter was puzzled by what he saw. Walking through these rooms, he said, it was difficult to know "whether you are in a studio, or a house of business." Silvy, he claimed, mixed art with manufacture, "hence the scale and method of his proceedings." The house was "at the same time a counting-house, a laboratory, and a printing establishment. One room is found to be full of clerks keeping the books, for at the West End credit must be given; in another a score of employés are printing from the negatives." A third room was maintained for chemical preparations and was full of "crucibles glittering with silver," while "one large apartment is appropriated to the baths in which the *cartes de visite* are immersed, and a feminine clatter of tongues directs us to the room in which portraits are



John Jabez Edwin Mayall  
(224 Regent Street,  
London), carte de visite  
of unidentified woman,  
c. 1853–89

MAYALL,

224, Regent Street,

finally corded and packed up.” In addition, a building had been erected in the garden for the printing work, which, Winter said, was “purely mechanical, and is performed by subordinates.”<sup>64</sup> It has been estimated that Silvy employed fifty workers in all in this detailed division of labor.<sup>65</sup>

The studios of Sarony and Silvy were grand establishments, but they were not entirely unique. As we have seen, Winter estimated that there were around thirty-five studios in 1862 on Regent Street alone. These studios, which included the establishments of J. J. E. Mayall and T. R. Williams, catered to the same public as the two described here. Despite the sex trade plied on the street (or because of it), Regent Street was an even more prestigious address than Porchester Terrace.<sup>66</sup>

#### “CHEAP-AND-NASTY PHOTOGRAPHIC ESTABLISHMENTS”

There is much to be learned from these accounts of grand studios with their fine decor, elaborate division of labor, and all-around elegance. Winter’s

confusion is particularly instructive. The combination of steam engine and expensive painting, splendid backdrops and printing house, suggests a new cultural form that united art and industrial production. As Allan Sekula has argued, the ideology of photographic art frequently provides a humane veneer for industrial production by subjectivizing the machine.<sup>67</sup> The configuration of “photographic art” suggests that science and technology can be combined with human affect and sentiment, implying that these runaway forces can be directed creatively in the interest of social progress. At some decisive points in the story of photography, this recombination of dirempt fragments was destined to produce utopian sparks. In this sense, the combination of industrial method and domestic form seems a concrete embodiment of the structure of sentiment found in the novels of Charles Dickens and the midcentury humorists.<sup>68</sup> Locating photography in a stable aesthetic tradition went some way toward naturalizing portrait factories.<sup>69</sup> Indeed, this form of modern archaism suggested that cartes had been around forever. The “non-synchronous” neoclassical, or Gothic, cloaking of industry seen here will be repeated in the artistic debates explored in Part 2, where a modern mode of representation found its place in the existing aesthetic categories.<sup>70</sup> The important point at this stage, though, is that if the studios of Silvy and Sarony were not unique, it would be fair to claim that they *were* exceptions to the norm. Notably, as Lee has observed, Silvy’s studio was dedicated *exclusively* to photography. Other studios, even extensive ones—such as the Harrogate establishment run by Mr. Holroyd, where the elaborate division of labor was said to bring “science and common sense” to bear on the business—combined photographic work with other kinds of image making.<sup>71</sup> The description “photographer and miniature painter” commonly appears on the reverse of cartes. Most studios operating during the 1860s were of a different order from these grand establishments.

An article that appeared in *The Photographic News* provides an introduction to a second photographic world. This text, which described an incidence of theft from the Oxford Street photographic dealer and photographer Jabez Hughes, set out to draw attention to what it described as the “mode of conducting the disreputable cheap-and-nasty photographic establishments.”<sup>72</sup> Hughes, we are told, noticed an unexpected decline in his profits. He suspected the cause of this fall to be dishonesty somewhere in the firm. The article informs us that the porter in the establishment—one Joseph Ricketts—had a brother-in-law, Frederick Smith, who was also a photographer. Smith was said to own “a very humble place of business in New Street, Covent Garden.” From here, the outcome of this little moral tale is clear.

Smith, we are told, kept his business afloat by selling photographic materials at reduced prices. This studio, the author claimed, "was one of those which disgrace the photographic profession, and which are well described as 'dens.'" This is the first time that the reference to a photographic "den" has come up, but it was a common description for the kind of studio that respectable photographers deplored. A den suggests the lair of a wild beast, or the fetid and grimy nook associated with crime and depravity. On another occasion, Simpson described these "dens" as places of "assault, robbery and other crimes."<sup>73</sup> Applied to photography, "other crimes" may euphemistically refer to the production of "obscene" pictures or "pirated" images. Cheap workers like Smith—and we will encounter others of his kind—did not occupy the grand thoroughfares of the metropolis. They belonged to the geography of the city charted by Mayhew and the social investigators. And so the police and the manager of the Hughes studio, John Werge (who, like his employer, was a freemason), kept watch on the establishment. Sure enough, they observed Ricketts arrive an hour early, enter the building, and help himself to stock. He was arrested along with his brother-in-law, who possessed materials stamped with Hughes's mark.<sup>74</sup> As far as the author was concerned, the worst part of this story was that it revealed that "a number of persons exist who, shutting their eyes, are willing to purchase materials, well knowing, by the price they pay for them, that they are dishonestly procured. It is another deeply humiliating aspect of the lowest phase of professional photography."<sup>75</sup> If the grand studios represent one form of highly visible photographic business, the "dens," the "dishonesty," and the persons needing "to shut their eyes" all figure a second photographic world. Photographic history has, unsurprisingly, paid much more attention to the former than the latter. There were, however, many establishments like Smith's and those he supplied, probably just surviving on the edge of economic disaster. Henry Mayhew noted that "in Bermondsey, the New-cut, and the Whitechapel-road," you could not "walk fifty yards without passing some photographic establishment, where for six-pence persons can have their portrait taken, and framed and glazed as well."<sup>76</sup>

To take an example that figured prominently in the photographic imagination, a writer in *The Photographic News* denounced those studios that employed "doormen" and "touts":

To every one of these cheap photographic studios there is attached one or more hired bullies called "door men," whose vocation it is to prowl up and down before the portal of the unwholesome temple of black art, to thrust villainous portraits into the faces of the passers



ABOVE: "Art-Progress,"  
*Punch, or the London  
Charivari*, May 2, 1857, 174



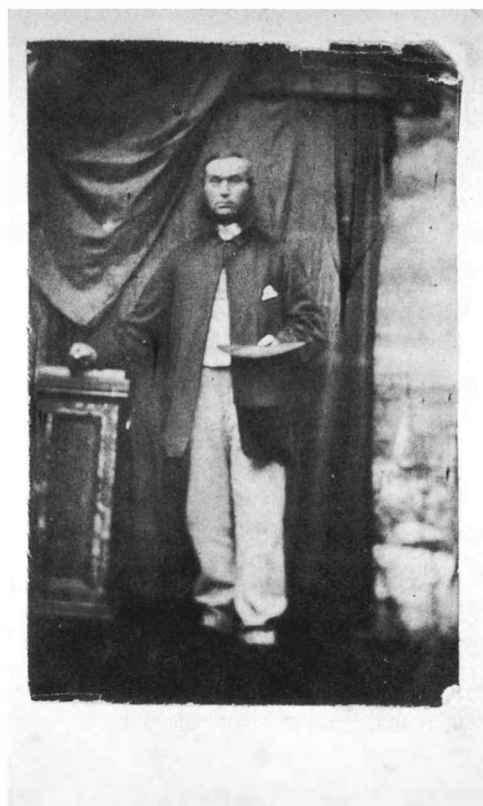
LEFT: Anonymous, carte  
de visite of unidentified  
woman and child

by; to make use of filthy and ribald talk to the giddy girls who stop to stare at the framed display of portraits; to exchange blackguard repartee with "the door men" of some neighbouring and rival studio; and, if need be, to assist their employers in ejecting, pummeling, and otherwise maltreating troublesome customers.<sup>77</sup>

Accounts like this appearing in the trade press afford us a view of the second photographic world, but they need to be read carefully. Such representations should be seen, in part, as an element of the photographic journals' strategy to depict photography as a respectable professional occupation. Their presence in the photographic press testifies not simply to the existence of touts but also to the journals' anxiety at the way in which the national press and *Punch* fixed on the doorman as a sign of photography's imbrication in popular and mass urban street culture. The *Daily Telegraph*, for instance, described touts as "riffraff" whose "disgusting language" surpassed even that of "omnibus cads." They were, this writer asserted, "impudent and foul-mouthed harpies" in "sordid attire and of threatening mien." The best analogy this writer could find was with "Irish beggars."<sup>78</sup> The doorman, "barker," or tout appears regularly in this literature as a figure of disgust, as if his public presence on the street metonymized the lack of respectability within. Linkman notes that it was a doorman in Lambeth who introduced Arthur Munby to a girl willing to be photographed "with her clothes up."<sup>79</sup> Munby is a good guide to this kind of photographic studio, because his patterns of fascination, which took him in search of dubious pictures of working women, led him into the kind of establishments rarely encountered in the historical records.<sup>80</sup> Munby noted one man who mixed photography with "easy shaving," and another who "looks like a retired costermonger, and who combines photography with gingerbeer and red herrings."<sup>81</sup> In the wake of the carte craze, many individuals took to photographic cheap work looking for a living. Who could blame them? It was frequently noted that photographers were failed men—persons who had tried their hand at many things before entering the photography business. (In a wonderful dialectical image that captures both the promise of a New World and a dumping ground, Nadar referred to the "Botany Bay of photography.")<sup>82</sup> More prosaically, Robinson described photography as "a refuge for the destitute."<sup>83</sup> He, of course, deplored this situation. According to the *Daily Telegraph*, these photographers were "fellows without calling and without character, who have somehow obtained a camera and a few chemicals" and "set up in the most populous streets."<sup>84</sup> Mayhew's account

of "street photographers" and their dodges describes one such man. His particular figure, "a Photographic Man," had worked "drag pitching with a banjo" and turned to photography because it offered the prospect of a better livelihood. This man began trading before he had mastered his "art," and he told his customers that the completely black picture he offered them "would come out bright as it dried."<sup>85</sup> An article that appeared in the *British Journal of Photography* in 1861 recorded, with evident distaste, an advertisement that had appeared in the press. It read: "TO PHOTOGRAPHERS. — WANTED a young man that understands the Photographic Business; one who also understands the Hairdressing Business preferred."<sup>86</sup> (Hairdressers seemed particularly prominent in the photographic imaginary; perhaps the connection was that they were both head businesses.) When Alfred H. Wall—a figure who occupies a central place in my narrative as perhaps the preeminent champion of art photography in the 1860s—interviewed prospective operators, among the dubious and very probably fictional, or fictionalized, characters that turned up was one he described as a man with a giant's head and dwarf's body. This "hoperator" suggested that he would turn Wall's studio into "a slap-up air-cuttin' saloon," the business "what I was 'prenticed to."<sup>87</sup> Body and language meet here to produce a figure dislocated from the norms of respectability.<sup>88</sup> Men like this may have seemed distasteful to those conducting the photographic press, but such mixed trading was common enough at the edges of the petit-bourgeois world.<sup>89</sup> One estimate suggests that 25 percent of photographers working in Leeds combined photography with other trades, including butchery, dentistry, cabinetmaking, and, indeed, hairdressing.<sup>90</sup> Among the thirty-three photographers listed in the Manchester trade directories for 1858 were "a housewife, a waxflower artist, a button maker, an estate agent, a baker and a hairdresser." It has been argued that these patterns of "mixed trading" declined as photography was professionalized.<sup>91</sup> Perhaps!

Not all of these studios marked as disreputable were dens conducted by those on the margins of society. My favorite story involves a villain worthy of Wilkie Collins: Albert, Count Leiningten, who worked under the name of Albert Ceileur and claimed to be Queen Victoria's cousin.<sup>92</sup> *The Photographic News* described "M. Ceileur" as an "old photographer and a skilful one" who had entered the employ of the London Stereoscopic Company on an "unusually handsome salary." The London Stereoscopic Company had obtained exclusive rights to produce views of the 1862 International Exhibition and expected to make considerable profits from these images. Soon, however, cheap pirated copies began to flood the market and com-



Anonymous, carte de  
visite of unidentified man



Anonymous, carte de  
visite of unidentified  
woman

promise their takings. It emerged that Count Leiningten/M. Ceileur was the source of these pirated pictures. He had copied the originals and was running off large numbers for both export and domestic sale, asking 5s per dozen less than he was supposed to be raking in as the official representative of the company. It was said that he exported nearly a quarter of a million of these pictures. To this end, he had set up a large photographic establishment employing "sixty hands." At the time, this was probably the biggest photographic business in Britain, larger even than Silvy's posh studio at Porchester Terrace.<sup>93</sup> Another report suggests that a photographer claiming "relationship with royal blood" was bound over and had to pay "heavy damages and costs" for pirating carte portraits.<sup>94</sup> Count Leiningten (along with M. Ceileur) issued bankruptcy and promptly vanished.<sup>95</sup>

### A THIRD SOMETHING

If the articles on Sarony and Silvy have been incessantly cited, an extraordinary essay by Stephen Thompson—"The Commercial Aspects of Photography"—has gone unnoticed.<sup>96</sup> Thompson had a good reputation for his photographic book illustrations, which included landscapes as well as pictures of monuments and artworks. During the 1870s he worked for the British Museum, documenting its holdings.<sup>97</sup> He begins his text conventionally enough, with a tale of a photographic journey—one replete with references to a "traveller," the "right path," the "right track," and so on. But early on he provides a premonition of what was to come, asking whether his age were not drifting into a "slough of a base money-grubbing spirit which is the death of all progress towards a desired end."<sup>98</sup> The echo of Bunyan may be intentional. According to Thompson, commercial photographers belonged to different classes. One of these was the group the press termed "the photographic nuisance" (and which I have characterized as "cheap workers"). These men, he said bitterly, were

the Arabs, the Pariahs of the profession, who prey on garbage, and infest the less reputable quarters of the metropolis and great provincial cities in daily increasing numbers—coarse, vulgar rogues who "hold out" in filthy dens, backed by an *entourage* of tawdry finery and atrocious specimens, yet attended by an even lower variety of the human species—the touter or doorsman. Ruffianism and black-guardism may there be found in its most repulsive phase.<sup>99</sup>

We have heard, almost word-for-word, this story before. The language of disgust and distaste accompanying it ought to be equally familiar: dirt and decay, vice and crime circle this class of photographer. For Thompson, cheap work appeared as a kind of disease. The reference to "tawdry finery," combined with the danger of infection, suggests that he saw this type of photography as a form of prostitution.

In contrast to these men, he argued, stood "regular professional photographers" who worked in portraits and landscape art. This group, Thompson insisted, had "no more affinity" with other classes of photographers "than the regular medical practitioner has with quacks and charlatans." Among the elite group were photographers of the "highest attainments." "Governed by refined principles of honour and integrity," they were "men of varied gifts and acquirements—some highly educated—all possessed of a high degree of intelligence." (The word "honour" is highly significant here, and we will need to return to it.) Thompson felt that this class of professionals, along with distinguished amateurs, had been responsible for the progress of photography.

So far, there is nothing unusual about this contrast. Dozens of writers conjured with the difference between cheap workers and Thompson's "regular professionals." In essence, his opposition seems to restate my contrast between a Sarony, or a Silvy, and those photographic producers struggling on the edge of ruin. But this article does more than pathologically condense these themes: Thompson divided photographers into *three* groups. There was, he suggested, "another class" engaged in photography. These men were "reaping much of the reward due to those who have borne the heat and burden of the day—we allude to the tradesmen or capitalists, who are not photographers at all. Yes: photography has its Barnums and its Moses and Sons."<sup>100</sup> This fascinating passage takes us into the recesses of a distinctly petit-bourgeois imagination. Thompson's argument is significant because he draws a line between the respectable studios and "the tradesmen or capitalists." His analogy with a circus impresario and a Jewish chain of tailors and outfitters (described by Nead as "the butt of mid-Victorian anti-Semitism") is particularly striking.<sup>101</sup> Chain and department stores figured prominently in the small retailer's demonology. The economies of scale, the range of stock, and the seductive pleasures provided by the extensive displays all seemed to add up to a package with which small traders could not compete. Thompson's essay produces the respectability of the small photographer through a contrast with a Jewish other who breaks the communal bounds of honorable trade. (No heroes here.) In reality, department stores, even at the end of the century, accounted for a tiny proportion of retail business, but in the petit-bourgeois

mind they spoke of an impending doom.<sup>102</sup> The point, I take it, is that the *signs* of what counted as the center of capitalist commerce were shifting. In the process, the materials out of which the petite bourgeoisie built its identity were put under some stress. Key elements of petit-bourgeois ideology—the idea of the self-made enterprise, the emphasis on small property, attachment to locale, the claim to reciprocal bonds—all seemed challenged by the *visibility* of the new forms of concentrated property. Thompson's reference to Moses and Son fits straightforwardly enough with the pattern of unease at work here. What he means by photography's "Barnums" is more difficult to determine. Perhaps he had in mind the razzmatazz of publicity and promotion ("puffery") that surrounded the circus master's spectacular shows. Maybe he detected similar tendencies in some of the grander studios. Both Barnum's advertising machine and Moses and Son's stores seem to figure for him a world of large, or concentrated, property pressing down on small traders. Thompson suggested that these photographic firms traded under "some generic title which cloaks all individuality." He thought of these firms as a kind of pernicious fungal growth. They were parasites growing on the body of the true "photographic brotherhood."

The "tradesmen or capitalists" that Thompson had in mind may have been the London Stereoscopic Company—with its gallons of eggs, reams of paper, and contracts with dodgy characters—and Marion and Co., the carte wholesale company. While the former employed photographers and bought and sold images, the latter was a merchant house exclusively trading in carte images of celebrities. Its manager, George Bishop, claimed that by the year of Thompson's article, this firm had printed as many as 50,000 cartes a month.<sup>103</sup> *The Stationer* estimated the profit ratio for this work to be in the region of 1,000 percent.<sup>104</sup> Marion and Co. was said to have paid Mayall in excess of £35,000 for his images of the royal family.<sup>105</sup> It is difficult to find information on photographic dealers, but when the Society for the Suppression of Vice brought an indecency prosecution against Henry Evans, a trader in "artists' studies," as part of its attempt to police public morals, Evans possessed stock of a quarter of a million photographs. It is not recorded what percentage was deemed "obscene."<sup>106</sup>

Thompson suggested that although the editors of the photographic press were, in the main, honest men, they had been fooled by the large houses. In "puffing" these enterprises, the photographic journals deceived the public. Thompson was concerned that potential customers would be lost as they tried, in turn, the photographic den and "the showy, puffing, *quasi* first class house." This is why I have said that Thompson's article *appears*

to work with the standard contrast established between respectable studios and photographic dens. In fact, his argument fundamentally rewrites the category of "respectability," bestowing it on those photographers who operated in the economic space *between* the grand studios and those he deemed rogue traders. Neither of the established categories, he thought, produced good photographs: both left customers disappointed. The result was that "the commonwealth of photographers suffers."<sup>107</sup> Thompson advised the public to eschew both "the low den and the gilded saloon, the touting of which is done through the columns of the daily press: neither belong to the legitimate photographic guild." Designating advertising as a form of touting plays a significant part in Thompson's strategy of petit-bourgeois decency and aspiration. This move enabled him to position the large houses with the "dens" as disreputable studios, thereby reserving the idea of respectability for another organization of business. Thompson reminded photographers that they had "a public duty to perform to the whole brotherhood." His corporatist rhetoric is notable, because the English guilds had long since passed into history and there could never have been a "legitimate photographic guild."<sup>108</sup> Thompson seems to speak for the small producer faced with a hostile market. In the most respectful terms, he suggested that the editors of the photographic press represented interests other than those of the majority of photographers. As I see it, Thompson's argument represents one of the dominant voices in nineteenth-century English photography.

Does it need saying that most photographers did not belong to the class of a Sarony or a Silvy? By and large, the owners of photographic studios did not employ well-paid colorists or lavish fortunes on equestrian statues, tapestries from Flanders, or exquisite furnishings. Rather, these were men (and, more rarely, women) who worked alongside one or two assistants. Small property owners dominated the photographic field. Photographers were, for the most part, petit-bourgeois producers. They shared the key structural characteristics of the petite bourgeoisie: unlike workers, they owned some capital, but in distinction to the middle class, they labored in the business.<sup>109</sup> Photographers offer an interesting case study of the petite bourgeoisie, uniting the features of two of its main fractions. On the one hand, they produced commodities, like the masters of small workshops; on the other, they sold their wares from small establishments, like small retailers. Historians of photography may not find it a particularly flattering analogy, but the most direct comparison for this kind of economic activity is with those manufacturer-retailers who purveyed their commodities from a small outlet, such as tailors and shoemakers, butchers and bakers.<sup>110</sup>

Because the category "petite bourgeoisie" plays a substantial role in the remainder of this book, it seems appropriate to explain what I take this concept to designate.<sup>111</sup> It seems to me that the classic Marxist accounts of petit-bourgeois life and politics—however unfashionable—provide, in their main lines, the best framework for investigation. I take from this body of theory the idea that petit-bourgeois values are determinate: they are totalized by the *range* of intermediary roles this class, or class fraction, occupies in a society structured by the antagonism between big capital and direct producers.<sup>112</sup> The petite bourgeoisie is caught between the rock of large capital and the hard place of labor. At moments of social crisis and upheaval, the petite bourgeoisie, caught in the middle, hitches its wagon to one of the larger engines. Fear of the abyss below inclines these people to expend inordinate effort in marking their distance from the proletarian horde. I do not accept the charge that this argument implies an inevitable teleological drift toward reaction.<sup>113</sup>

Social historians have tended to see a pattern of petit-bourgeois migration, in nineteenth-century Britain, from radicalism to the politics of order. Toward the end of the century, it is argued, the petite bourgeoisie came under pressure from department stores, the new multiples (Stephen Thompson's *bête noire*), and the consumer co-ops, while wider access to education from the 1870s threatened the security of the clerical bloc. Shopkeepers, small traders, and small masters had occupied a fundamental place in the radical alliance in the years leading to the Chartist challenge. Yet in the final decades of the century, the petite bourgeoisie became identified with conservatism and jingoism.<sup>114</sup> Fear and uncertainty, it is claimed, propelled the petite bourgeoisie into a climate of stifling conformity and respectability—a process that would ultimately lead them into "Villa Toryism."<sup>115</sup> This is the petite bourgeoisie encountered in the work of Gissing and Joyce. But this model does not really explain the characteristic patterns of the photographic trade. According to these accounts, the 1860s ought to be characterized by a lull before the storm—a moment with a stable petite bourgeoisie, shorn of its radical past but not yet beset by the winds of competition and insecurity. While we might expect to discover a serene petite bourgeoisie in this period—the classical period of Liberalism—we actually find resentment focused on the working class. This is all the more apparent because the mid-nineteenth century witnessed a temporary political settlement between the working class and capital. Historians tell us that during these years, a shift took place from "a seditious and ungovernable people" to the post-Chartist concord.<sup>116</sup> Both poles of this distinction are, no doubt, exaggerated, but the overall drift is unquestionable. Yet all through this period, photographers

expressed their fear of (and distaste for) working people. As we will see, the fundamental conceptualizations of photography put into place during the 1860s were born of this anxiety and hostility.

In their important recent work on the petite bourgeoisie, Geoffrey Crossick and Heinz-Gerhard Haupt have recast this story of a migration from radicalism to reaction. The petite bourgeoisie, they suggest, remained remarkably consistent in its adherence to a set of social values. Shopkeepers and small producers stuck fast to ideals of small property and honest work; they opposed social parasites, the idle rich, and unproductive middlemen; they fought the bureaucratic state and taxing government; and they adhered to a notion of the *quartier*. These were all key themes of English radicalism in the period from Paine to Chartism. Crossick and Haupt have convincingly argued that the petite bourgeoisie remained loyal to these ideas long after the breakup of the radical alliance. It was the configuration of social forces that changed, while the petite bourgeoisie remained relatively constant. Traces of these values can be found, for instance, in later petit-bourgeois opposition to Socialism and to the working class as "tax eaters."<sup>117</sup> Fear of Chartism seems to occupy the pivotal point in this shift, figured by the withdrawal of the middle-class delegates from the Birmingham convention and the Bull Ring riots. When universal suffrage and the attendant threat of leveling property became the litmus test of radicalism, the petite bourgeoisie went home.<sup>118</sup> The end of old corruption and the lifting of overt political repression, which helped accommodate the petite bourgeoisie to the state, also facilitated this move. Midcentury Liberalism took shape under these conditions.<sup>119</sup> In many ways, it seems that the political Right in Britain has adapted to the petite bourgeoisie at least as much as the petite bourgeoisie has moved to the Right. All of this appears to confirm that the relation of the petite bourgeoisie to the working class was fraught with tensions well before the drift rightward in the 1880s and 1890s.

In the absence of detailed historical work on the capitalization of photographic studios, Clive Behagg's work on small producers and manufacturer-retailers trading in Birmingham may provide us with some helpful pointers. The story Behagg tells certainly seems to illuminate Stephen Thompson's account of the stresses experienced by photographic producers in the intermediate studios. Small masters and manufacturer-retailers were under pressure throughout this period. It has become a commonplace of social history writing that the development of capitalism in Britain was not a story of Dark Satanic Mills. As E. P. Thompson observed, the characteristic industrial worker operated from home or in the myriad of small workshops.<sup>120</sup>

Throughout the nineteenth century, small producers continued to trade side-by-side with the large concerns. These little masters worked alongside those they employed, and, as a writer in the *Morning Chronicle* suggested, they were often indistinguishable from their employees in dress, language, and habits.<sup>121</sup> The choice of grafting in these workshops or setting up as a master was, at this time, a choice *within* the laboring community.<sup>122</sup> The capitalist transformation of work hinged less on mechanization and factory labor than on the integration of existing forms of production into the vagaries of the market.<sup>123</sup> Artisans often continued to produce in traditional ways, but the merchant's or factor's credit, supply of materials, and control of markets drew these workshops into a web of dependency.<sup>124</sup> Where technological change was significant, it often favored the development of small-scale production. Photography, as I suggested earlier, is directly comparable to those trades that were transformed by the sewing machine's introduction. Studios needed to remain small and dispersed, because the faces that reflected light onto photosensitive plates could not be concentrated in one place.

The little workshops operated on short-term credit, frequently in cycles of no more than a week.<sup>125</sup> Small concerns, usually undercapitalized, bought their raw materials in small quantities and needed to sell quickly in order to recoup their outlay and commence the next week's production.<sup>126</sup> As Behagg observes, this was a "viciously inverted political economy": these producers were forced to buy in the most expensive markets and sell in the cheapest.<sup>127</sup> It was only one step from this pattern of dependency to the sweating trades and the world of the garret masters. Under such conditions, artisan ideals of independence tended to return in a nightmarish garb.<sup>128</sup> These forms of dependency, as I suggested in the previous chapter, fundamentally transformed the world of the small masters. The winds of the market blew the laboring community apart. To appear worthy of credit, masters needed to run their workshops in a businesslike manner. This meant adopting middle-class norms of propriety and marking one's distance from the working community. Fundamentally, it meant imposing capitalist work discipline on an artisan labor force. Most small masters accepted this logic of the market, turned against the customary culture of the workshop, and sought to subject their workforce to the new rhythms and patterns of work. They fought the tradition of Saint Monday and frequently adopted a moralizing tone on the lack of Christian behavior, the perils of alcohol, and other "heathen" activities.<sup>129</sup> It also meant moralizing and disciplining the master himself. The "honourable" masters, in contrast, stuck fast to the solidarities of the workshop and accepted "the obligations of the trade." They adhered to an

unwritten code that involved restrictions on apprenticeship and the types of machinery that were admissible; they refused the dilution of skilled labor; and they rigidly followed a list price for work.<sup>130</sup> This idea of the "legitimate pursuit of trade," which opposed the central tenets of economic liberalism, formed a cornerstone of artisan resistance to the capitalist transformation of work. The idea of the honorable master and the legitimate pursuit of trade invited the masters to act as participants *in* the laboring community. For the large manufacturers, in contrast, the legitimate pursuit of trade came, by the 1840s, to be associated with the pieties of political economy.<sup>131</sup> Behagg suggests that this upheaval not only produced modern work relations but also transformed artisan producers into petit-bourgeois manufacturers who modeled themselves on the large employers and accepted the strictures of the "dismal science." By the 1860s, this petite bourgeoisie was set in opposition to the working class.

Here is Stephen Thompson on the "capitalists." These large photographic firms, he argued, "hold much the same position in the trade with regard to their *employés* as what are termed 'sweating houses' do in the slop-trade. Everyone is under-paid and over-worked on the one hand, and the public over-charged on the other, and thus profits are made at both ends."<sup>132</sup> Thompson claimed that he admired "commercial enterprise" but, he felt, this must be pursued on the basis of "honourable principles." As far as he was concerned, there were definite limits to "legitimate" trade. Anything that overstepped this line was "fraught with mischievous evils of the direst kind." To compare photographic enterprises with the slop trade and sweating, to declare for "honourable principles" and "legitimate" trade, was to inhabit a world of small producers hostile to the encroachment of the capitalist market, a market that favored the large concerns and middlemen. As far as Thompson was concerned, these big houses had stepped over a boundary. His language gives some indication of the changes underway in photographic production. It can be argued that the biggest threat to the deskilling of labor in this period was not mechanization but overstocked labor markets—precisely the situation photographic producers faced in the wake of "cartomania."<sup>133</sup>

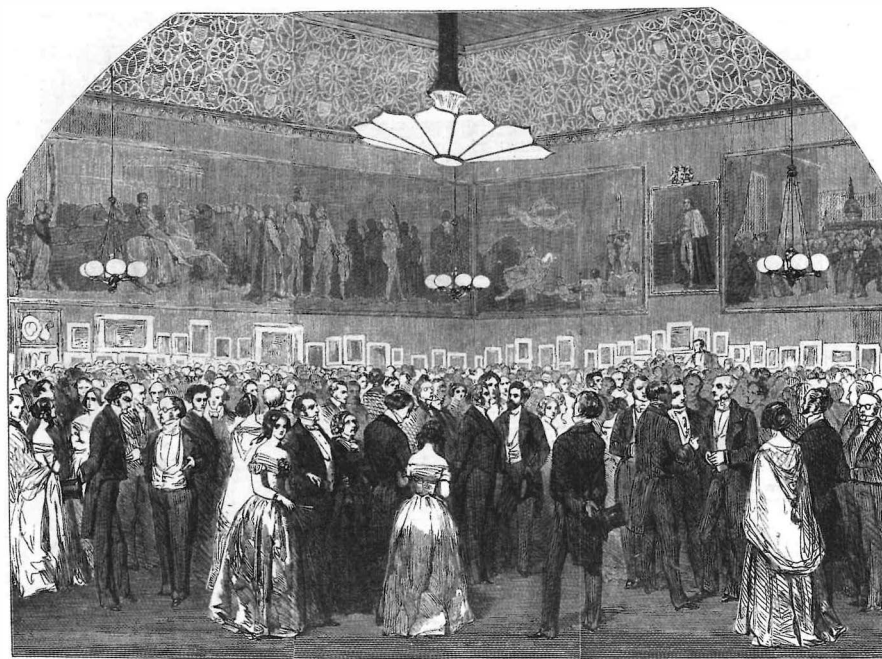
Another essay, signed S. T. (and almost certainly by Thompson, who signed his contributions to books "S. T."), railed against cheapness, which he called a "pernicious evil."<sup>134</sup> Cheap work, the author felt, was an affliction of his society. It was found in the railways, where it put a few extra shillings in the pockets of the shareholders; in the building trade; and in photography. Cheapness was a "monster" that fixed its "fangs" in "the beloved form of our beautiful art." This article decried the "cheap portraiture executed by ruffians"

and was particularly exercised by the idea of cheap printing, which the author characterized as "printing by the acre." On the whole, S. T. thought it was to photography's detriment "that the commercial element can enter so extensively into it as it does." Revealingly, he stated that he had no faith in anything that could not "be done by the individual, or under his immediate superintendence, and in which he can take a personal pride and interest and responsibility." Here, large concerns—cast as vampires—stand in contrast to the ideal of small studio production. This is a familiar image for the resentment felt by small masters and tradesmen for middlemen, factors, and the unfair competition represented by concentrated property. In the context of his comments on *Moses and Son*, it is difficult not to read this as an anti-Semitic allusion (this may be the effect of *my* conjuncture, though his reference to "vultures" in the other essay is more clear cut). S. T. does suggest that sections of the photographic trade, along with many others, were being squeezed by the structures of the market. There has been no research on credit cycles in the photographic trade, but Thompson's bile and spleen may signify that many small producers were increasingly coming under the control of the "capitalists."

a photographic atlas

#### "TRULY WE ARE A MOTLEY RACE"—OR THE THIRD-CLASS CARRIAGE

In one respect, the very existence of the photographic press testifies to this petit-bourgeois status. It has been claimed that it took ten years for photography to emerge as a category distinct from science or art in journals such as *Notes and Queries*, *The Athenaeum*, and so on.<sup>135</sup> This change may have been unavoidable, but it was not entirely to photography's credit. The men of science wrote in the journals of the (albeit attenuated) bourgeois public sphere. We have only to think here of the range of publications contributed to by Sir David Brewster or Robert Hunt. Periodicals like *The Photographic News* register a shift of address from the general to the particular: they move from educating, or conversing with, a public to chivvying or bolstering their narrow audience. As Wall noted: "I always sit down to my fortnightly task of writing for THE BRITISH JOURNAL OF PHOTOGRAPHY with a great degree of pleasure. Other contributors to other journals address their readers as the invisible beings in some unknown world; but we of the photographic serials rather sit down for a pleasant and cheerful hour or two with those we know and esteem—with those to whom we are united by community of tastes, feelings, interests, and pursuits."<sup>136</sup> Wall's comment was a preamble to noting that there were some who thought his criticisms personally motivated. But even when this is taken into account, the passage still indicates



"Soirée of Photographers, in the Great Room of the Society of Arts," *The Illustrated London News*, January 1, 1853, 12. By permission of the British Library

the restricted audience for these journals. Wall went on to state that he often received letters and visits from those whose only introduction was "our pens." While the writers for the middle-class quarterlies spoke to their readers on intimate terms, this was a very different matter from knowing them all personally. The photographic press spoke to itself.

If the photographic journals are to be characterized as a petit-bourgeois forum and identified with the voice of Thompson—and I am convinced of this—such a designation requires some clarification. The proprietors of small photographic studios undoubtedly made up the readership of these magazines (the evidence is manifest in the letters to the editors), but the conductors and many of the regular contributors were of a different stamp. Thompson's article registers the distinction, suggesting that these men had been hoodwinked by the large concerns. Look at the image of those who assembled for the "soirée of photographers" in the great room of the Society of Arts in 1853. It strikes me that any account of photography in mid-nineteenth-century England will have to come to terms with this picture. The soirée was a feature of the learned societies, and this gathering attested to the ambitions for the Photographic Society that was coming into being

at this precise moment. The image is composed of a series of distinct bands. At the top there is the elaborate decor; below it, the painted frieze; lower still, a band of photographs hung on the wall; and then, two layers of photographers. One of these strata consists of the assembled throng in the background, many of whom seem to be listening to the small raised figure. Then, in the foreground, there are small groups of men and women engaged in acts of sociability. There is no way of knowing whether the depicted women are photographers or the wives and daughters of these men. The former is not impossible. When the Photographic Society was formed, women were eligible for membership.<sup>137</sup> I like to think that the two women on the left edge of the picture—the only ones not attached to a male arm—are keen photographers discussing the latest chemical "recipes" or "spherical aberration."

These men and women appear at their ease in these auspicious surroundings. They converse about photography and other matters. Introductions are made, acquaintances renewed, the new Society earnestly debated. Their finery—hats and fans, silk dresses and black frock coats—makes a display of their comfort and status. What I find most interesting about the image are the transfers, or movements, from one stratum to another. The stocky gentleman accompanied by his wife and daughter, to the left of center, is echoed in the group in the frieze directly above him. More generally, the frieze of figures in the foreground seems to repeat the arrangement from the painting above. The layer of photographs mediates these two groups. The height at which the photographs are hung seems to recapitulate the arrangement of the heads in the painting. In so doing, it joins together the photographers in the foreground and the frieze. The heroic events on the walls are thus mirrored by those in the room.

The figures in the illustration of the 1853 soirée were the kind of men who supplied the journals with editors and regular contributors. These were not the persons struggling to make ends meet in small studios; they are hardly even Thompson's respectable men. When the Photographic Society was formed, its first council was made up of twenty-four men. It included two knights of the realm, an earl, a baronet, a count, two medical doctors, a naval captain, two Fellows of the Royal Society (one of whom was also one of the medical doctors), a doctor of philosophy, and the president of the Royal Academy.<sup>138</sup> Evidently, this is not the petite bourgeoisie. The Society was formed when a group of eminent men associated with photography negotiated with Talbot for the partial relinquishment of his patent claims.<sup>139</sup> As Sir Charles Eastlake put it, this threw photography open "to the enterprise of men of science, of amateurs and of artists."<sup>140</sup> Professional photogra-

phers do not figure in his description. These men, then, formed the Society, and in significant ways it remained under their hegemony. It is telling that Eastlake—president of the Royal Academy—was the first president, while the second was the Chief Baron Pollock (who was the supreme English Law Lord). Lady Elizabeth Eastlake, the wife of Charles Eastlake, speculated that the next president might be “a General” fresh from a foreign land, or, perhaps, the Archbishop of Canterbury.<sup>141</sup> By June 1853, Queen Victoria and Prince Albert had accepted roles as patrons for the Society.<sup>142</sup>

The discussion on the council’s composition that occurred at the first anniversary meeting of the Society, however, reveals some significant social tensions developing in that body. A motion was submitted at this meeting that advocated “that all persons practising photography professionally with a view to profit, and all dealers in photographic apparatus and materials, be disqualified from holding office in the Council of the Photographic Society.”<sup>143</sup> The motion was initially passed on a show of hands, but when the secretary of the Society, Roger Fenton, pointed out that on these grounds he would be excluded from the council, it was immediately rescinded. By the time of the anniversary meeting, the membership of the Society had risen to 370. This influx of members, at least some of whom ran commercial studios, broadened the society’s social base. The motion may attest to the worry felt by some of the amateurs with this change.<sup>144</sup> The annual photographic soirée became a fixture in the 1860s. They were held in the large hall of Kings College, the Suffolk Street Gallery, and the Architectural Society. Presiding over them were eminent men from the world of photography—Talbot and the Reverend J. B. Reade among them—but these often included public figures like the Chief Baron Pollock, who held honorary status.<sup>145</sup> By 1862 the number in attendance had swollen to nearly 500.<sup>146</sup> It is fair to suggest that these were no longer the same people.

When the Manchester Photographic Society was formed in 1855, the Bishop of Manchester was its president, while the council was made up of illustrious men of science and industrialists.<sup>147</sup> Some of them were among the most eminent men of the age: Nasmyth, Frankland, Joule. The following year, however, two professional photographers—James Mudd and Alfred Brothers—were brought on the council.<sup>148</sup> The seven men who met to discuss the formation of the Liverpool Photographic Society in 1853 included the borough engineer, a printer and topographic photographer, a professional photographer and dealer, an optician/instrument maker who also sold photographic materials, and a glass dealer whose wares included photographic plates.<sup>149</sup> These men were of a somewhat different stamp from the figures in

the London Society, as they were commercially involved with photography. When this Society was founded, the position of members was dominated by the professionals, whereas amateurs were associates—but the chairman was an architect (Picton) and the presidency went to Samuel Holme, who was the city mayor. When the Society was refounded in 1864, the Earl of Caithness acted as patron and the Reverend T. B. Banner presided.<sup>150</sup> Some of the particularities of the Liverpool and Manchester societies can, no doubt, be put down to the specific context of industrial Lancashire. Nevertheless, in London, Manchester, and Liverpool, a remarkably similar structure appears. In each case, amateurs preside over and represent the interests of photography. Even in Liverpool, where men who were professionally involved played a leading role in founding the Society, they noticeably step back from leading positions at the moment of instigation.

None of this should come as a shock. Throughout the nineteenth century, the British state (and its imperial extensions) was staffed by titled gents. Unless we wish to follow those revisionist historians and ideologues who dispute the existence of capitalism, this relation must be seen as a question of representation. Discourse analysis does not help here because it dissolves the very connection to deep structure or mediation required to explain this phenomenon.<sup>151</sup> One way to view the dialogic relationship between the photographic elite and the petit-bourgeois constituency of the journals is through the idea of “the imaginary public” developed in the work of T. J. Clark and Tom Crow.<sup>152</sup> (It is, I think, a way of reading Gramsci through, or with, Freud.) This public is often a fantastic projection on the part of the writer or artist, providing a series of values that can be worked with, or against, at the moments of production and of reception. This imaginary public becomes a presence in the writer’s work. He or she anticipates its responses and adapts to them. The critic seeks to represent this public and, in doing so, internalizes values and judgments that do not quite correspond with any that actually exist. It ought to be clear that any social project operates, to a greater or lesser extent, in this way. While the imaginary public might be a “phantasy,” it cannot be cut to fit any shape. Rather, it is constructed from the real materials and experiences at hand. The “public” is distinct from the empirical audience it is predicated on, yet it always exists in a dialectical relation to it.<sup>153</sup> The writer’s conception of his or her “public” cannot stray too far from this audience and retain its constitutive credibility. This is to say that for Clark and Crow, artists and writers might make their own “public,” but they do not do so under conditions of their own choosing.

The photographic press was shaped something like this. The editors of the journals, along with some of their regular authors, wrote with an imaginary constituency in mind. The audience that they addressed was significantly distinct from their readership. In fantasy it consisted of enlightened amateurs; owners of respectable studios; those interested in the intricacies of art theory, optics, and a dozen other things; and an educated general public. The readers of these magazines, however, were of a different sort. The editor of *The Photographic News*, in championing the interests of the big studios, on more than one occasion declared forcefully against opening on Sunday—a practice he described as “unnecessary and socially wrong and unjustifiable.”<sup>154</sup> Remarkably, the exchange that followed the publication of his comments saw contributions from religious zealots; small traders intent on justifying Sunday work; and even a “doorsman” who welcomed the break from his unremitting labor.<sup>155</sup> The point, I think, is that the imaginary address worked for the petit-bourgeois constituency of readers. The model of the grand studios existed in the journals as a mobilizing representation that worked to secure petit-bourgeois respectability. In this sense, it played a comparable role to that of the myth of social mobility woven around the small master providing an impetus for artisan aspiration.<sup>156</sup> At the same time, this writing is shot through with the “answering word” of petit-bourgeois photographers. Their concerns are edged around and bumped up against. Not infrequently, these values are either ventriloquized or come directly from their own mouths. In important ways these concerns generated the texts penned by the grandees.<sup>157</sup> As Marx put it, one must not imagine that the petite bourgeoisie’s “representatives are indeed all shopkeepers or enthusiastic supporters of shopkeepers.”<sup>158</sup> It may be that neither Thompson nor Wall were, strictly speaking, petit bourgeois (though I think they probably were), but they could still give voice to the concerns of small photographic houses. Irrespective of whether Marx’s contentious argument that the disaggregated petite bourgeoisie required another force to unify it stands up, it might prove productive to think of the representational structure of the photographic press as a species of literary Bonapartism.

Even this formulation may overstate the case. Perhaps a handful of photographers made significant fortunes in the middle of the nineteenth century. Mayall entered the solid middle class, becoming alderman, and then mayor, of Brighton.<sup>159</sup> Silvy and Sarony made and spent a great deal of money. Robinson was probably comfortable. But many others, even prominent figures, were not so fortunate. Wall noted, in an exchange with George Shadbolt, that he did not possess the leisure to study science, because he—“not being

by any means” one of the “richest” photographers—had been forced to specialize.<sup>160</sup> This is a telling point, because as the writer of his obituary put it, there was a point during the 1860s when Wall wrote “almost the whole of the matter in each issue” of *The Photographic News*.<sup>161</sup> Photography was shaped by small property owners.

The writings of R. A. S. (a.k.a. R. A. Seymour), which appeared in the *British Journal of Photography* between 1861 and 1862, provide an extremely important testimonial to the social tensions and class dynamics of this petit-bourgeois world. In one long sentence that warrants citing in its entirety, R. A. S. listed those individuals who had come together to shape the photographic field:

Miniature and portrait painters whose occupation like that of *Othello*, had gone—actors whose bright dreams of histrionic fame had long since ended in their awakening at last, and, as it seemed, too late, to the bitter consciousness of a mistaken vocation—toilers in the lower and worst-paid walks of literature—gentlemen who have come down in the social scale only to be more proud of their losses than they ever were of their gains—imprudent ones, whose wealth having melted like ice beneath their dainty feet, has left them struggling alone in the cold dark waters of adversity—mechanics, with souls above their position, making earnest and aspiring efforts to reach the higher level; and mechanics with souls beneath their position, clutching at any chance which may appear to promise a life of indolence, and through which they sink to that lower level they are better fitted to disgrace—chemists’ shopmen, escaping from the monotonous drudgery of life behind the counter—speculative individuals, who try everything, and, as they say, “*mysteriously enough*” fail in each:—from these and from every other source, downwards through all the various classifications of individuals, trades, professions, and callings—even to those gentlemen whose other vocations are best known to the detective police—does photography gather its recruits.<sup>162</sup>

An imagery of movement presides over this passage. Persons go up—and they come down. Some sink into photography, some rise up to it; still others drag it down to their own level. Photography occupies a space in a social topography: there is an above and a below, a heaven and a hell. Depending on their life chances, it was, for some, a utopian space, and for others it was a place of last resort. But for all of these individuals, photography was positioned below some other enterprises. Failure governed. In a fundamental



**A HINT TO THE ENTERPRISING.**

Boy. "HERE YOU ARE, SIR. BLACK YER BOOTS, AND TAKE YER LIKENESS FOR THE SMALL CHARGE OF THREEPENCE!"

"A Hint to the Enterprising," *Punch, or the London Charivari*, November 14, 1857, 197. By permission of the British Library

moment of desire and recognition, R. A. S. claimed: "Truly we are a motley race." The "we" is as telling as the "motley," as it draws his readers into this disreputable list. They were servants, black—the Othello reference—and workers. There is no mistaking this account. According to R. A. S., photographers were the others they despised. The petite bourgeoisie knew that it was too close to the motley proletariat for comfort.

R. A. S. was one of Wall's various pseudonyms.<sup>163</sup> Throughout Wall's writings there are moments of recognition like this. He was acutely conscious of the structuring proximity of the worker-other. And he knew that his identity as a reputable gent hinged on a battle to subdue this alien consciousness. Wall was certainly present in this list: a failed miniature painter, failed actor, and toiler in the lower reaches of literature. (In addition to his photographic criticism, he had worked as an actor, playwright, and theatre scene painter; he later wrote some bad novels and a biography of Queen

Victoria.)<sup>164</sup> Wall had grappled with the proletarian multitude, and he had sunk into it, but had emerged on the other side. The word "we" builds for him an "I." This R. A. S./Wall construction is, I think, shaped in the narrative zone of a debased *bildungsroman*.<sup>165</sup> His texts certainly have the whiff of fictionalized biography. Here he describes himself as a photographer "chiefly engaged in portraiture, having a large private establishment—well, say, not a hundred yards from the City of London—and employing several operators and printers." But this was after his rise; previously, there had been a fall. He would repeat the pattern.

In another essay, R. A. S./Wall claims that at the age of nineteen, he found himself married and, having completed his apprenticeship, he was trying to get by as "one of the smaller fry of street-exhibiting miniature painters."<sup>166</sup> This was not a salubrious position in the first place, but, as he said, the practice of the miniature painter was "doomed" to "destruction" by photography, which brought men "from the bench, and shop, and desk" into the portrait trade. In a passage worthy of his beloved Dickens, he described the impact of photography on miniaturists. "Charming little homes," he claimed, "where the refining and beauty-creating power of soul-bewitching art brought humble means but pleasant cheerfulness to its lowliest votaries" were destroyed by photography. Miniaturists then found that "the shabbiness of garments" locked them into "miserable dungeons" and left them "trembling at the steps of cash-demanding landlords and merciless duns." It also left their wives restraining tears as the children "grew accustomed to going supperless to bed." The position of R. A. S./Wall was by no means the worst, as he had no children.

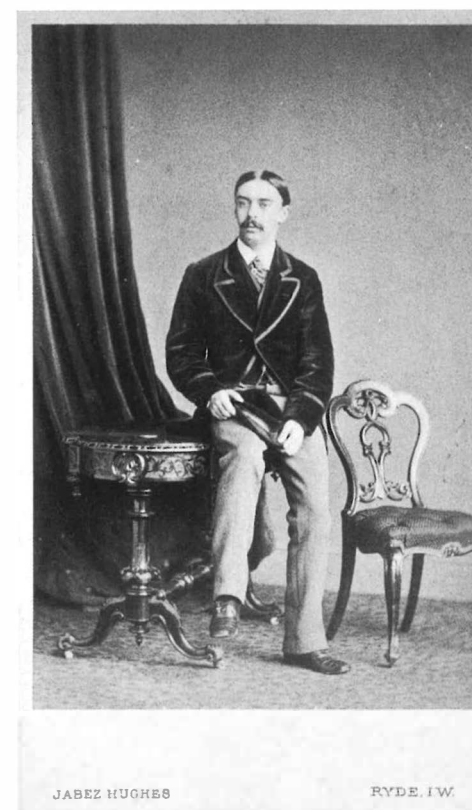
As they say, "if you can't beat 'em, join 'em." So R. A. S./Wall sold everything, reneged on his rent for nine months, and used the money for some photographic lessons. His teacher—an "Israelitish-wizard-artist"—was, he argued, not one of the best. This "Jew salesman" affected the mannerisms of the artist. He wore a "scarlet smoking cap, and an elaborately-braided velvet morning coat." R. A. S./Wall felt this figure blended the mystery of an alchemist with the "caricatured imitation of the artist's pride." But his speech betrayed him. According to R. A. S./Wall, he understood little about photography. The man, we are told, said, "All I knows about it is that when I put this 'ere plate in that there place, somehows or another it brings out the pictur."<sup>167</sup> This man had previously "flourished cross-legged on a tailor's slop-board." R. A. S./Wall claimed that he was tricked into purchasing an overpriced apparatus. If, for Thompson, the Jewish monopolist negatively defined a respectable position for the small honorable master, in

this instance, the anti-Semitic figuration produces R. A. S./Wall's virtue against the low practitioners of the art/science.

The previous year, R. A. S./Wall suggested that he had worked hard to master the new process. But, he admitted, "I must confess that I did not take kindly to the new art-science." The following year he expanded the point: "I, for my own part, joined the profession, not for the love of it, but out of sheer vulgar necessity. My camera was merely taken in hand, *originally*, for providing what we artists call 'pot-boilers,' when that other much dearer profession—portrait painting—had failed me in my sorest need. I did not therefore at first take kindly to the art by which my own was rendered, to me at least, nearly valueless."<sup>168</sup> His true love remained "palette, pencil, and brush," not the rival "metal plates and chemicals." But needs must, and so he set off on a tour of eastern counties as a photographic artist. With his wife, he traveled to Norwich by train in a "comfortless carriage ignominiously labelled 'for the working classes.'"<sup>169</sup>

The travelers arrived at their destination, and (having paid the rent) had a small sum on which to survive until the customers came flocking in. But disaster struck: all of the photographic specimens, carefully prepared before departure, had been smashed en route. The remaining money had to be spent on making a new batch. R. A. S./Wall and his young wife faced a desperate situation. He made pictures of farmers and watercolors of servant girls; he sent out circulars in which, forced by circumstances, he dishonestly claimed "a London reputation." He met with no success. And then, with the kind of *deus ex machina* worthy of melodramatic fiction, salvation arrived: a painting left with a London dealer sold for £20.<sup>170</sup> With effort, perseverance, and his cash, he escaped the ignominious identification. Norwich figures in this account as a chronotope. It provides a location though which the author of this text could remake himself. He had sunk into the multitude so that he could be reborn in singular splendor. The account of R. A. S. conferred on Wall the structure of a novelistic life.<sup>171</sup> All the same, the stain of the third-class carriage left its mark. It was not just that he had traveled in this carriage: his subsequent story, throughout the 1860s, is produced out of the way in which the third-class carriage traveled in him. The R. A. S./Wall character internalized this void. In his various forms and incarnations, Wall repeatedly labored to expel it. But his highly significant writings emerged from it as a practice of resentment. Given his central role in producing the photographic literature of the period, this story gives a very different coloring to the class voice of photographic theory.

R. A. S./Wall's story is notable for its extreme contrasts, but the structure is hardly unique. A photographer as prominent as Robinson moved



Jabez Hughes (Regina House, Ryde, Isle of Wight), carte de visite inscribed "Willoughby O'Neil" on back

through a range of occupations before finding his "vocation." Photographers as celebrated as Roger Fenton, Samuel Bourne, and Camille Silvy all abandoned the profession when more lucrative or prestigious opportunities presented themselves.<sup>172</sup> As we have seen, many took to photography in order to establish some kind of income, but if a better break came along, some were only too ready to take it. This applied to people at both ends of Thompson's scale. For every Robinson or Wall, Fenton or Bourne, there were hundreds looking for a way up. In 1862 a "complete set of apparatus" could be had, according to some, for as little as £3.<sup>173</sup> It is difficult to know how well most of the small studios did. But the London trade directories suggest that, in the main, they struggled to survive.<sup>174</sup> Despite the problem of how to read these directories, it is clear that names came and went, and studios regularly changed hands. London studios typically seem to have lasted for only a few years before closing or before the next "photographer" took over and tried his or her luck. This is a familiar enough pattern for petit-bourgeois enterprises that were, all too often, undercapitalized and riddled with debt.<sup>175</sup>

These economic conditions help make sense of the aspiration, respectability, and concern for representation that were central and obsessive ideological motifs in the photographic press. Respectability was predicated on contingency. One gets the feeling that the insistent repetition of photographers' distance from the working class arose from the fact that, in reality, the gap separating them was not especially great. Thompson's article and Wall's story tally with the abiding themes of petit-bourgeois life during this period, because their identity hinged on middle-class norms of propriety and respectability, while they struggled with often little more than a working-class income.<sup>176</sup> As Jabez Hughes revealingly noted, "Some time since, I met a friend whom I had not seen for a few years. After the usual salutations, he said, 'What are you doing now—not in photography?' 'Yes I am; why do you ask?' 'I thought you had left that; I always thought you aimed at being something respectable!'"<sup>177</sup> For such people, appearances mattered.

The study of photographic literature should alter our understanding of the mid-nineteenth-century petite bourgeoisie.<sup>178</sup> To read the photographic press is to encounter fear and resentment focused on the working class. Even if working people posed little threat in the 1860s, photographic writing suggests that in petit-bourgeois fantasy, workers appeared as a hideous menace.<sup>179</sup> There is a dynamic of intersubjectivity in these texts, which imagine and internalize a threatening other and then reexternalize that other as a form of horror. It would seem that many in the photographic section of the petite bourgeoisie never felt secure, and the threat they feared most was that they, too, might really be like those they despised. The "greatest offence against property," E. P. Thompson once noted, "was to have none."<sup>180</sup> The dialogue that takes place throughout this writing is with this worker-other, who, at every moment, has to be separated out from the self. In the process, this phantasm of labor torments the petite bourgeoisie, invading and corrupting their identity. The constant closure of studios invoked the ever-present threat that a photographer's own concern might fail and that he would slide down into the workers' world. Even in the downturn in class struggle that characterized the middle years of the century, every outbreak of class violence, every strike or labor "atrocities," fed these deepest fears. Every criticism of photography was met with a pathological assertion of decency. Photographers suspected that their hands were dirty, and the silver nitrate stains only confirmed their suspicion. As we will see in the rest of this book, the suspicion mattered a great deal when they came to define what kind of image a photograph was.

