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The Body and the Archive*

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. . . there must be arranged a comprehensive system of exchanges, so that there might grow up something like a universal currency of these banknotes, or promises to pay in solid substance, which the sun has engraved for the great Bank of Nature.

—Oliver Wendell Holmes, 1859

On the one side we approach more closely to what is good and beautiful; on the other, vice and suffering are shut up within narrower limits; and we have to dread less the monstrosities, physical and moral, which have the power to throw perturbation into the social framework.

—Adolphe Quetelet, 1842

I.

The sheer range and volume of photographic practice offers ample evidence of the paradoxical status of photography within bourgeois culture. The simultaneous threat and promise of the new medium was recognized at a very early date, even before the daguerreotype process had proliferated. For exam-

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ple, following the French government announcement of the daguerreotype in August 1839, a song circulated in London which began with the following verse:

> O Mister Daguerre! Sure you're not aware
> Of half the impressions you're making,
> By the sun's potent rays you'll set Thames in a blaze,
> While the National Gallery's breaking.

Initially, photography threatens to overwhelm the citadels of high culture. The somewhat mocking humor of this verse is more pronounced if we consider that the National Gallery had only moved to its new, classical building on Trafalgar Square in 1838, the collection having grown rapidly since the gallery's founding in 1824. I stress this point because this song does not pit photography against a static traditional culture, but rather plays on the possibility of a technological outpacing of *already* expanding cultural institutions. In this context, photography is not the harbinger of modernity, for the world is already modernizing. Rather, photography is modernity run riot. But danger resides not only in the numerical proliferation of images. This is also a premature fantasy of the triumph of a *mass* culture, a fantasy which reverberates with political foreboding. Photography promises an enhanced mastery of nature, but photography also threatens conflagration and anarchy, an incendiary leveling of the existing cultural order.

By the third verse of this song, however, a new *social* order is predicted:

> The new Police Act will *take down* each fact
> That occurs in its wide jurisdiction
> And each beggar and thief in the boldest relief
> Will be *giving a color* to fiction.[1]

Again, the last line of the verse yields a surplus wit, playing on the figurative ambiguity of "giving a color," which could suggest both the elaboration and unmasking of an untruth, playing further on the obvious monochromatic limitations of the new medium, and on the approximate homophony of *color* and *collar*. But this velvet wit plays about an iron cage which was then in the process of being constructed. Although no "Police Act" had yet embraced photography, the 1820s and '30s had engendered a spate of governmental inquiries and legislation designed to professionalize and standardize police and penal procedures in Britain, the most important of which were the Gaols Act of 1823 and the Metropolitan Police Acts of 1829 and 1839. (The prime instigator of these modernization efforts, Sir Robert Peel, happened to be a major collector of seven-

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

William Henry Fox Talbot. Articles of China, *plate III from* The Pencil of Nature, *1844.*

teenth-century Dutch paintings, and a trustee of the National Gallery.) Directly to the point of the song, however, was a provision in the 1839 act for taking into custody vagrants, the homeless, and other offenders "whose name and residence [could] not be ascertained."[2]

Although photographic documentation of prisoners was not at all common until the 1860s, the potential for a new juridical photographic realism was widely recognized in the 1840s, in the general context of these systematic efforts to regulate the growing urban presence of the "dangerous classes," of a chronically unemployed sub-proletariat. The anonymous lyricist voiced sentiments that were also heard in the higher chambers of the new culture of photography.

Consider that incunabulum in the history of photography, Henry Fox Talbot's *The Pencil of Nature.* Talbot, the English gentleman-amateur scientist who paralleled Daguerre's metallic invention with his own paper process, produced a lavish book that was not only the first to be illustrated with photographic prints, but also a compendium of wide-ranging and prescient meditations on the promise of photography. These meditations took the form of brief commentaries on each of the book's calotype prints. Talbot's aesthetic ambition was clear: for one austere image of a broom leaning beside an (allegori-

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.

cally) open door, he claimed the "authority of the Dutch school of art, for taking as subjects of representation scenes of daily and familiar occurrence."[3] But an entirely different order of naturalism emerges in his notes on another quite beautiful calotype depicting several shelves bearing "articles of china." Here Talbot speculates that "should a thief afterwards purloin the treasures—if the mute testimony of the picture were to be produced against him in court—it would certainly be evidence of a novel kind."[4] Talbot lays claim to a new legalistic truth, the truth of an indexical rather than textual inventory. Although this frontal arrangement of objects had its precedents in scientific and technical illustration, a claim is being made here that would not have been made for a drawing or a descriptive list. Only the photograph could begin to claim the legal status of a *visual* document of ownership. Although the calotype was too insensitive to light to record any but the most willing and patient sitters, its evidentiary promise could be explored in this property-conscious variant of the still life.

Both Talbot and the author of the comic homage to Daguerre recognized a new *instrumental* potential in photography: a silence that silences. The protean oral "texts" of the criminal and pauper yield to a "mute testimony" that "takes down" (that diminishes in credibility, that transcribes) and unmasks the disguises, the alibis, the excuses and multiple biographies of those who find or place themselves on the wrong side of the law. This battle between the presumed denotative univocality of the legal image and the multiplicity and presumed duplicity of the criminal voice is played out during the remainder of the nineteenth century. In the course of this battle a new object is defined—the criminal body—and, as a result, a more extensive "social body" is invented.

We are confronting, then, a double system: a system of representation capable of functioning both *honorifically* and *repressively*. This double operation is most evident in the workings of photographic portraiture. On the one hand, the photographic portrait extends, accelerates, popularizes, and degrades a traditional function. This function, which can be said to have taken its early modern form in the seventeenth century, is that of providing for the ceremonial presentation of the bourgeois *self*. Photography subverted the privileges inherent in portraiture, but without any more extensive leveling of social relationships, these privileges could be reconstructed on a new basis. That is, photography could be assigned a proper role within a new hierarchy of taste. Honorific conventions were thus able to proliferate downward.[5] At the same time,

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*, vol. 101, no. 202 (April 1857), pp. 442–468.

photographic portraiture began to perform a role no painted portrait could have performed in the same thorough and rigorous fashion. This role derived, not from any honorific portrait tradition, but from the imperatives of medical and anatomical illustration. Thus photography came to establish and delimit the terrain of the *other*, to define both the *generalized look*—the typology—and the *contingent instance* of deviance and social pathology.

Michel Foucault has argued, quite crucially, that it is a mistake to describe the new regulatory sciences directed at the body in the early nineteenth century as exercises in a wholly negative, repressive power. Rather, social power operates by virtue of a positive therapeutic or reformative channeling of the body.[6] Still, we need to understand those modes of instrumental realism that do in fact operate according to a very explicit deterrent or repressive logic. These modes constitute the lower limit or "zero degree" of socially instrumental realism. Criminal identification photographs are a case in point, since they are designed quite literally to facilitate the *arrest* of their referent.[7] I will argue in the second part of this essay that the semantic refinement and rationalization of precisely this sort of realism was central to the process of defining and regulating the criminal.

But first, what general connections can be charted between the honorific and repressive poles of portrait practice? To the extent that bourgeois order depends upon the systematic defense of social relations based on private property, to the extent that the legal basis of the self lies in the model of property rights, in what has been termed "possessive individualism," every proper portrait has its lurking, objectifying inverse in the files of the police. In other words, a covert Hobbesian logic links the terrain of the "National Gallery" with that of the "Police Act."[8]

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. 151–152. 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

In the mid-nineteenth century, the terms of this linkage between the sphere of culture and that of social regulation were specifically utilitarian.[9] Many of the early promoters of photography struck up a Benthamite chorus, stressing the medium's promise for a social calculus of pleasure and discipline. Here was a machine for providing small doses of happiness on a mass scale, for contributing to Jeremy Bentham's famous goal: "the greatest happiness of the greatest number."[10] Thus the photographic portrait in particular was welcomed as a socially ameliorative as well as a socially repressive instrument. Jane Welsh Carlyle voiced characteristic hopes in 1859, when she described inexpensive portrait photography as a social palliative:

> Blessed be the inventor of photography. I set him even above the inventor of chloroform! It has given more positive pleasure to poor suffering humanity than anything that has been "cast up" in my time . . . — this art, by which even the poor can possess themselves of tolerable likenesses of their absent dear ones.[11]

In the United States, similar but more extensive utilitarian claims were made by the portrait photographer Marcus Aurelius Root, who was able to articulate the connection between pleasure and discipline, to argue explicitly for a moral economy of the image. Like Carlyle, he stressed the salutory effects of photography on working-class family life. Not only was photography to serve as a means of cultural enlightenment for the working classes, but family photographs sustained sentimental ties in a nation of migrants. This "primal household affection" served a socially cohesive function, Root argued — articulating a nineteenth-century familialism that would survive and become an essential ideo-

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person, the "Author" and the "Actor" (*Leviathan*, Chap. 16, pp. 217–218). 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 portrait 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 individual 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" (C. B. 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.

logical feature of American mass culture. Furthermore, widely distributed portraits of the great would subject everyday experience to a regular parade of moral exemplars. Root's concern for respectability and order led him to applaud the adoption of photography by the police, arguing that convicted offenders would "not find it easy to resume their criminal careers, while their faces and general aspects are familiar to so many, especially to the keen-sighted detective police."[12] The "so many" is significant here, since it implicitly enlists a wider citizenry in the vigilant work of detection. Thus Root's utilitarianism comes full circle. Beginning with cheaply affordable aesthetic pleasures and moral lessons, he ends up with the photographic extension of that exemplary utilitarian social machine, the Panopticon.[13]

12. Marcus Aurelius Root, *The Camera and the Pencil,* 1864, reprint, Pawlett, Vermont, Helios, 1971, pp. 420–421.

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, Illinois, Free Press, 1960, pp. 227–274.)

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*, no. 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:*

Notwithstanding the standard liberal accounts of the history of photography, the new medium did not simply inherit and "democratize" the honorific functions of bourgeois portraiture. Nor did police photography simply function repressively, although it is foolish to argue that the immediate function of police photographs was somehow more ideological or positively instrumental than negatively instrumental. But in a more general, dispersed fashion, in serving to introduce the panoptic principle into daily life, photography welded the honorific and repressive functions together. Every portrait implicitly took its place within a social and moral hierarchy. The *private* moment of sentimental individuation, the look at the frozen gaze-of-the-loved-one, was shadowed by two other more *public* looks: a look up, at one's "betters," and a look down, at one's "inferiors." Especially in the United States, photography could sustain an imaginary mobility on this vertical scale, thus provoking both ambition and fear, and interpellating, in class terms, a characteristically "petit-bourgeois" subject.

We can speak then of a generalized, inclusive *archive*, a *shadow archive* that encompasses an entire social terrain while positioning individuals within that terrain.[14] This archive contains subordinate, territorialized archives: archives whose semantic interdependence is normally obscured by the "coherence" and "mutual exclusivity" of the social groups registered within each. The general, all-inclusive archive necessarily contains both the traces of the visible bodies of heroes, leaders, moral exemplars, celebrities, and those of the poor, the diseased, the insane, the criminal, the nonwhite, the female, and all other embodiments of the unworthy. The clearest indication of the essential unity of this archive of images of the body lies in the fact that by the mid-nineteenth century a single hermeneutic paradigm had gained widespread prestige. This paradigm had

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Origins of the Penitentiary System, trans. Glynis Cousin, London, Macmillan, 1981; David Rothman, *The Discovery 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," *The Art Journal*, vol. 42, no. 4 (Winter 1982), pp. 311–319; 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.

two tightly entwined branches, physiognomy and phrenology. Both shared the belief that the surface of the body, and especially the face and head, bore the outward signs of inner character.

Accordingly, in reviving and to some extent systematizing physiognomy in the late 1770s, Johann Caspar Lavater argued that the "original language of Nature, written on the face of Man" could be deciphered by a rigorous physiognomic *science.*[15] Physiognomy analytically isolated the profile of the head and the various anatomic features of the head and face, assigning a characterological significance to each element: forehead, eyes, ears, nose, chin, etc. Individual character was judged through the loose concatenation of these readings. In both its analytic and synthetic stages, this interpretive process required that distinctive individual features be read in conformity to type. Phrenology, which emerged in the first decade of the nineteenth century in the researches of the Viennese physician Franz Josef Gall, sought to discern correspondences between the topography of the skull and what were thought to be specific localized mental faculties seated within the brain. This was a crude forerunner of more modern neurological attempts to map out localized cerebral functions.

In general, physiognomy, and more specifically phrenology, linked an everyday nonspecialist empiricism with increasingly authoritative attempts to medicalize the study of the mind. The ambitious effort to construct a materialist science of the self led to the dissection of brains, including those of prominent phrenologists, and to the accumulation of vast collections of skulls. Eventually this effort would lead to a volumetrics of the skull, termed craniometry. But presumably any observant reader of one of the numerous handbooks and manuals of phrenology could master the interpretive codes. The humble origins of phrenological research were described by Gall in these terms:

> I assembled a large number of persons at my house, drawn from the lowest classes and engaged in various occupations, such as fiacre driver, street porter and so on. I gained their confidence and induced them to speak frankly by giving them money and having wine and beer distributed to them. When I saw that they were favorably disposed, I urged them to tell me everything they knew about one another, both their good and bad qualities, and I carefully examined their heads. This was the origin of the craniological chart that was seized upon so avidly by the public; even artists took it over and distributed a large number among the public in the form of masks of all kinds.[16]

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.

The broad appeal and influence of these practices on literary and artistic realism, and on the general culture of the mid-nineteenth-century city is well known.[17] And we understand the culture of the photographic portrait only dimly if we fail to recognize the enormous prestige and popularity of a general physiognomic paradigm in the 1840s and 1850s. Especially in the United States, the proliferation of photography and that of phrenology were quite coincident.

Since physiognomy and phrenology were comparative, taxonomic disciplines, they sought to encompass an entire range of human diversity. In this respect, these disciplines were instrumental in constructing the very archive they claimed to interpret. Virtually every manual deployed an array of individual cases and types along a loose set of "moral, intellectual, and animal" continua.[18] Thus zones of genius, virtue, and strength were charted only in relation to zones of idiocy, vice, and weakness. The boundaries between these zones were vaguely demarcated; thus it was possible to speak, for example, of "moral idiocy." Generally, in this pre-evolutionary system of difference, the lower zones shaded off into varieties of animality and pathology.

In the almost exclusive emphasis on the head and face we can discover the idealist secret lurking at the heart of these putatively materialist sciences. These were discourses *of* the head *for* the head. Whatever the tendency of physiognomic or phrenologic thought—whether fatalistic or therapeutic in relation to the inexorable logic of the body's signs, whether uncompromisingly materialist in tone or vaguely spiritualist in relation to certain zones of the organic, whether republican or elitist in pedagogical stance—these disciplines would serve to legitimate on organic grounds the dominion of intellectual over manual labor. Thus physiognomy and phrenology contributed to the ideological hegemony of a capitalism that increasingly relied upon a hierarchical division of labor, a capitalism that applauded its own progress as the outcome of individual cleverness and cunning.

In claiming to provide a means for distinguishing the stigmata of vice from the shining marks of virtue, physiognomy and phrenology offered an essential hermeneutic service to a world of fleeting and often anonymous market transactions. Here was a method for quickly assessing the character of strangers in the dangerous and congested spaces of the nineteenth-century city. Here was a gauge of the intentions and capabilities of the other. In the United States in the 1840s, newspaper advertisements for jobs frequently requested

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.

that applicants submit a phrenological analysis.[19] Thus phrenology delivered the moral and intellectual "facts" that are today delivered in more "refined" and abstract form by psychometricians and polygraph experts.

Perhaps it is no surprise, then, that photography and phrenology should have met formally in 1846 in a book on "criminal jurisprudence." Here was an opportunity to lend a new organic facticity to the already established medical and psychiatric genre of the case study.[20] A phrenologically inclined American penal reformer and matron of the women's prison at Sing Sing, Eliza Farnham commissioned Mathew Brady to make a series of portraits of inmates at two New York prisons. Engravings based on these photographs were appended to Farnham's new edition, entitled *Rationale of Crime*, of a previously unillustrated English work by Marmaduke Sampson. Sampson regarded criminal behavior as a form of "moral insanity." Both he and Farnham subscribed to a variant of phrenology that argued for the possibility of therapeutic modification or enhancement of organically predetermined characteristics. Presumably, good organs could be made to triumph over bad. Farnham's contribution is distinctive for its unabashed nonspecialist appeal. She sought to speak to "the popular mind of Republican America," in presenting an argument for the abolition of the death penalty and the establishment of a therapeutic system of treatment.[21] Her contribution to the book consisted of a polemical introduction, extensive notes, and several appendices, including the illustrated case studies. Farnham was assisted in her selection of case-study subjects by the prominent New York publisher-entrepreneur of phrenology, Lorenzo Fowler, who clearly lent further authority to the sample.

Ten adult prisoners are pictured, evenly divided between men and women. Three are identified as Negro, one as Irish, one as German; one woman is identified as a "Jewess of German birth," another as a "half-breed Indian and negro." The remaining three inmates are presumably Anglo-Saxon, but are not identified as such. A series of eight pictures of child inmates is not annotated in racial or ethnic terms, although one child is presumably black. Although Farnham professed a variant of phrenology that was not overtly racist—unlike other pre-Darwinian head analysts who sought conclusive proof of the "separate creation" of the non-Caucasian races—this differential marking of race and ethnicity according to age is significant in other ways. After all, Farnham's work appeared in an American context—characterized by slavery and the massive immigration of Irish peasants—that was profoundly stratified

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.

along these lines. By marking children less in racial and ethnic terms, Farnham avoided stigmatizing them. Thus children in general were presented as more malleable figures than adults. Children were also presented as less weighted down by criminal biographies or by the habitual exercise of their worst faculties. Despite the fact that some of these boys were explicitly described as incorrigibles, children provided Farnham with a general figure of moral renewal. Because their potential for "respectability" was greater than that of the adult offenders, they were presented as miniature versions of their potential adult-male-respectable-Anglo-Saxon-proletarian selves. Farnham, Fowler, and Brady can be seen as significant inventors of that privileged figure of social reform discourse: the figure of the child rescued by a paternalistic medicosocial science.[22]

Farnham's concerns touch on two of the central issues of nineteenth-century penal discourse: the practical drawing of distinctions between incorrigible and pliant criminals, and the disciplined conversion of the reformable into "useful" proletarians (or at least into useful informers). Thus even though she credited several inmates with "well developed" intellects, and despite the fact that her detractors accused her of Fourierism, her reformist vision had a definite ceiling. This limit was defined quite explicitly by the conclusion of her study. There she underscored the baseness shared by all her criminal subjects by illustrating three "heads of persons possessing superior intellect" (two of which, both male, were treated as classical busts). Her readers were asked to note the "striking contrast."[23]

I emphasize this point because it is emblematic of the manner in which the criminal archive came into existence. That is, it was only on the basis of mutual comparison, on the basis of the tentative construction of a larger, "universal" archive, that zones of deviance and respectability could be clearly demarcated. In this instance of the first sustained application of photography to the task of phrenological analysis, it seems clear that the comparative description of the criminal body came first. The book ends with a self-congratulatory mirror held up to the middle-class reader. It is striking that the pictorial labor behind Farnham's criminal sample was that of Brady, who devoted virtually his entire antebellum career to the construction of a massive honorific archive of photographs of "illustrious," celebrated, and would-be celebrated American figures.[24]

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*, vol. 31, no. 3 (July 1974), pp. 128–135; and Alan Trachtenberg, "Brady's Portraits," *The Yale Review*, vol. 73, no. 2 (Winter 1984), pp. 230–253.

Thus far I have described a number of early attempts, by turns comic, speculative, and practical, to bring the camera to bear upon the body of the criminal. I have also argued, following the general line of investigation charted in the later works of Foucault, that the position assigned the criminal body was a relative one, that the invention of the modern criminal cannot be dissociated from the construction of a law-abiding body—a body that was either bourgeois or subject to the dominion of the bourgeoisie. The law-abiding body recognized its threatening other in the criminal body, recognized its own acquisitive and aggressive impulses unchecked, and sought to reassure itself in two contradictory ways. The first was the invention of an exceptional criminal who was indistinguishable from the bourgeois, save for a conspicuous lack of moral inhibition: herein lay the figure of the criminal genius.[25] The second was the in-

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.

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B. F.

B. F. is one of the inmates of the Long Island Farms. He is partially idiotic, and the very imperfect development of the superior portion of the brain, with the small size of the whole, clearly indicates the character of his mental capacities. It affords a striking contrast to the last drawing, R. A., and is in harmony with the actual difference between the minds of the two individuals. B. F. is vicious, cruel, and apparently incapable of any elevated or humane sentiments.

APPENDIX 175

HEADS OF PERSONS POSSESSING SUPERIOR INTELLECT.

The following drawings are introduced for the purpose of showing the striking contrast between the cerebral developments of such persons as we have been describing and those who are endowed with superior powers of intellect and sentiment.

From Eliza Farnham, Appendix to Marmaduke Sampson, Rationale of Crime, *1846.*

From Alphonse Bertillon, Service d'identification. Exposition universelle de Chicago, *1893. (Album collection National Gallery of Canada, Ottawa.)*

vention of a criminal who was organically distinct from the bourgeois: a *biotype*. The science of criminology emerged from this latter operation.

A physiognomic code of visual interpretation of the body's signs—specifically the signs of the head—and a technique of mechanized visual representation intersected in the 1840s. This unified system of representation and interpretation promised a vast taxonomic ordering of images of the body. This was an archival promise. Its realization would seem to be grounded primarily in the technical refinement of strictly optical means. This turns out not to be the case.

I am especially concerned that exaggerated claims not be made for the powers of optical realism, whether in a celebratory or critical vein. One danger lies in constructing an overly monolithic or unitary model of nineteenth-century realist discourse. Within the rather limited and usually ignored field of instrumental scientific and technical realism, we discover a house divided. Nowhere was this division more pronounced than in the pursuit of the criminal body. If we examine the manner in which photography was made useful by the late-nineteenth-century police, we find plentiful evidence of a crisis of faith in optical empiricism. In short, we need to describe the emergence of a truth-apparatus that cannot be adequately reduced to the optical model provided by the camera. The camera is integrated into a larger ensemble: a bureaucratic-clerical-statistical system of "intelligence." This system can be described as a sophisticated form of the archive. The central artifact of this system is not the camera but the filing cabinet.

II.

The institution of the photographic archive received its most thorough early articulation in precise conjunction with an increasingly professionalized and technological mode of police work and an emerging social science of criminology. This occurred in the 1880s and 1890s. Why was the model of the archive of such import for these linked disciplines?

In structural terms, the archive is both an abstract paradigmatic entity and a concrete institution. In both senses, the archive is a vast substitution set, providing for a relation of general equivalence between images. This image of the archive as an encyclopedic repository of exchangeable images was articulated most profoundly in the late 1850s by the American physician and essayist Oliver Wendell Holmes when he compared photographs to paper currency.[26] The capacity of the archive to reduce all possible sights to a single code of equivalence was grounded in the metrical accuracy of the camera. Here was a medium from which exact mathematical data could be extracted, or as the physicist François Arago put it in 1839, a medium "in which objects preserve mathematically their forms."[27] For nineteenth-century positivists, photography doubly fulfilled the Enlightenment dream of a universal language: the universal mimetic language of the camera yielded up a higher, more cerebral truth, a truth that could be uttered in the universal abstract language of mathematics. For this reason, photography could be accommodated to a Galilean vision of the world as a book "written in the language of mathematics." Photography promised more than a wealth of detail; it promised to reduce nature to its geometrical essence. Presumably then, the archive could provide a standard physiognomic gauge of the criminal, could assign each criminal body a relative and quantitative position within a larger ensemble.

This archival promise was frustrated, however, both by the messy contingency of the photograph and by the sheer quantity of images. The photographic archive's components are not conventional lexical units, but rather are subject to the circumstantial character of all that is photographable. Thus it is absurd to imagine a dictionary of photographs, unless one is willing to disregard the specificity of individual images in favor of some model of typicality, such as that underlying the iconography of Vesalian anatomy or of most of the plates accompanying the *Encyclopédie* of Diderot and d'Alembert. Clearly, one way of "taming" photography is by means of this transformation of the circumstantial and idiosyncratic into the typical and emblematic. This is usually achieved by stylistic or interpretive fiat, or by a sampling of the archive's offerings for a

26. Oliver Wendell Holmes, "The Stereoscope and the Stereograph," *Atlantic Monthly*, vol. 3, no. 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.

"representative" instance. Another way is to invent a machine, or rather a clerical apparatus, a filing system, which allows the operator/researcher/editor to retrieve the individual instance from the huge quantity of images contained within the archive. Here the photograph is not regarded as necessarily typical or emblematic of anything, but only as a particular image which has been isolated for purposes of inspection. These two semantic paths are so fundamental to the culture of photographic realism that their very existence is usually ignored.

The difference between these two models of photographic meaning are played out in two different approaches to the photographic representation of the criminal body: the "realist" approach, and by realism here I mean that venerable (medieval) philosophical realism that insists upon the truth of general propositions, on the reality of species and types, and the equally venerable "nominalist" approach, which denies the reality of generic categories as anything other than mental constructs. The first approach can be seen as overtly theoretical and "scientific" in its aims, if more covertly practical. The other can be seen as overtly practical and "technical" in its aims, if only covertly theoretical. Thus the would-be scientists of crime sought a knowledge and mastery of an elusive "criminal type." And the "technicians" of crime sought knowledge and mastery of individual criminals. Herein lies a terminological distinction, and a division of labor, between "criminology" and "criminalistics." Criminology hunted "the" criminal body. Criminalistics hunted "this" or "that" criminal body.

Contrary to the commonplace understanding of the "mug shot" as the very exemplar of a powerful, artless, and wholly denotative visual empiricism, these early instrumental uses of photographic realism were systematized on the basis of an acute recognition of the *inadequacies* and limitations of ordinary visual empiricism. Thus two systems of description of the criminal body were deployed in the 1880s; both sought to ground photographic evidence in more abstract *statistical* methods. This merger of optics and statistics was fundamental to a broader integration of the discourses of visual representation and those of the social sciences in the nineteenth century. Despite a common theoretical source, the intersection of photography and statistics led to strikingly different results in the work of two different men: Alphonse Bertillon and Francis Galton.

The Paris police official Alphonse Bertillon invented the first effective modern system of *criminal identification.* His was a bipartite system, positioning a "microscopic" individual record within a "macroscopic" aggregate. First, he combined photographic portraiture, anthropometric description, and highly standardized and abbreviated written notes on a single *fiche*, or card. Second, he organized these cards within a comprehensive, statistically based filing system.

The English statistician and founder of eugenics, Francis Galton, invented a method of composite portraiture. Galton operated on the periphery of criminology. Nonetheless, his interest in heredity and racial "betterment" led

him to join in the search for a biologically determined "criminal type." Through one of his several applications of composite portraiture, Galton attempted to construct a *purely optical* apparition of the criminal type. This photographic impression of an abstract, statistically defined, and empirically nonexistent criminal face was both the most bizarre and the most sophisticated of many concurrent attempts to marshall photographic evidence in the search for the essence of crime.

The projects of Bertillon and Galton constitute two methodological poles of the positivist attempts to define and regulate social deviance. Bertillon sought to individuate. His aims were practical and operational, a response to the demands of urban police work and the politics of fragmented class struggle during the Third Republic. Galton sought to visualize the generic evidence of hereditarian laws. His aims were theoretical, the result of eclectic but ultimately single-minded curiosities of one of the last Victorian gentleman-amateur scientists. Nonetheless, Bertillon's work had its own theoretical context and implications, just as Galton's grimly playful research realized its practical implications in the ideological and political program of the international eugenics movement. Both men were committed to technologies of demographic regulation. Bertillon's system of criminal identification was integral to the efforts to quarantine permanently a class of habitual or professional criminals. Galton sought to intervene in human reproduction by means of public policy, encouraging the propagation of the "fit," and discouraging or preventing outright that of the "unfit."

The idealist proclivities, territorialism, and status consciousness of intellectual history have prevented us from recognizing Bertillon and Galton's shared ground. While Galton has been considered a proper, if somewhat eccentric, object of the history of science, Bertillon remains an ignored mechanic and clerk, commemorated mostly by anecdotal historians of the police.

In order to explore this terrain shared by a police clerk and gentleman statistician, I need to introduce a third figure. Both Bertillon's and Galton's projects were grounded in the emergence and codification of *social statistics* in the 1830s and 1840s. Both relied upon the central conceptual category of social statistics: the notion of the "average man" (*l'homme moyen*). This concept was invented (I will argue shortly that it was actually reinvented) by the Belgian astronomer and statistician Adolphe Quetelet. Although less well remembered than Auguste Comte, Quetelet is the most significant other early architect of sociology. Certainly he laid the foundations of the quantitative paradigm in the social sciences. By seeking statistical regularities in rates of birth, death, and crime, Quetelet hoped to realize the Enlightenment philosopher Condorcet's proposal for a "social mathematics," a mathematically exact science that would discover the fundamental laws of social phenomena. Quetelet helped to establish some of the first actuarial tables used in Belgium, and to found in 1853 an international society for the promotion of statistical methods. As the philoso-

pher of science Ian Hacking has suggested, the rise of social statistics in the mid-nineteenth century was crucial to the replacement of strictly mechanistic theories of causality by a more probabilistic paradigm. Quetelet was a determinist, but he invented a determinism based on iron laws of chance. This emergent paradigm would lead eventually to indeterminism.[28]

Who, or what, was the average man? A less flippant query would be, *how* was the average man? Quetelet introduced this composite character in his 1835 treatise *Sur l'homme.* Quetelet argued that large aggregates of social data revealed a regularity of occurrence that could only be taken as evidence of determinate social laws. This regularity had political and moral as well as epistemological implications:

> The greater the number of individuals observed, the more do individual peculiarities, whether physical or moral, become effaced, and leave in a prominent point of view the general facts, by virtue of which society exists and is preserved.[29]

Quetelet sought to move from the mathematicization of individual bodies to that of society in general. In *Sur l'homme* he charted various quantitative biographies of the productive and reproductive powers of the average man and woman. For example, he calculated the fluctuation of fecundity with respect to female age. Using data from dynamometer studies, he charted the average muscular power of men and women of different ages. At the level of the social aggregate, life history read as a graphic curve. (Here was prefiguration, in extreme form, of Zola's naturalism: a subliterary, quantitative narrative of the generalized social organism.)

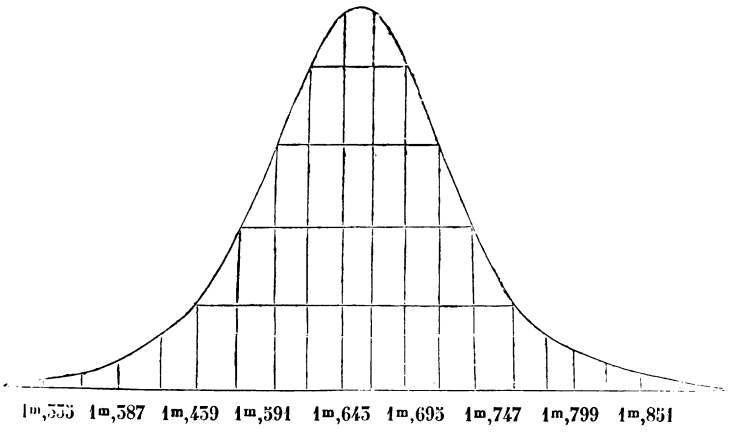
Just as Quetelet's early statistical contributions to the life insurance industry can be seen as crucial to the regularization of that organized form of gambling known as finance capital, so also his charting of the waxing and waning of human energies can be seen as an attempt to conceptualize that Hercules of industrial capitalism, termed by Marx the "average worker," the abstract embodiment of labor power in the aggregate.[30] And outside the sphere of waged work, Quetelet invented but did not name the figure of the average mother, crucial to the new demographic sciences which sought nervously to chart the relative numeric strengths of class against class and nation against nation.

For Quetelet the most emphatic demonstration of the regularity of social

28. See Ian Hacking, "How Should We Do the History of Statistics?" *Ideology and Consciousness*, no. 8 (Spring 1981), pp. 15–26; and "Biopower and the Avalanche of Printed Numbers," *Humanities and Society*, vol. 5, nos. 3–4 (Summer and Fall 1982), pp. 279–295.
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*, trans. Ben Fowkes, London, New Left Books, vol. 1, 1976, pp. 440–441.

phenomena was given by crime statistics. "Moral statistics" provided the linchpin for his construction of a "social physics" that would demolish the prestige of moral paradigms grounded in free will. The criminal was no more than an agent of determining social forces. Furthermore, crime statistics provided the synecdochic basis for a broader description of the social field. As Louis Chevalier has argued, Quetelet inaugurated a "quantitative description which took criminal statistics as the starting point for a description of urban living as a whole."[31] Chevalier has argued further that criminal statistics contributed thus to a pervasive bourgeois conception of the essentially *pathological* character of metropolitan life, especially in the Paris of the July Monarchy. Quetelet's terminological

Tailles des Belges de 18 à 20 ans.



From Adolphe Quetelet, Physique sociale, ou Essai sur le développement des facultés de l'homme, *1869.*

contribution to this medicalization of the social field is evident in his reference to the statistical study of crime as a form of "moral anatomy."

Quetelet refined his notion of the "average man" with conceptual tools borrowed from astronomy and probability theory. He observed that large aggregates of social data—notably anthropometric data—fell into a pattern corresponding to the bell-shaped curve derived by Gauss in 1809 in an attempt to determine accurate astronomical measurements from the distribution of random errors around a central mean. Quetelet came to regard this symmetrical bino-

31. Chevalier, p. 10.

mial curve as the mathematical expression of fundamental social law. While he admitted that the average man was a statistical fiction, this fiction lived within the abstract configuration of the binomial distribution. In an extraordinary metaphoric conflation of individual difference with mathematical error, Quetelet defined the central portion of the curve, that large number of measurements clustered around the mean, as a zone of normality. Divergent measurements tended toward darker regions of monstrosity and biosocial pathology.[32]

Thus conceived, the "average man" constituted an ideal, not only of social health, but of social stability and of beauty. In interesting metaphors, revealing both the astronomical sources and aesthetico-political ambitions inherent in Quetelet's "social physics," he defined the social norm as a "center of gravity," and the average man as "the type of all which is beautiful—of all which is good."[33] Crime constituted a "perturbing force," acting to throw the delicate balance of this implicitly republican social mechanism into disarray. Although Quetelet was constructing a quantitative model of civil society and only indirectly describing the contours of an ideal commonwealth, his model of a gravitational social order bears striking similarity to Hobbes's Leviathan.[34]

Like Hobbes, Quetelet began with atomized individual bodies and returned to the image of the body in describing the social aggregate. Quetelet worked, however, in a climate of physiognomic and phrenologic enthusiasm, and indeed early social statistics can be regarded as a variant of physiognomy writ large. For example, Quetelet accepted, despite his republicanism, the late-eighteenth-century notion of the *cranial angle*, which, as George Mosse has argued, emerges from the appropriation by preevolutionary Enlightenment anthropology of the classicist idealism of Wincklemann.[35] Based in part on the art-historical evidence of noble Grecian foreheads, this racist geometrical fiction defined a descending hierarchy of head types, with presumably upright Caucasian brows approaching this lost ideal more closely than did the presumably apelike brows of Africans. For his part, Quetelet was less interested in a broadly racist physical anthropology than in detecting within European society patterns of bodily evidence of deviation from "normality." It is understandable that he would be drawn to those variants of physiognomic thought which sought to systematize the body's signs in terms of a quantifying geometrical

32. Adolphe Quetelet, *Lettres sur la théorie des probabilités*, Brussels, Académie Royale, 1846. (*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.

schema. From Quetelet on, biosocial statisticians became increasingly absorbed with *anthropometrical* researches, focusing both on the skeletal proportions of the body and upon the volume and configuration of the head.[36] The inherited idealist fascination with the upright forehead can be detected even in Quetelet's model of an ideal society: he argued that social progress would lead to a diminished number of defective and inferior cases, thus increasing the zone of normality. If we consider what this utopian projection meant in terms of the binomial curve, we have to imagine an increasingly peaked, erect configuration: a classical ideal to a fault.

Certainly physiognomy provided a discursive terrain upon which art and the emerging bio-social sciences met during the middle of the nineteenth century. Quetelet's explicitly stated enthusiasm for the model of artistic practice is understandable in this context, but the matter is more complicated. Despite the abstract character of his procedures, Quetelet possessed the aesthetic ambition to compare his project to Dürer's studies of human bodily proportion. The statistician argued that his "aim had been, not only to go once more through the task of Albert [*sic*] Dürer, but to execute it also on an extended scale."[37] Thus visual empiricism retained its prestige in the face of a new object—society—which could in no way be effectively or comprehensively visualized.[38]

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 Quetelet 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

By the end of the nineteenth century, this essentially *organismic* model of a *visible* social field was in crisis. The terms of Quetelet's honorific linkage of an emergent statistics to a venerable optical paradigm were explicitly reversed. The French sociologist Gabriel Tarde argued in 1883 that "a statistical bureau might be compared to an eye or ear," claiming further that "each of our senses gives us, in its own way and from its special point of view, the statistics of the external world. Their characteristic sensations are in a certain way their special graphical tables. Every sensation . . . is only a number."[39] Here the transition is made from the prestige of the visual and the organic to the prestige of institutionalized, bureaucratic abstraction.

Tarde was a central figure, not only in the demise of organismic models of society, but also in the development of a French school of criminological thought during the 1880s. Tarde was a magistrate during his early career, and by 1894 became the head of the Bureau of Statistics within the Department of Justice in Paris, which made him the abstract overseer of the quantitative ebbs and flows of a regulated criminality. His background in legal theory and practice led him to attempt a criticism and modification of Quetelet's extreme determinism, which had absolved the criminal of all responsibility. After all, classical legal theory was not about to abandon its ideological capacity to uphold the state's right to punish criminals for their deeds. In 1890, Tarde advanced a notion of "criminal responsibility" based upon the continuity of individual identity within a shared social milieu, a milieu of "social similarity." Tarde's psychological model of individuality assumed an essential internal nar-

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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. 134–135 (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).

rative coherence of the self: "Identity is the permanence of the person, it is the personality looked at from the point of view of its duration."[40]

Tarde's rather nominalist approach to the philosophy of crime and punishment paralleled a more practical formulation by Alphonse Bertillon, director of the Identification Bureau of the Paris Prefecture of Police. In 1893, Bertillon offered the following introduction to his system, then in use for ten years, known variously as "Bertillonage" and the "signaletic notice":

> In prison practice the signaletic notice accompanies every reception and every delivery of a human individuality; this register guards the trace of the real, actual presence of the person sought by the administrative or judicial document. . . . [The] task is always the same: to preserve a sufficient record of a personality to be able to *identify* the present description with one which may be presented at some future time. From this point of view signalment is the best instrument for the *proof of recidivation*, which necessarily implies the *proof of identity*.[41]

In effect, then, Bertillon's police archive functioned as a complex biographical machine which produced presumably simple and unambiguous results. He sought to identify repeat offenders, that is, criminals who were liable to be considered "habitual" or "professional" in their deviant behavior. The concern with recidivism was of profound social importance in the 1880s. Bertillon, however, professed no theory of a criminal type, nor of the psychic continuities or discontinuities that might differentiate "responsible" criminals from "irresponsible" criminals. He was sensitive to the status hierarchy between his Identification Bureau and the more "theoretical" mission of the Bureau of Statistics. (Bertillon was the son of a prominent anthropometrician, Louis Adolphe Bertillon, and seems to have labored mightily to vindicate himself after an inauspicious start as a mere police clerk.) He was more a social engineer, an inventive clerk-technician, than a criminologist. He sought to ground police work in scientific principles, while recognizing that most police operatives were unfamiliar with consistent and rigorous empirical procedures. Part of his ambition was to accelerate the work of processing criminals and to employ effectively the labors of unskilled clerks. He resembles in many respects his American contemporary, Frederick Winslow Taylor, the inventor of scientific management, the first system of modern factory discipline. Bertillon can be seen, like Taylor, as a prophet of rationalization. Here is Bertillon describing the rapidity of his process: "Four pairs of police officers suffice, at Paris, for the measurement, every

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.

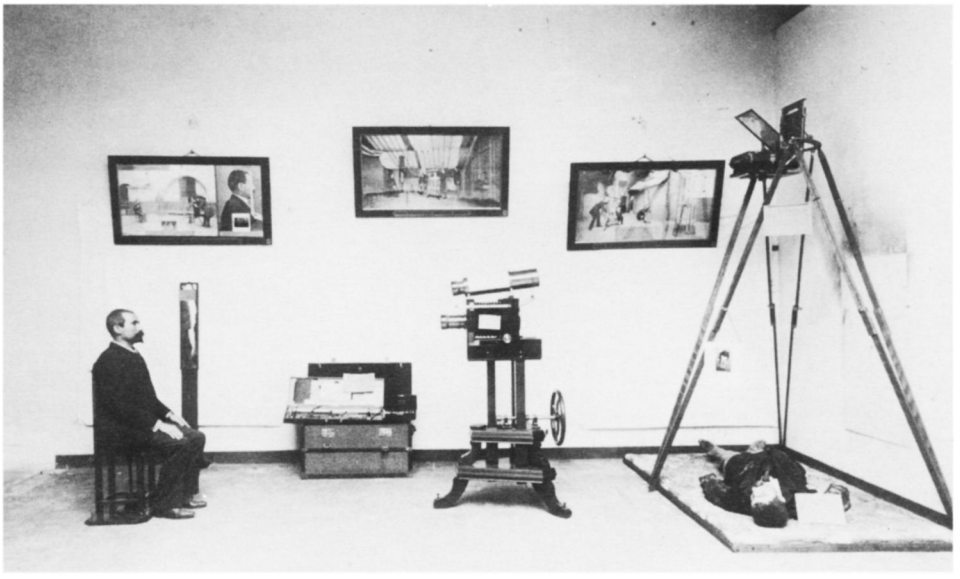
From Alphonse Bertillon, Service d'identification. Exposition universelle de Chicago, *1893.* *Classification cabinets, Paris Prefecture of Police.*

morning between nine o'clock and noon, of from 100 to 150 men who were arrested the day before."[42] Ultimately, this was not fast enough, and therein lay a principal reason for the demise, some thirty years later, of the Bertillon system.

How did the Bertillon system work? The problems with prior attempts at criminal identification were many. The early promise of photography had faded in the face of a massive and chaotic archive of images. The problem of *classification* was paramount:

> The collection of criminal portraits has already attained a size so considerable that it has become physically impossible to discover among them the likeness of an individual who has assumed a false name. It goes for nothing that in the past ten years the Paris police have collected more than 100,000 photographs. Does the reader believe it practicable to compare successively each of these with each one of the 100 individuals who are arrested daily in Paris? When this was attempted in the case of a criminal particularly easy to identify, the search demanded more than a week of application, not to speak of the errors and oversights which a task so fatiguing to the eye could

42. Alphonse Bertillon, "The Bertillon System of Identification," *Forum*, vol. 11, no. 3 (May 1891), p. 335.



Display of apparatus, Chicago Exposition.

> not fail to occasion. There was a need for a method of elimination analogous to that in use in botany and zoology; that is to say, one based on the characteristic elements of individuality.[43]

Despite the last part of this remark, Bertillon sought not to relate individual to species, but to extract the individual from the species. Thus he invented a classifying scheme that was based less upon a taxonomic categorization of types than upon an ordering of individual cases within a segmented aggregate. He had failed miserably in an earlier attempt to classify police photographs according to the genre of offense, for obvious reasons.[44] Criminals may have constituted a "professional type," as Tarde argued, but they did not necessarily observe a narrow specialization in their work.

Bertillon sought to break the professional criminal's mastery of disguises, false identities, multiple biographies, and alibis. He did this by yoking anthropometrics, the optical precision of the camera, a refined physiognomic vocabulary, and statistics.

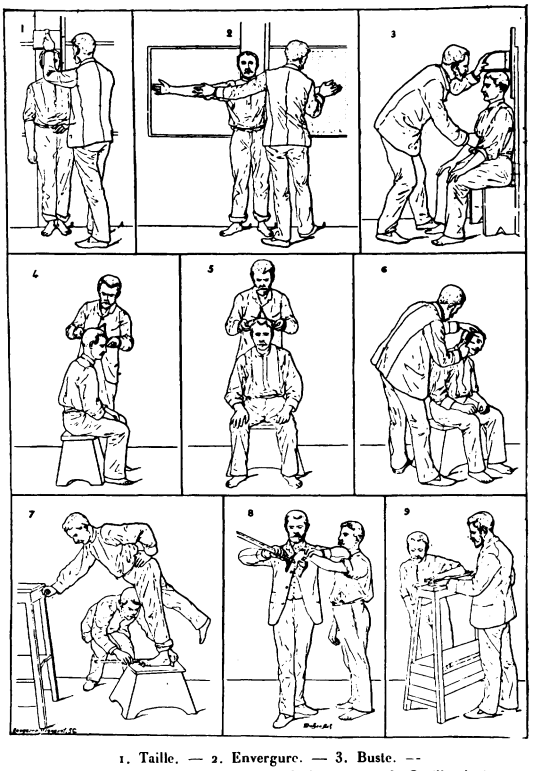
First Bertillon calculated, without a very sophisticated grasp of the calculus of probabilities, that the chance that two individuals might share the same series of eleven bodily measurements ran on the order of one in four

43. *Ibid.*, p. 331.
44. Alphonse Bertillon, *L'identité des récidivistes et la loi de relégation*, Paris, Masson, 1883, p. 11.

RELEVÉ

DU

SIGNALEMENT ANTHROPOMÉTRIQUE



1. Taille. — 2. Envergure. — 3. Buste. — 4. Longueur de la tête. — 5. Largeur de la tête. — 6. Oreille droite. — 7. Pied gauche. — 8. Médius gauche. — 9. Coudée gauche.

Frontispiece (left) and figures (right) from Alphonse Bertillon, Identification anthropométrique, *1893.*

million.[45] He regarded these eleven measurements as constant in any adult body. His signaletic notice linked this "anthropometrical signalment," recorded as a numerical series, with a shorthand verbal description of distinguishing marks, and a pair of photographic portraits, both frontal and profile views.

Bertillon's second problem was the organization of individual cards in a comprehensive system from which records could be retrieved in short order. To this end, Bertillon enlisted the prodigious rationalizing energies of Quetelet's "average man." By organizing his measurements into successive subdivisions, each based on a tripartite separation of below-average, average, and above-average figures, Bertillon was able to file 100,000 records into a grid of file drawers, with the smallest subset within any one drawer consisting of approximately a dozen identification cards. Having thus separately processed 100,000

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

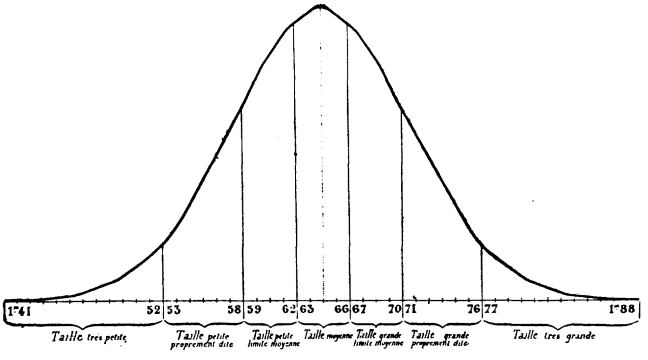


Fig. 4. — Courbe binomiale de la taille sur laquelle on a séparé par des verticales l'emplacement des sept catégories de taille.

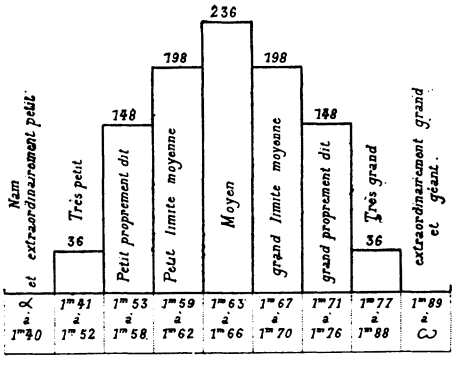


Fig. 5. — Diagramme de la taille indiquant par la hauteur proportionnelle des colonnes le nombre des sujets ressortissant à chacune des sept catégories de taille indiquées sur la courbe binomiale (Fig. 4).

male and 20,000 female prisoners over the decade between 1883 and 1893, Bertillon felt confident in boasting that his system was "infallible." He had in the process "infallibly" identified 4,564 recidivists.[46]

Bertillon can be said to have realized the binomial curve as office furniture. He is one of the first users of photographic documents to comprehend fully the fundamental problem of the archive, the problem of volume. Given his recourse to statistical method, what semantic value did he find in photographs? He clearly saw the photograph as the final conclusive sign in the process of identification. Ultimately, it was the photographed face pulled from the file that had to match the rephotographed face of the suspect, even if this final "photographic" proof was dependent upon a series of more abstract steps.

Bertillon was critical of the inconsistent photography practiced by earlier

46. *Ibid.*, pp. xxi–xxiii, lxxiv.

police technicians and jobbers. He argued at length for an aesthetically neutral standard of representation:

> In commercial and artistic portraits, questions of fashion and taste are all important. Judicial photography, liberated from these considerations, allows us to look at the problem from a more simple point of view: which pose is theoretically the best for such and such a case?[47]

Bertillon insisted on a standard focal length, even and consistent lighting, and a fixed distance between the camera and the unwilling sitter. The profile view served to cancel the contingency of expression; the contour of the head remained consistent with time. The frontal view provided a face that was more likely to be recognizable within the other, less systematized departments of police work. These latter photographs served better in the search for suspects who had not yet been arrested, whose faces were to be recognized by detectives on the street.

Just as Bertillon sought to classify the photograph by means of the Vitruvian register of the anthropometrical signalment and the binomial curve, so also he sought to translate the signs offered by the photograph itself into another, verbal register. Thus he was engaged in a two-sided, internal and external, taming of the contingency of the photograph. His invention of the *portrait-parlé*—the "speaking likeness" or verbal portrait—was an attempt to overcome the inadequacies of a purely visual empiricism. He organized voluminous taxonomic grids of the features of the male human head, using sectional photographs. He devoted particular attention to the morphology of the ear, repeating a physiognomic fascination with that organ that extended back to Lavater.[48] But on the basis of this comparative anatomy, Bertillon sought to reinvent physiognomy in precise nonmetaphysical, ethnographic terms. Through the construction of a strictly denotative signaletic vocabulary, this project aimed for the precise and unambiguous translation of appearance into words.

For Bertillon, the criminal body expressed nothing. No characterological secrets were hidden beneath the surface of this body. Rather, the surface and the skeleton were indices of a more strictly material sort. The anthropometrical signalment was the register of the morphological constancy of the adult

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. 116–117). 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*, no. 9 [Spring 1980], pp. 5–29).

Plate 41 from Alphonse Bertillon, Identification anthropométrique, *1893.*

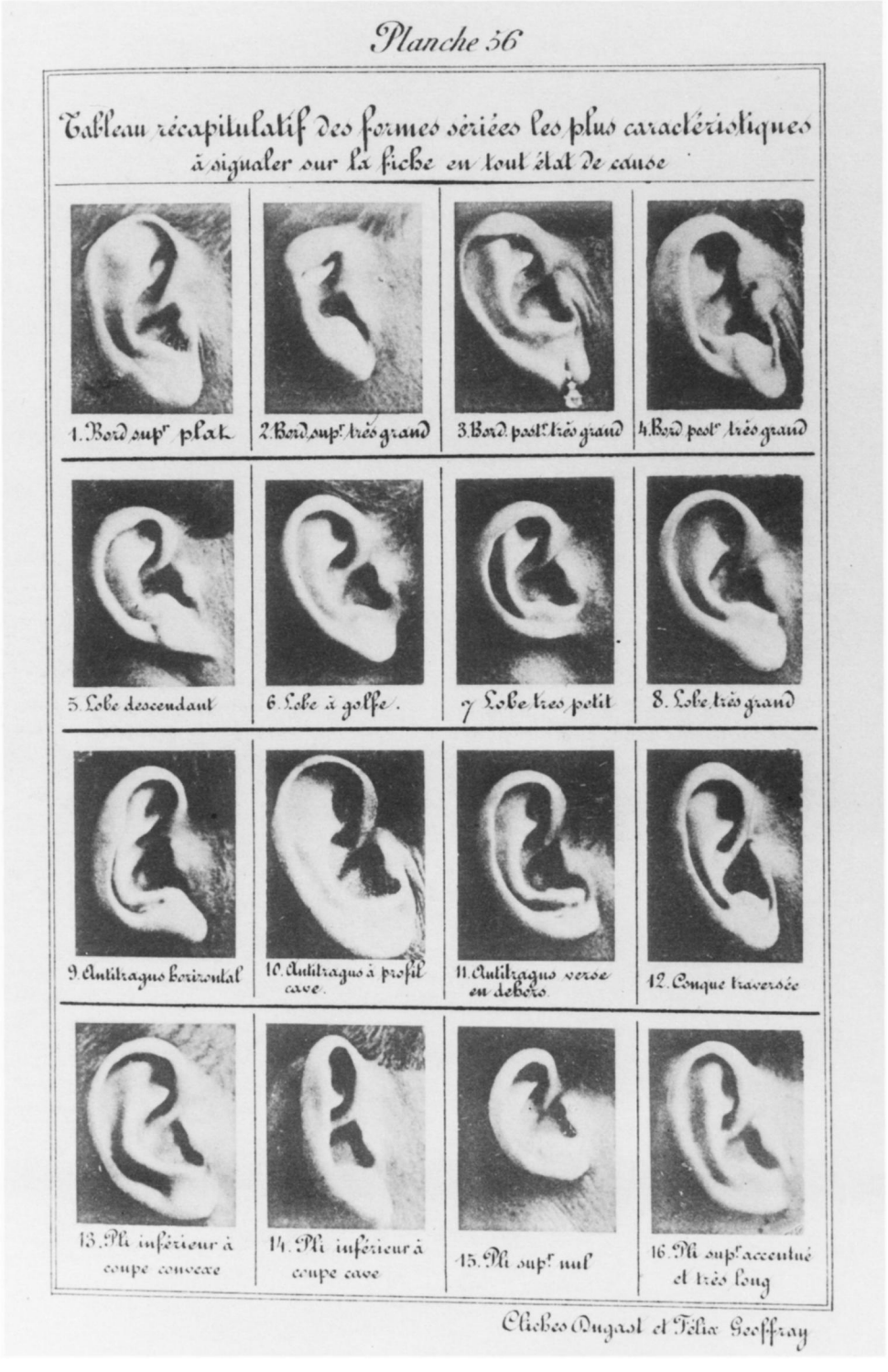


Plate 56 from Alphonse Bertillon, Identification anthropométrique, *1893.*

skeleton, thus the key to biographical identity. Likewise, scars and other deformations of the flesh were clues, not to any innate propensity for crime, but to the body's physical history: its trades, occupations, calamities.

For Bertillon, the mastery of the criminal body necessitated a massive campaign of *inscription*, a transformation of the body's signs into a *text*, a text that pared verbal description down to a denotative shorthand, which was then linked to a numerical series. Thus Bertillon arrested the criminal body, determined its identity as a body that had *already* been defined as criminal, by means that subordinated the image—which remained necessary but insufficient—to verbal text and numerical series. This was not merely a self-contained archival project. We can understand another, more global, imperative if we remember that one problem for the late-nineteenth-century police was the telegraphic transmission of information regarding suspects. The police were competing with opponents who availed themselves of the devices of modernity as well, including the railroad.

Why was the issue of recidivism so important in France during the 1880s? Robert Nye has argued recently that the issue emerged on the political agenda of Gambettist Republicans during the Third Republic, leading to the passage of the Relegation Law of 1885, which established a Draconian policy of colonial transport for repeat offenders. The bill worked out a variable quota of misdemeanors and felonies, including vagabondage, that could lead to permanent exile in Guyana or New Caledonia. The French agricultural crisis had led to a renewed massive urban influx of displaced peasants during the 1880s. The recidivism debate focused on the social danger posed by the vagrant, while also seeing the milieu of the chronically unemployed urban poor as a source of increased criminality. Not least in provoking the fears of the defenders of order was the evidence of renewed working-class militancy in the strike wave of 1881, after a decade of peace purchased by the slaughter of the Communards. At its most extreme, the debate on recidivism combined the vagabond, the anarchist, and recidivist into a single composite figure of social menace.[49]

Bertillon himself promoted his system within the context of this debate. Having only succeeded in identifying his first recidivist in February of 1883, he quickly argued that his binomial classification system would be essential to the application of any law of relegation. He described a Parisian working-class milieu that was undergoing what might facetiously be called a "crisis of identity." During the Commune, all city records prior to 1859 had been burned; any Parisian over twenty-two years old was at liberty to invent and reinvent an

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.

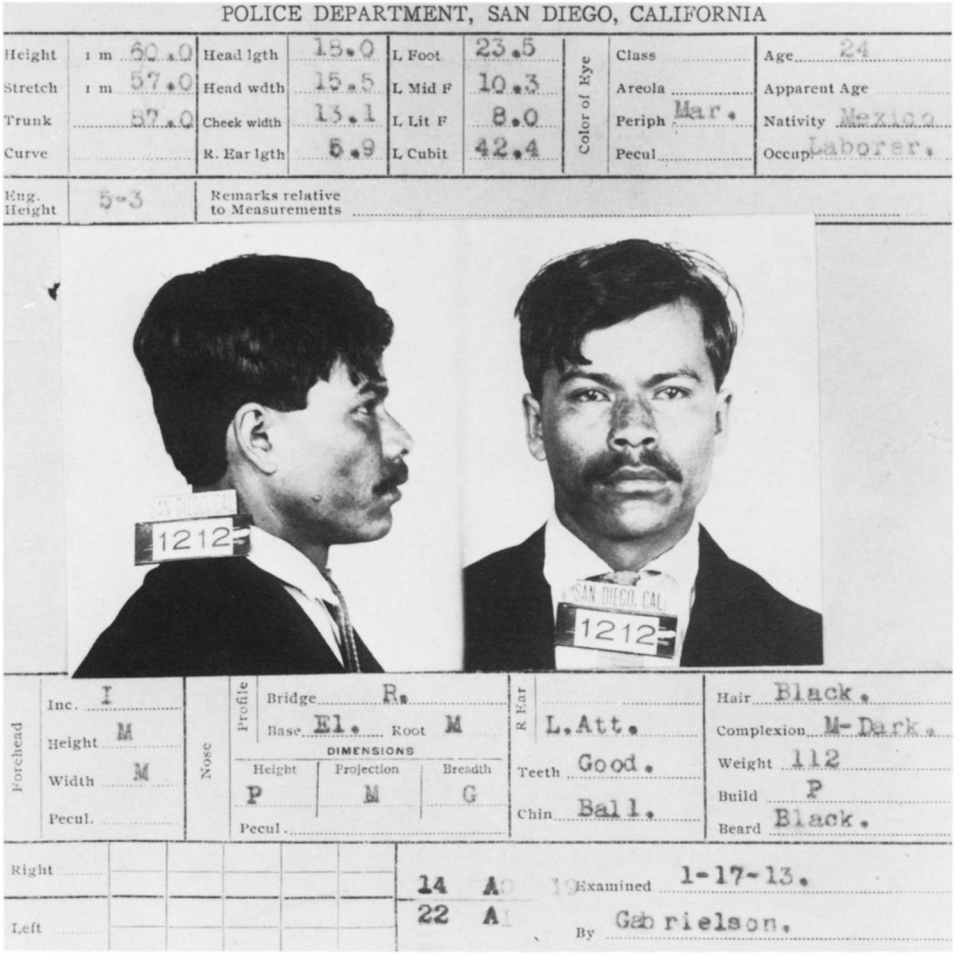
entirely bogus nativity. Furthermore, Bertillon claimed that there was an extraordinary traffic in false documents, citing the testimony of foremen at the more "insalubrious" industrial establishment—white lead and fertilizer factories, for example—that job applicants frequently reappeared two weeks after being rejected with entirely new papers and different names.[50] In effect, Bertillon sought to reregister a social field that had exploded into multiplicity.

One curious aspect of Bertillon's reputation lies in the way in which his method, which runs counter to any metaphysical or essentialist doctrine of the self, could be regarded as a triumph of humanism. One biographer put it this way: "A man of his type inevitably found a kind of romance in a technique the aim of which was to individualize human beings."[51] Bertillon himself contributed to this "humane" reading of his project: "Is it not at bottom a problem of this sort that forms the basis of the everlasting popular melodrama about lost, exchanged, and recovered children?"[52] But in more technical and theoretical contexts, the degree to which Bertillonage actually eroded the "uniqueness" of the self became clear. Writing with a coauthor in 1909, Bertillon noted that according to the logic of the binomial curve, "each observation or each group of observations is to be defined, not by its absolute value, but by its deviation from the arithmetic mean."[53] Thus even the nominalist Bertillon was forced to recognize the higher reality of the "average man." The individual could only be identified by invoking the powers of this genie. And the individual only existed *as an individual* by being identified. Individuality as such had no meaning. Viewed "objectively," the self occupied a position that was wholly relative.

The Bertillon system proliferated widely, receiving an enthusiastic reception especially in the United States and contributing to the internationalization and standardization of police methods. The anthropometric system faced competition from the fingerprint system, a more radically synecdochic procedure, invented in part by Francis Galton, who had interests in identification as well as typology. With the advent of fingerprinting, it became evident that the body did not have to be "circumscribed" in order to be identified. Rather, the key to identity could be found in the merest trace of the body's tactile presence in the world. Furthermore, fingerprinting was more promising in a Taylorist sense, since it could be properly executed by less-skilled clerks. By the late nineteen-tens, the Bertillon system had begun to yield to this more efficient and less cumbersome method, although hybrid systems operated for some years.[54]

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,

Bertillon card, 1913.



POLICE DEPARTMENT, SAN DIEGO, CALIFORNIA

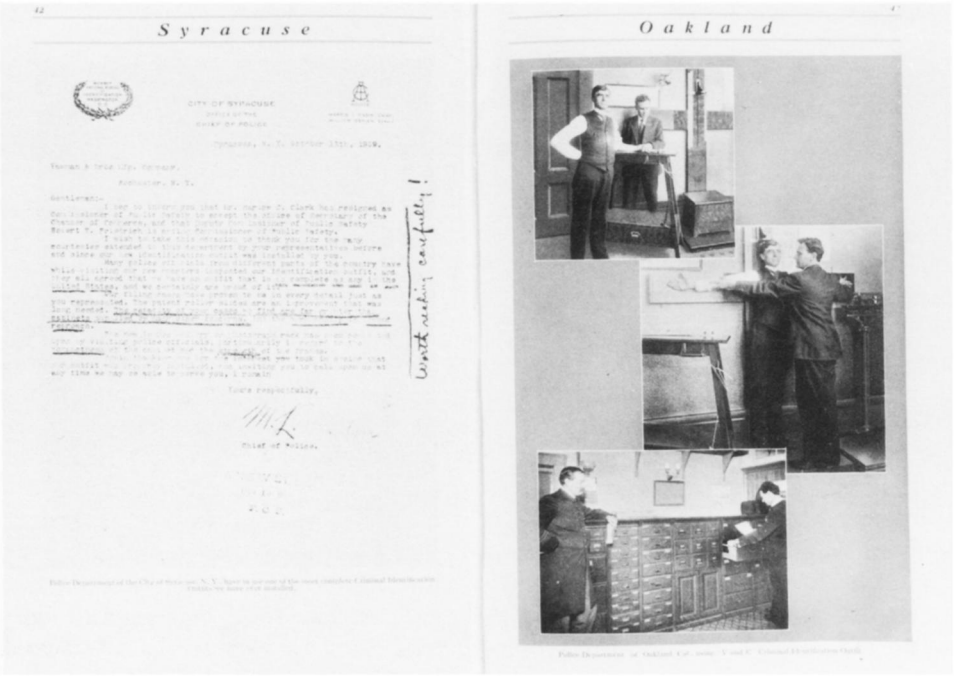
Height	1 m 60.0	Head lgth	18.0	L Foot	23.5	Color of Eye	Class	Age	24
Stretch	1 m 57.0	Head wdth	15.5	L Mid F	10.3		Areola	Apparent Age	
Trunk	87.0	Cheek width	13.1	L Lit F	8.0		Periph Mar.	Nativity Mexico	
Curve		R. Ear lgth	6.9	L Cubit	42.4		Pecul	Occup Laborer.	

Eng. Height 5-3 Remarks relative to Measurements

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

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

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, Maryland, 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



From Yawman and Erbe Mfg. Co., Criminal Identification by "Y and E": Bertillon and Finger Print Systems, *1913.*

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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. 364–365). 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*, vol. 18 [May 29, 1888], pp. 177–191).

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).

For Bertillon, the type existed only as a means for refining the description of individuality. Detectives could not afford not to be nominalists. Bertillon was not alone in this understanding of the peculiarities of the policeman's search for the specificity of crime. For example, the New York City detective chief Thomas Byrnes published in 1886 a lavish "rogues' gallery" entitled *Professional Criminals of America*. Although Byrnes practiced a less systematic mode of photography than did Bertillon, he clearly articulated the position that classical physiognomic typing was of no value whatsoever in the hunt for the "higher and more dangerous order" of criminals, who "carried no suggestion of their calling about them."[55] In Bertillon's case, the resistance to the theory of a *biologically given* criminal type was also in keeping with the general drift of late-nineteenth-century French criminological theory, which stressed the importance of environmental factors in determining criminal behavior. Thus the "French school," notably Gabriel Tarde and Alexandre Lacassagne, opposed the biological determinism of the "Italian school" of criminal anthropology, which centered on the anatomist-craniometrician Cesare Lombroso's quasi-Darwinian theory of the criminal as an "atavistic being who reproduces in his person the 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 ap-

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.

115

ELLEN CLEGG,
ALIAS ELLEN LEE.
SHOP LIFTER AND PICKPOCKET.

116

MARY HOEY,
ALIAS MOLLY HOLLBROOK.
PICKPOCKET.

117

MARGRET BROWN,
ALIAS OLD MOTHER HUBBARD.
PICKPOCKET AND SATCHEL WORKER.

118

CHRISTENE MAYER,
ALIAS KID GLOVE ROSEY,
SHOP LIFTER.

119

LENA KLEINSCHMIDT,
ALIAS RICE and BLACK LENA,
SHOP LIFTER.

120

MARY CONNELLY,
ALIAS IRVING,
PICKPOCKET AND SHOP LIFTER.

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

Fig. 110. — *Clayes.*

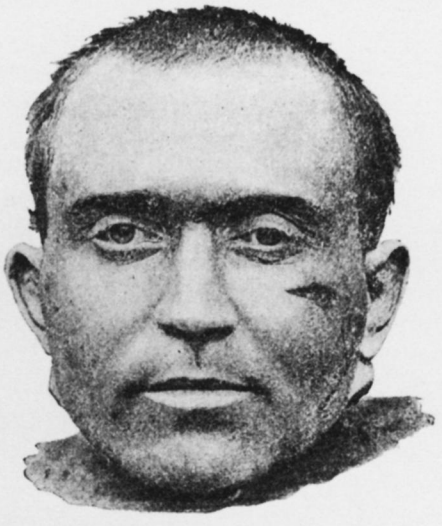


Fig. 111. — *Clayes.*

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

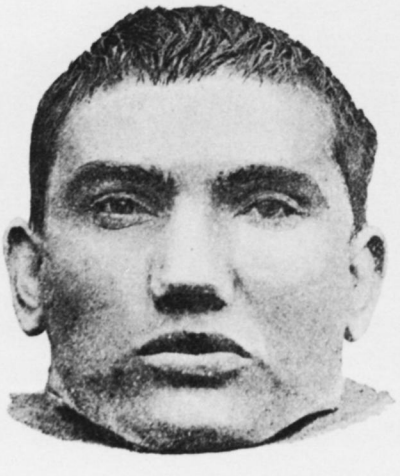


Fig. 112. — *Degroote.*

Fig. 113. — *Degroote.*

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

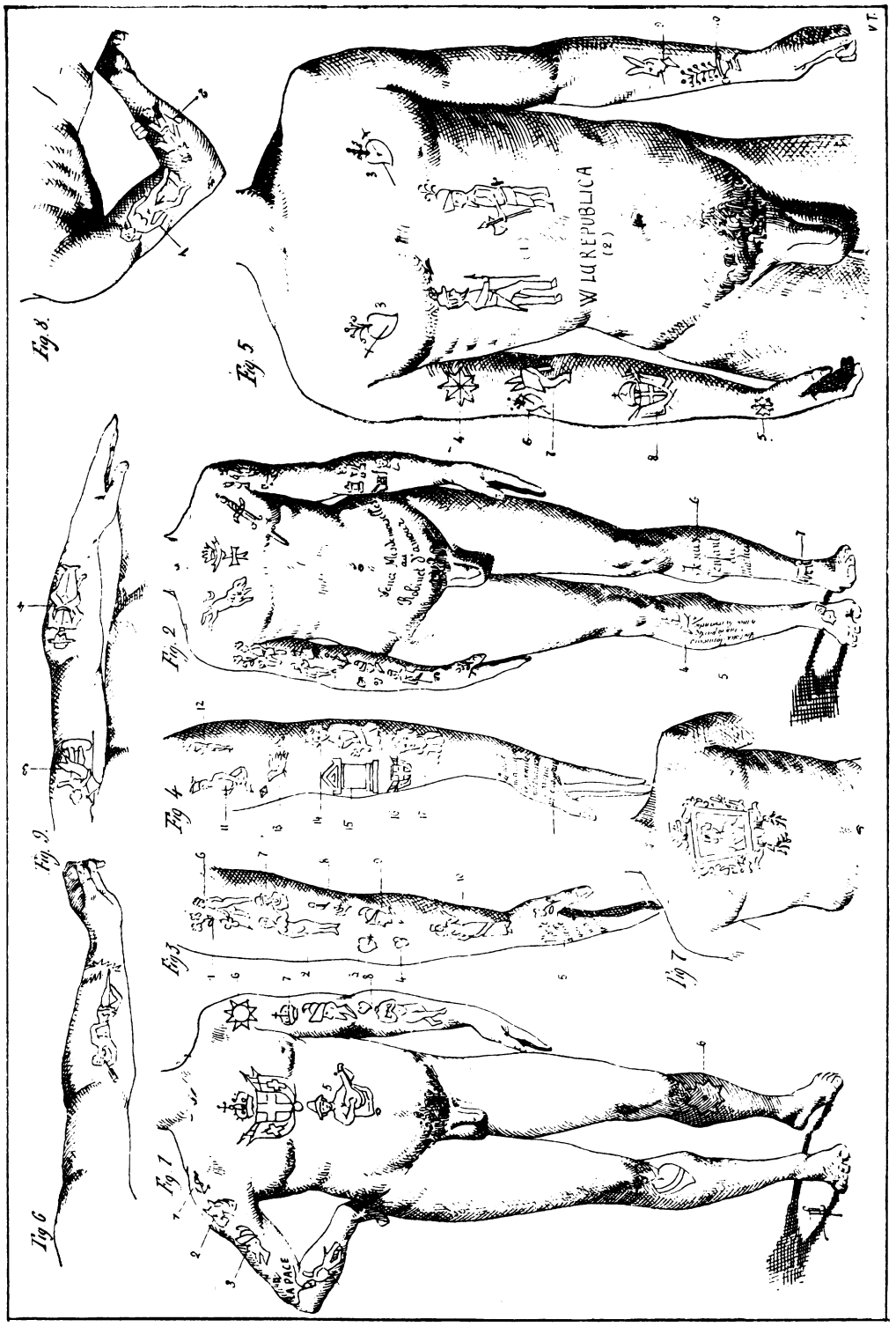
peared in France and Italy offering photographic evidence of basic criminal types. Although the authors were frequently at odds with one another over the "atavistic" or "degenerate" nature of the criminal, on a more fundamental level they shared a common battle. This was a war of representations. The 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 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 which 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 which 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.

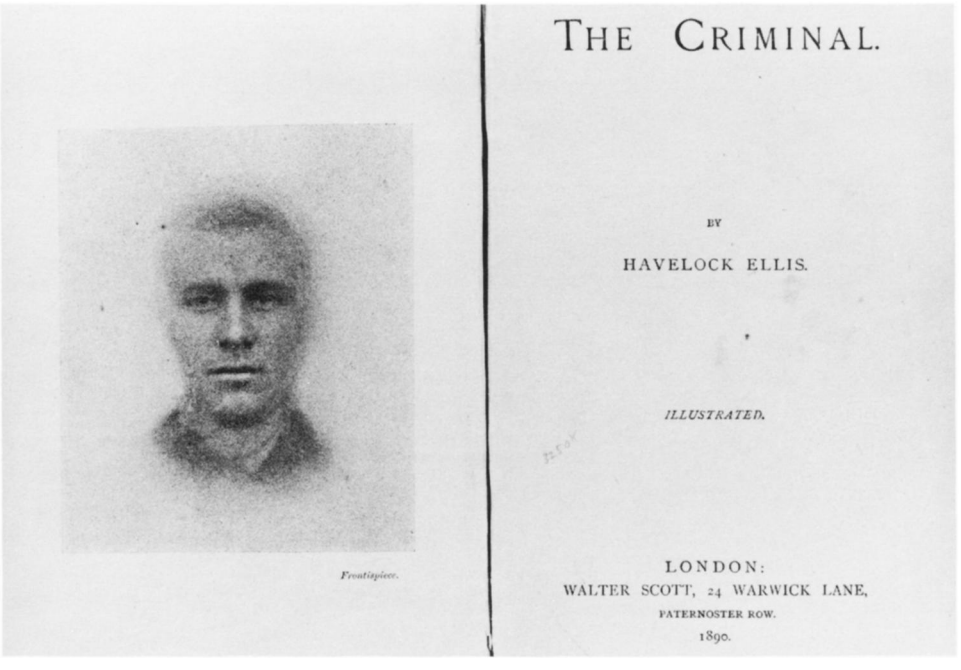
Where Bertillon was a compulsive systematizer, Galton was a compulsive quantifier. While Bertillon was concerned primarily with the triumph of social order over social disorder, Galton was concerned primarily with the triumph of established rank over the forces of social leveling and decline. Certainly 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. Composite 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

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.

Plate XXXIX from Cesare Lombroso, L'homme criminel, *1895.*



TATOUAGES DE CRIMINELS.



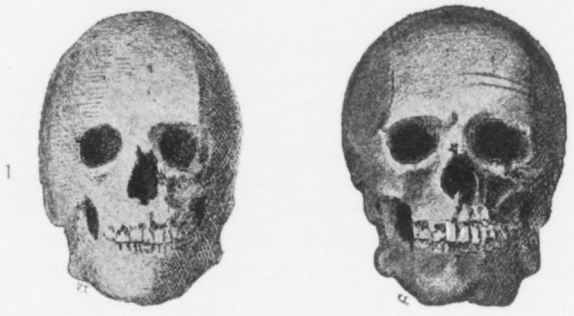
Galtonian composite.

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]

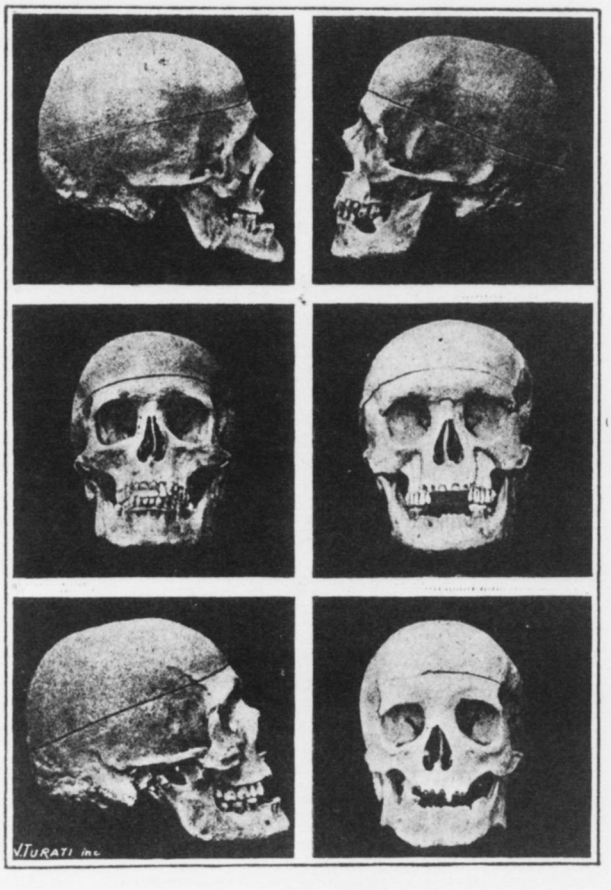
Galton is significant in the history of science for developing the first statistical methods for studying heredity.[63] His career was suspended between the triumph of his cousin Charles Darwin's evolutionary paradigm in the late 1860s and the belated discovery in 1899 of Gregor Mendel's work on the 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

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*, vol. 7, no. 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.



a

Fotografie composite Galtoniane di crani di delinquenti.



b

Anomalie in tre crani di delinquenti.

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

"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]

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]

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.

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

SPECIMENS OF COMPOSITE PORTRAITURE

PERSONAL AND FAMILY.

Alexander the Great From 6 Different Medals.

Two Sisters.

From 6 Members of same Family Male & Female.

HEALTH.

23 Cases. Royal Engineers. 12 Officers. 11 Privates

DISEASE.

6 Cases

9 Cases

Tubercular Disease

CRIMINALITY.

8 Cases

4 Cases

2 Of the many Criminal Types

CONSUMPTION AND OTHER MALADIES

I

20 Cases

II

36 Cases

56 Cases

Co-composite of I & II

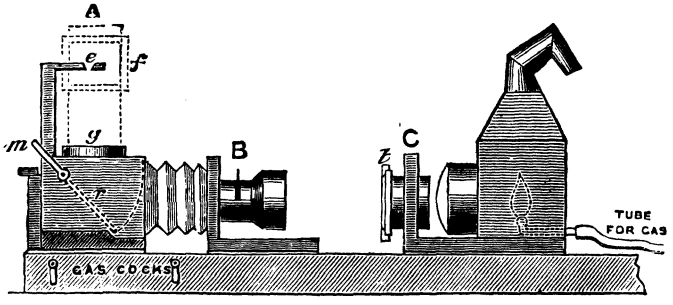
Consumptive Cases.

100 Cases

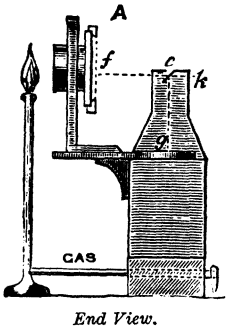
50 Cases

Not Consumptive.

DIAGRAM SHOWING THE ESSENTIAL PARTS.



Side View.



End View.

A The body of the camera, which is fixed.
B Lens on a carriage, which can be moved to and fro.
C Frame for the transparency, on a carriage that also supports the lantern; the whole can be moved to and fro.
r The reflector inside the camera.
m The arm outside the camera attached to the axis of the reflector; by moving it, the reflector can be moved up or down.
g A ground-glass screen on the roof, which receives the image when the reflector is turned down, as in the diagram.
e The eye-hole through which the image is viewed on *g*; a thin piece of glass immediately below *e*, reflects the illuminated fiducial lines in the transparency at *f*, and gives them the appearance of lying upon *g*,—the distances *f e* and *g e* being made equal, the angle *f e g* being made a right angle, and the plane of the thin piece of glass being made to bisect *f e g*.
f Framework, adjustable, holding the transparency with the fiducial lines on it.
t Framework, adjustable, holding the transparency of the portrait.

This book was a summary of Galton's researches over the preceding fifteen years. From this initial criticism of a more naive 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 or-

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

ganismic 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 unimpor-

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 Organism," *The Westminster Review*, New Series, vol. 17, no. 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.

> tant 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*:

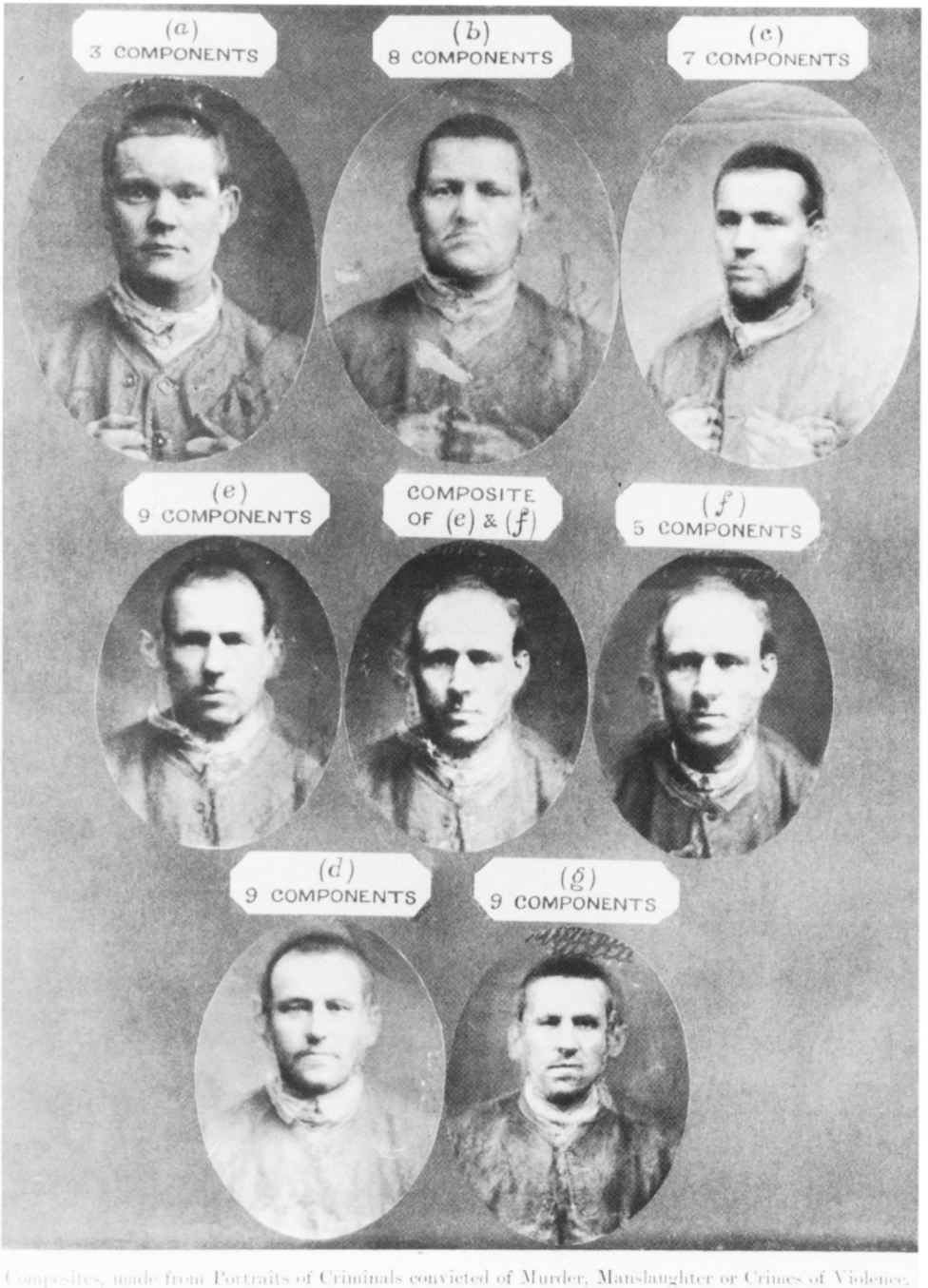
> The process . . . of pictorial statistics [is] suitable to give us generic pictures of man, such as Quetelet obtained in outline by the ordinary numerical methods of statistics, as described in his work on *Anthropométrie* . . . . By the process of composites we obtain a picture and not a mere outline.[71]

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 com-

69. Francis Galton, "On Generic Images," *Proceedings of the Royal Institution*, vol. 9 (1879), p. 166.
70. Francis Galton, "Analytical Photography," *Nature*, vol. 18 (August 2, 1890), p. 383.
71. Francis Galton, "Generic Images," *Nineteenth Century*, vol. 6, no. 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).

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



Composites, made from Portraits of Criminals convicted of Murder, Manslaughter or Crimes of Violence.

posite of six portrait medallions of Alexander the Great serves Galton as an introductory, epistemological benchmark, 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 *In-*

72. Galton, *Inquiries*, p. 14.
73. *Ibid.*, p. 15.
74. Francis Galton, *Essays in Eugenics*, London, Eugenics Education Society, 1909, pp. 8–9, 62.

quiries 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 which led from Anglo-American eugenics to National Socialist *Rassentheorie.*[80]

75. Galton, "Generic Images," p. 169.
76. Galton, *Inquiries*, p. 183.
77. *Ibid.*, p. 182.
78. Galton, "Generic Images," pp. 163–164.
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. 342–360.

Galton was asked to make the composites in 1883 by Joseph Jacobs, who was attempting to

Francis Galton. The Jewish Type. *1883. Plate XXXV from Pearson.*

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

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*, vol. 29, no. 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*, vol. 29, no. 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. 150–162.)

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

example, Lewis Hine made a 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 which 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 free-hand drawings and composites of tracings from photographs of criminal heads. The former had 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 sci-

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 1910–1913 essay, "Changes in Bodily Form of Descendants of Immigrants," in *Race, Language and Culture*, New York, Macmillan, 1949, pp. 60–75.

ences, 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 proposition. 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 only operate with brutal certainty 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

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.

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 which register a physical trace. Symbols, on the other hand, signify by virtue of conventions or rules. Verbal language 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.

III.

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

86. Charles Sanders Peirce, *The Philosophical Writings of Peirce*, ed. Justus Buchler, New York, Dover, 1955, pp. 99–119.
87. Rhodes, p. 191.

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

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*, vol. 10, no. 10 (May 1983), pp. 9–16.

90. Compare Bernard Berenson, "Isochromatic Photography and Venetian Pictures," *The Nation*, vol. 57, no. 1480 (November 9, 1893), pp. 346–347, with Fred Jane, "Preface," *Fighting Ships*, London, Marsten, 1905–1906, p. 2. However different their objects, these texts share an enthusiasm for large quantities of well-defined photographs.

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 pho-

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, N.Y., 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*, no. 22 (Spring 1981), pp. 32–37.

tographs, 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 photographer 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 achival 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 em-

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*, no. 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. 163–164.

braced 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 which 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, 1943.* 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, in-

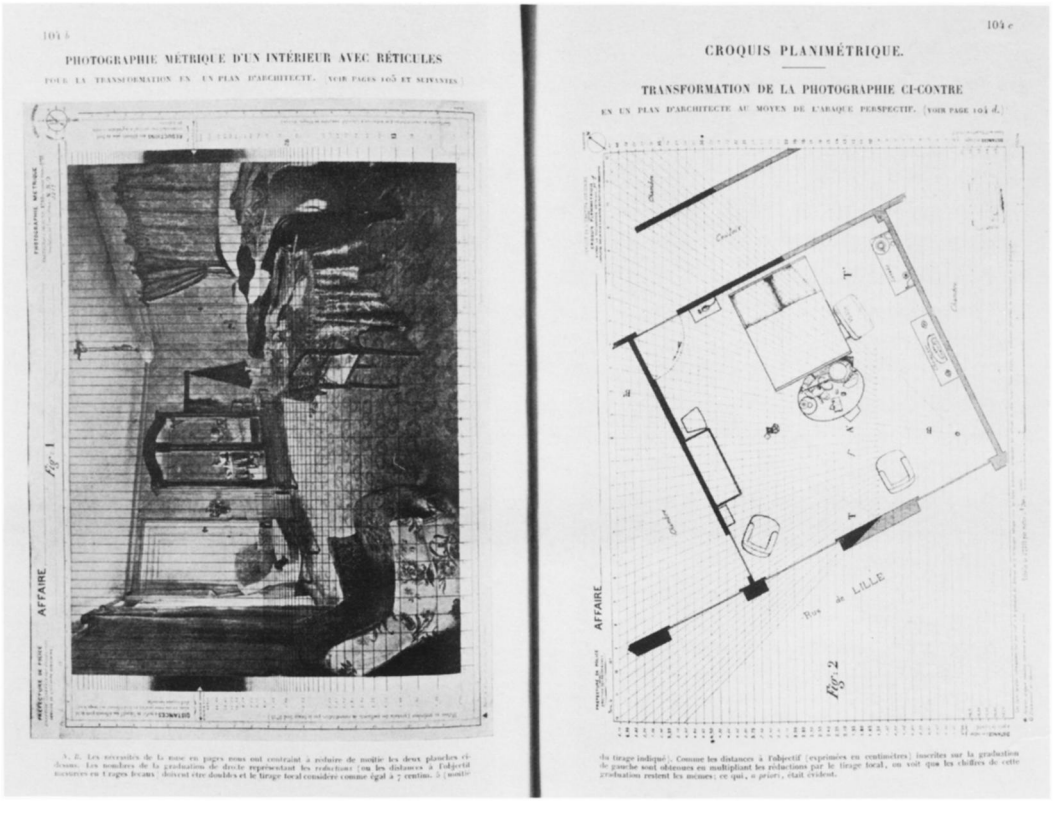
97. Walker Evans, *American Photographs*, New York, Museum of Modern Art, 1938.
98. Reproduced in Jerry Thompson, ed., *Walker Evans at Work*, New York, Harper and Row, 1982, p. 107.
99. Walter Benjamin, "The Paris of the Second Empire in Baudelaire," in *Charles Baudelaire*, p. 41.
100. Leslie Katz, "Interview with Walker Evans," *Art in America*, vol. 59, no. 2 (March–April 1971), p. 87.

Walker Evans. License-Photo Studio, New York, 1934. *Plate 1 from* American Photographs, *1938.*

cluding 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.

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*, vol. 13, no. 1 (Spring 1972), p. 25.

Eugène Atget. Plate 12 from Lichtbilder, *1930.*



104 b

PHOTOGRAPHIE MÉTRIQUE D'UN INTÉRIEUR AVEC RÉTICULES

POUR LA TRANSFORMATION EN UN PLAN D'ARCHITECTE. (VOIR PAGES 105 ET SUIVANTES)

Fig. 1

104 c

CROQUIS PLANIMÉTRIQUE.

TRANSFORMATION DE LA PHOTOGRAPHIE CI-CONTRE

EN UN PLAN D'ARCHITECTE AU MOYEN DE L'ABAQUE PERSPECTIF. (VOIR PAGE 104 d.)

Rue de LILLE

Fig. 2

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

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.

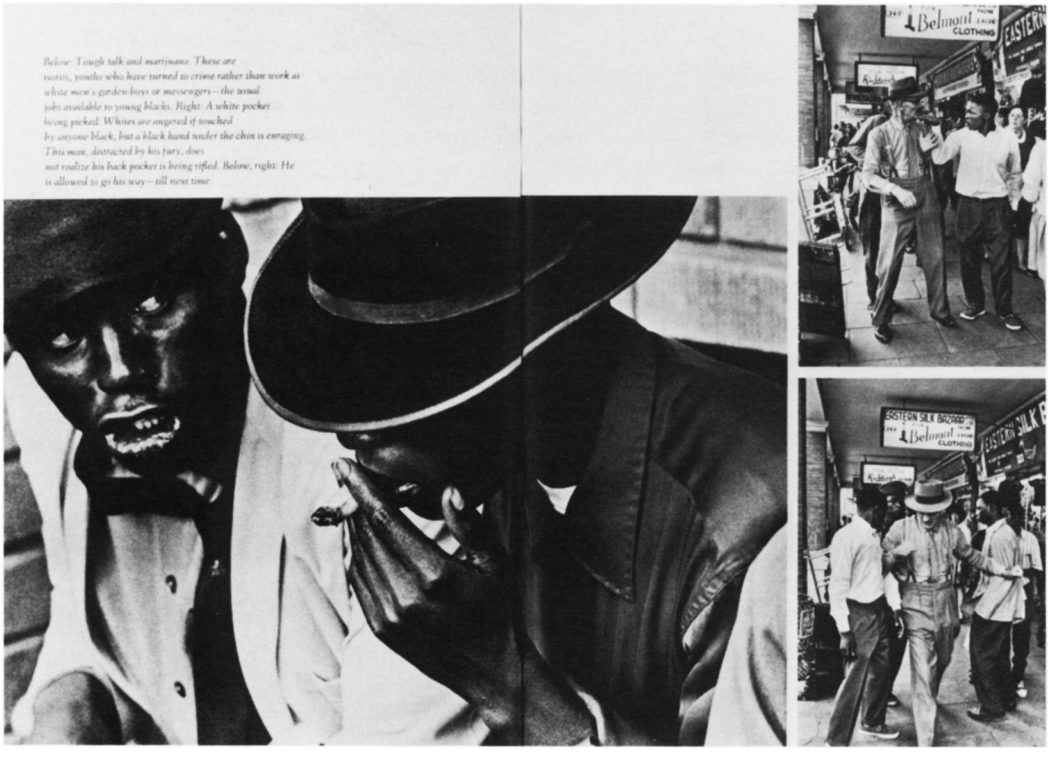
These are political issues. As such, their resonance can be heard in the aesthetic sphere. In the United States in the 1970s, a number of works, primarily in film and video, took an aggressive stance toward both biological determinism and the prerogatives of the police. Martha Rosler's video "opera"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

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.

graphic 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 photo-



From Ernest Cole, House of Bondage, *1967.*

graphed *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.

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.