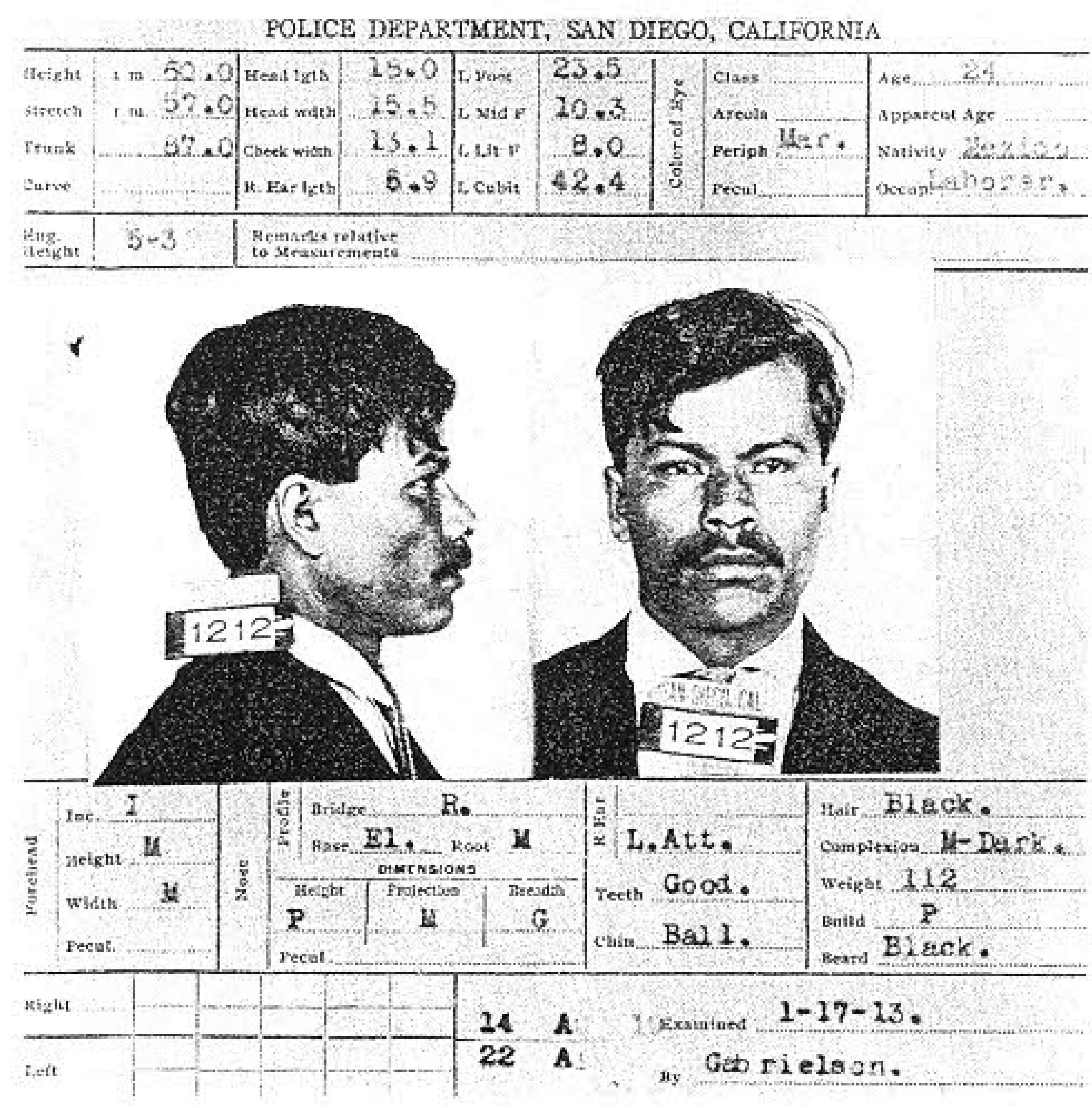
Bertillon card, 1913


POLICE DEPARTMENT, SAN DIEGO, CALIFORNIA

Height 1 m. 52.0 | Head lgth 15.0 | L. Foot 23.5 | Color of Eye | Class | Age 24
Stretch 1 m. 57.0 | Head width 15.5 | L. Mid F 10.3 | | Areola | Apparent Age
Trunk 87.0 | Cheek width 13.1 | L. Lit F 8.0 | | Periph Mar. | Nativity Mexico
Curve | R. Ear lgth 6.9 | L. Cubit 42.4 | | Pecul | Occup Laborer.

Eng. Height 5-3 | Remarks relative to Measurements

1212

Forehead: Inc. I; Height M; Width M; Pecul.
Nose: Profile: Bridge R.; Base El.; Root M
DIMENSIONS: Height P; Projection M; Breadth G; Pecul
R Ear: L. Att.
Teeth Good.
Chin Ball.
Hair Black.
Complexion M-Dark.
Weight 112
Build P
Beard Black.

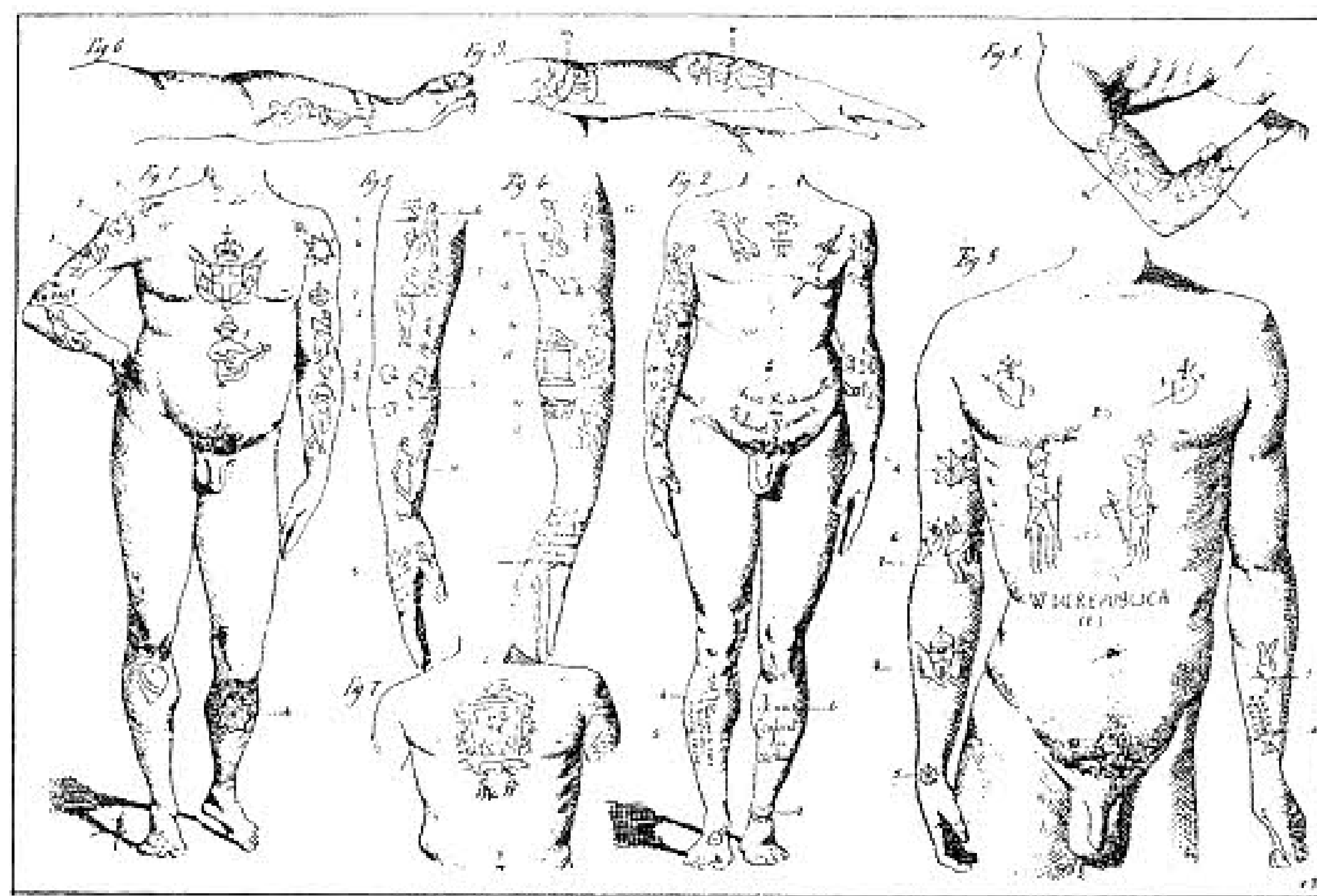
Right | 14 A | Examined 1-17-13.
Left | 22 A | By Gabrielson.

From Thomas Byrnes, *Professional Criminals of America*, 1886

ferocious instincts of primitive humanity and the inferior animals."[56] Against this line of reasoning, Lacassagne argued that "the social milieu is the mother culture of criminality; the microbe is the criminal."[57] (In this context, it is worth noting the mutual admiration that passed between Pasteur, the microbe hunter, and Bertillon, the hunter of recidivists.[58]) The French were able to medicalize crime while simultaneously pointing to environmental factors. A range of positions emerged, some more medical, some more sociological in emphasis. Tarde insisted that crime was a profession that proliferated through channels of imitative behavior. Others argued that the criminal was a "degenerate type," suffering more than noncriminals from the bad environmental effects of urbanism.[59]

Despite the acute differences between the warring factions of the emerging criminological profession, a common enthusiasm for photographic illustration of the criminal type was shared by almost all of the practitioners, with the notable exception of Tarde, who shunned the lowly empiricism of the case study for more lofty, even if nominalist, meditations on the problem of crime. Before looking at Francis Galton's peculiar contribution to the search for a criminal type, I will note that during the 1890s in particular, a profusion of texts appeared in France and Italy offering photographic evidence of basic criminal types. Although the authors were frequently at odds with one another over the "atavistic" or "degenerate" nature of the criminal, on a more fundamental level they shared a common battle. This was a war of representations. The photograph operated as the *image* of scientific truth, even in the face of Bertillon's demonstration of the inadequacies of the medium. Photographs and technical illustrations were deployed, not only

Plate 39 from Cesare Lombroso, *L'homme criminel,* 1895



TATOUAGES DE CRIMINELS.

From Charles Marie Debierre, *Le crâne des criminels,* 1895

LA PHYSIONOMIE DU CRIMINEL 275

Fig. 110. — *Clayes.* Fig. 111. — *Clayes.*

(Photographies prises 1/4 d'heure après la décapitation).

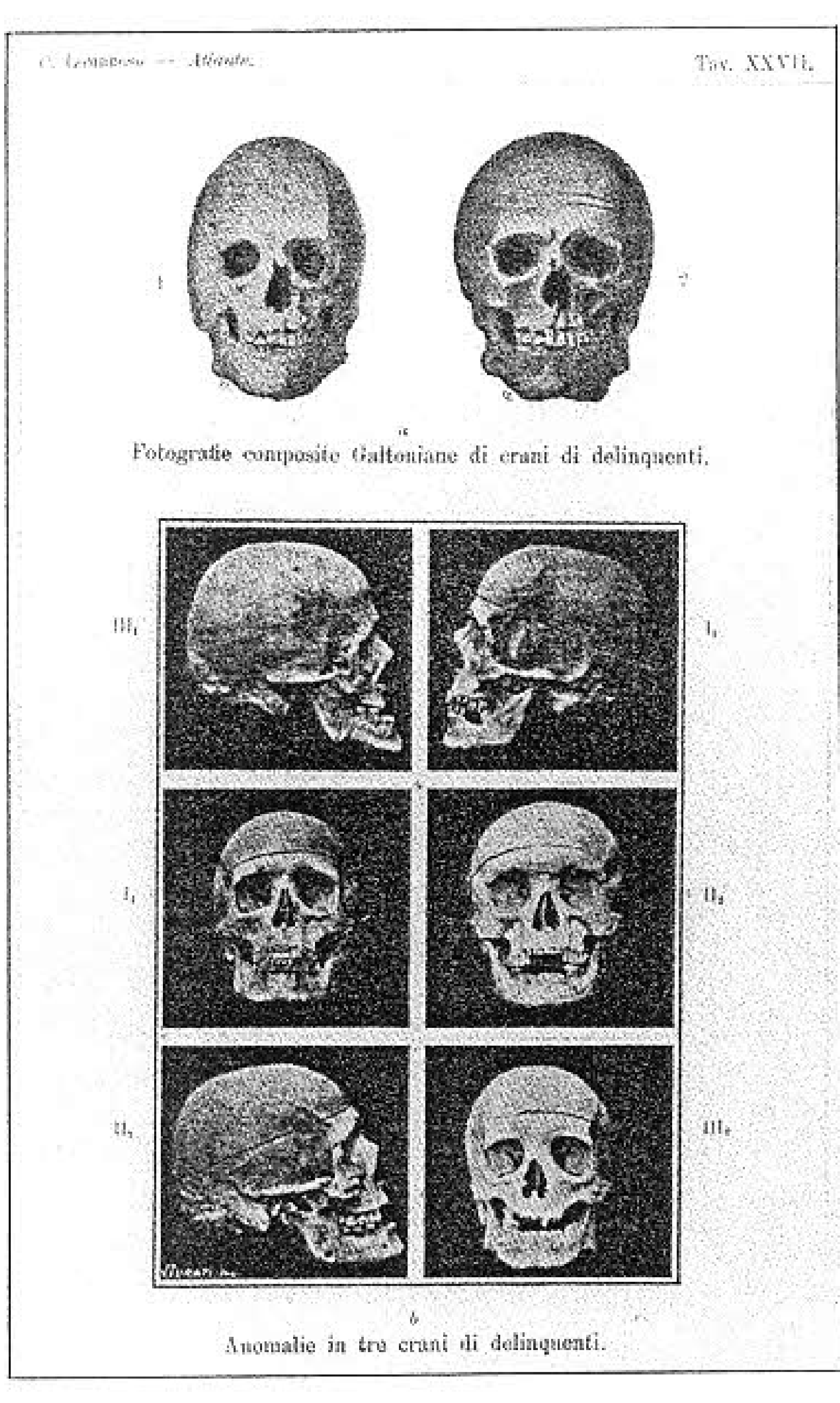
Fig. 112. — *Degroote.* Fig. 113. — *Degroote.*

against the body of the representative criminal, but also against that body as a bearer and producer of its own, inferior representations. These texts can be seen as a battle between the camera and the tattoo, the erotic drawing, and the graffiti of a prison subculture. For Lombroso, tattooing was a particular mark of atavism, since criminals shared the practice with presumably less evolved tribal peoples. But even works that sought to demolish Lombroso's dogmatic biologism established a similar hierarchy. Scientific rationalism *looked down* at the visual products of a *primitive* criminality. This was a quasi-ethnologic discourse. Consider, for example, a work that argued against atavism and for degeneracy, Charles Marie Debierre's typologically titled *Le crâne des criminels.* This book contained an illustrated chapter treating "les beaux-arts dans les prisons" as subject matter for the psychological study of the criminal. A subsequent chapter offered a set of photographs of the severed heads of convicts, "taken one quarter of an hour after decapitation." Faced with these specimens of degeneracy, this physiognomist of the guillotine remarked: "Degroote and Clayes . . . their dull faces and wild eyes reveal that beneath their skulls there is no place for pity." Works of this sort depended upon an extreme form of statistical inference: basing physiognomic generalizations on very limited samples.[60]

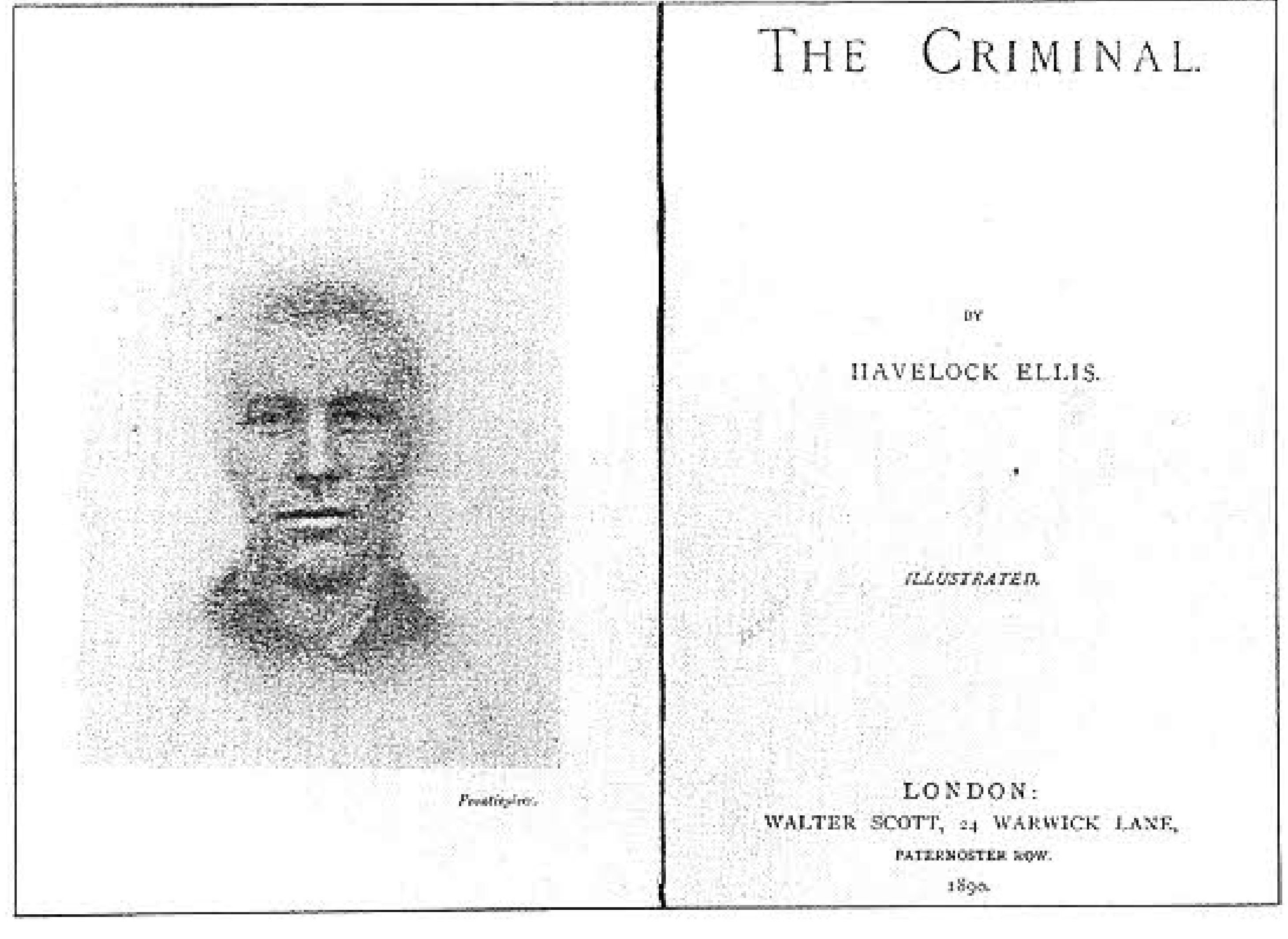
This brings us finally to Francis Galton, who attempted to overcome the limitations of this sort of inferential reading of individual case studies.

Where Bertillon was a compulsive systematizer, Galton was a compulsive quantifier. While Bertillon was concerned primarily with the triumph of social order over social disorder, Galton was concerned primarily with the triumph of established rank over the forces of social leveling and decline. Certainly these were not incompatible projects. On a theoretical plane, however, Galton can be linked more closely to the concerns of the Italian school of criminal anthropology and to biological determinism in general. Com-

Plate 27 from Cesare Lombroso, *L'uomo delinquente,* 1896–97



Galtonian composite


Frontispiece.

THE CRIMINAL.

BY

HAVELOCK ELLIS.

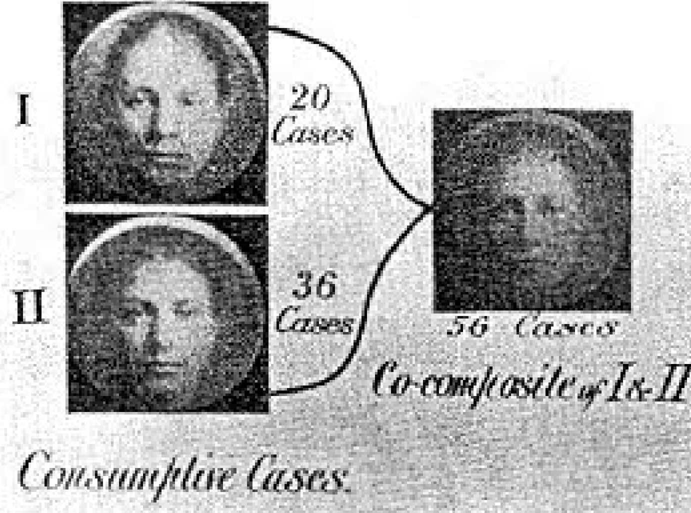
ILLUSTRATED.

LONDON:
WALTER SCOTT, 24 WARWICK LANE,
PATERNOSTER ROW.
1890.

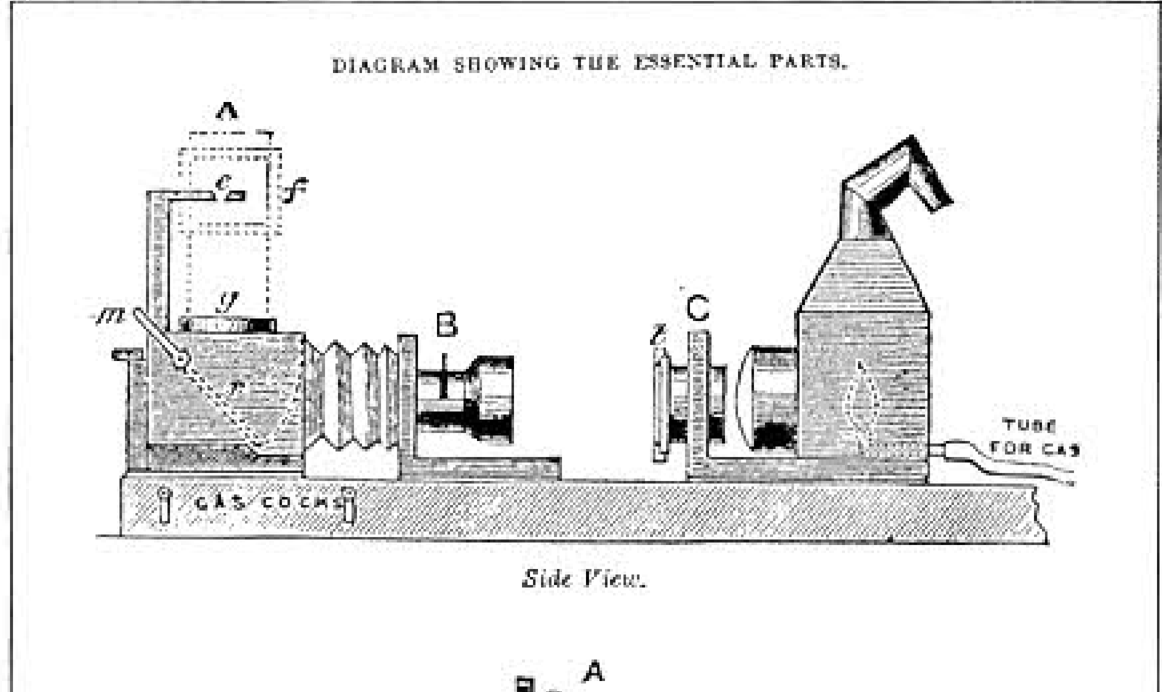
posite images based on Galton's procedure, first proposed in 1877, proliferated widely over the following three decades. A composite of criminal skulls appears in the albums of the 1895 French edition and the 1896–97 Italian edition of Lombroso's *Criminal Man.* Likewise, Havelock Ellis's *The Criminal,* which adhered to the positions of the Italian school and marked the high tide of Lombrosoism in England, bore a Galtonian frontispiece in its first, 1890 edition.[61]

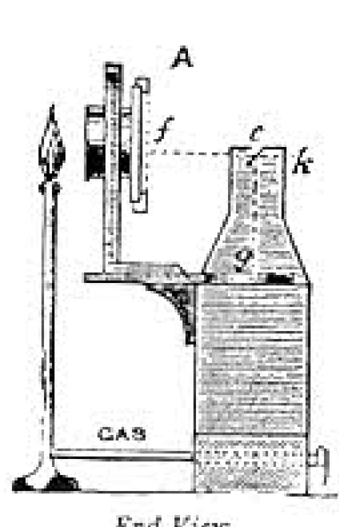
Both Galton and his quasi-official biographer, the statistician Karl Pearson, regarded the composite photograph as one of the central intellectual inventions of Galton's career. More recent studies of Galton have tended to neglect the importance attached to what now seems like an optical curiosity.[62]

Galton is significant in the history of science for developing the first statistical methods for studying heredity.[63] His career was suspended between the triumph of his cousin Charles Darwin's evolutionary paradigm in the late 1860s and the belated discovery in 1899 of Gregor Mendel's work on the genetic ratio underlying inheritance. Politically, Galton sought to construct a program of social betterment through breeding. This program pivoted on a profoundly ideological *biologization* of existing class relations in England. Eugenicists justified their program in utilitarian terms: by seeking to reduce the numbers of the "unfit," they claimed to be reducing the numbers of those predestined to unhappiness. But the eugenics movement Galton founded flourished in a historical context—similar in this respect to Third Republic France—of declining middle-class birthrates coupled with middle-class fears of a burgeoning residuum of degenerate urban poor.[64]



Frontispiece from Francis Galton, *Inquiries into Human Faculty*, 1883





The composite apparatus, from Francis Galton, *Inquiries into Human Faculty*, 1883

Galton's early, 1869 work *Hereditary Genius* was an attempt to demonstrate the priority, in his words, of "nature" over "nurture" in determining the quality of human intelligence. In a rather tautological fashion, Galton set out to demonstrate that a reputation for intelligence amounted to intelligence and that men with (reputations for) intelligence begat offspring with (reputations for) intelligence. He appropriated Quetelet's binomial distribution, observing that the entrance examination scores of military cadets at Sandhurst fell into a bell-shaped pattern around a central mean. On the basis of this "naturalizing" evidence, he proposed a general quantitative hierarchy of intelligence and applied it to racial groups. This hierarchy was characterized by a distinct classicist longing: "The average ability of the Athenian race is, on the lowest possible estimate, very nearly two grades higher than our own—that is, about as much as our race is above that of the African negro."[65] Eugenics can be seen as an attempt to push the English social average toward an imaginary, lost Athens and away from an equally imaginary, threatening Africa.

Galton's passion for quantification and numerical ranking coexisted with a qualified faith in physiognomic description. His writings demonstrate a remarkable parallelism and tension between the desire to measure and the desire to look. His composites emerged from the attempt to merge optical and statistical procedures within a single "organic" operation. Galton's *Inquiries into Human Faculty* of 1883 began by suggesting some of the limitations of prior—and subsequent—attempts at physiognomic typing:

> The physiognomical difference between different men being so numerous and small, it is impossible to measure and compare them each to each, and to discover by ordinary statistical methods the true physiognomy of a race. The usual way is to select individuals who are judged to be representative of the prevalent type, and to photograph them; but this method is not trustworthy, because the judgment itself is fallacious. It is swayed by exceptional and grotesque features more than by ordinary ones, and the portraits supposed to be typical are likely to be caricatures.[66]

This book was a summary of Galton's researches over the preceding fifteen years. From this initial criticism of a more physiognomic stance, Galton moved directly to an outline of his composite method. The composite frontispiece and the recurrent references in various contexts throughout the book to lessons to be learned from the composites suggest that Galton believed that he had invented a prodigious epistemological tool. Accordingly, his interest in composite imagery should not be regarded as a transparent ideological stunt, but as an overdetermined instance of biopositivism.

How did Galton produce his blurred, fictitious apparitions? How did he understand them? He acknowledged at the outset of his experiments Herbert Spencer's prior proposal for a similar process of superimposition. Spencer's organismic conception of society can be seen as fertile soil for the notion of a generalized body, although in this case Spencer seems to have been drawn to the notion of a composite through a youthful fascination with phrenology.[67] But Galton was concerned also with the psychology of the visual imagination, with the capacity of the mind to construct generic images from sense data. Here he found his inspiration in Thomas Huxley. He claimed in fact that the composite photographic apparatus shared, and ultimately surpassed, the capacity of artistic intelligence to generalize. Here, as with Quetelet, one witnesses the statistician as artist manqué.

Galton fabricated his composites by a process of successive registration and exposure of portraits in front of a copy camera holding a single plate. Each successive image was given a fractional exposure based on the inverse of the total number of images in the sample. That is, if a composite were to be made from a dozen originals, each would receive one-twelfth of the required total exposure. Thus, individual distinctive features, features that were unshared and idiosyncratic, faded away into the night of underexposure. What remained was the blurred, nervous configuration of those features that were held in common throughout the sample. Galton claimed that these images constituted legitimate averages, and he claimed further that one could infer larger generalities from the small sample that made up the composites. He proposed that "statistical constancy" was attained after "thirty haphazard pictures of the same class [had] been combined."[68]

Galton made more expansive claims for his process, which he has described as a form of "pictorial statistics":

> Composite pictures are . . . much more than averages; they are rather the equivalents of those large statistical tables whose totals, divided by the number of cases and entered on the bottom line, are the averages. They are real generalizations, because they include the whole of the material under consideration. The blur of their outlines, which is never great in truly generic composites, except in unimportant details, measures the tendency of individuals to deviate from the central type.[69]

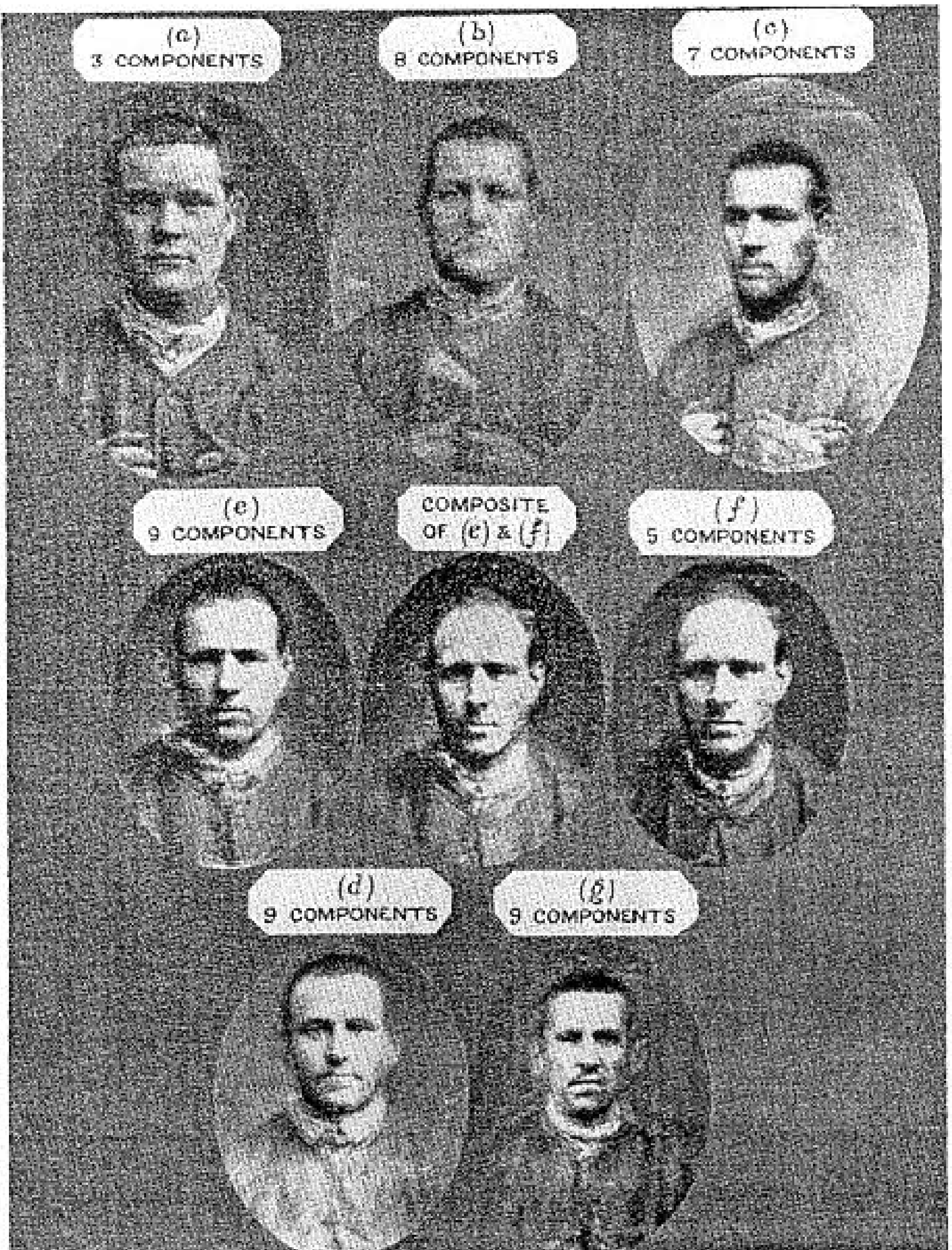
In this passage the tension between claims for empirical specificity and claims for generality reaches the point of logical rupture: what are we to make of this glib slide from "they include the whole" to "except unimportant details"? In his search for a type, Galton did not believe that anything *significant* was lost in underexposure. This required an unacknowledged presupposition: only the gross features of the head mattered. Ears, for example, which were highly marked as signs in other physiognomic systems, both as individuating *and* as typical features, were not registered at all by the composite process. (Later Galton sought to "recapture" small differences or "unimportant details" by means of a technique he called "analytical photography," which superimposed positive and negative images, thereby isolating their unshared elements.[70])

Just as he had acknowledged Quetelet as a source for his earlier ranking of intelligence, so Galton claimed that the composite photograph produced an improved impression of *l'homme moyen:*

> The process . . . of pictorial statistics [is] suitable to give us generic pictures of man, such as Quetelet obtained in outline by the ordinary numerical methods of statistics, as described in his work on *Anthropométrie*. . . . By the process of composites we obtain a picture and not a mere outline.[71]

In effect Galton believed that he had translated the Gaussian error curve into pictorial form. The symmetrical bell curve now wore a human face. This was an extraordinary hypostatization. Consider the way in which Galton conveniently exiled blurring to the *edges* of the composite, when in fact blurring would occur over the entire surface of the image, although less perceptibly. Only an imagination that wanted to *see* a visual analogue of the binomial curve would make this mistake, finding the type at the center and the idiosyncratic and individual at the outer periphery.

The frontispiece to *Inquiries into Human Faculty* consists of eight sets of composites. Galton describes these images as an integrated ensemble in his text, in what amounts to an illustrated lecture on eugenics. The first, upper left composite of six portrait medallions of Alexander the Great serves Galton as an introductory, epistemological bench-



Francis Galton, *Criminal Composites*, c. 1878. Plate 27 from Karl Pearson, *The Life, Letters and Labours of Francis Galton*, vol. 2, 1924.

mark, not only to the series, but to the entire book. Oblivious to issues of style or artistic convention, Galton assumed that individual engravers had erred in various ways in their representations. The composite, according to a Gaussian logic of averaged measurements, would contain a "truer likeness." An unspoken desire, however, lurks, behind this construction. Galton made many composites of Greek and Roman portrait coins and medallions, seeking in the blurred "likenesses" the vanished physiognomy of a higher race.

Galton's next two sets of composites were made from members of the same family. With these he charged into the active terrain of eugenic research and manipulation. By exhibiting the blending of individual characteristics in a single composite image, Galton seems to have been searching for a ratio of hereditary influence. He extended these experiments to composites tracing the lineage of race horses.

The next composite was probably the most democratic construction of Galton's entire career: a combination of portraits of twelve officers and eleven enlisted men of the Royal Engineers. This was offered as a "clue to the direction in which the stock of the English race might most easily be improved."[72] This utopian image was paired with its dystopian counterparts, generic images of disease and criminality.

While tuberculosis seemed to produce a vaguely wan physiognomy, crime was less easy to type. Galton had obtained identification photographs of convicts from the Director of Prisons, Edmund Du Cane, and these were the source of his first composites in 1878. Despite this early start in the search for the biological criminal type, Galton came to a position that was less enthusiastic than that of Lombroso: "The individual faces are villainous enough, but they are villainous in different ways, and when they are combined,

the individual peculiarities disappear, and the common humanity of a low type is all that is left."[73] Thus Galton seems to have dissolved the boundary between the criminal and the working-class poor, the residuum that so haunted the political imagination of the late-Victorian bourgeoisie. Given Galton's eugenic stance, this meant that he merely included the criminal in the general pool of the "unfit."

Later, following Charles Booth's sociological stratification of the London population, Galton classified "criminals, semi-criminals, and loafers" as the worst of the eugenically unfit: the bottom one percent of the urban hierarchy. On this basis, he supported long sentences for "habitual criminals," in hopes of "restricting their opportunities for producing low-class offspring."[74]

Galton concluded the introductory sample of composite portraits in his *Inquiries* with contrasted sets of composites made from very large samples: representing "consumptive" and "not consumptive" cases. With these he underlined both the *statistical* and the *social hygenic* ambitions behind his optical process and his political program.

Galton harbored other *psychological* and *philosophical* ambitions. In his earlier essays on "generic images" he examined "analogies" between mental images, which he claimed consisted of "blended memories," and the genera produced by his optical process. Citing the Weber-Fechner Law of psychophysics, which demonstrated that relative perceptual sensitivity decreased as the level of stimulus increased, Galton concluded that "the human mind is therefore a most imperfect apparatus for the elaboration of general ideas," when compared with the relentless and untiring quantitative consistency of "pictorial statistics."[75] In *Inquiries,* he returned to this theme: "The ideal faces obtained by the method of composite portraiture appear to have a great deal in common with . . . so-called abstract ideas." He wondered whether abstract ideas might not be more correctly termed "cumulative ideas."[76] Galton's rather reified notions of what constituted thought is perhaps most clearly, if unwittingly, expressed in his offhand definition of introspection: "taking stock of my own mental furniture."[77]

The composite apparatus provided Galton with a model of scientific intelligence, a mechanical model of intellectual labor. Furthermore, this intelligence answered to the logic of philosophical realism. Galton argued that his composites refuted nominalist approaches to the human sciences, demonstrating with certainty the reality of distinct racial types. This amounted to an essentialist physical anthropology of race.[78]

It is not surprising, then, that Galton would come to regard his most successful composite as that depicting "the Jewish type." In a historical context in which there was no clear anthropological consensus on the racial or ethnic character of modern Jews, Galton produced an image that was, according to Karl Pearson, "a landmark in composite photography": "We all know the Jewish boy, and Galton's portraiture brings him before us in a way that only a great work of art could equal—scarcely excel, for the artist would only idealise from *one* model."[79] This applause, ominous enough as it is, takes on an even more sinister tone in retrospect when one considers the line of influence that led from Anglo-American eugenics to National Socialist *Rassentheorie.*[80]

Galton's composite process enjoyed a wide prestige until about 1915. Despite its origins in a discourse of racial essentialism, the composite was used to make a variety of points, some of which favored "nurture" over "nature." For example, Lewis Hine made a

Francis Galton, *The Jewish Type*, 1883. Plate 35 from Pearson.

Lewis Hine, composite photograph of child laborers employed in cotton mill, 1913 (National Gallery of Canada, Ottawa)

number of crude composite prints of girl mill-workers in 1913, in what was evidently an attempt to trace the general effects of factory working conditions on young bodies. And, in a curious twist, the book that provided the conclusive refutation from within criminology of Lombroso's theory of the innate criminal with the telltale skull, Henry Goring's *The English Convict,* opened its attack with a comparison between composites of freehand drawings and composites of tracings from photographs of criminal heads. The former has been used by Havelock Ellis to make his physiognomic case in *The Criminal.* The discrepancy between these and the tracings revealed a great degree of caricature in Ellis's pictures.[81] With both Hine and Goring, a faith in the objectivity of the camera persisted. However, with the general demise of an optical model of empiricism, Galton's hybridization of the camera and the statistical table approached extinction. Photography continued to serve the sciences, but in a less grandiose and exalted fashion, and consequently with more modest—and frequently more casual—truth claims, especially on the periphery of the social sciences.

In retrospect, the Galtonian composite can be seen as the collapsed version of the archive. In this blurred configuration, the archive attempts to exist as a potent single image, and the single image attempts to achieve the authority of the archive, of the general, abstract propositions. Galton was certainly a vociferous ideologue for the extension and elaboration of archival methods. He actively promoted familial self-surveillance for hereditarian purposes, calling for his readers to "obtain photographs and ordinary measurements periodically of themselves and their children, making it a family custom to do so."[82] His model here was the British Admiralty's voluminous registry of sailors. Here again, eugenics modeled itself on the military. Galton founded an Anthropometrical Laboratory in 1884, situated first at the International Health Exposition, then moving to the Science Museum in South Kensington. Nine thousand visitors were measured, paying three or four pence each for the privilege of contributing to Galton's eugenic research.[83]

Although married for many years, Galton left no children. Instead, he left behind an immense archive of documents. One curious aspect of Karl Pearson's massive pharaonic biography of Galton is its profusion of photographic illustrations, including not only Galton's many photographic experiments, but also a kind of intermittent family album of more personal pictures.

Eugenics was a utopian ideology, but it was a utopianism inspired and haunted by a sense of social decline and exhaustion. Where Quetelet had approached the question of the average with optimism, finding in averages both a moral and an aesthetic ideal, Galton's eugenicist hope for an improved racial stock was always limited by his early discovery that successive generations of eugenically bred stock tended to regress back toward the mean, and "mediocrity."[84] Thus the fantasy of absolute racial betterment was haunted by what must have seemed a kind of biological entropy.[85] Later, in the twentieth century, eugenics would operate with brutal certainty only in its negative mode, through the sterilization and extermination of the Other.

What can we conclude, finally, about the photographic problems encountered and "solved" by Bertillon, the nominalist detective, and Galton, the essentialist biometrician? The American philosopher and semiotician Charles Sanders Peirce, their contemporary, made a useful distinction between signs that referred to their objects indexically and those that operated symbolically. To the extent that photographs are "effects of the radiations from the object," they are indexical signs, as are all signs that register a physical trace. Symbols, on the other hand, signify by virtue of conventions or rules. Verbal lan-

guage in general, and all conceptual thought, is symbolic in Peirce's system.[86] Paradoxically, Bertillon, in taming the photograph by subordinating it to the verbal text of the *portrait parlé,* remained wedded to an *indexical* order of meaning. The photograph was nothing more than the physical *trace* of its contingent instance. Galton, in seeking the apotheosis of the optical, attempted to elevate the indexical photographic composite to the level of the *symbolic,* thus expressing a *general law* through the accretion of contingent instances. In so doing, Galton produced an unwitting caricature of inductive reason. The composites signified, not by embodying the law of error, but by being rhetorically annexed to that law. Galton's ambition, although scientistic, was not unlike that of those other elevators of photography, the neosymbolists of the Photo Secession. Both Galton and Stieglitz wanted something more than a mere trace, something that would match or surpass the abstract capabilities of the imaginative or generalizing intellect. In both cases, meaning that was fervently believed to emerge from the "organic" character of the sign was in fact certified by a hidden framing convention. Bertillon, on the other hand, kept his (or at least his underlings') eye and nose to the ground. This made him, in the prejudiced and probably inconsequential opinion of one of his biographers, Henry Rhodes, "the most advanced photographer in Europe."[87] Despite their differences, both Bertillon and Galton were caught up in the attempt to preserve the value of an older, optical model of truth in a historical context in which abstract, statistical procedures seemed to offer the high road to social truth and social control.

The first rigorous system of archival cataloguing and retrieval of photographs was that invented by Bertillon. Bertillon's nominalist system of identification and Galton's essentialist system of typology constitute not only the two poles of positivist attempts to regulate social deviance by means of photography, but also the two poles of these attempts to regulate the semantic traffic in photographs. Bertillon sought to embed the photograph in the archive. Galton sought to embed the archive in the photograph. While their projects were specialized and idiosyncratic, these pioneers of scientific policing and eugenics mapped out general parameters for the bureaucratic handling of visual documents. It is quite extraordinary that histories of photography have been written thus far with little more than passing reference to their work. I suspect that this has something to do with a certain bourgeois scholarly discretion concerning the dirty work of modernization, especially when the status of photography as a fine art is at stake.[88] It is even more extraordinary that histories of social documentary photography have been written without taking the police into account. Here the issue is the maintenance of a certain liberal humanist myth of the wholly benign origins of socially concerned photography.[89]

Roughly between 1880 and 1910, the archive became the dominant institutional basis for photographic meaning. Increasingly, photographic archives were seen as central to a bewildering range of empirical disciplines, ranging from art history to military intelligence.[90] Bertillon had demonstrated the usefulness of his model for police purposes, but other disciplines faced significantly different problems of image cataloguing. An emergent *bibliographic science* provided the utopian model of classification for these expansive and unruly collections of photographs. Here again Bertillon was prescient in his effort to reduce the multiple signs of the criminal body to a textual shorthand and numerical series. At a variety of separate but related congresses on the internationalization and standardization of photographic and bibliographic methods, held between 1895 and 1910, it was

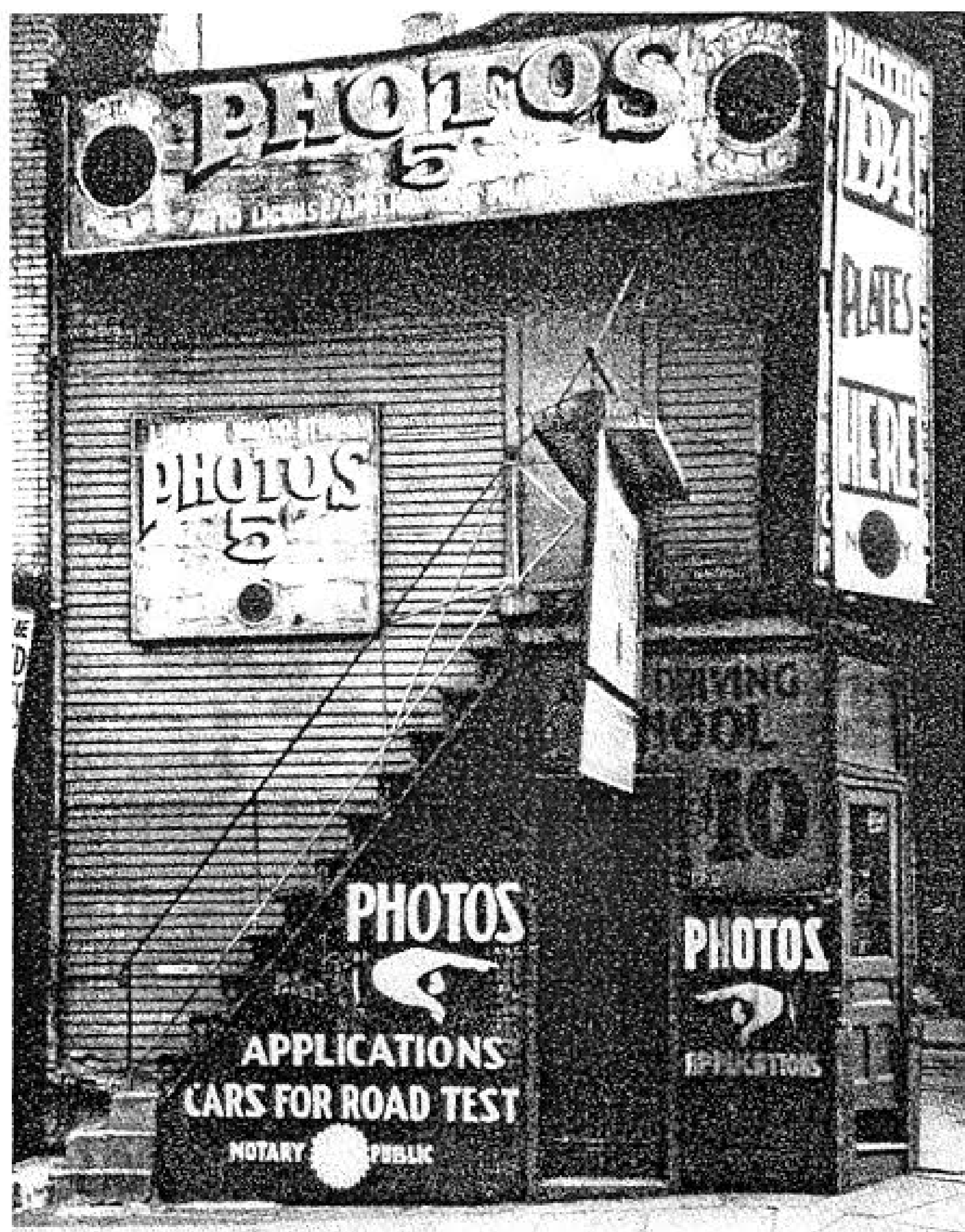
recommended that photographs be catalogued topically according to the decimal system invented by the American librarian Melvil Dewey in 1876. The lingering prestige of optical empiricism was sufficiently strong to ensure that the terrain of the photographable was still regarded as roughly congruent with that of knowledge in general. The Institute for International Bibliography built on the universalist logic of the eighteenth-century encyclopedists. But appropriate to the triumphal years of an epoch of scientific positivism and the early years of bureaucratic rationalization, a grandiose clerical mentality had now taken hold.[91]

The new scientific bibliographers articulated an operationalist model of knowledge, based on the "general equivalence" established by the numerical shorthand code. This was a system for regulating and accelerating the flow of texts, profoundly linked to the logic of Taylorism. Is it surprising that the main reading room of that American Beaux-Arts temple of democratic and imperial knowledge, the Library of Congress, built during this period of bibliographic rationalization, should so closely resemble the Panopticon, or that the outer perimeter of the building should bear thirty-three "ethnological heads" of various racial types?[92] Or is it any more surprising that the same American manufacturing company produced Bertillon cabinets, business files, and library card catalogue cabinets?[93]

Photography was to be both an *object* and *means* of bibliographic rationalization. The latter possibility emerged from the development of microfilm reproduction of documents. Just as photographs were to be incorporated into the realm of the text, so also the text could be incorporated into the realm of the photograph. If photography retained its prestige as a universal language, it increasingly did so in conjunction with a textual paradigm that was housed within the library.[94]

The grand ambitions of the new encyclopedists of photography were eventually realized but not in the grand encyclopedic fashion one might have expected. With the increasing specialization of intellectual disciplines, archives tended to remain segregated. Nonetheless, the dominant culture of photography did rely heavily on the archival model for its legitimacy. The shadowy presence of the archive authenticated the truth claims made for individual photographs, especially within the emerging mass media. The authority of any particular syntagmatic configuration was underwritten by the encyclopedic authority of the archive. One example will suffice. Companies like Keystone Views or Underwood and Underwood serially published short pictorial groupings of stereograph cards. Although individual sequences of pictures were often organized according to a narrative logic, one sees clearly that the overall structure was informed not by a narrative paradigm, but by the paradigm of the archive. After all, the sequence could be rearranged; its temporality was indeterminate, its narrativity relatively weak. The pleasures of this discourse were grounded not in narrative necessarily, but in archival play, in substitution, and in a voracious optical encyclopedism. There were always more images to be acquired, obtainable at a price, from a relentlessly expanding, globally dispersed picture-gathering agency.[95]

Archival rationalization was most imperative for those modes of photographic realism that were instrumental, that were designed to contribute directly or indirectly to the practical transformation or manipulation of their referent. Can any connections be traced between the archival mode of photography and the emergence of photographic modernism? To what degree did self-conscious modernist practice accommodate itself to the model of the archive? To what degree did modernists consciously or unconsciously resist or subvert the model of the archive, which tended to relegate the individual photogra-



Walker Evans, *License-Photo Studio, New York, 1934 (Lower East Manhattan, Baxter Street).* Plate 1 from *American Photographs,* 1938. (Collection, The Museum of Modern Art, New York)

pher to the status of a detail worker, providing fragmentary images for an apparatus beyond his or her control? Detailed answers to this question are clearly beyond the scope of this essay. But a few provisional lines of investigation can be charted.

The protomodernism of the Photo Secession and its affiliated movements, extending roughly to 1916, can be seen as an attempt to resist the archival mode through a strategy of avoidance and denial based on craft production. The elegant *few* were opposed to the mechanized *many,* in terms both of images and authors. This strategy required the ostentatious display of the "honorific marks of hand labor," to borrow the phrase coined by the American sociologist Thorstein Veblen in 1899.[96] After 1916, however, aesthetically ambitious photographers abandoned the painterly and embraced pictorial rhetorics much closer to those already operative within the instrumental realist and archival paradigms. Understandably, a variety of contradictory attitudes to the archive emerge within photographic discourse in the 1920s. Some modernists embraced the archival paradigm: August Sander is a case in point. Others resisted through modernist reworkings of the antipositivism and antirationalism of the Photo Secession: the later Stieglitz and Edward Weston are obvious examples.

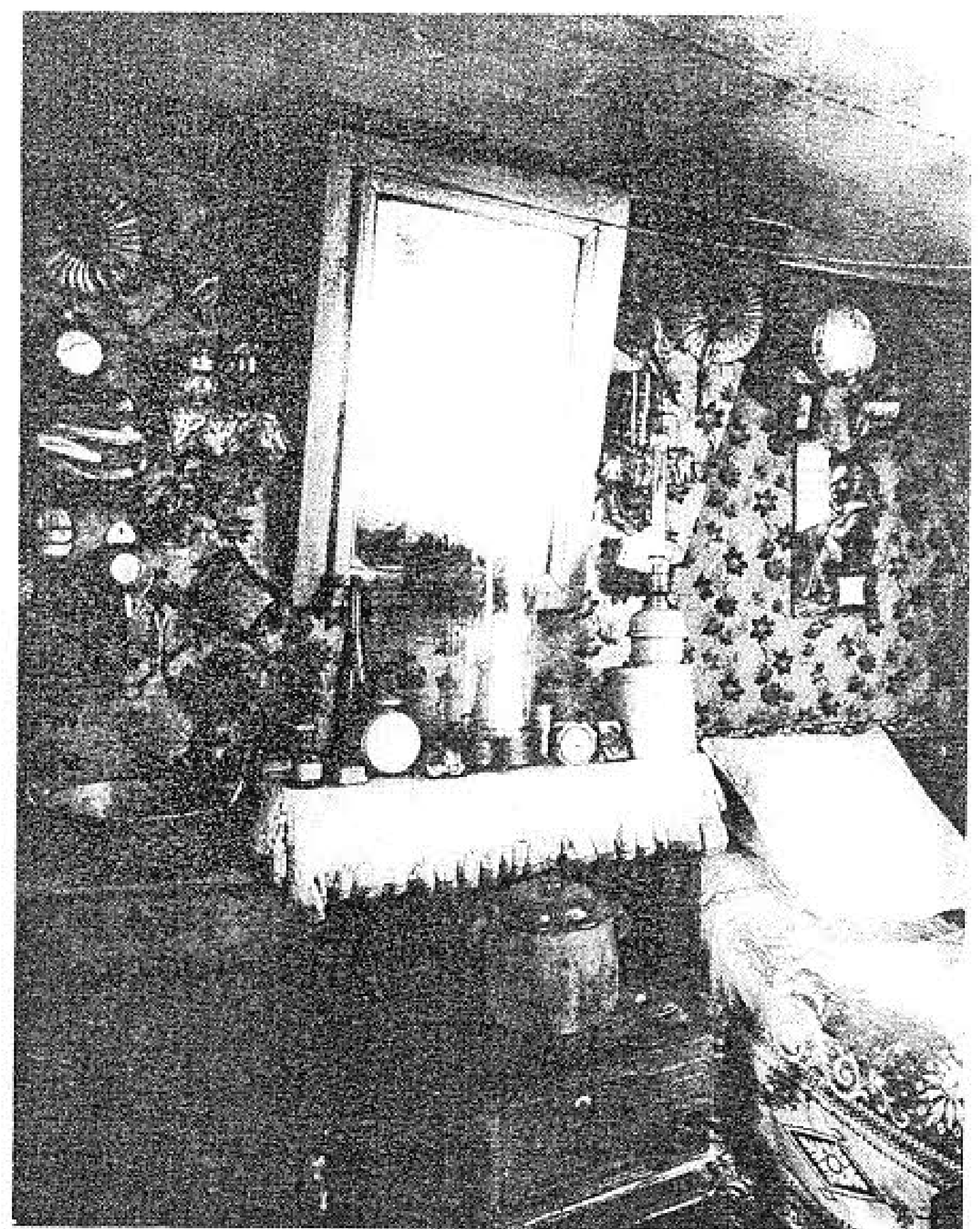
In many respects the most complicated and intellectually sophisticated response to the model of the archive was that of Walker Evans. Evans's book sequences, especially in his 1938 *American Photographs,* can be read as attempts to counterpose the "poetic" structure of the sequence to the model of the archive. Evans began the book with a prefatory note *reclaiming* his photographs from the various archival repositories that held copyright to or authority over his pictures.[97] Furthermore, the first photograph in the book describes a site of the archival and instrumental mode's proliferation into the spaces of metropolitan daily life in the 1930s: *License-Photo Studio, New York, 1934.* We now know that Evans was fascinated with police photographs during the period in which he made the photographs

in this book. A terse topical list on "New York society in the 1930s" contains a central, telegraphic, underlined inscription: "*This project get police cards.*"[98] Certainly Evans's subway photographs of the late 1930s and early 1940s are evidence of a sophisticated dialogue with the empirical methods of the detective police. Evans styled himself as a flaneur and late in life likened his sensibility to that of Baudelaire. Though Walter Benjamin had proposed that "no matter what trail the *flâneur* may follow, every.one will lead him to a crime,"[99] Evans avoided his final rendezvous. This final detour was explicitly described in a 1971 interview in which he took care to distinguish between his own "documentary style" and a "literal document" such as "a police photograph of a murder scene."[100] He stressed the necessary element of poetic transcendence in any art photograph of consequence. The elderly Evans, transformed into the senior figure of modernist genius by a curatorial apparatus with its own archival imperative, could no longer recognize the combative and antiarchival stance of his earlier sequential work. Evans was forced to fall back on an organicist notion of style, searching for that refined surplus of stylistic meaning which would guarantee his authorship and which in general served to distinguish the art photographer from a flunky in a hierarchy of flunkies.

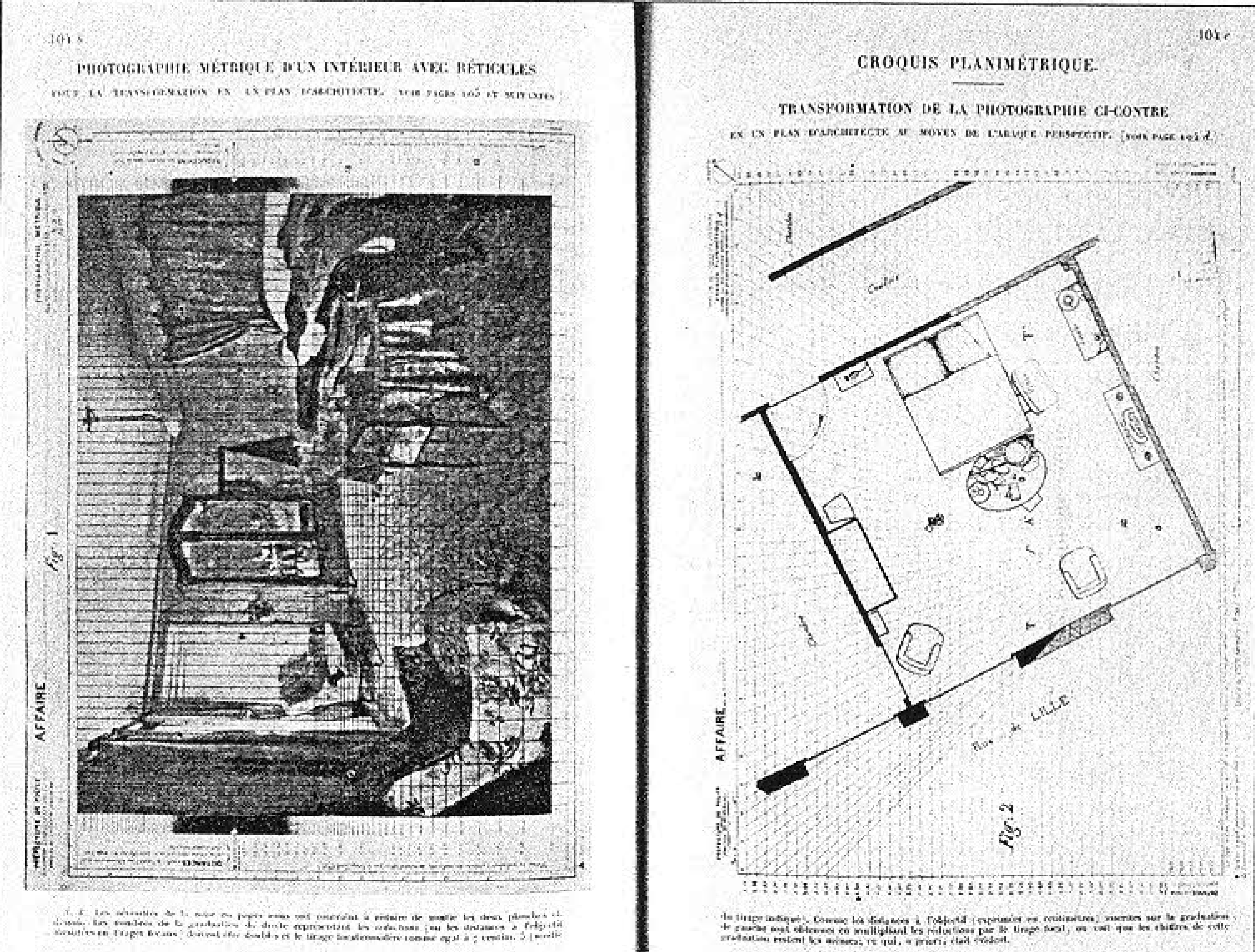
With the advent of postmodernism, many photographers have abandoned any serious commitment to stylistic transcendence, but they fail to recognize the degree to which they share Evans's social fatalism, his sense of the immutability of the existing social order. Modernism offers other models, however, including more militant and equally intelligent models of photographic practice. Consider Camille Recht's reading of the photographs of Eugène Atget, a photographer of acknowledged import in Evans's own development. Recht comments on interior views "which remind us of a police photograph of a crime scene" and then on "the photograph of a worker's dwelling which testifies to the housing problem." For Recht, the proximity of a "nuptial bed and an unavoidable chimney flue," provided grimly comic testimony of everyday life in an exploitative social formation.[101] This emphasis on the telling detail, the metonymic fragment that points to the systemic crimes of the powerful, would be repeated and refined in the writings of Walter Benjamin.[102] Our tendency to associate Benjamin with the theory and practice of montage tends to obscure the degree to which he built his modernism from an empiricist model, from a model of careful, idiosyncratic observation of detail. This model could argue both for the photographer as *monteur* and for the photographer as revolutionary spy or detective, or, more "respectably," as critical journalist of the working class.

This essay could end with this sketch of modernist responses to the prior institutionalization of the instrumental realist archive. Social history would lead to art history, and we would arrive at a safe archival closure. Unfortunately, Bertillon and Galton are still with us. "Bertillon" survives in the operations of the national security state, in the condition of intensive and extensive surveillance that characterizes both everyday life and the geopolitical sphere. "Galton" lives in the renewed authority of biological determinism, founded in the increased hegemony of the political Right in the Western democracies. That is, Galton lives quite specifically in the neo-Spencerian pronouncements of Reaganism, Thatcherism, and the French National Front.[103] Galton's spirit also survives in the neoeugenicist implications of some of the new biotechnologies.

These are political issues. As such, their resonance can be heard in the aesthetic sphere. In the United States in the 1970s, a number of works, primarily in film and video, took an aggressive stance toward both biological determinism and the prerogatives



Eugène Atget, plate 12 from *Lichtbilder*, 1930



PHOTOGRAPHIE MÉTRIQUE D'UN INTÉRIEUR AVEC RÉTICULES

AFFAIRE

Fig. 1

CROQUIS PLANIMÉTRIQUE.

TRANSFORMATION DE LA PHOTOGRAPHIE CI-CONTRE

EN UN PLAN D'ARCHITECTE AU MOYEN DE L'ABAQUE PERSPECTIF.

AFFAIRE

Rue de LILLE

Fig. 2

Metrical photograph and planimetric sketch, from A. Bertillon and A. Chervin, *Anthropologie métrique*, 1909

of the police. Martha Rosler's video "opera" *The Vital Statistics of a Citizen, Simply Obtained* (1976) retains its force as an allegorical feminist attack on the normalizing legacy of Quetelet and Galton. Other, more nominalist, works took on the police at the level of counter-testimony and counter-surveillance. I am thinking here of a number of documentary films: Howard Gray and Michael Alk's *The Murder of Fred Hampton* (1971), Cinda Firestone's *Attica* (1973), and the Pacific Street Film Collective's *Red Squad* (1972). These examples tend to be forgotten or overlooked in a contemporary art scene rife with a variety of what can be termed "neophysiognomic" concerns. The body has returned with a vengeance. The heavily expressionist character of this return makes the scientistic and racialist underpinnings of physiognomy seem rather remote. In photography, however, this lineage is harder to repress. In one particularly troubling instance, this returned body is specifically Galtonian in its configuration. I refer here to the computer-generated composites of Nancy Burson, enveloped in a promotional discourse so appallingly stupid in its fetishistic belief in cybernetic truth and its desperate desire to remain grounded in the optical and organic that it would be dismissable were it not for its smug scientism. For an artist or critic to resurrect the methods of biosocial typology without once acknowledging the historical context and consequences of these procedures is naive at best and cynical at worst.[104]

In the interests of a certain internationalism, however, I want to end with a story that takes us outside the contemporary art scene and away from the simultaneously inflated and deflated figure of the postmodernist author. This anecdote might suggest something of the hardships and dilemmas of a photographic practice engaged in from below, a photographic practice on ground patrolled by the police. In 1967 a young Black South African photographer named Ernest Cole published a book in the United States called *House of Bondage*. Cole's book and his story are remarkable. In order to photograph a broad range of South African society, Cole had first to change his racial classification from black to colored, no mean feat in a world of multiple bureaus of identity, staffed by officials who have mastered a subtle bureaucratic taxonomy of even the offhand gestures of the different racial and ethnic groups. He countered this apparatus, probably the last *physiognomic* system of domination in the world, with a descriptive strategy of his own, mapping out the various checkpoints in the multiple channels of apartheid.

Cole photographed during a period of relative political "calm" in South Africa, midway between the Sharpeville massacre of 1960 and the Soweto students' revolt of 1976. At a time when black resistance was fragmented and subterranean in the wake of the banning of the main opposition groups, he discovered a limited, and by his own account problematic, figure of resistance in young black toughs, or *tsotsis,* who lived lives of petty criminality. Cole photographed *tsotsis* mugging a white worker for his pay envelope as well as a scene of a white man slapping a black beggar child. And he regularly photographed the routine passbook arrests of blacks who were caught outside the zones in which they were permitted to travel. As might be expected, Cole's documentation of the everyday flows of power, survival, and criminal resistance got him into trouble with the law. He was questioned repeatedly by police, who assumed he was carrying stolen camera equipment. Finally he was stopped after photographing passbook arrests. Asked to explain himself, he claimed to be making a documentary on juvenile delinquency. Sensing his criminological promise, the police, who then as now operated through a pervasive system of informers, invited him to join the ranks. At that point, Cole decided to leave the

country while he still could. *House of Bondage* was assembled from the negatives he smuggled out of South Africa. Since publishing his book in exile, Cole has disappeared from the world of professional photojournalism.[105]

The example of Cole's work suggests that we would be wise to avoid an overly monolithic conception of realism. Not all realisms necessarily play into the hands of the police, despite Theodor Adorno's remark, designed to lampoon a Leninist epistemology once and for all, that "knowledge has not, like the state police, a rogues' gallery of its objects."[106] If we are to listen to, and act in solidarity with, the polyphonic testimony of the oppressed and exploited, we should recognize that some of this testimony, like Cole's, will take the ambiguous form of visual documents, documents of the "microphysics" of barbarism. These documents can easily fall into the hands of the police or their intellectual apologists. Our problem, as artists and intellectuals living near but not at the center of a global system of power, will be to help prevent the cancellation of that testimony by more authoritative and official texts.

Below: Tough talk and marijuana. These are tsotsis, youths who have turned to crime rather than work as white men's garden-boys or messengers—the usual jobs available to young blacks. Right: A white pocket being picked. Whites are angered if touched by anyone black, but a black hand under the chin is enraging. This man, distracted by his fury, does not realize his back pocket is being rifled. Below, right: He is allowed to go his way—till next time.

From Ernest Cole, *House of Bondage*, 1967

N O T E S

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1 Quoted in Helmut and Alison Gernshiem, *L. J. M. Daguerre* (New York: Dover, 1968), p. 105 (italics in original).

2 The Metropolitan Police Act, 1839, in *Halsbury's Statutes of England,* vol. 25 (London: Butterworth, 1970), p. 250. For a useful summary of parliamentary debates on crime and punishment in the nineteenth century, see *Catalogue of British Parliamentary Papers* (Dublin: Irish University Press, 1977), pp. 58–73. On the history of the National Gallery, see Michael Wilson, *The National Gallery: London* (London: Philip Wilson Publishers, 1982).

3 William Henry Fox Talbot, *The Pencil of Nature* (1844; facsimile edition, New York: Da Capo, 1968), pl. 6, n.p.

4 Ibid., pl. 3.

5 The clearest of the early, optimistic understandings of photography's role within a new hierarchy of taste, necessitating a restructuring of the portrait labor market along industrial lines, can be found in an unsigned review by Elizabeth Eastlake, "Photography," *Quarterly Review* 101:202 (April 1857), pp. 442–68.

6 See Michel Foucault, *Discipline and Punish: The Birth of the Prison,* trans. Alan Sheridan (New York: Pantheon, 1977) and *The History of Sexuality, Volume I: An Introduction,* trans. Robert Hurley (New York: Pantheon, 1978).

7 Any photographs that seek to identify a *target,* such as military reconnaissance photographs, operate according to the same general logic. See my 1975 essay "The Instrumental Image: Steichen at War," in *Photography against the Grain: Essays and Photo Works, 1973–1983* (Halifax: The Press of the Nova Scotia College of Art and Design, 1984).

8 The theoretical ground for the construction of a specifically *bourgeois* subject can be found in Hobbes's *Leviathan* (1651). C. B. Macpherson has argued that Hobbes's axiomatic positing of an essentially competitive individual human "nature" was in fact quite specific to a developing market society, moreover, to a market society in which human labor power increasingly took the form of an alienable commodity. As Hobbes put it, "The *Value* or WORTH of a man, is as of all things, his Price; that is to say, so much as would be given for the use of his Power: and therefore is not absolute; but a thing dependent on the need and judgement of another" (Thomas Hobbes, *Leviathan* [Harmondsworth: Penguin, 1968], chap. 10, pp. 151–52. See Macpherson's introduction to this edition and his *Political Theory of Possessive Individualism: Hobbes to Locke* [London: Oxford University Press, 1962]).

While it would be farfetched to present Hobbes as a theorist of the "bourgeois portrait," it is interesting to note how he defined individual autonomy and its relinquishment through contractual obligation in terms of dramaturgical metaphors, thus distinguishing between two categories of the person, the "Author" and the "Actor" (*Leviathan,* chap. 16, pp. 217–18). The analogy between symbolic representation and political-legal representation is central to his thought. (An amusing history of portrait photography could be written on the vicissitudes of the Hobbesian struggle between photographer and sitter, both in the actual encounter and in the subsequent reception of portrait photographs.)

Furthermore, the frontispiece to *Leviathan* took the form of an allegorical portrait. The commonwealth, or state, is literally embodied in the figure of a sovereign, an "artificial man," whose body is itself composed of a multitude of bodies, all of whom have ceded a portion of their indi-

vidual power to the commonwealth in order to prevent the civil war that would inevitably result from their unchecked pursuit of "natural" appetites. Thus the "body" of the Leviathan is a kind of pressure vessel, containing explosive natural forces. This image is perhaps the first attempt to diagram the social field visually. As such, it has a definite, if usually indirect, resonance in nineteenth-century attempts to construct visual metaphors for the conceptual models of the new social sciences.

9 "The utilitarian doctrine . . . is at bottom only a restatement of the individualist principles which were worked out in the seventeenth century: Bentham built on Hobbes" (Macpherson, *Political Theory of Possessive Individualism,* p. 2).

10 Jeremy Bentham, "A Fragment on Government" (1776), in Mary P. Mack, ed., *A Bentham Reader* (New York: Pegasus, 1969), p. 45.

11 Quoted in Helmut Gernsheim, *The History of Photography: From the Camera Obscura to the Beginning of the Modern Era* (New York: McGraw-Hill, 1969), p. 239.

12 Marcus Aurelius Root, *The Camera and the Pencil* (1864; reprint Pawlett, VT: Helios, 1971), pp. 420–21.

13 The Panopticon, or Inspection House, was Jeremy Bentham's proposal, written in 1787, for an architectural system of social discipline, applicable to prison, factory, workhouse, asylum, and school. The operative principles of the Panopticon were isolation and perpetual surveillance. Inmates were to be held in a ring of individual cells. Unable to see into a central observation tower, they would be forced to assume that they were watched continually. (As Hobbes remarked over a century earlier, "the reputation of Power is Power.") The beneficial effects of this program were trumpeted by Bentham in the famous opening remarks of his proposal: "Morals reformed—health preserved—industry invigorated—instruction diffused—public burdens lightened—Economy seated, as it were, upon a rock—all by a simple idea of architecture" (John Bowring, ed., *The Works of Jeremy Bentham,* vol. 4 [London: Simpkin, Marshall, 1843], p. 49). With Bentham the principle of supervision takes on an explicit industrial capitalist character: his prisons were to function as profit-making establishments, based on the private contracting-out of convict labor. Bentham was a prototypical efficiency expert. (On these last two points see, respectively, Gertrude Himmelfarb, "The Haunted House of Jeremy Bentham," in *Victorian Minds* [New York: Knopf, 1968], pp. 32–81; and Daniel Bell, "Work and Its Discontents," in *The End of Ideology: On the Exhaustion of Political Ideas in the Fifties* [Glencoe, IL: Free Press, 1960], pp. 227–74.)

For Foucault, "Panopticism" provides the central metaphor for modern disciplinary power based on isolation, individuation, and supervision (*Discipline and Punish,* pp. 195–228). Foucault traces the "birth of the prison" only to the 1840s, just when photography appears with all of its instrumental promise. Given the central optical metaphor in Foucault's work, a reading of the subsequent development of disciplinary systems would need logically to take photography into account. John Tagg has written a Foucauldian account of the "panoptic" character of early police and psychiatric photography in Britain. While I am in frequent agreement with his argument, I disagree with his claim that the "cumbersome architecture" of the Panopticon became redundant with the development of photography ("Power and Photography: Part 1, A Means of Surveillance: The Photograph as Evidence in Law," *Screen Education* 36 [Winter 1980], p. 45). This seems to accord too much power to photography and to imply that domination operates entirely by the force of visual representation. To suggest that cameras replaced prisons is more than a little hyperbolic. The fact that Bentham's plan was never realized in the form he proposed has perhaps contributed to the confusion; models are more easily transformed into metaphors than are realized projects. Once discourse turns on metaphor, it becomes a simple matter to substitute a photographic metaphor for an architectural one. My main point here is that any history of disciplinary institutions must recognize the multiplicity of material devices involved—some literally concrete—in tracing not only the importance of surveillance, but also the continued importance of confinement. After all, Bentham's proposal *was* partially realized in the cellular and separate systems of confinement that emerged in the nineteenth century. At least one "genuine" panopticon prison was constructed: the Stateville Penitentiary in Illinois, built between 1916 and 1924. (For works on early prison history, see D. Melossi and M. Pavarini, *The Prison and the Factory: Origins of the Penitentiary System,* trans. Glynis Cousin [London: Macmillan, 1981]; David Rothman, *The Dis-*

covery of the Asylum: Social Order and Disorder in the New Republic [Boston: Little, Brown, 1971]; and Michael Ignatieff, *A Just Measure of Pain: The Penitentiary in the Industrial Revolution, 1750–1850* [London: Macmillan, 1978]).

Certainly prison architecture and the spatial positioning of prisons in the larger environment remain matters of crucial importance. Especially in the United States, where economic crisis and Reaganite judicial tough-mindedness have lead to record prison populations, these are paramount issues of what is euphemistically called "public policy." In fact, the current wave of ambitious prison building has led to at least one instance of (postmodern?) return to the model of the Panopticon. The new Montgomery County Detention Center in Virginia was designed by prison architect James Kessler according to a "new" principle of "podular/direct supervision." In this scaled-down, rumpus-room version of the Panopticon, inmates can see into the central control room from which they are continually observed (see Benjamin Forgey, "Answering the Jail Question," *The Washington Post,* August 2, 1986, pp. G1–G2).

14 For earlier arguments on the archival paradigm in photography, see Rosalind Krauss, "Photography's Discursive Spaces: Landscape/View," *Art Journal* 42:4 (Winter 1982), pp. 311–19, reprinted in this volume; and Allan Sekula, "Photography between Labour and Capital," in B. Buchloh and R. Wilkie, eds., *Mining Photographs and Other Pictures: Photographs by Leslie Shedden* (Halifax: The Press of the Nova Scotia College of Art and Design, 1983), pp. 193–268.

15 John [*sic*] Caspar Lavater, Preface to *Essays on Physiognomy Designed to Promote the Knowledge and the Love of Mankind,* vol. 1, trans. Henry Hunter (London: J. Murray, 1792), n.p.

16 Quoted in Louis Chevalier, *Labouring Classes and Dangerous Classes in Paris during the First Half of the Nineteenth Century,* trans. Frank Jellineck (London: Routledge, 1973), p. 411.

17 In addition to Chevalier's book just cited, see Walter Benjamin's 1938 essay, "The Paris of the Second Empire in Baudelaire," in *Charles Baudelaire: A Lyric Poet in the Era of High Capitalism,* trans. Harry Zohn (London: New Left Books, 1973), pp. 35–66. See also Judith Wechsler, *A Human Comedy: Physiognomy and Caricature in Nineteenth Century Paris* (Chicago: University of Chicago Press, 1982). For specific histories of phrenology, see David de Guistino, *Conquest of Mind: Phrenology and Victorian Social Thought* (London: Croom Helm, 1975); and John Davies, *Phrenology: Fad and Science* (New Haven: Yale University Press, 1955).

18 Lavater, vol. 1, p. 13.

19 Davies, p. 38.

20 On the history of the illustrated psychiatric case study, see Sander Gilman, *Seeing the Insane* (New York: J. Wiley, 1982).

21 Eliza Farnham, "Introductory Preface" to Marmaduke Sampson, *Rationale of Crime and its Appropriate Treatment, Being a Treatise on Criminal Jurisprudence Considered in Relation to Cerebral Organization* (New York: Appleton, 1846), p. xiii.

22 For a reading of the emergence of this system in France, see Jacques Donzelot, *The Policing of Families,* trans. Robert Hurley (New York: Pantheon, 1979). Donzelot seems to place inordinate blame on women for the emergence of a "tutelary" mode of social regulation. For a Marxist-feminist critique of Donzelot, see Michelle Barrett and Mary McIntosh, *The Anti-Social Family* (London: New Left Books, 1982).

23 Sampson, p. 175.

24 See Madeline Stern, "Mathew B. Brady and the *Rationale of Crime,*" *The Quarterly Journal of the Library of Congress* 31:3 (July 1974), pp. 128–35; and Alan Trachtenberg, "Brady's Portraits," *The Yale Review* 73:2 (Winter 1984), pp. 230–53.

25 On this point see Michel Foucault, "Prison Talk," in *Power/Knowledge: Selected Interviews and Other Writings, 1972–1977,* ed. Colin Gordon (New York: Pantheon, 1980), p. 46.

26 Oliver Wendell Holmes, "The Stereoscope and the Stereograph," *Atlantic Monthly* 3:20 (June 1859), p. 748. For a more extensive treatment of this issue, see my 1981 essay "The Traffic in Photographs," in *Photography against the Grain,* pp. 96–101.

27 François Arago, letter to Duchâtel, in Gernsheim, *Daguerre,* p. 91.

28 See Ian Hacking, "How Should We Do the History of Statistics?" *Ideology and Consciousness* 8 (Spring 1981), pp. 15–26; and "Biopower and the Avalanche of Printed Numbers," *Humanities and Society* 5: 3–4 (Summer–Fall 1982) pp. 279–95.

29 Adolphe Quetelet, *A Treatise on Man and the Development of His Faculties,* trans. R. Knox (Edinburgh: Chambers, 1842), p. 6.

30 Karl Marx, *Capital: A Critique of Political Economy,* vol. 1, trans. Ben Fowkes (London: New Left Books, 1976), pp. 440–41.

31 Chevalier, p. 10.

32 Adolphe Quetelet, *Lettres sur la théorie des probabilités* (Brussels: Académie Royale, 1846). Published in English as *Letters on the Theory of Probability,* trans. O. G. Downes (London: Layton, 1849). See also Georges Canguilhem, *On the Normal and the Pathological,* trans. Carolyn Fawcett (Boston: Reidel, 1978), pp. 86–104.

33 Quetelet, *Treatise on Man,* p. 100.

34 See note 8. Of course, Quetelet's extreme determinist view of the social field was diametrically opposed to the contractual model of human relations advanced by Hobbes.

35 See George Mosse, *Toward the Final Solution: A History of European Racism* (New York: Fertig, 1978), pp. 17–34.

36 See Adolphe Quetelet, *Anthropométrie, ou mesure des différents facultés de l'homme* (Brussels: Muquardt, 1871). Quetelet suffered from aphasia after 1855, and his later works tend to be repetitious and incoherent (see Frank H. Hankins, *Adolphe Quetlet as Statistician* [New York: Columbia University Press, 1908], pp. 31–32). On the intersection of anthropometry and race science, see Stephen Jay Gould, *The Mismeasure of Man* (New York: Norton, 1981).

37 Quetelet, *Treatise on Man,* p. v.

38 Here are some ways in which Quetelet's position in relation to idealist aesthetic theory become very curious. The "average man" can be regarded as a bastard child of Kant. In the "Critique of Aesthetical Judgement" Kant describes the psychological basis of the construction of the empirically based "normal Idea" of human beauty, arguing that "the Imagination can, in all probability, actually though unconsciously let one image glide into another, and thus by the concurrence of several of the same kind come by an average, which serves as the common measure of all. Every one has seen a thousand full-grown men. Now if you wish to judge of the normal size, estimating it by means of comparison, the Imagination (as I think) allows a great number of images (perhaps the whole thousand) to fall on one another. If I am allowed here the analogy of optical presentation, it is the space where most of them are combined and inside the contour, where the place is illuminated with the most vivid colors, that the *average size* is cognizable; which, both in height and breadth, is equally far removed from the extreme bounds of the greatest and smallest stature. And this is the stature of a beautiful man" (Immanuel Kant, *Critique of Judgement,* trans. J. H. Bernard [London: Macmillan, 1914], pp. 87–88). This passage prefigures not only Quetelet but also—as we shall see—Galton. However, Kant was careful to respect differences between normal Ideas of beauty appropriate to different races. On an empirical level, he constructed no hierarchy. Furthermore, he distinguished between the empirically-based normal Idea, and the "Ideal of beauty," which is constructed in conformity with a concept of morality. Quetelet can be accused of unwittingly collapsing Kant's distinction between the normal Idea and the Ideal, and thus fusing aesthetics and morality on a purely quantitative basis, preparing thus the ground for Galton's plan for the engineering of human reproduction.

Although Kant's more general proposal for a science of the human species based on the model of the natural sciences was known to Comte, Quetelet, "a stranger to all philosophical speculation," seems never to have read Kant (Joseph Lottin, *Quetelet, statisticien et sociologue* [Louvain: Institut supérieur de philosophie, 1912], p. 367).

Quetelet's persistent likening of his project to the work of the visual artist can certainly be taken as emblematic of the fusion of idealist aesthetics with Enlightenment theories of social perfection. More specifically, however, Quetelet's evocations of art history—which extended to the measurement of classical sculpture and to long chronological tables of artists who had dealt with problems of bodily proportion—can be seen as a legitimating maneuver to ward off accusations that his strict determinism obliterated the possibility of a human creativity based on the exercise of free will. (It was also an attempt to compare the average bodily types of "ancients" and "moderns.") Thus Quetelet colors his gray determinism with a self-justifying hint of romanticism. But this maneuver also converts the visual artist into a protoscientist, linking Quetelet to the emerging

discourse of artistic realism. (See his *Anthropométrie,* pp. 61–169. In this work Quetelet constructed a visual diagram of the biographical course of an average body type from infancy to old age, based on anthropometrical data.)

39 Gabriel Tarde, "Archaeology and Statistics," in *The Laws of Imitation,* trans. Elsie Parsons (New York: Henry Holt, 1903), pp. 134–35 (this essay first appeared in the *Revue philosophique,* October 1883). In an extraordinary passage of the same essay Tarde compares the graphical curve for criminal recidivism with the "curve traced on [the] retina by the flight of [a] swallow," metaphorically linking within the same epistemological paradigm the work of Bertillon with that of the physiologist Etienne Jules Marey, chronophotographer of human and animal locomotion (ibid., p. 133).

40 Gabriel Tarde, *Penal Philosophy,* trans. Rapelje Howell (Boston: Little, Brown, 1912), p. 116.

41 Alphonse Bertillon, *Identification anthropométrique; instructions signalétiques* (Paris: Melun, 1893), p. xiii. I have modified the translation given in the American edition, *Signaletic Instructions,* trans. R. W. McLaughry (Chicago: Werner, 1896).

42 Alphonse Bertillon, "The Bertillon System of Identification," *Forum* 11:3 (May 1891), p. 335.

43 Ibid., p. 331.

44 Alphonse Bertillon, *L'identité des récidivistes et la loi de relégation* (Paris: Masson, 1883), p. 11.

45 Bertillon, *Identification anthropométrique,* pp. xvii-xviii.

46 Ibid., pp. xxi-xxiii, lxxiv.

47 Alphonse Bertillon, *La photographie judiciare* (Paris: Gauthier-Villars, 1890), p. 2 (my translation).

48 In 1872 O. G. Rejlander suggested that photographs of ears be used to identify criminals ("Hints Concerning the Photographing of Criminals," *British Journal Photographic Almanac* [1872], pp. 116–17). Carlo Ginzburg has noted the coincidence of Bertillon's attention to the "individuality" of the ear and Giovanni Morelli's attempt to construct a model of art-historical authentication based on the careful examination of the rendering of the ear by different painters ("Morelli, Freud, and Sherlock Holmes: Clues and Scientific Method," *History Workshop* 9 [Spring 1980], pp. 5–29).

49 See Robert Nye, *Crime, Madness, and Politics in Modern France: The Medical Concept of National Decline* (Princeton: Princeton University Press, 1984), pp. 49–96. Although Nye mentions Bertillon's project only in passing, I have relied upon his social history for an understanding of the politics of French criminology during the late nineteenth century. A more directly relevant study of Bertillon, Christian Pheline's *L'image accusatrice* (Paris: Cahiers de la Photographie, 1985), unfortunately came to my attention only after this essay was going to press.

50 Bertillon, *L'identité des récidivistes,* pp. 2, 5.

51 Henry Rhodes, *Alphonse Bertillon: Father of Scientific Detection* (London: Abelard-Schuman, 1956), p. 83.

52 Bertillon, "The Bertillon System of Identification," p. 330.

53 A. Bertillon and A. Chervin, *Anthropologie métrique* (Paris: Imprimerie Nationale, 1909), p. 51 (my translation). The same text drolly likens the shape of the binomial curve to that of a "gendarme's hat."

54 Bertillon noted that his system was adopted by 1893 in the United States, Belgium, Switzerland, Russia, much of South America, Tunisia, the British West Indies, and Rumania (*Identification anthropométrique,* p. lxxxi). Translations of Bertillon's manuals of signaletic instructions appeared in Germany, Switzerland, England, and Peru, as well as the United States. On the enthusiastic American reception of the Bertillon system, see Donald Dilworth, ed., *Identification Wanted: Development of the American Criminal Identification System, 1893–1943* (Gaithersburg, MD: International Association of Chiefs of Police, 1977). The IACP promoted the general adoption of Bertillonage by the geographically dispersed and municipally autonomous police forces of the United States and Canada, and the establishment of a National Identification Bureau in Washington, D.C. This office was absorbed into the Federal Bureau of Investigation in 1924. (Canada adopted Bertillonage with the Criminal Identification Act of 1898.) Starting in 1898, a quasi-official monthly publication of the IACP, called *The Detective,* carried Bertillon measurements and photographs of wanted criminals. This publication provides a reasonable gauge of the ratio of reliance by American police on the Bertillon and fingerprint systems over the next twenty-five years. The British resisted Bertillon's method, largely because the fingerprint system was of British origin. Nonetheless, regulations were established in 1896 under the Penal Servitude Act of 1891 for the photographing, fingerprinting,

and Bertillon measurement of criminal prisoners (Great Britain, *Statutory Rules and Orders* [London: H. M. Stationary Office, 1896], no. 762, pp. 364–65). By 1901, however, the anthropometric signalment was abandoned.

Bertillon and Galton traded jibes at their respective systems. Bertillon faulted Galton for the difficulties encountered in classifying fingerprints ("The Bertillon System of Identification," p. 331). Galton faulted Bertillon for his failure to recognize that bodily measurements were correlated and not independent variables, thus grossly underestimating the probability of duplicate measurements (Francis Galton, *Memories of My Life* [London: Methuen, 1908], p. 251; see also his "Personal Identification and Description," *Journal of the Anthropological Institute* 18 [May 29, 1888], pp. 177–91).

The two men's obsession with authorship may have been a bit misplaced, however. In "Morelli, Freud, and Sherlock Holmes" (cited in note 48, above), Carlo Ginzburg has suggested that the whole enterprise of rationalized criminal identification rested on the *theft* of a more popular, conjectural form of empiricism, grounded in hunting and divining. Sir William Herschel had appropriated fingerprinting in 1860 from a usage customary among Bengali peasants under his colonial administration. The source of police methods in what Ginzburg describes as "low intuition" was obliquely acknowledged by Bertillon in a passage in which he argues for a rigorously *scientific* policing, while invoking at the same time the distinctly *premodern* image of the hunter: "Anthropology, by definition, is nothing but the natural history of man. Have not hunters in all times been interested in natural history? And, on the other hand, have not naturalists something of the hunter in them? No doubt the police of the future will apply to their particular form of the chase the rules of anthropology and psychology, just as the engineers of our locomotives are putting in practice the laws of mechanics and thermodynamics" ("The Bertillon System of Identification," p. 341). Ginzburg has proposed a model of observation and description that is more open to multiplicity and resistance than that advanced by John Tagg, who subsumes all documentary within the paradigm of the Panopticon (Tagg, "Power and Photography," p. 55).

55 Thomas Byrnes, "Why Thieves are Photographed," in *Professional Criminals of America* (New York: Cassell, 1886), p. 53.

56 Cesare Lombroso, "Introduction," to Gina Lombroso-Ferrero, *Criminal Man* (New York: Putnam, 1911), p. xxv.

57 Quoted by Nye, p. 104.

58 Rhodes, p. 190.

59 See Nye, pp. 97–131.

60 Charles Marie Debierre, *Le crâne des criminels* (Lyon and Paris: Storck and Masson, 1895), p. 274. The other important illustrated works are by members of the Italian school: Lombroso's revised French and Italian editions of his 1876 *L'uomo delinquente* included separate albums of illustrations (Paris: Alcan, 1895 and Turin: Fratelli Bocca, 1896–97). The plates of criminal types in these albums were taken from materials prepared for Enrico Ferri, *Atlante antropologico-statistico dell'omicidio* (Turin: Fratelli Bocca, 1895).

61 Havelock Ellis, *The Criminal* (London: Walter Scott, 1890).

62 The exception is David Green, "Veins of Resemblance: Photography and Eugenics," *The Oxford Art Journal* 7:2 (1984), pp. 3–16.

63 See Ruth Schwartz Cowan, *Sir Francis Galton and the Study of Heredity in the Nineteenth Century* (New York: Garland, 1985).

64 See Gareth Stedman Jones, *Outcast London: A Study in the Relationship between Classes in Victorian Society* (Oxford: Clarendon, 1971).

65 Francis Galton, *Hereditary Genius* (London: Friedman, 1978), p. 342.

66 Francis Galton, *Inquiries into Human Faculty and Its Development* (London: Macmillan, 1883), pp. 5–6.

67 Galton acknowledged Spencer in an 1878 paper read before the Anthropological Institute, extracted in ibid., p. 340. Spencer's previously unpublished 1846 proposal for producing and superimposing phrenological diagrams of the head, "On a Proposed Cephalograph," can be found as an appendix to his *An Autobiography,* vol. 1 (New York: Appleton, 1904), pp. 634–638. Like Quetelet, Spencer appears not to have read Kant on the notion of an average type, or on any other topic for that matter (see David Wiltshire, *The Social and Political Thought of Herbert Spencer* [Oxford: Oxford University Press, 1978], p. 67). Spencer's organismic defense of a hierarchical social division of labor is articulated in a review of the collected works of Plato and Hobbes: "The Social Orga-

86 Charles Sanders Peirce, *The Philosophical Writings of Peirce*, ed. Justus Buchler (New York: Dover, 1955), pp. 99–119.

87 Rhodes, p. 191.

88 Compare Josef Maria Eder, *History of Photography,* trans. Edward Epstean (New York: Columbia University Press, 1945), with Beaumont Newhall, *Photography: A Short Critical History* (New York: Museum of Modern Art, 1938). Eder, very much part of the movement to rationalize photography during the first decade of this century, is quite willing to treat police photography as a proper object of his narrative. Eder in fact wrote an introduction to a German edition of Bertillon's manual (*Die gerichtliche Photographie* [Halle a. S.: Knapp, 1895]). Newhall, on the other hand, wrote a modernist history in 1938 that privileged technical photography, including First World War aerial reconnaissance work, without once mentioning the use of photography by the police. Clearly, Newhall found it easier to speak of the more glamorous, abstract, and chivalrous state violence of early air power than to dwell on the everyday state violence of the police.

89 An exception would be Sally Stein's revisionist account of Jacob Riis, "Making Connections with the Camera: Photography and Social Mobility in the Career of Jacob Riis," *Afterimage* 10:10 (May 1983), pp. 9–16.

90 Compare Bernard Berenson, "Isochromatic Photography and Venetian Pictures," *The Nation* 57:1480 (November 9, 1893), pp. 346–47, with Fred Jane, "Preface," *Fighting Ships* (London: Marsten, 1905–6), p. 2. However different their objects, these texts share an enthusiasm for large quantities of well-defined photographs.

91 The Institut International de Bibliographie, founded in 1895 with headquarters in Brussels, campaigned for the establishment of a *bibliographia universalis* registered on standardized filing cards. Following Dewey, the Institute recommended that literature on photography be assigned the seventh position within the graphic arts, which were in turn assigned the seventh position within the categories of human knowledge. The last subcategory within the classification of photography was to hold photographic prints. See the Institute's following publications: *Manuel pour l'usage du répertoire bibliographique de la photographie établi d'après la classification décimale* (Brussels, copublished with the Société Française de la Photographie, 1900); *Code pour l'organisation de la documentation photographique* (Brussels, 1910).

92 I am grateful to Daniel Bluestone for pointing out this latter architectural detail. For a contemporary description of the heads, see Herbert Small, *Handbook of the New Library of Congress* (Boston: Curtis and Cameron, 1901), pp. 13–16.

93 See the following catalogues published by the Yawman and Erbe Mfg. Co.: *Card Ledger System and Cabinets* (Rochester, NY, 1904); *Criminal Identification by "Y and E": Bertillon and Finger Print Systems* (Rochester, 1913); and *"Y and E" Library Equipment* (Rochester, 192?).

94 On early microfilm, see *Livre microphotographique: le bibliophoto ou livre à projection* (Brussels: Institut International de Bibliographie, 1911). On the more recent conversion of the photograph from library-document to museum-object, see Douglas Crimp, "The Museum's Old/The Library's New Subject," *Parachute* 22 (Spring 1981), pp. 32–37 (reproduced in this volume).

95 This suggests that the historiography of photography will have to approach the question of an "institutional mode" in different terms than those already developed for the historiography of cinema. See, for example, Noël Burch, "Film's Institutional Mode of Representation and the Soviet Response," *October* 11 (Winter 1979), pp. 77–96.

96 Thorstein Veblen, *The Theory of the Leisure Class: An Economic Study of Institutions* (New York: Modern Library, 1934), pp. 163–64.

97 Walker Evans, *American Photographs* (New York: Museum of Modern Art, 1938).

98 Reproduced in Jerry Thompson, ed., *Walker Evans at Work* (New York: Harper and Row, 1982), p. 107.

99 Walter Benjamin, "The Paris of the Second Empire in Baudelaire," in *Charles Baudelaire,* p. 41.

100 Leslie Katz, "Interview with Walker Evans," *Art in America* 59:2 (March-April 1971), p. 87.

101 Camille Recht, introduction to Eugène Atget, *Lichtbilder* (Paris and Leipzig: Henri Jonquières, 1930), pp. 18–19 (my translation).

102 See Benjamin's 1931 essay "A Short History of Photography," trans. Stanley Mitchell, *Screen* 13:1 (Spring 1972), p. 25.

nism," *The Westminster Review,* n. s. 17:1 (January 1860), pp. 90–121. This extended metaphor goes so far as to compare the circulation of blood with that of money (p. 111). On the connections between Spencerian social Darwinism and eugenics, see Greta Jones, *Social Darwinism and English Thought* (Sussex: Harvester, 1980).

68 Galton, *Inquiries,* p. 17.

69 Francis Galton, "On Generic Images," *Proceedings of the Royal Institution* 9 (1879), p. 166.

70 Francis Galton, "Analytical Photography," *Nature* 18 (August 2, 1890), p. 383.

71 Francis Galton, "Generic Images," *Nineteenth Century* 6:29 (July 1879), p. 162. In the related, previously cited paper "On Generic Images," Galton stated that Quetelet was the first to give "the idea of type" a "rigorous interpretation" (p. 162). Ruth Schwartz Cowan has argued, following Karl Pearson, that Quetelet was of no particular import in Galton's development as a statistician; but Cowan is interested in Galton's position as a statistician in the lineage of hereditarian thought and not in his attempt to negotiate the merger of optical and statistical methods. That is, Cowan prefers to define biostatistics as a science which began with Galton, a science having no prehereditarian precursor in Quetelet (see *Sir Francis Galton,* pp. 145–200).

72 Galton, *Inquiries,* p. 14.

73 Ibid., p. 15.

74 Francis Galton, *Essays in Eugenics* (London: Eugenics Education Society, 1909), pp. 8–9, 62.

75 Galton, "Generic Images," p. 169.

76 Galton, *Inquiries,* p. 183.

77 Ibid., p. 182.

78 Galton, "Generic Images," pp. 163–64.

79 Karl Pearson, *The Life, Letters and Labours of Francis Galton,* vol. 2 (Cambridge: Cambridge University Press, 1924), p. 293.

80 On the role played by eugenics in Nazi racial policy, see Allan Chase, *The Legacy of Malthus: The Social Costs of the New Scientific Racism* (Urbana: University of Illinois Press, 1980), pp. 342–60.

Galton was asked to make the composites in 1883 by Joseph Jacobs, who was attempting to demonstrate the existence of a relatively pure racial type of modern Jew, intact despite the Diaspora. For the portraits, Jacobs recruited boy students from the Jews' Free School and from the Jewish Working Men's Club in London. Galton and Jacobs both agreed that a racial type had been produced, but they disagreed profoundly on the *moral essence* of that type. Galton, the great quantifier, met his imaginary Other: "The feature that struck me most, as I drove through the . . . Jewish quarter, was the cold scanning gaze of man, woman, and child. . . . I felt, rightly or wrongly, that every one of them was cooly appraising me at market value, without the slightest interest of any other kind" ("Photographic Composites," *The Photographic News* 29:1389 [April 17, 1885]). Jacobs responded to Galton's anti-Semitism with a more honorific reading of the composites, suggesting that "here we have something . . . more spiritual than a spirit. . . . The composite face must represent this Jewish forefather. In these Jewish composites we have the nearest representation we can hope to possess of the lad Samuel as he ministered before the Ark, or the youthful David when he tended his father's sheep" ("The Jewish Type, and Galton's Composite Photographs," *The Photographic News* 29:1390 [April 24, 1885]). Thus Jacobs counters Galton's myth of the Jew as the embodiment of capital with a proto-Zionist myth of origins. (On the medical and racial stereotyping of Jews in the late nineteenth century, and the Jewish reaction, see Sander Gilman, "The Madness of the Jews," in *Difference and Pathology: Stereotypes of Sexuality, Race, and Madness* [Ithaca: Cornell University Press, 1985], pp. 150–62).

81 Henry Goring, *The English Convict: A Statistical Study* (London: H. M. Stationery Office, 1913). Lombroso's theoretical fixation with convict head size had already been undercut within physical anthropology by Franz Boas. See his 1910–13 essay, "Changes in Bodily Form of Descendants of Immigrants," in *Race, Language and Culture* (New York: Macmillan, 1949), pp. 60–75.

82 Galton, *Inquiries,* p. 43.

83 Pearson, *Life, Letters and Labours,* vol. 2, p. 357.

84 Galton, *Hereditary Genius,* pp. xvii-xviii.

85 On the cultural resonance of the concept of entropy in the nineteenth century, see Anson Rabinbach, "The Body without Fatigue: A Nineteenth Century Utopia," in Seymour Drescher et al., eds., *Political Symbolism in Modern Europe: Essays in Honor of George Mosse* (New Brunswick: Transaction Books, 1982), pp. 42–62.

103 For an example of the high regard for Galton among contemporary hereditarians, see H. J. Eysenck's introduction to the 1978 edition of *Hereditary Genius* previously cited.

104 See Nancy Burson et al., *Composites: Computer Generated Portraits* (New York: William Morrow, 1986).

105 Ernest Cole (with Thomas Flaherty), *House of Bondage* (New York: Random House, 1967). For the account of Cole's own struggle to produce the pictures in the book, I have relied upon Joseph Lelyveld's introduction, "One of the Least-Known Countries in the World," pp. 7–24.

106 Theodor Adorno, *Negative Dialectics,* trans. E. B. Ashton (New York: Seabury, 1973), p. 206.