ABSTRACT

Title of Document: RISKY BUSINESS: CHANCE AND CONTINGENCY IN AMERICAN ART AROUND 1900

Adam Robert Greenhalgh, Ph.D., 2012

Directed By: Sally M. Promey, Professor, Program in American Studies, Yale University

Franklin Kelly, Distinguished Affiliate Faculty, Department of Art History and Archaeology, University of Maryland, College Park

My dissertation exposes and interprets unnoticed points of intersection between American visual culture and the rhetoric, logic, and imagery of institutions and disciplines dedicated to rationalizing chance—insurance, census, statistics, probabilism—around 1900, when popular, mathematical, and philosophical conceptions of the accident were undergoing considerable revision. Following the Civil War, experts in a number of disciplines and commercial enterprises counted, measured, and classified individual experiences, bodies, and lives. Statistically minded theorists recognized that, given a large enough sample, phenomena previously considered random or divinely predetermined, such as death, injury, accident, disease, and crime, occurred regularly and were, to a degree, predictable. Anthropometrists also noticed that anatomical and physiognomic traits were distributed according to statistically evident norms. Innovative graphic techniques were developed to visualize, dramatize, and publicize the previously invisible trends, laws, and patterns revealed by such statistical analysis. Insurance underwriters gathered vital statistics and compiled actuarial charts, effectively

quantifying lives and configuring individuals in terms of risk. Insurance advertisements portrayed the modern world as a place of hazard and imminent peril manageable only through accident and life coverage. My dissertation demonstrates that this statistical and actuarial calculus manifested in works of art as Americans began to think, speak, and visualize their world in terms of risk, odds, and contingency. Organized as a series of case studies, my work demonstrates that visual culture fully engaged with the abstract concepts—chance, risk—and mathematical disciplines—statistics, probabilism—that informed this emergent worldview.

My study builds on recent social histories of chance, enhancing and complicating them by considering understudied imagery—insurance advertising; composite photography; statistical graphics—and period documents overlooked by art historians—census questionnaires; actuarial life tables; Edward Bellamy's 1888 novel *Looking Backward*—to reveal not only how this material informs major artworks, but also how works of art participated in underwriting an emerging conception of the world as an ultimately indeterminate, chance-based system. Individual chapters focus on artworks clustered roughly around the year 1900: Winslow Homer's mid-1880s paintings of peril at sea, blurry pictorial photographic portraiture by Edward Steichen, and George Bellows's painting *Forty-two Kids* (1907).

RISKY BUSINESS: CHANCE AND CONTINGENCY IN AMERICAN ART, AROUND 1900

By

Adam Robert Greenhalgh

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Advisory Committee:
Professor Sally M. Promey, Co-chair
Dr. Franklin Kelly, Co-chair
Professor Joshua Shannon
Professor Jonathan Auerbach
Dr. William H. Truettner

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3.61. Dr. Sargent’s Composite Statues of the Typical Americans, installation view, physical anthropometry section of the Anthropology Building at the 1893 Columbian Exposition. Albumen print, attributed to John Grabill, no. H6320. Peabody Museum of Archaeology and Ethnography, Harvard University, Chicago World’s Fair H Boards H.6302-6345; H.6378-6395.23 (Misc), Box. H6320.
3.62. Measurements of the 1893 World’s Fair attendees (males and females), Papers of Dudley Allen Sargent: measurement cards from schools and organizations other than Harvard, 1880–1902. Harvard University Archives, Box 8, HUG 1768.60.
3.63. Physical anthropology laboratory, Room 8, Anthropology Building; includes view of composite portraits, Albumen print, attributed to John Grabill, no. H6329. Peabody Museum of Archaeology & Ethnography, Harvard University. 2004.24.725.
3.64. Wendt Soldiers and their Composites, published in H.P. Bowditch, “Are Composite Photographs Typical Pictures,” *McClure’s Magazine* 3, no. 4. (September 1894): plate 7.
3.65. Photograph of Composite Statues of the Typical Americans, male, 1893. Boston Public Library.
3.66. Photograph of Composite Statues of the Typical Americans, female, 1893. Boston Public Library.
3.67. Photograph of Composite Statues of the Typical Americans, male, 1893. Boston Public Library.
3.68. Photograph of Composite Statues of the Typical Americans, female, 1893. Boston Public Library.
3.69. Childe Hassam, *Rainy Late Afternoon, Union Square* (also exhibited as *Rain Storm, Union Square*), 1890. Oil on canvas. Museum of the City of New York.
3.70. Detail, Childe Hassam, *Rainy Late Afternoon, Union Square* (also exhibited as *Rain Storm, Union Square*), 1890. Oil on canvas. Museum of the City of New York.
3.71. Francis Galton, Portraits of three sisters, full face and profile, with the corresponding composites, c.1882. Published in Karl Pearson, *Life, Letters and Labours of Francis Galton*, Plate XXXII.
3.72. Galton, Composite portraits of criminals convicted of manslaughter or crimes of violence. Photographs, c. 1885. University College London, Galton Papers.
3.73. Havelock Ellis, *The Criminal* (London: Walter Scott, 1890), frontispiece.
3.74. “Life Insurance for the Average Man,” Prudential Insurance Company advertisement, c. 1885.
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3.76. Francis Galton’s Quincunx, manufactured by Tisley & Spiller, London, 1873. Galton Collection, University College London.

3.77. Francis Galton, sketch of Quincunx, c. 1873.
3.78. Henry P. Bowditch, Kappa Pi Eta Dinner Club ("Grub Club"), faculty members of Harvard Medical School, photo collage includes portraits of individual members with composite image in center, 1887 (Clockwise from top left: Henry P. Bowditch, Clarence J. Blake, Reginald H. Fitz, C. Ellery Stedman, William L. Richardson, George B. Shattuck, Edward Wigglesworth, Henry P. Quincy, James R. Chadwick, Edward S. Wood, Frederick C. Shattuck, Oliver F. Wadsworth). H.P. Bowditch Papers, Countway Medical Library, Harvard University. Location: S015.01, no. 00094.004.
3.79. Henry P. Bowditch, Kappa Pi Eta Dinner Club ("Grub Club"), faculty members of Harvard Medical School, photo collage includes portraits of individual members with composite image in center, c. 1907–8 (Clockwise from top left: R.H. Fitz, O.F. Wadsworth, Frederick C. Shattuck, Clarence J. Blake, M.H. Richardson, H.P. Walcott, E.W. Taylor, John T. Bowen, Charles Harrington, Arthur T. Cabot, W.L. Richardson, George B. Shattuck). H.P. Bowditch Papers, Countway Medical Library, Harvard University. Location: S015.06, no. 00094.013.
3.80. The Travelers Insurance company advertisement, chromolithograph, 1870. Courtesy of Citigroup Inc.,—Center for Culture, New York.
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3.83. "…you can protect them all under The Travelers umbrella." Advertisement, The Travelers Insurance Companies, c. 1960. Courtesy of Citigroup Inc.,—Center for Culture, New York.
4.1. George Bellows, *Forty-two Kids*, 1907. Oil on canvas, 42 x 60 1/4 inches (106.7 x 153.0 cm). Corcoran Gallery of Art, Washington, D.C. Museum Purchase, William A. Clark Fund, 31.12.
4.2. Details, George Bellows, *Forty-two Kids*, 1907. Oil on canvas, 42 x 60 1/4 inches (106.7 x 153.0 cm). Corcoran Gallery of Art, Washington, D.C. Museum Purchase, William A. Clark Fund, 31.12.
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4.6. George Bellows, *Benediction In Georgia*, 1916. Lithograph, 16 ¼ x 20 ¼ inches (41.4 x 51.4 cm). Smithsonian American Art Museum. Gift of Prentiss Taylor 1984.44.
4.7. George Bellows, *Both Members of This Club*, 1909. 45 ¼ x 63 1/8 inches. National Gallery of Art, Washington, D.C., Chester Dale Collection, 1944.13.1.
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4.9. "Thirty-six Boys," halftone photogravure of *Forty-two Kids*, the *Telegraph*, April 1911.
4.10. Unknown cartoonist, "42 Kids", c. 1908–1909. George Bellows Papers, Amherst College Archives and Special Collections.
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4.12. George Bellows, *Club Night*, 1907. Oil on canvas, 43 x 53 inches. National Gallery of Art, Washington, D.C, John Hay Whitney Collection, 1982.76.1.
4.13. Jacob Riis, *Five Cents a Spot Unauthorized Lodgings in Bayard St.*, in *How the Other Half Lives: Studies Among the Tenements of New York* (New York: Charles Scribner's Sons, 1890).
4.14. Unknown photographer, "Only were to be seen the policemen, flashing their dark lanterns into doorways and alleys," in Jack London, *People of the Abyss* (New York: The Macmillan company; London: Macmillan & co., Ltd., 1903), chapter 10.
4.15. Jacob Riis, *Tenement House Yard*, in *How the Other Half Lives: Studies Among the Tenements of New York* (New York: Charles Scribner's Sons, 1890).
4.16. George Bellows, *Cliff Dwellers*, 1913. Oil on canvas, 40 3/16 x 42 1/16 inches (102.07 x 106.83 cm). Los Angeles County Museum of Art.
4.17. George Benjamin Luks, *Street Scene (Hester Street)*, 1905. Oil on canvas, 25 13/16 x 35 7/8 inches (65.5 x 91.1 cm) Brooklyn Museum of Art. Dick S. Ramsay Fund, 40.339.
4.18. Jacob Riis, *Knee-Pants at 45 Cents a Dozen at Ludlow St. Sweater Shop*, in *How the Other Half Lives: Studies Among the Tenements of New York* (New York: Charles Scribner's Sons, 1890), 96.
4.19. Jacob Riis, *Men's lodging room, 47th St. Police Station* (1892). Museum of the City of New York.
4.20. Winslow Homer, *Snap the Whip* (1872). Oil on canvas, 22 x 36 inches (55.88 x 91.44 cm.) Butler Institute of American Art, Youngstown, Ohio. Museum purchase, 919-0-108.
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4.22. Thomas Eakins, *Swimming*, 1883. Oil on canvas, 27 3/8 x 36 3/8 inches (69.5 x 92.4 cm). Amon Carter Museum, Fort Worth, Texas.
4.23. Theodore Géricault, *Raft of the Medusa*, 1818–1819. Oil on canvas, 491 × 717 cm, Musée du Louvre, Paris.
4.24. George Luks, "Hogan's Alley Kids at Hogan's Bath," *New York World*, 30 May 1897.
4.25. "An East-Side Dive," *Puck* (14 July 1909).
4.26. George Bellows, *Kids*, 1906. Oil on canvas, 32 x 42 inches. McGlothlin Collection.
4.27. George Bellows, *River Rats*, 1906. Oil on canvas, 30 1/2 x 38 ½ inches. Private collection, Washington, D.C.

4.28. Thomas Nast, “Brutal Attack on the Police—‘The Day We Celebrate’ Irish Riot,” *Harper’s Weekly*, April 6, 1867.
4.29. Frederick Opper, “A King of Ashanty Gold,” *Puck*, 24 May 1882.
4.30. Detail of “The Bugaboo of Congress,” *Puck*, 4 January 1885.
4.31. “Sheep Fly Maggot,” c. 1900. Mildenhall Collection, Canberra, Australia.
4.32. Detail, George Bellows, *Forty-two Kids*, 1907; F.R. Crittenden, “Root-Maggots and How to Control Them” (Washington, Dep’t of Agriculture Circular no. 63, 1905).
4.33. Edgar M. Crookshank, *bacillus figurans*, in *Photography of Bacteria* (1887).
4.34. John Leech, “Drop of London Water,” *Punch* (11 May 1850).
4.35. Emile Levy, advertisement for *Les Invisibles*, 1883. Lithograph.
4.36. McConnell Filter Company, *McConnell Germ-Proof Water Filters, Illustrated Catalogue*, 1894. Historical Collections of the College of Physicians of Philadelphia.
4.37. Still from *Cheese Mites* (1903), from *The Unseen World*, 35mm, 150 feet, black & white, silent. Production Company: Charles Urban Trading Company; Director of Photography: F. Martin Duncan. British Film Institute, London.
4.38. Detail, George Bellows, *Forty-two Kids*, 1907. Oil on canvas, 42 x 60 1/4 inches (106.7 x 153.0 cm). Corcoran Gallery of Art, Washington, D.C. Museum Purchase, William A. Clark Fund, 31.12.
4.39. Edweard Muybridge, *Animal Locomotion. An Electro-Photographic Investigation of Consecutive Phases of Animal Movements*, Volume I, Men (Nude), plate 287 The Metropolitan Museum of Art, Rogers Fund, transferred from the library, 1991 (1991.1135.1).
4.40. Marcel Duchamp, *Nude Descending a Staircase, No. 2*, 1912. Philadelphia Museum of Art.
4.41. Screenshot from the film *Cheese Mites; or, Lilliputians in a London Restaurant* (1901).
4.42. Arthur Hill Hassall, Illustrations of London water samples taken by the Grand Junction Company and the West Middlesex Company, from *Microscopical Examination of the Water Supplied to the Inhabitants of London and Suburban Districts* (1850), published in Water and Its Impurities,” *Lancet* I (1851): 192–3 B.
4.43. Edward A. Samuels, “Natural History in a Cup of Mud,” *Forest and Stream: A Journal of Outdoor Life, Travel, Nature Study, Shooting.*… LVIII, no. 19 (10 May 1902): 365.
4.44. “The Poor House,” *Puck* 66, no. 1691(28 July, 1909).
4.45. “Shooting the Rapids,” Advertisement for Williams Soap Shaving Stick, published in *Puck* (27 July 1898), p.13.
4.46. “Passing Through the Woods One Day…,” Ivory Soap advisement, Proctor and Gamble, 1883. Collection of the National Museum of American History, Smithsonian Institution, Washington, D.C.
4.47. “The Contented Rat,” Ivory Soap advisement, Proctor and Gamble, 1885. Collection of the National Museum of American History, Smithsonian Institution, Washington, D.C.

4.48. “A New Departure,” Ivory Soap advisement, Proctor and Gamble, 1883. Collection of the National Museum of American History, Smithsonian Institution, Washington, D.C.
4.49. “A New Departure,” Ivory Soap advisement, Proctor and Gamble, 1886. Collection of the National Museum of American History, Smithsonian Institution, Washington, D.C.
4.50. “A New Departure,” Ivory Soap advisement, Proctor and Gamble, 1892. Collection of the National Museum of American History, Smithsonian Institution, Washington, D.C.
4.51. “Reclaimed,” Ivory Soap advisement, Proctor and Gamble, 1884. Collection of the National Museum of American History, Smithsonian Institution, Washington, D.C.
4.52. “Reclaimed,” Ivory Soap advisement, Proctor and Gamble, 1886. Collection of the National Museum of American History, Smithsonian Institution, Washington, D.C.
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4.54. Pacific Coast Borax Twenty Mule trademark, letterhead, Warshaw Collection, National Museum of American History, Smithsonian Institution, Washington, D.C.
4.55. Pacific Coast Borax Twenty Mule advertisement, c.1900. Warshaw Collection, National Museum of American History, Smithsonian Institution, Washington, D.C.
4.56. Peter Newell, “Each warrior bears a trusty gun—,” in *The 20-Mule-Team Brigade* (New York: The Pacific Coast Borax Co, 1904), n.p.
4.57. Detail, “’Halt!’ Sharply Cried the Captain, Fire!” Peter Newell, *The 20-Mule-Team Brigade* (New York: The Pacific Coast Borax Co, 1904), n.p.
4.58. “Trust a child to know...,” Ivory Soap advisement, Proctor and Gamble, 1921. Collection of the National Museum of American History, Smithsonian Institution, Washington, D.C.
4.59. Detail, “My! How this Pony’s Anger Burned! Although it didn’t Smoke!” Peter Newell, *The 20-Mule-Team Brigade* (New York: The Pacific Coast Borax Co, 1904), n.p.
4.60. Peter Newell, *The 20-Mule-Team Brigade* (New York: The Pacific Coast Borax Co, 1904), n.p.
4.61. Samuel D. Ehrhart, *Fool Pied Piper*, 1909. Ink on paper. University of Minnesota Libraries. Published in *Puck* 65, no. 1689 (2 July 1909).
4.62. Detail (Uncle Sam and Rats) Samuel D. Ehrhart, *Fool Pied Piper*, 1909. Ink on paper. University of Minnesota Libraries. Published in *Puck* 65, no. 1689 (2 July 1909).
4.63. Detail (physiognomies), Samuel D. Ehrhart, *Fool Pied Piper*, 1909. Ink on paper. University of Minnesota Libraries. Published in *Puck* 65, no. 1689 (2 July 1909).
4.64. Detail (“Muttering grew to a rumbling”) Robert Browning, *The Pied Piper of Hamelin, with Illustrations by Kate Greenaway* (London: Frederick Warne and Co., Ltd., 1888), 18.

4.65. Detail (Children's exodus), Robert Browning, *The Pied Piper of Hamelin, with Illustrations by Kate Greenaway* (London: Frederick Warne and Co., Ltd., 1888), 38–41.
4.66. "Arrival of Another Distinguished Foreigner [Cholera]," *Harper's Weekly*, 11 November 1865, 720.
4.67. Frank Henry Temple Bellew, "Our Honored Guest [Cholera], *Harper's Weekly*, 2 September 1871, 815.
4.68. "Deaths from Known Causes" [diarrheal disease; typhoid fever; consumption; diphtheria], *Statistical Atlas of the United States* (1898).
4.69. "Mortality (Expectation of Life—Death Rate)," *Scribner's Statistical Atlas of the United States* (c.1883).
4.70. Unknown cartoonist, *"Eighty Four Legs" by Geo. Bellows*, c. 1908-1909. George Bellows Papers, Amherst College Archives and Special Collections.
4.71. Detail, *"Eighty Four Legs" by Geo. Bellows*, c. 1908–1909. George Bellows Papers, Amherst College Archives and Special Collections.
4.72. George Bellows, *The Newsboy* (1908). Oil on canvas, 30 1/8 x 22 1/8 inches. Brooklyn Museum of Art, New York, Gift of Mr. & Mrs. Daniel Fraad, Jr.
4.73. George Bellows, *Frankie the Organ Boy* (1907). Oil on canvas, 48 x 34 ¼ inches. The Nelson-Atkins Museum of Art, Kansas City, Missouri.
4.74. David Gilmour Blythe, *A Match Seller*, ca. 1859. Oil on canvas, 27 x 22 inches North Carolina Museum of Art, Raleigh.
4.75. George Bellows, *Paddy Flannigan* (1908). Oil on canvas, 30 1/4 x 25 inches. Collection of Erving and Joyce Wolf.
4.76. George Bellows, *Cross-Eyed Boy* (1906). Oil on canvas, 20 x 16 inches. Mead Art Museum, Amherst College, MA, Bequest of Charles H. Morgan.
4.77. George Bellows, *Portrait of a Laughing Boy* (1907). Oil on canvas, 24 x 18 inches. Mrs. C. Ruxton Love, Jr., Greenwich, Connecticut.
4.78. Plates from Guillaume-Benjamin-Armand Duchenne de Boulogne, *Méchanisme de la Physionome Humaine ou Analyse électro-physiologique de l'expresion des passions applicable a la pratique des arts plastique* (Paris, 1862).
4.79. Plate from Charles Darwin, *The Expression of the Emotions in Man and Animals*, second edition (1889).
4.80. Plate from Charles Darwin, *The Expression of the Emotions in Man and Animals*, second edition (1889).
4.81. Details, George Bellows, *Forty-two Kids*, 1907. Oil on canvas, 42 x 60 1/4 inches (106.7 x 153.0 cm). Corcoran Gallery of Art, Washington, D.C. Museum Purchase, William A. Clark Fund, 31.12.
4.82. Details, George Bellows, *Forty-two Kids*, 1907. Oil on canvas, 42 x 60 1/4 inches (106.7 x 153.0 cm). Corcoran Gallery of Art, Washington, D.C. Museum Purchase, William A. Clark Fund, 31.12.
4.83. "Growth of States in Population," *Scribner's Statistical Atlas* (c.1883).

Introduction

Representing a World of Chance

Prior to the nineteenth century European and American cultures generally accepted accidents as signs of a transcendent controlling destiny or divine plan. They deemed chance to be of no real consequence at all. In 1748, the Scottish empiricist philosopher David Hume reckoned "that chance, when strictly examined, is a mere negative word, and means not any real power which has anywhere a being in nature."[1] From about 1830, though, coinciding with what the philosopher Ian Hacking has called an "avalanche of printed numbers," a shift towards a statistically determined worldview that entailed the gradual erosion of belief in any ultimate designing force began to take hold in Europe.[2] Siméon-Denis Poisson, Pierre-Simon Laplace, Joseph Baptiste Joseph Fourier, and other mathematicians and scientists, particularly astronomers, examined disparate data, including census statistics and astronomical positioning calculations. Their analyses contributed to the development of various incarnations of a rule known during the nineteenth century as the law of large numbers, which, assuming a large enough sample, demonstrated mathematically the tendency of actions, decisions, and events previously considered haphazard or divinely preordained to occur in approximately constant numbers from year to year.

The regularity of events evidenced by this kind of statistical accumulation, adherents maintained, followed underlying natural laws. Laplace argued that a failure to

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[1] David Hume, *Enquiries Concerning Human Understanding and Concerning the Principles of Morals* (1748, reprinted from the posthumous edition of 1777; Oxford: Clarendon Press, 1975), 95.

[2] Hacking first introduced the metaphor of the "avalanche of printed numbers" in "Biopower and the Avalanche of Printed Numbers," *Humanities in Society* 5, nos. 3 & 4 (Summer and Fall 1982): 290.

identify causes for seemingly chance occurrences was subjective, the result of an inability to discover the responsible law rather than an indication of stochasticity. Statistically minded theorists sought to ascertain and make visible these deterministic laws. On the basis of conclusions drawn from the law of large numbers, many came to believe that society could be better understood through the accumulation of more and more numbers. Foremost among them was the Belgian astronomer and statistician Adolphe Quetelet. Astonished by the annual consistency of crime rates, Quetelet dedicated himself to divining the underlying laws that governed people. He understood that statistical regularity was visible only through the analysis of large numbers and populations rather than individuals and their specific actions. "It is of primary importance," he wrote, "to keep out of view man as he exists in an insulated, separate, or in an individual state, and to regard him only as a fraction of the species."[3]

Quetelet is best known for the concept of *l'homme moyen*, or the average man, a fictional concept representing the mean measurement of a given characteristic of a population. Quetelet introduced his *homme moyen* in 1835. In 1844, he observed that a large sample of measurements of a single man varied according to the law of error. That is, when plotted on a graph these variable measurements followed the curve of a Gaussian distribution. The Gaussian bell-shaped curve was named after the mathematician Carl Friedrich Gauss who had in 1809 first plotted the curve as a solution to a differential equation. It came to be known as the Normal Curve, after Charles Sanders Peirce (in 1873), Francis Galton (in 1877), and Wilhelm Lexis (in 1877) independently used the word "normal" to describe the probability curve that follows

[3] Lambert Adolphe Jacques Quetelet, *A Treatise on Man and the Development of His Faculties*, transl. R. Knox (Edinburgh: Chambers, 1842), 5.

Gauss's bell-shaped trajectory.[4] Quetelet noticed, too, that measurements of a large sample of different men—chest measurements of over 5,000 Scottish soldiers published in 1817 in the *Edinburgh Medical Journal*—also followed the curve of Normal distribution. This allowed him to ignore the manifold variables that might be responsible for chest size (parents' anatomy, environment, etc.) and conclude that natural phenomena were, as a rule, Normally distributed. It proved to be an enormously popular conclusion and was subsequently applied to all manner of arguments. The historian of statistical methods Stephen M. Stigler, for instance, tells of a remarkable (and preposterous) paper published in 1875 that argued that deviations from the Normal Curve in the topography of hills, or what the author called the "curve of denudation," was evidence of geological erosion (Fig. 1.1).[5]

Hacking notes that Quetelet's conclusions about the Normal distribution of chest sizes "began to turn statistical laws that were merely descriptive of large-scale regularities into laws of nature and society that dealt in underlying truths and causes."[6] The propensity for number-gathering changed perceptions of social reality as well as conceptions of people's anatomies, variations, and behavior. In his heredity experiments in the late-1880s, the English polymath Francis Galton discovered correlation and the theory of regression towards the mean. He recognized that hereditary traits distributed themselves according to the law of error following the Normal Curve of distribution.

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[4] Steven M. Stigler traces the Normal Curve's fascinating evolution, including the multiple independent transformations of its name in three countries and two languages in *Statistics on the Table: The History of Statistical Concepts and Methods* (Cambridge: Harvard University Press, 1999), 404–415.

[5] The paper is A. Tylor, "Action of Denuding Agencies," *Geological Magazine* (decade II) 2 (1875): 433–476. See Stigler (1999), 378–9.

[6] Hacking, *The Taming of Chance* (Cambridge: Cambridge University Press, 1990), 108.

Galton's shot-dropping machine, the quincunx, demonstrated that statistical laws, once thought to indicate some underlying but unknown causal logic, operated autonomously (see Fig. 3.76). As Hacking has put it, Galton "saw that chance had been tamed," in the sense that it was acknowledged to be fundamental to the operation of nature and society.[7] In 1893, not quite 150 years after Hume had dismissed chance, regarding it to be of no real consequence, the pragmatist philosopher Charles Sanders Peirce declared, "chance itself pours in at every avenue of sense: it is of all things the most obtrusive. That it is absolute is the most manifest of all intellectual perceptions."[8] At the end of the nineteenth century, Peirce signaled a paradigmatic shift in conceptions of chance and causality by concluding that he lived in a world of absolute chance. Chance, according to Hacking, "was no longer the essence of lawlessness, but at the core of all laws of nature and all rational inductive inference."[9]

The statistical "avalanche" that Hacking has identified began in Europe around 1820. It did not, however, immediately bury the United States. Rather, a statistical "volcano," in Hacking's geological vocabulary, erupted in the 1880s.[10] This tardiness is curious, given the fact that, as historian Daniel Boorstin has noted, "counting is built into national self-conception."[11] Indeed, it is unconstitutional not to conduct a decennial nation census, the "first in modern times to become institutionalized," after the Philadelphia Constitutional Convention of 1787 established that membership in the

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[7] Hacking, *Taming of Chance* , 186.

[8] Charles Sanders Peirce, "Reply to the Necessitarians," *The Monist* 3 (1893): 526–70; in *Collected Papers of Charles Sanders Peirce*, 8 vols. (Cambridge, Mass., 1931–1958) 6: 425.

[9] Hacking, *Taming of Chance*, xii.

[10] Hacking, "Biopower," 280.

[11] Daniel J. Boorstin, *The Americans: the Democratic Experience* (New York: Random House, 1973), 168.

House of Representatives would be determined according to population.[12] The timing of the American statistical volcano is made evident in the growth of the U.S. Census questionnaire. In 1870, only 156 questions were asked, but in 1880, the census included some 13,010 questions.[13]

The period covered by this dissertation, from about 1870 to 1910, was marked by attempts to reconcile the horrors of the recent internecine conflict, as well as by rapid industrialization, rampant immigration, urban overcrowding, labor riots, financial speculation, industrial accidents, train wrecks, natural disasters, fraud, and deception. Philosophers revised ideas relating to determinism and causality in popular forums and publications as uncertainty became one of few social certainties.[14] At the same time, social theorists and reformers invested real faith in the potential of quantitative statistical analysis in the form of enumeration, census-taking, and record-collecting as a means of controlling a world they and others increasingly understood operated according to the statistical rules of probability and error.

As experts composed theoretical, philosophical, and mathematical descriptions of a world of chance predicated on probabilistic inference and statistical analysis, the United States simultaneously struggled to recover from the unprecedented destruction of the Civil War, the impact of which should not be underestimated in any attempt to

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[12] Article 1, section 2, paragraph 3 of the United States Constitution institutes the national census, the first of which was to be undertaken within three years of the first meeting of Congress. See Boorstin (1973),168; Hacking, "Biopower," 290.

[13] Hacking, "Biopower," 290, and Hacking, "How Should We Do the History of Statistics," in Graham Burchell, Colin Gordon and Peter Miller, eds., *The Foucault Effect: Studies in Governmentality* (Chicago: University of Chicago Press, 1991), 183.

[14] Charles Sanders Peirce published a series of six articles that originally were collectively entitled *Illustrations of the Logic of Science* in *Popular Science Monthly* from November 1877 through August 1878. The third of these six papers was "The Doctrine of Chances" (*Popular Science Monthly* 12 [March 1878], 604–615).

understand the late-nineteenth century history of statistics and chance. A large part of the rehabilitative work done in the decades following the war was statistical in nature as public and private agencies launched a massive campaign to systematically assess the losses incurred by both sides. They compiled and scrutinized casualty records; reported internments; located, identified, and buried the undocumented or unburied dead; carefully tallied shared losses and sacrifices; and addressed the claims of the dead and injured.[15] The U.S. Bureau of Pensions established a rudimentary Civil War veteran pension program. Vital statistics, medical reports, and documentary photographs formed the foundation of a compensatory scale that correlated rank, service duration, and severity of injuries, among other factors, with a corresponding level of financial remuneration payable to veterans or their widows.[16]

The American Civil War produced broken bodies, a fact testified to in an unsettling photograph of amputated limbs that its creator Reed Bontecou, M.D. entitled *A Morning's Work* (Fig. 1.2). Bontecou, a surgeon with the Union infantry, was one of the first in the medical field to apply photography to clinical ends. He photographed soldiers upon admittance to and discharge from his care, and many of these photographs were later instrumental in qualifying disabled veterans for pension payments. The Army filed duplicates of photographs of injured soldiers with their discharge records and used them

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[15] These endeavors, as David Blight has illustrated, served in time to recreate national unity and harmony. David W. Blight, *Race and Reunion*: *the Civil War in American Memory* (Cambridge, Mass.: Belknap Press of Harvard University Press, 2001). See also Drew Gilpin Faust, *This Republic of Suffering: Death and the American Civil War* (New York: Alfred A. Knopf, 2008).

[16] Gustavus A. Weber and Laurene F. Schmeckebier, *The Veteran's Administration: Its History, Activities and Organization* (Washington, D.C.: The Brookings Institutions, 1934), 39–51; Although the federal government and state governments had begun assigning monetary value to the loss of specific limbs during the war, the scale was revised in various Congressional Acts over subsequent decades. Michael F. Fitzpatrick, "Payback for Broken Soldiers," *Civil War Times Illustrated* 41, no. 6 (2002): 38–45.

in determining post-war disability payments. These photographs played a crucial evidentiary role; they proved, in effect, that soldiers were entitled to a compensatory wage for their wounds.[17]

Bontecou called his photograph *A Morning's Work* because it represented the average number of amputations he did during an average morning during the war.[18] Configuring injuries in this manner elides individuals, wounds, accidents, and the specifics of their histories—it erases individual causes in favor of an average, an abstract fiction—and produces objective mathematical order out of a profusion of otherwise chaotic and unthinkable contingent scenarios. Medical personnel performed some 60,000 amputations during the Civil War (3 out of four operations were amputations),[19] of which 45,000 patients survived.[20] Trying to understand each individual injury, as well as its cause and treatment options, is overwhelming and nigh on impossible, but understanding the totality in terms of averages would seem to offer some comprehensible order to the staggering scale of limb loss.[21] The composition of *A Morning's Work*—a gentle hillock

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[17] Kathy Newman, "Wounds and Wounding in the American Civil War: A (Visual) History, *The Yale Journal of Criticism* 6, no. 2 (Fall 1993): 67; Maris A. Vinovskis, "Have Social Historians Lost the Civil War? Some Preliminary Demographic Speculations," *The Journal of American History* (June 1989): 49.

[18] Stanley B. Burns, *A Morning's Work: Medical Photographs from the Burns Archive and Collection, 1843–1939* (Santa Fe, NM: Twin Palms Publishers, 1998), cat. no. 23.

[19] Stewart Brooks, *Civil War Medicine* (Springfield, Illinois: Charles C. Thomas, 1966), 97; H.H. Cunningham, *Doctors in Grey: The Confederate Medical Service* (Baton Rouge: Louisiana State University Press, 1958), 225.

[20] Laurann Figg and Jane Farrell-Beck, "Amputation in the Civil War: Physical and Social Dimensions," *Journal of the History of Medicine and Allied Sciences* 48, no. 4 (October 1993): 454.

[21] During the Civil War some 1,500 toes were amputated, with 81 deaths resulting (6% fatality rate). 5,500 lower leg amputations were performed, resulting in 1,700 deaths (38% mortality rate). 6,300 amputations were made at mid-thigh, resulting in 3,411 deaths (54% mortality rate), while 195 legs were amputated at the knee, resulting in 111 deaths (58% mortality rate). Only 66 legs were taken off at the hip, but 55 of those operations were fatal (88% mortality rate). 172 soldiers underwent double amputations, which carried a mortality rate of 61.7 for bilateral upper thigh amputations, and an aggregate mortality rate of 51.5% for

composed of gangrenous, scarred, and ragged-edged limbs—embodies its identity as an average in that the contour of the pile of amputated limbs traces an approximation of a gently sloping Normal Curve. *A Morning's Work* normalizes a horrific fact of the war, metaphorically and visually. It aligns statistics and aesthetics. Despite its unsettling subject, furthermore, *A Morning's Work* recalls traditional Western still-life painting such as the artfully composed market scenes by the sixteenth-century Dutch painter Pieter Aertsen or Théordore Géricault's high-Romantic paintings of anatomical fragments. By mimicking the compositions of fine art antecedents, Bontecou cloaks the grim subject of his photograph in the universalities of timeless artistic tradition.

Bontecou's photograph is primarily relevant to this study because it anticipates the statistical logic of the vast compendia of mortality statistics compiled in the wake of the Civil War in publications like the government-mandated, multi-volume *Medical and Surgical History of the War of the Rebellion* (1870–1888).[22] The volumes compile page after page of charts representing the quantity and nature of cases of various diseases, wounds, deaths, and sicknesses arranged in chronological order, by geographical region, and by rank and race of victim. Elaine Scarry has suggested that the goal of war is to injure. Despite the ineffiencies of Northern hospitals and war medicine in general, Scarry notes, the North's superior medical capabilities were essential to their ultimate victory:

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bilateral lower extremity amputation. 224,580 U.S. Army soldiers died of disease, although it is unclear how many of these cases included infection incurred post-operation. 164,000 Confederate soldiers died of disease. Gangrene, a common cause for amputation, carried a mortality rate of 45.6% in the 2,652 cases recorded. One of the most significant causes of death was, in fact, not anticipated or accounted for: According to the *Medical and Surgical History of the War of the Rebellion* (1870–1888), some 560,000 soldiers died from disease during the war; that's two deaths from disease—dysentery, diarrhea, typhoid, and malaria—for every one sustained in battle.

[22] Barnes, Joseph K, comp., *Medical and Surgical History of the War of the Rebellion (1861–1865), Prepared, in Accordance with Acts of Congress, Under the Direction of Surgeon General Joseph K. Barnes, United States Army*, 3 vols. (Washington, D.C.: Government Printing Office, 1870–88).

"A generous and effective medical system…will contribute…to their side's ability to out-injure the other side, out-injuring accomplished in part by remaining as healthy and whole, well-fed and medically repaired as possible."[23] In this sense, the history of the war as an injury contest "won" by the North is told in this history of injuries sustained during the campaign. Victory, in other words, is defined by the statistical accounting of mortality rates, which testify to the North's greater ability to endure injury.

A similar story is told visually in the archive of photographs of injured, treated, and rehabilitated Union soldiers compiled by Bontecou and others. In publications like Bontecou's *Gunshot Wounds Illustrated* (1865), previously unimaginable injuries are photographed and visually controlled in before-and-after photographic format (Fig. 1.3). Thomas H. Matthews, a Corporal in the 198th Regiment of Pennsylvania Volunteers, for example, was shot during combat behind his left ear. The minnie ball, a new conical-cylindrical soft lead bullet the design of which improved upon the range, accuracy, and destructive capability of pre-War spherical ball ammunition, exited below Corporal Matthews's left eye, leaving a mazy trail of internal and external trauma.

In Bontecou's "before" picture, the exit wound beneath Corporal Matthews's left eye—the ostensible focus and function of the picture—is in the center of the image; the camera's position is superior and we look down on Corporal Matthews. The "after" picture, on the contrary, was shot from an inferior angle, so that we look up at the newly resuscitated/resurrected soldier. He has, visually and metaphorically, arisen. In addition to marking Matthews's rehabilitation compositionally, Bontecou also reflects his patient's physical health in his costume. In the "before" photograph, the corporal's

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[23] Elaine Scarry, *The Body in Pain: The Making and Unmaking of the World* (New York: Oxford University Press, 1985), 90.

gaping facial wound is mirrored in his shirt, which is open at the chest, and the dark curve of the laceration beneath his eye is similarly replicated in the thick drooping line of the ribbon or thong around his neck. In the "after" picture, the neatly sutured post-operative crescent scar beneath his eye rhymes with a series of similar shapes in his clothing—collar, buttons, neatly trimmed mustache, and watch fob. Indeed, the row of buttons and button holes on his jacket creates a descending reflection of his eyes, the left eye spherical and shiny like the polished brass buttons on the left lapel, the right eye marred by a narrow dark underscore like the slit of the buttonholes lining the right lapel. The "after" picture is of a man repaired, fixed, and whole. He is dressed immaculately, sutured impeccably, and ready to resume his role as productive member of society.

In the textual description that accompanied Bontecou's photographs of Corporal Matthews, his injury is attributed to the minnie ball rather than an enemy combatant. "He was wounded in Petersburg by a minnie ball that entered behind the left ear, making its way below the left eye, fracturing in its course the condyle and coronoid process of inferior maxillary, zygomatic process of temporal, and malar bones."[24] This unthinkable injury has been granted a seemingly reasonable medical explanation, albeit one ascribed to an inanimate object, the minnie ball, and its injurious circuit through Corporal Matthews' head. Describing injures in this manner effectively transcribes a war characterized by the radical dislocation of cause and effect (sharpshooters, infection, disease, etc.) within and on the bodies of the participants. The unpredictable and seemingly independent trajectory of the minnie ball is mapped in the same way that Stephen Crane's soldiers ponder "the mystery of a bullet's journey" in the 1899 short

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[24] Entry for Corporal Thomas H. Matthews in Reed Bontecou, M.D., *Gunshot Wounds Illustrated*, 2 vols. (Washington, D.C.: Harewood U. S. A. General Hospital, [1865]).

story "An Episode of War."[25] Writing injuries in this manner dislocates them from the specific context of this particular war; they appear to have just happened. The stochastic hazards of the war and their specific causes have retroactively been tamed by paradoxically attributing their cause to chance.

Like Bontecou's description of the minnie ball's journey through and across Corporal Matthew's face, Winslow Homer conflated war and body in *Trooper Meditating Beside a Grave*, a small oil painting of 1865 possibly intended as a study for a larger work that was never executed (Fig. 1.4). A lone soldier stands in the woods contemplating a rudimentary wooden cross that marks a compatriot's grave. Homer's soldier is faceless, anonymous, the visor of his kepi is pulled down low and covers his eyes. His jacket appears to be hanging open, unbuttoned over the breast. The yawning cavity, rimmed in scarlet and black and hollow within, suggests a horrific, gaping wound. Even those not injured in action, Homer seems to suggest, carry the wounds of war.

Like the new blades of grass at his feet, Homer's soldier represents life amidst death, but he is also marked for, or by, death. His eyes downcast and his face obscured, Homer's soldier is anonymous and abstract—he is an everyman, an average Union cavalryman, his identity as such indicated by the cavalry insignia—a pair of crossed sabers—on the top of his kepi. The oval flat cap stands in for the soldier's downcast, shadowed face; the crossed sabers replicate the red-brown mustache below. The glinting sabers also rhyme with the crosses planted in the ground around the soldier, who is himself, eerily enough, planted in the ground, his legs seeming to grow, like the grave-

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[25] Stephen Crane, "An Episode of War," in *The Portable Stephen Crane* (1899; New York: Penguin Books, 1969), 319.

marker before him, up from the grass and undergrowth. The cavalry insignia, quite literally, is an "x" on the soldier's head. As such, it evokes the view through a telescopic rifle sight as a sharpshooter takes aim. This element in *Trooper Meditating Beside a Grave* is a visual echo of a sketch of precisely such a view that Homer doodled in a letter of 1896 describing an instance at Yorktown in 1862 when he had occasion to "take aim" through a sharpshooter's rifles sight (Fig. 1.5).[26]

Imminent physical or mental trauma is writ large on Homer's soldier's uniform—the gaping chest wound cum billowing jacket and the rifle sight's crosshairs / cavalry insignia (see Fig. 1.4). Crane, in his war story "Death and the Child" also conflated wound and uniform when the narrator describes a line of walking wounded soldiers as an inventory of instructional bandaging diagrams: "Others were bandaged with the triangular kerchief, upon which one could still see, through blood-stains, the little explanatory pictures illustrating the ways to bind various wounds "Fig. I," "Fig. 2," "Fig. 7."[27] By reducing individuals to diagrams and targets, and defining them by their wounds, Crane and Homer participate in a broader discourse that attempted to make the war somehow more comprehensible through numbers, charts, diagrams, medical photographs, and statistics. Indeed, this statistical logic parallels the actuarial logic of the Army Pension program that would link identity, injuries, and financial compensation, suggesting that both endeavors are dedicated to managing the long-lasting trauma of wounds on an individual and national scale.

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[26] Winslow Homer to George G. Briggs, 19 February 1896. Winslow Homer collection, Archives of American Art, Smithsonian Institution.

[27] Crane, "Death and the Child," in *The Open Boat And Other Tales of Adventure* (New York: Doubleday & McClure Co., 1898), 260. The literary critic Mark Seltzer has argued that Crane's wound-soldiers are "the working models, living diagrams, and unnatural nature that…correlate wounded bodies and writing in the machine culture." Seltzer, *Bodies and Machines* (New York: Routledge, 1992), 114.

The accumulation and publication of Civil War mortality statistics is a key component of the late-nineteenth century American fetishization of numbers. Many believed that society and history could be better understood through statistical analysis. In 1914, S.N.D. North, the first head of a permanent United States census office and the chief statistician of the 1900 census, evaluated the past seventy-five years of progress in statistics and declared, "statistics are the surest foundation for history."[28] He proposed dividing the history of civilization after the Middle Ages into two phases, the non-statistical and the statistical. The former was synonymous with a period of "superstition," while the latter was a "period of ascertained facts expressed in numerical terms."[29] Statistics, North concluded, were "the chief instrumentality through which the progress of civilization is now measured, and by which its development hereafter will be largely controlled."[30]

That the notion of accounting statistically for the haphazard progress of history bled beyond the annual proceedings of organizations like North's American Statistical Association is testified to in a clever passage in Harold Frederic's 1892 story "My Aunt Susan" in which the narrator, a young boy named Ira, describes his aunt Susan as she worked at her loom during the Civil War weaving "cut up" and "sewed together" garments into carpets.

> At her side were piled a dozen or more big balls of carpet rags, which the village wives and daughters cut up, sewed together and wound in the long winter evening, while the men-folk sat with their stockinged feet on the

[28] Simon Newton Dexter North, *Seventy-five Years' Progress in Statistics, the outlook for the future; an address at the seventy fifth anniversary of the American statistical association, Boston, Mass., February 13, 1914* (Concord, N.H., The Rumford press, [1914]), 3.

[29] Ibid.

[30] Ibid.

> stove hearth, and read out the latest 'news from the front' in their *Weekly Tribune*.[31]

Susan's weaving is aligned textually with the "news from the front," the representation of which is incorporated into her carpet.

> For two years now the balls of rags had contained an increasing proportion of pale blue woolen strips, as the men of the county round about came home from the South, or bought cheap garments from the second-hand dealers in Tecumseh. All other colours had died out. There was only this light blue, and the black of bombazine or worsted mourning into which the news of each week's papers forced one or another of the neighboring families…. The loom spun out only long, depressing rolls of black and blue (306).

As the war rages Susan, like a latter day Penelope, weaves the story of the war, patiently producing rugs dominated by the blue and black rags of Union overcoats and widow's mourning garments. "'If this war goes on much longer,'" she points out, "'every carpet in Dearborn County'll be blue as a whetstone'" (305–6). The "long, depressing rolls of black and blue" reflect casualty reports and mortality statistics from the battlefield printed in the daily newspaper. The loom counts and accounts for all those bodies involved in the war, binding together the cast-off uniforms of dead and wounded soldiers with women's uniforms of mourning, the "black of bombazine or worsted" (306). Uniforms stand in for bodies; bodies are uniform. In the sense that Susan's loom translates aggregates of disparate facts into some form of order and regularity, it can be said to function in a statistical manner.

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[31] Harold Frederic, "My Aunt Susan," *In the Sixties* (New York: Scribner's Sons, 1897; reprint, New York, 1971), 303. "My Aunt Susan" was first published in *The Independent* (London) on 9 June 1892. It was later included in *In the Sixties*, which was published in March 1897 by Charles Scribner's Sons, New York. The volume was a "Uniform Edition" of all Frederic's stories they had published to date, including "The Copperhead," "Marsena," "The Eve of the Fourth," and "My Aunt Susan.

Frederic's Aunt Susan and her creative representation of mortality statistics can be understood in the context of the widespread statistical measurement of all manner of phenomenon that marked the final quarter of the nineteenth century. Experts in a number of disciplines and commercial enterprises counted, measured, and classified individual experiences, bodies, and lives. Innovative graphic techniques were developed to visualize, dramatize, and publicize the previously invisible trends, laws, and patterns revealed by the analysis of these accumulated statistics, numbers, and measurements. The resulting pictographs, charts, graphs, tables, and maps were published in popular statistical atlases. They transformed seemingly random phenomena like disease, crime, and death into images that suggest consistent, map-able, predictable, and manageable rates (Fig. 1.6; see also Figs. 4.68 and 4.69). Aunt Susan's loom can be understood as a component of a burgeoning statistical logic. Towards the end of the century, Americans gained familiarity with new modes of representational statistical logic, which oozed—lava-like, if you will, to keep with Hacking's volcano analogy—beyond the borders of social science and into popular modes of representation, literary and visual.

As the highly visible injured bodies of the Civil War were accounted for statistically in the final decades of the nineteenth century, accidents and injuries were happening more often and often more spectacularly. New modes of transportation and the accelerated speed thereof yielded more and more injurious wrecks; more factories and an increase in an urban workforce yielded more frequent workplace injuries; and so forth. As accidents increased, so did their visibility, in newspapers, prints, and other forms of popular media. Urban accident forms the subject of paintings, prints, and drawings by some of the New York urban realists, many of whom trained and worked as newspaper

illustrators. Everett Shinn did a series of pastel drawings of fire-fighting scenes and at least one traffic accident.[32] George Bellows painted a collision between old and new modes of transport—horse-drawn carriage and street car, respectively—in his 1908 painting *Steaming Streets* (Fig. 1.7). This focus on modern accidents attests to a number of things: the press's commercialization of the horrific, a basic human fascination with the grotesque (emblematized by Bellows's sidewalk gawkers), and the perceived random hazards of modern urban life.[33] An under-examined aspect of this trajectory concerns the fact that the increase in the visibility of accidents paralleled the emergence and rapid growth of an insurance industry dedicated to managing accidents' consequences.

The growth of the insurance industry over the course of the nineteenth century was staggering: In 1840 less than $5 million of life insurance (issued by 15 companies) was in force in the United States. By 1860, forty-three companies had almost $205 million worth of policies in force. Insurance as a "democratized universal institution" came into effect in the US the decade after the Civil war,[34] which boosted the industry's growth: 75 new companies organized between 1859 and 1867. Between 1860 and the end of the war in 1865 the total value of life insurance policies issued trebled. Indeed, it has been suggested that the industry's growth during the Civil War, a period of previously

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[32] See Everett Shinn, *Fire on Twenty-fourth Street, New York City*, 1907, pastel on paper, 23 ¼ x 18 inches (59 x 45.7 cm), Hirschl and Adler Galleries, New York; and Everett Shinn, *Night Life—Accident*, 1908, pastel, watercolor, and gouache on paper, 13 x 17 ¼ inches (33 x 43.8 cm), Private collection, both of which are illustrated in Rebecca Zurier, Robert W. Snyder, and Virginia M. Mecklenburg, *Metropolitan Lives: The Ashcan Artists and Their New York* (exh. cat. National Museum of American Art; New York: W.W. Norton and Company, 1995).

[33] For more on this spectacular aspect of modern life, see Ben Singer, *Melodrama and Modernity* (New York: Columbia University Press, 2001), 59–100. On images of accident, fire, and other urban disaster by the so-called Ashcan painters as theatrical and spectacular spectator events, see Zurier et al, *Metropolitan Lives*, (1995), 90–92; and Sylvia Yount, "Consuming Drama: Everett Shinn and the Spectacular City," *American Art* 6, no. 4 (Autumn, 1992): 86–109.

[34] Boorstin (1973), 174.

unimaginable mortality, was an effect of the focus "on the transience of life in the most dramatic possible way."[35]

An 1872 *Harper's Weekly* illustration testifies to the dialectical relationship between the visibility of accidents and the institutions dedicated to managing their consequences (Fig. 1.8). Here, a fire engine of the newest design wreaks havoc as it races to tame an unseen conflagration. Accidents spawn accidents in a series of contingent concatenations. Notably, the prominent sign for the "Accident Insurance Co." oversees the mayhem. The purview of the insurance company underwrites, literally and figuratively, this hazardous scene. To ensure insurance's viability, the world had to be represented as a place of imminent but ultimately unforeseeable accidents: a world of risk, in other words.

Sociologists Ulrich Beck and Anthony Giddens suggest that the twinned concepts of risk / chance define the essence of modern society.[36] We have come to accept that risk / chance impacts every aspect of our lives, on an individual and global level, and we guard against potential consequences by investing in various forms of insurance. Insurance has become an accepted and inescapable fact of life. This state of affairs has a history that becomes increasingly complex with the rise of the insurance industry over the last quarter of the nineteenth century. This period saw the birth of what the philosopher and historian François Ewald calls the "insurance society," in which norms and averages

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[35] Viviana A. Rotman Zelizer, *Morals and Markets: The Development of Life Insurance in the United States* (New Brunswick: Transaction Books, 1983), 15. Zelizer refers to an assumption by Morton Keller and R. Carlyle Buley in *The Life Insurance Enterprise,1885–1910: A Study in the Limits of Corporate Power* (Cambridge, MA: Belknap Press of Harvard University Press, 1963), 17; and R. Carlyle Buley, *The Equitable Life Assurance Society of the United States: One Hundredth Anniversary History, 1859/1959* (New York: Appleton-Century-Crofts, [1959]), 82.

[36] Ulrich Beck, *Risk Society: Towards a New Modernity*, trans. Mark Ritter (London: Sage Publications, 1992); Anthony Giddens, *The Consequences of Modernity* (Stanford: Stanford University Press, 1990).

function, as per Foucault's biopolitics model, as organizing principles of disciplinary power, provided standards of measure by which risk could be calculated according to rules of statistical probability.[37] An overlooked element of this obscure history comprises visual culture: prints, illustrations, advertisements, photographs, films. In the chapters that follow, select images from the visual component of this history will be exposed and theorized as they relate to the works of art at the heart of each chapter.

My research has led me to the following conclusion: to ensure insurance's viability at the end of the nineteenth century, the world had to be shown to operate according to predictable rules, the most important of which was, paradoxically, that no outcome could be prognosticated with ultimate precision. The world had to be constructed and represented as a place of risk. Risk, according to Ewald, is the fundamental element of insurance.[38] Ewald has written that risk in the context of insurance has three characteristics: 1) risk must be calculable in that the probability of the occurrence of a given event must be estimable, 2) risk is collective in that an individual accident only becomes calculable when it is socialized, and 3) risk is capital in that it must be possible to equate financial compensation for any given loss (this is what separates insurance from relief from charities, fraternities, or other traditional forms of local community support).[39] Based on these elements of risk, insurance is "the

[37] François Ewald, "Insurance and Risk," in Graham Burchell, ed., *The Foucault Effect: Studies in Governmentality* (Chicago: University of Chicago Press, 1991), 203.

[38] Ibid., 199.

[39] Ibid., 201–205.

compensation of effects of chance through mutuality organized according to the laws of statistics."[40]

Rather than thinking about insurance in terms of specific companies, forms, or technologies, Ewald considers insurance as the practice of a certain type of rationality. It has, Ewald writes, "no special field of operations; rather than being defined in terms of its objects, it is a kind of ubiquitous form. It provides a general principle for the objectification of things, people and their relations."[41] The chapters that follow embrace Ewald's formulation of insurance as a "type of rationality." Following art historian Michael Baxandall, who has suggested that social facts lead to the development of visual habits and skills, which, combined with real experience, contribute to a "cognitive style," I aim to unearth what might be called an actuarial cognitive style at work in the formation of Ewald's late-nineteenth century insurance society.[42] An actuarial cognitive style reveals the social facts, visual habits, and skills endorsed and rewarded in a society managed by an increasingly powerful insurance industry. Americans were taught to act, in part, as insurance underwriters, assessing personal risks according to probabilities informed by widely published and illustrated vital and accident statistics and estimating the potential ramifications, in terms of injury and financial cost, of any assessed risk. My dissertation demonstrates that as Americans began to think, speak, and visualize their world and lives in terms of risk, odds, and contingency, a statistical and actuarial calculus manifested in works of art. How, in short, were American artists, in representing a world

[40] Ibid., 207.

[41] Ibid., 206.

[42] Michael Baxandall, *Painting and Experience in Fifteenth Century Italy: A Primer in the Social History of Pictorial Style* (Oxford: Clarendon Press, 1972), 30.

coming to be understood as governed by chance and managed by insurance informed by the insistent discourse surrounding chance's emerging role as an increasingly potent social force and were they complicit or resistant to the eventual triumph of an insurance society?

Chance presented problems and possibilities in equal measure. Darwin described the evolution of nature as a process of natural selection marked by random and purposeless variations. Chance, for Darwin, was an infinite wellspring of differentiation, heterogeneity, and adaptability. Herbert Spencer modified an evolutionary paradigm to a form suitable to social structures, but factored in an inherent upward mobility that assuaged anxieties arising from the blind chance of Darwinism. Social theorist John Fiske similarly tamed Darwin's evolutionary theories, commandeering Herbert Spencer's version of an evolutionary paradigm and investing it with Emersonian-esque elements that assuaged Americans' anxieties about death and the fate of the soul raised by *Descent of Man*.[43] Charles Sanders Peirce, William James, Oliver Wendell Holmes and other so-called philosophical pragmatists dedicated energy to trying to refute doubts raised by Darwin's mechanistic universe by embracing chance's role in the universe. Based on conditions of experience, Peirce concluded that indeterminism was the only logical way to account for the spontaneity, abundance, and variation of nature, as well as human consciousness. Indeed, in Peirce's tychism, he identified a hypothesis of "absolute chance," in which chance is a force that violates the regular laws of nature in

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[43] On the response of American artists to Darwinism, see Kathleen Pyne, *Art and the Higher Life: Painting and Evolutionary Thought in Late Nineteenth-Century America* (Austin: University of Texas Press, 1996), particularly Chapter 1. For other contemporary responses to Darwin, see Frank X. Ryan, ed., *Darwin's Impact: Social Evolution in America*, vol. 2, *Race, Gender and Supremacy* (Bristol, UK: Thoemmes Press, 2001).

infinitesimal ways and results in a world characterized by uncertainty and speculation.[44] Peirce fully recognized the erosion of determinism and embraced the possibilities offered by chance. He saw that he lived in a world of chance because probability and statistics permeated every aspect of life.[45] For William James, chance's "presence is the vital air which lets the world live, the salt which keeps it sweet."[46] Henry Adams, the historian and author of the autobiographical *Education of Henry Adams* (1907), on the contrary, was distressed by modern developments in science and technology and saw only a pessimistic vision of the modern world. He subscribed to a thermodynamic model of the universe motivated by the purposeless and entropic forces of pure chance.

Novelists, including Theodore Dreiser, Frank Norris, Jack London, Stephen Crane, and William Dean Howells, among others, grappled with the potential ramifications of a world operating by chance, exploring systems—economic, evolutionary, narrative—in which inhumane and ultimately destructive forces contend without concern for human life. These authors utilized accidents, coincidences, lotteries, stock market crashes, mistaken identities, and all manner of chance interventions as reliable literary devices to propel the plot forward or offer narrative conclusions. Edward Bellamy, as we shall see in Chapter 3, interpreted chance and causality differently in his popular utopian novel of 1888, *Looking Backward, 2000–1887*, constructing a brave new world in which chance is a beneficent force. Where Norris or London, for example, saw, like Adams, the randomness of chance pointing to degeneration, atavism, and entropy,

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[44] Peirce, *Collected Papers*, 7:514; See also Peter T. Turley, "Peirce on Chance," *Transactions of the Charles S. Peirce Society*. 5, no. 4 (Fall, 1969): 243–254.

[45] Hacking, *Taming of Chance*, xii.

[46] William James, *Writings, 1878–1899* (New York: Library of America, 1992), 591.

Bellamy wrote the random and the purposeless out of the equation altogether by paradoxically incorporating chance as a positive variable, thereby imagining a scenario in which utopia would automatically develop via risk-free evolution.

Rather than approach chance in the visual arts in terms of subject (a comprehensive history of images of accidents has yet to be written), spatio-temporal coincidence, or as an intentional compositional or creative strategy (both of which are promising avenues for future investigation), my interests lie in exposing and interpreting hitherto unnoticed points of intersection between American visual culture and the rhetoric, logic, and imagery of institutions and disciplines dedicated to rationalizing chance—insurance, statistics, probabilism, the census and other forms of systematized enumeration—around 1900, when, in the wake of the Civil War, conceptions of chance, causality, risk, and the accident underwent considerable revision. Organized as a series of case studies, my project demonstrates that visual culture fully engaged with the abstract concepts—chance, risk—and mathematical disciplines—statistics, probabilism, enumeration—that informed this emergent worldview.

Chapter One considers a series of paintings Winslow Homer executed in the mid-1880s that take peril at sea as their subjects. Paintings such as *The Fog Warning* thematize risk and contingency and resonate with a double discourse prevalent in life insurance marketing: life as commodity, and contingency plan as quasi-religious salvation. My research has revealed a striking congruity, overlooked heretofore, between the iconography of insurance advertising and Homer's nautical motifs. Taking direction from sociologist Viviana Zelizer's work on the moral messaging of early life insurance marketing, my readings offer a socio-historically grounded alternative to the gender,

psychoanalytic, and biographical focus of previous interpretations of Homer's sea pictures.[47] I map clear connections between Homer's paintings and the establishment of life insurance as a new way of rationalizing death, its financial evaluation, and actuarial management and compensation.

It has become common to explain Pictorial photographic portraiture's soft focus as a means of elevating photography to the status of art from its mimetic, technological origins. Chapter Two proposes an alternate interpretive option via an archaeology of the blur. I demonstrate that photographers such as Edward Steichen were not alone in idealizing essentialized, abstracted, and blurred physiognomies. Pictorialist portraiture negotiates between competing models of modern subjectivity: On one hand: a robust, humanist model in which the soul is essential and unique. On the other: a statistically-informed mechanistic model in which individuals are accounted for in relation to norms, averages, and percentages extracted from large populations. Pictorialist portraiture has long been championed as the expression of the former. I argue that it is equally informed by the latter. This occurs at a moment when individuals were being recalculated in relation to statistical norms, an integral step in the emergence around 1900 of Ewald's insurance society.

Chapter Three focuses on George Bellows's 1907 painting *Forty-two Kids*, which I read as an imperfect and discomfiting visual census; the painting's formal illegibility contradicts the title's enumerative specificity. I situate Bellows's work in a culture that fetishized enumeration and placed real faith in the reformative potential of quantitative statistical analysis. Instead of offering a reassuring census, though, *Forty-two Kids* calls

[47] Viviana A. Rotman Zelizer, *Morals and Markets: The Development of Life Insurance in the United States* (New Brunswick: Transaction Books, 1983).

into question the efficacy of the enumerative exercise. In a world of chance, Bellows seems to argue, the act of counting could not escape chance and the law of error and became an inherently speculative endeavor. *Forty-two Kids* engages the tension around 1900 between, on one hand, a positivist and progressive belief in the power of enumeration and statistical probabilism to bring about real social change and, on the other hand, the growing acceptance of the integral role of absolute chance and indeterminism in all social operations. Bellows's brand of realism is one that confounds vision and invites chance into the interpretive equation, undermining a rational, or quantifiable, view of the world at a moment when a paradigm of statistically-provable deterministic laws was giving way to one based on its opposite, indeterminism. Presaging twentieth-century art's embrace of chance, Bellows' effacing brushstrokes exploit the productive tension at the heart of the dialectical relationship between control and accident.

My interpretations rely on the histories of statistics, probability, chance, and risk written by philosophers and historians of science Ian Hacking, Theodore Porter, Stephen Stigler, Lorraine Daston, and others.[48] Their important work laid the foundation for a wave of cultural and literary studies. Walter Benn Michaels sparked important queries into the relationship between chance, writing, and representation.[49] While Michaels' provocative close readings are the gold standard, I'd suggest that his economic interests

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[48] Ian Hacking, *The Emergence of Probability: A Philosophical Study of Early Ideas about Probability, Induction, and Statistical Inference* (London: Cambridge University Press, 1975); Theodore M. Porter, *The Rise of Statistical Thinking, 1820–1900* (Princeton: Princeton University Press, 1986); Stephen M. Stigler, *The History of Statistics: The Measurement of Uncertainty Before 1900* (Cambridge: The Belknap Press of Harvard University Press, 1986); Lorraine J. Daston, *The Probabilistic Revolution* (Cambridge: MIT University Press, 1987); Gerd Gigerenzer et al, *The Empire of Chance: How Probability Changed Science and Everyday Life* (Cambridge: Cambridge University Press, 1989); Stephen M. Stigler, *Statistics on the Table: The History of Statistical Concepts and Methods* (Cambridge: Harvard University Press, 1999).

[49] Walter Benn Michaels, *The Gold Standard and the Logic of Naturalism* (Berkeley: University of California Press, 1987).

are but part of the broad culture of chance. Subsequent inquiries by literary and cultural critics and sociologists Stephen Kern, Judith Green, Nan Goodman, and others revealed rich and divergent ways that cultural forms intersect with discourses of chance and risk.[50] While the secondary literature on chance in the social sciences, intellectual history, mathematics, literature, narrative theory, economics, genetics, law, and statistics is substantial, little consideration has been given to a social history of chance that incorporates visual culture of the late-nineteenth and early-twentieth century.

Art historians are beginning to show an interest in the relevance of chance's history and historiography to visual culture.[51] Robin Kelsey and Edward Eigen are engaged in exciting projects relating to chance and photography and the architectural memorialization of accidents, respectively.[52] It is fair to say that an interdisciplinary conversation about chance and its related concepts risk, contingency, gambling, and the accident have blossomed over the past two decades. I hope to contribute an art historian's voice and eye to this conversation by pointing the way towards eventually writing a history of late nineteenth- and early-twentieth-century American painting and photography that foregrounds evolving and contested conceptions of chance, risk, and

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[50] Judith Green, *Risk and Misfortune: A Social Construction of Accidents* (London: University College London Press, 1997); Nan Goodman, *Shifting the Blame: Literature, Law, and the Theory of Accidents in Nineteenth-Century America* (Princeton: Princeton University Press, 1998); Deborah Lupton, *Risk* (New York: Routledge, 1999); Elaine Freedgood, *Victorian Writing about Risk: Imagining a Safe England in a Dangerous World* (Cambridge: Cambridge University Press, 2000); T.J. Jackson Lears, *Something For Nothing: Luck in America* (New York: Viking, 2003); Eric Wertheimer, *Underwriting: The Poetics of Insurance in America, 1722–1872* (Stanford: Stanford University Press, 2006); Jason Puskar, "Underwriting the Accident: Narratives of American Chance, 1871–1935" (unpub. Diss. Harvard University, 2004).

[51] Cynthia Mills, "Emerging Themes, Emerging Voices," *American Art* 21, no. 2 (Summer 2007): 2–14.

[52] Robin Kelsey, "Chance and Photography," in Robin Kelsey and Blake Stimson, eds., *The Meaning of Photography* (Williamstown, Mass.: Sterling and Francine Clark Art Institute; New Haven: Distributed by Yale University Press, 2008); Edward Eigen, "On the Record: J.M.W. Turner's Studies for the Burning of the Houses of Parliament and Other Uncertain Bequests to History, *Grey Room* 31 (Spring 2008).

probability. Indeed, I hope this dissertation is the first step in a history of visual culture that foregrounds evolving conceptions of chance with an eye towards historical interdependence.

Writing in 1897, Alfred Stieglitz explicitly acknowledged the role of chance in his work. Regarding his photograph *Winter—Fifth Avenue* (1893; Fig. 1.9), he wrote that the "result contained an element of chance, as I might have stood there for hours without succeeding in getting the desired picture."[53] But, even as Stieglitz admitted to chance's role in photography, he also seemed to believe that it could be tamed:

> It is amusing to watch the majority of hand camera workers shooting off a ton of plates helter-skelter, taking their chances as to the ultimate result. Once in a while these people make a hit, and it is due to this case that many pictures produced by means of the hand camera have been considered flukes. At the same time it is interesting to note with what regularity certain men seem to be the favorites of chance—so that it would lead us to conclude that, perhaps, chance is not everything, after all.[54]

Around 1900, chance could be everything and nothing. Chance was both appealing and terrifying. It could paradoxically provide an illusion of control, in terms of probability or odds, even as it represented the omnipresence of doubt, risk, and uncertainty. The artists in my case studies represent a few of those who, deliberately or not, probed the meanings and ramifications of a newly emergent world of chance. Their work does not necessarily take a clearly defined position regarding chance and its creative, aesthetic, or social beneficence or disadvantage, just as my readings arguably evade making claims for artistic intention, motivation, or even awareness. The players in

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[53] Stieglitz, "The Hand Camera—Its Present Importance," *American Annual of Photography* (1897); reprinted in Vicki Goldberg, ed., *Photography in Print: Writings from 1816 to the Present* (New York: Simon and Schuster, 1981), 216–17.

[54] Ibid.

my study need not have been aware of each others' work, nor need they have been aware of any resonances I point out between their work and others'. The paintings and photographs that form the focus of my chapters are often multivalent and slippery, properly reflecting the dialectical relationship between chance and control, determinism and indeterminism, accident and intention. By thematizing or engaging with chance, the artists discussed in the following chapters paved the way for later artists who would fully embrace chance as a subject or compositional strategy—Surrealists, Dadaists, Abstract Expressionists, Conceptual artists, and practitioners more recent and more difficult to stylistically define. The work I consider here and the culture of which they are part and to which they contribute are part of the social, historical, and artistic conditions that enabled subsequent artists to embrace chance as a fully viable component of modern and contemporary art.

Chapter 1

Picturing Personal Risk: Winslow Homer's Perilous Seas and Insurance Advertising in the 1880s

In 1885 Winslow Homer (1836–1910) executed three oil paintings of comparable size—roughly 30" x 48"—that take North Atlantic fishermen as their subjects: *The Herring Net*, *The Fog Warning*, and *Lost on the Grand Banks*. (Figs. 2.1, 2.2, and 2.3).[1] In 1893 all three were included in the World's Columbian Exposition, where critics recognized them as a series addressing the "dramatic and tragic phases of the life of the…fisherman."[2] Despite the paintings' obvious differences, including the species of fish in each picture (herring, halibut, and cod, respectively) and the number of fishermen in the dory in each painting, the trio has long been understood as sequential passages in a loosely connected narrative. A late-nineteenth century critic read them as comprising a "noble epic, beginning with a scene of rough toil and ending with a premonition of tragedy."[3] The description, while verging on grandiloquent, is apt in that the choice of words "epic" and "tragedy" elevate the pictures from the mundane realm of "realist" representations of labor to loftier literary heights, equating Homer's fishing pictures with poetic and dramatic forms central to the development of Western civilization. Turgid, perhaps, but this critic's inflated language is not wholly inaccurate in that it identifies the

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[1] Based on their initial appearances in public exhibitions, Homer appears to have painted them in this sequence given here.

[2] "Winslow Homer's Pictures at the World's Fair" (unidentified newspaper clipping, Bowdoin), quoted in Nicolai Cikovsky, Jr., Franklin Kelly et al., *Winslow Homer* (exh. cat., National Gallery of Art; New Haven: Yale University Press, 1995), 226.

[3] Ibid.

key elements of the trajectory of Homer's series: valiant effort, heroism, conflict, overwhelming forces, and eventual demise.

A key difference between Homer's series and the epic tradition originated by his Greek namesake, the author of *The Iliad* and *The Odyssey*, is the role of divine intervention, which plays a major part in the epics of Homer, Hesiod, Virgil, Ovid, and others; it is, indeed, essential to the narrative structure of those poems.[4] Winslow Homer's paintings, on the contrary, are devoid of divine oversight, although, as I will show, they do contain religious iconography. As was the case with classical epics such as *The Iliad* or *The Odyssey*, a modern epic would have to be composed in accordance with contemporaneous conceptions of the universe's operation.[5] In Winslow Homer's lifetime many came to understand that the universe did not function by divine predetermination. This shift rendered a narrative form that relied on the caprice of the gods for conflict resolution, plot development, and moral instruction ideologically unsuitable. Homer's epic series is eminently representative of its historical moment in that it is dependent on an understanding of a world contingent on risk and chance rather than divine inspiration.

The fishermen in *The Herring Net*, the scene of "rough toil" with which the series begins, enjoy good fortune; their bountiful catch is the result of the favorable coincidence of the net's placement and a spawning school of herring. In *The Fog Warning*, a halibut fisherman in a loaded dory is alerted by an alarm from his mother ship to the atmospheric

[4] Tobias Gregory, *From Many Gods to One: Divine Action in Renaissance Epic* (Chicago: University of Chicago Press, 2006).

[5] I take my cue here from Tobias Gregory's exploration of the Renaissance "reinvention of epic divine action," about which he writes: "When Renaissance poets set themselves the task of emulating the *Aeneid*, they understood that divine action of some kind would be a necessary part of the project. They understood too that in this respect their classical models could not be followed too closely; epic divine action would have to be reinvented in accordance with Christian norms." Gregory (2006), 4.

threat gathering on the horizon. *Lost on the Grand Banks* portrays two cod fishermen who have been separated from their schooner by a dense fog. Executed in a single prolific year, *The Herring Net*, *The Fog Warning*, and *Lost on the Grand Banks* were bookended by a pair of lifesaving images: *The Life Line* (1884, Fig. 2.4), which depicts a rescue operation using a breeches buoy to save an unconscious woman from a coastal shipwreck, and *Undertow* (1886, Fig. 2.5), which, according to a critic writing in 1887, "is a picture in which four figures, thrown together by chance, are made to assume magnificent combinations of line, and to present an heroic sculpturesque effect which endow them with the quality of the antique."[6]

During the decade, Homer also portrayed shipwrecks, in *Wreck of the Iron Crown* (1881, Fig. 2.6) and *The Ship's Boat* (1883, Fig. 2.7), and their impact on the local community's female population, in *Perils of the Sea* (1881, Fig. 2.8); Good Samaritan rescue in *To the Rescue* (1886, Fig. 2.9); and nautical navigation under challenging weather conditions in *Eight Bells* (1886, Fig. 2.10) and *Blown Away* (1888, Fig. 2.11). Thematically related paintings, such as that of a rescue mission at sea, in *The Signal of Distress* (1890 / 1892–1896, Fig. 2.12), and an offshore shipwreck in *The Wreck* (1896, Fig. 2.13), that originated in sketches and ideas dating from the 1880s complete a cluster of images that indicates a keen interest on Homer's part during the decade in uncertainty, accident, risk, peril, and salvation.[7] These are notions closely related to the concept of chance, which was a topic of much revision, speculation, and concern during the decade.

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[6] "The Fine Arts. Good Work at the Academy," *The Critic*, 9 April 1887, 183; quoted in Cikovsky and Kelly (1995), 189.

[7] It could be argued that Homer's interest in risk and chance extended the entirety of his career. *Defiance: Inviting a Shot at Petersburg* (1864, Detroit Institute of Arts), for instance, certainly engages with the subject, as does *Fox Hunt* (1893: Pennsylvania Academy of the Fine Arts) and *Gulf Stream* (1899, Metropolitan Museum of Art). His hunting images such as *Fallen Deer* (1892, Museum of Fine Arts,

Homer's trio of fishing paintings is manifestly about labor in arduous conditions. It clearly pays homage to the "bold-hearted fishermen" of Gloucester and their courage, strength, and stamina in the face of potentially disastrous natural phenomena.[8] Homer's paintings, though, are multivalent. Homer's images of the sea and the activities of men on and at its edge have supported numerous interpretations. Sarah Burns has argued that Homer's wreck and rescue subjects related semantically to the anxieties and exhilaration of the turbulent post-Civil War U.S. economy and his "bigness and force" jibed with the character of American business.[9] Paul Provost has written about the "heroism" of Homer's fishermen.[10] Paul Staiti has viewed Homer's hunting subjects and late seascapes through the lens of late nineteenth-century thermodynamic theory.[11] Henry Adams has famously noticed that "death is the central theme in all these works," and put forth a psycho-biographical reading of Homer's preoccupation with morbidity in the years following the deaths of the artist's mother and father.[12] Elizabeth Johns has utilized Erik Erikson's psychological theories of life cycle identity development as a matrix for understanding Homer's pictures of peril and savior as symptomatic of the "competence,

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Boston) or *Hound and Hunter* (1892, National Gallery of Art) have been examined in relation to Darwinian themes of survival, and it is obvious that Darwin's theories of evolution hinge on the evolutionary benefit of chance mutation. My focus here, however, is more specific to social theories of risk as they evolved in the 1880s in conjunction with the rhetoric and imagery employed by insurance, which dedicated itself at this time to rationalizing or taming chance via complex actuarial and investment computations.

[8] George H. Procter, *The Fishermen's Memorial and Record Book: Containing a List of Vessels and Their Crews Lost from the Port of Gloucester from the Year 1830 to October 1, 1873* (Gloucester: Procter Brothers, 1873), 4.

[9] Sarah Burns, *Inventing the Modern Artist: Art and Culture in Gilded Age America* (New Haven: Yale University Press, 1996), 191.

[10] Paul Provost, "Winslow Homer's *The Fog Warning*: The Fisherman as Heroic Character," *American Art Journal* 22, no. 1 (Spring 1990): 20–27.

[11] Paul Staiti, "Winslow Homer and the Drama of Thermodynamics," *American Art* 15, no. 1 (Spring, 2001): 10–33.

[12] Henry Adams, "Mortal Themes: Winslow Homer," *Art in America* 71 (February 1983): 114.

testing, courage, and tragedy that haunt middle age."[13] This list comprises just a fraction of the numerous interpretations offered for Homer's marine subjects.

I propose a different approach. One, indeed, that connects in new ways the numerous disparate interpretive approaches to Homer's marine subjects of the 1880s. Homer's images resonate with a contemporaneous visual culture of accident and risk produced by both the popular press and the advertising arm of the insurance industry, which was becoming increasingly powerful and visible during the 1870s and 1880s. At the end of the nineteenth century, Americans were becoming accustomed to perceiving their world as a place of inevitable accident and ubiquitous risk. Prompted by vividly illustrated advertisements, Americans were being asked to imagine and fear unpredictable and accidental injury and death. Homer's fishing series, which plots a narrative trajectory from good fortune to terrible disaster following the intervention of an unforeseen but generally predictable natural phenomenon, can be situated in a contemporaneous cultural discourse of risk and chance. Homer's seas can be read as emblematic of the powerful and unpredictable forces and risks that characterized modern life as the insurance industry portrayed it; like Homer's halibut fisherman in *The Fog Warning*, Americans were being trained at the end of the nineteenth century to be alert to previously unseen perils on the horizon.

Risk Analysis

The Herring Net is believed to be based on firsthand observations made in Prout's Neck, Maine, during 1884's bountiful herring season.[14] Two fishermen in a dory haul in a

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[13] Elizabeth Johns, *Winslow Homer: The Nature of Observation* (Berkeley: University of California Press, 2002), 119.

gill net loaded with herring.[15] Homer's rightmost fisherman kneels in the middle of the dory; he is underrunning, a technique that involves dragging the gillnet across the gunwale and emptying its contents into the bottom of the boat. His companion balances on the starboard gunwale and leans over the rolling sea in order to lower the empty net back into the water. The net will remain in place overnight to be checked and emptied again the next day. Despite being a depiction of strenuous labor, Homer's image is calm and still. The composition is pyramidal, formed by the lines of the fishermen's sloping backs, shoulders, arms, and the curve of port-side gunwale. The triangular apex is echoed below by vectors formed by the diagonal of the gill net's float line as it rises from the painting's lower right corner, and the crest of the swell rising from the lower left corner of the canvas. The shimmering bodies of the herring emerge from the waves in a scalene triangle-shaped wedge that bisects a similarly shaped dagger of sunlight that illuminates the ocean's surface to the right of the dory. While the interplay of geometric forms creates a sense of energy underscoring the ebb and flow of the tide, it also serves to lock the dory and its occupants firmly in place. Homer has corralled the shifting energies of the ocean and organized them into a rational and geometric order. It is a theme that is emblematized two-dimensionally in the motif of the crossed oars in the prow of the dory; *x*, as it were, marks the spot.

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[14] According to testimony recorded by Philip Beam, one of Homer's earliest biographers, Roswell Googins, a youth in Prout's Neck, Maine, rowed Homer out to the herring fleet anchored in the herrings' coastal spawning grounds. *The Herring Net* appears to be based on drawings dating from 1884 believed to have resulted from Homer's expedition with Googins. Philip Conway Beam, *Winslow Homer at Prout's Neck* (Boston: Little, Brown, 1966), 66.

[15] A dory is a small boat, approximately five to seven feet in length, with a narrow, flat bottom, high bow, and flaring sides. It is a traditional fishing boat used in both coastal and deep waters off the Northeast coast of the United States.

The overall sense conveyed by Homer's image is one of monumentality and stability familiar from Renaissance painting. The *Boston Daily Evening Transcript* appears to have made this connection in 1886 when it pointed out that *The Herring Net* "recalls certain old Italian work, it is the very concentration of strength."[16] Franklin Kelly has suggested that the critic might have been thinking specifically of Raphael's *The Miraculous Draft of Fishes*, a familiar image of piscine bounty (Fig. 2.14).[17] In Luke's account of the calling of the apostles to follow Jesus (Luke 5:1–11), they enjoy a divinely sanctioned bounteous catch, which functions as a metaphor for the disciples' future influence over the spiritual lives of humankind. The miraculous nature of the scenario outlined in the Gospel of Luke is defined as such not just by virtue of its enormity ("they inclosed a great multitude of fishes: and their net brake"[18]) but because they had, as Simon told Christ, "toiled all the night, and have taken nothing."[19] A previously barren fishing ground, as per Christ's will, miraculously bore an abundance of fish.

Herring spawning season, when fish of the quantities alluded to in the Gospel of Luke and depicted in *The Herring Net* might be expected in shallow coastal waters, is contingent upon climate, water temperature, and other combinations of environmental factors not fully understood by the fisherman Homer would have seen in action. Describing the movements of herring schools, George Brown Goode's definitive study of the fishing industry of the United States noted that "although the movements of the herring appear to be very capricious, they are doubtless governed as much by well-

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[16] *Boston Daily Evening Transcript*, 25 February 1886; quoted in Cikovsky and Kelly (1995), 228.

[17] Ibid.

[18] Luke 5:4. King James Bible.

[19] Ibid.

defined laws as any other portion of creation, although we are yet far from understanding fully the conditions which control their actions."[20] Herring schools often returned to favored coastal stretches to spawn, depositing their eggs on shallow and nutrient-rich ocean floors, although Goode concedes that "herrings do not like to visit the place where they have spawned a second time."[21] The perceived deterministic laws governing the regular movements of the herring were not fully known. There existed an element of uncertainty, but past performance offered the probability of future success. In contrast to the New Testament catch, Homer's fishermen's abundant haul is the result of the propitious coincidence of the net's placement and the probabilistically determinable location of a spawning school of herring rather than divine sanction or inspiration.

Homer's ordered geometric composition—the *x* that marks the spot—suggests not only Renaissance stability but also something of the rational logic of late-nineteenth risk analysis. From the twentieth century, the word risk came generally to be synonymous with danger. But during the nineteenth century, risk was a more nuanced concept. Risk could be both good and bad, denoting the probability or chance of an occurrence combined with the magnitude of associated losses or gains.[22] In these terms, *The Herring Net* appears to embody good risk. The probability or chance of realizing a large gain—catching herring at a historically favored spawning ground—is high. The sociologist Mitchell Dean has suggested that, "Risk is a way…of ordering reality, of rendering it into a calculable form. It is a way of representing events so they might be made

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[20] George Browne Good, *The Fisheries and Fishing Industry of the United States* (Washington, 1877), Section 1, vol. 1: 553.

[21] Ibid., 1: 555.

[22] Mary Douglas, *Risk and Blame: Essays in Cultural Theory* (London; New York: Routledge, 1992), 23.

governable...."[23] Homer's rational, calm, and stable rendition of the labor of commercial herring fishing, a laborious and speculative enterprise, jibes with Dean's risk-based ordering of reality.

In *The Fog Warning*, a fisherman in a dory laden with at least two large halibut is alerted by an alarm from his mother ship to an atmospheric threat gathering on the horizon. *Lost on the Grand Banks* portrays two cod fishermen who have been separated from their schooner by a dense fog. *The Fog Warning* and *Lost on the Grand Banks* involve a less favorable risk calculus than *The Herring Net*. The good risk equation of *The Herring Net* has been skewed by two factors: an inherently more negatively risky occupation and an unforeseen and unpredictable intervention. The mode of fishing depicted in *The Fog Warning* and *Lost on the Grand Banks* required individual dories to fan out around a schooner, or mother ship, to harvest trawl lines in the deep and treacherous waters off the Newfoundland coast.[24] Halibut fishing was recognized as the most demanding branch of the fisheries, requiring the most skill, endurance, and courage of its fishermen.[25] It was widely acknowledged that "no class of fishermen take [sic] greater risks than halibut fishermen."[26] The market compensated the halibut fisherman's greater risk, compared to the herring fishermen, with higher payment, which was calculated as a share of the catch. For the late nineteenth-century critic who saw Homer's

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[23] Mitchell Dean, "Risk, Calculable and Incalculable," in Deborah Lupton, ed., *Risk and Sociocultural Theory: New Directions and Perspectives* (Cambridge: Cambridge University Press, 1999), 131.

[24] Halibut schools are most often found on the slopes and deep trenches where the cold Labrador Current meets the warmer Gulf Stream; the water off the Grand, Green, and St. Peters' Banks reaches depths of 400 fathoms, or nearly 2,400 feet. George Browne Good, (1877), Section 5, vol. 1: 4.

[25] Ibid., 1: 5.

[26] Ibid., 1: 20.

trio as a "noble epic, beginning with a scene of rough toil and ending with a premonition of tragedy,"[27] it would appear that the "premonition" first appears in *The Fog Warning* and the "tragedy" is well and truly nigh in *Lost on the Grand Banks*.

Trawl fishing, the technique shown in *The Fog Warning* and *Lost on the Grand Banks*, was introduced in the Gloucester fishing industry in 1861 and acquainted open water fishermen with a brand new peril. The risk of becoming separated from one's schooner in foul weather was a very real one.[28] *The Fishermen's Memorial and Record Book* (1873) describes in the bleakest of terms the peril Homer's fishermen face in *The Fog Warning* and *Lost on the Grand Banks*:

> The majority of those who thus get estrayed [sic] from their vessel, pay the penalty with their lives; and it does not require a very vivid imagination to portray the sufferings these men must endure, adrift as they are in a dory, on the vast expanse of water, with death by starvation, or to be swallowed up by the waves, constantly staring them in the face, each hour rendering their hope of escape less encouraging, adding to their discomforts and decreasing their powers of endurance. Many a bold-hearted fisherman, with the love of life strong within him, with youth and hope and bright prospects, ere he left his vessel in those fog-benighted regions, has had all these hopes and aspirations suddenly quenched, upon finding himself either alone, as is sometimes the case, but most generally with one companion, adrift on the Banks, and nearly exhausted in their efforts to find the vessel, which to them is the ark of safety.[29]

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[27] "Winslow Homer's Pictures at the World's Fair" (unidentified newspaper clipping, Bowdoin), quoted in Kelly, 226.

[28] George Procter, in *The Fishermen's Memorial and Record Book* (1877), published a list (surely woefully incomplete) of some twelve hundred and sixty-five men and two hundred and eighty vessels lost in the fisheries between 1830 and 1873. A more complete list of fishermen lost at sea has been compiled more recently by archivists working for the city of Gloucester, Massachusetts, based on the work of Roberta Sheedy for Memorial Plaques at the Fisherman's Statue on the Boulevard at Gloucester Harbor. This list includes not only those Gloucester residents lost at sea while fishing, but any death by drowning, whether at sea, in the Harbor, or rivers or lakes, and also deaths of fishermen on shore if their death was caused at sea. The statistics cover the entirety of the nineteenth century and the first quarter of the twentieth, and totals 829 pages. http://gloucester-ma.gov/index.aspx?NID=74 (14 October 2011).

[29] George H. Procter, *The Fishermen's Memorial and Record Book: Containing a List of Vessels and Their Crews Lost from the Port of Gloucester from the Year 1830 to October 1, 1873* (Gloucester: Procter Brothers, 1873), 4.

As another contemporary description put it, open sea trawl fishing involved "the most reckless daring" and "the greatest risk."[30]

The Fog Warning depicts a crisis, a turning point both literal and metaphorical. Alerted by the alarm from his mother ship, Homer's fisherman swivels to assess the situation brewing on the horizon. *The Fog Warning* marks the midpoint in the series' trajectory from fortuitous synchroneity to unfortunate mishap. The small detail of the oarsman's turned head carries major interpretive consequences (Fig. 2.15). It is an important element, to begin with, in distinguishing Homer's painting from precedent images of danger at sea by other artists, which, for the most part, adopt a distant vantage point. Paintings such as *An American Ship in Distress* (Fig. 2.16) and *Shipwreck* (Fig. 2.17), by the Philadelphia painter Thomas Birch, for instance, can be considered representative of nineteenth-century American marine painting. Drawing on an Anglo-Dutch marine painting tradition and Joseph Vernet's sublime spectacles, Birch produced luminous, quasi-Romantic images of catastrophes at sea and their aftermaths.

Birch paints wrecks. *The Fog Warning*, however, is about the assessment of potential peril, the nature of which is explicated in the title Homer chose for the painting. *The Fog Warning* was originally exhibited under the title *Halibut Fishing* (or, *The Halibut Fisher*), but as the *Boston Evening Transcript* pointed out, "this name was not given by its original sponsor. The real name is 'The Fog Warning.'"[31] Homer's intended

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[30] Capt. J.W. Collins, "Howard Blackburn's Fearful Experience of a Gloucester Halibut Fisherman, Astray in a Dory in a Gale off the Newfoundland Coast in Midwinter," (pamphlet, Boston: F.A. Varnum, 1884), [5].

[31] "Art and Artists," *Boston Daily Evening Transcript*, 7 April 1886; quoted in Cikovsky and Kelly (1995) 229.

title, *The Fog Warning*, deflects focus away from the protagonist's occupation, which is indicated by the apocryphal title *Halibut Fishing*. The title *The Fog Warning*, on the other hand, focuses attention on the apprehension of a potential peril faced by the fisherman: the ringing bell warning the dories of a gathering threat. The title refers not to the danger itself—the fog bank—but the moment at which the danger comes into existence as such—that is, the moment of its apprehension.

Kelly has argued that "Homer depended on narrative structures that would, just as they began to suggest a normal unfolding, deflect the viewer from obvious and easy interpretations."[32] *The Fog Warning* is explicit, almost diagrammatic, in making clear the position in which the halibut fisherman finds himself. His attention has been drawn by the schooner's alarm to the threat gathering on the horizon and he must very quickly decide what course of action to take. The fog bank appears to be amassing beyond the mother ship on the horizon but on the two-dimensional surface of Homer's canvas, it lies between the fisherman and his ship. Homer makes clear from the tendrils snaking skyward that the fog bank is encroaching upon the dory and will imminently cut the fisherman off from the schooner. The peril, in short, is imminent.

For the moment at least, the fisherman retains uninterrupted visual access to the ship—his head rises above the horizon where it is in precise alignment with the schooner (see Fig. 2.15). The anchor that rests in the prow of the dory is likewise aligned with fisherman and schooner, suggesting an iconographic glimmer of safety by virtue of the anchor's Classical and Christian associations with hope. But, like the anchor, which is hooked precariously on the gunwale of the dory, the link between fisherman and safety is balanced in a hazardous manner. We are to understand that the ocean's swells are moving

[32] Cikovsky and Kelly (1995), 307.

forward, towards the front of the picture plane. Therefore, the dory is in the midst of cresting the wave. Imminently, the swell will pass, the dory will dip below the horizon, and the fisherman will lose sight of the schooner. He has just a moment to make a contingency plan and decide his course of action. As Henry Adams put it, "the painting shows the moment in which the oarsman pauses to relocate his target [the mother ship], to realign his course, and to reassess his chances of survival."[33]

While *The Fog Warning* makes explicit the implications of the narrative moment, it leaves the outcome open-ended. As Homer's fisherman swivels, he analyzes an uncertain situation and considers contingency plans: should he row for the ship, dump the halibut, continue harvesting his trawl lines, or just wait out the storm? The painting presents the opposite of one of the Neoclassical theorist Gotthold Ephraim Lessing's "pregnant moments," the concept that dictated the depiction of a moment that would best allow the viewer of the painting to imagine what immediately preceded and what would immediately follow the moment depicted. *The Fog Warning* is not concerned with narrative closure. Rather, the materialization of the fog bank announced by the titular alarm amounts to the beginning of any number of narrative threads.[34] As a representation of uncertainty and assessment, *The Fog Warning* is a painting about the weighing of options, the consideration of ramifications, benefits, and odds. It is, to put it succinctly, an image of risk analysis.

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[33] Adams, "Mortal Themes," 114.

[34] Kelly has suggested that from 1890 Homer, in his late marine pictures, deliberately enacted evasive maneuvers to circumvent the misreading of his paintings by avoiding narrative altogether. A non-narrative painting beggars the question "what happens next." The fishing pictures of the mid-1880s appear to mark a step towards narrative avoidance by offering the audience multiple endings. Or at least, *The Fog Warning*, when read alone, offers an invitation to complete the reading of the painting in multiple ways. See Cikovksy and Kelly (1995), 301–315.

Saul Zalesh has suggested that the "hidden faces" of Homer's fishermen "make them universal everymen."[35] Gazing towards the horizon, the fisherman in *The Fog Warning* is an echo of one of Caspar David Friedrich's renowned *Rükenfiguren*, those 'backward-facing figures' intended to prompt an imaginative association with the viewer of the painting and implicate him in an intense, spiritual contemplation of the sublime majesty of the great German artist's landscapes (Fig. 2.18).[36] Instead of Romantic self-absorption, however, the viewer of Homer's painting is asked to contemplate the fisherman's process of risk analysis. The fisherman functions as an analogue to the painting's viewer, who is consequently implicated in the process of risk analysis. This would have been an activity not wholly unfamiliar to a viewer of *The Fog Warning*. Despite the obvious differences between a modern, urban spectator encountering a painting in a gallery or shop window and Homer's weather-beaten and weary marine toiler, the mental act the latter performs jibes with a set of cognitive skills becoming increasingly familiar to Homer's audience. Both Homer's seafarers and Homer's audience were aware that they lived in an environment characterized by unpredictable peril, unforeseen accident, and chance misfortune. Both worlds were being calculated in terms of risk.

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[35] Homer's vantage point is low in *The Herring Net*, positioning the viewer beneath the lip of the boat's stern. Despite our inferior perspective, the fishermen's faces are obscured; they are blocked from sight by the brim of a Sou'wester and the bulge of a shoulder, respectively. Zalesh concludes that the anonymity of Homer's herring fishermen is an indication that Homer's painting is a polemic against the deindividualizing and destructive technology that was replacing traditional forms of fishing. Saul E. Zalesh, "Winslow Homer, Against the Current," *American Art Review* 5 (Fall 1993): 124.

[36] Elizabeth Prettejohn, *Beauty & Art, 1750–2000* (Oxford: Oxford University Press, 2005), 54–56

Most commentators link the emergence of the word and concept *risk* with early maritime ventures in the pre-modern period.[37] Francois Ewald, for instance, argues that the notion of risk first appeared in the Middle Ages in relation to maritime insurance and used to designate the perils that could compromise a voyage: "At that time, risk signified the possibility of an objective danger, an act of God, a force majeure, a tempest or other peril of the sea that could not be imputed to wrongful conduct."[38] This concept of risk, as Deborah Lupton has elucidated, "excluded the idea of human fault and responsibility. Risk was perceived to be a natural event such as a storm, flood or epidemic rather than a human-made one. As such, humans could do little but attempt to estimate roughly the likelihood of such events happening and take steps to reduce their impact."[39]

As Ian Hacking has argued, from the seventeenth century, in an attempt to deal with the social changes and upheavals wrought by industrialization and modernization, the science of statistics and probability was developed to calculate norms and identify deviations from them. Rationalized counting, it was believed, would bring disorder under control. Risk, as a result, was "scientized" by being subject to mathematical and probability calculations.[40] As Ulrich Beck formulates it, "Consequences that at first affect only the individual become 'risks,' systematically caused, statistically describable, and in that sense 'predictable' types of events, which can therefore also be subjected to supra-

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[37] Niklas Luhmann, *Risk: A Sociological Theory* (New York: Aldine de Gruyter, 1993), 9.

[38] Francois Ewald, "Two Infinities of Risk," in B. Massumi, ed., *The Politics of Everyday Fear* (Minneapolis: University of Minnesota Press, 1993), 226.

[39] Deborah Lupton, *Risk* (London: Routledge, 1999), 5.

[40] Lupton (1999), 6.

individual and political rules of recognition, compensation and avoidance."[41] Along similar lines, Mitchell Dean refers to risk as a "component of diverse forms of calculative rationality."[42]

As Gerda Reith has summarized, risk has come to express the "probabilistic nature of reality" as distinct from its original seventeenth century meaning of hazard or danger.[43] Risk, according to Mary Douglas, provides a "theoretical base for decision making."[44] This concept is distinct from—albeit connected to—that of chance. Whereas the latter testifies to genuine stochasticity in life, the former is an "expression of the calculation of possible outcomes based on the knowledge of the effect of chance on the world."[45] Risk, in Reith's words, deals with knowledge, a "particularly modern probabilistic type of knowledge."[46] Because risk acknowledges the irreducible existence of chance in the world and demands a new way of seeing cause and effect in terms of chance-based probabilities, the early twentieth-century probability theorist Frank Knight described risk as "determinate uncertainty."[47]

In *The Fog Warning*, Homer paints the recognition of what in maritime law is referred to as a "peril of the sea," one of those casualties peculiar to navigating the

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[41] Ulrich Beck, "From Industrial Society to the Risk Society: Questions of Survival, Social Structure and Ecological Environment," *Theory, Culture, and Society* 9 (1992): 99.

[42] Dean, (1999), 131.

[43] Gerda Reith, *The Age of Chance: Gambling in Western Culture* (London; New York: Routledge, 1999), 39.

[44] Douglas, (1992), 23.

[45] Reith (1999), 40.

[46] Ibid., 40.

[47] Frank Hyneman Knight, *Risk, Uncertainty, and Profit* (Cambridge, Riverside Press, 1921), 46; quoted in Reith (1999), 40.

oceans: sinking, collision, heavy weather, etc. Homer used the term as the title of an 1881 watercolor that he later reworked as an etching (Fig. 2.19). The exact nature of the peril here is unknown—it happens offstage, so to speak—but it is likely an offshore rescue attempt.[48] As in *The Fog Warning*, Homer represents a frozen moment of apprehension, thereby highlighting the scenario's uncertain outcome. This indeterminacy is embodied in the actors' horizon-ward gazes, as it is in the turned head of *The Fog Warning*'s fisherman. Curiously, this motif is dislocated and repeated in the margin of the etching. Perils of the sea are often conflated with Acts of God in legal and marine insurance documents. An Act of God is defined as an event that directly and exclusively results from the occurrence of natural causes that could not have been prevented by the exercise of foresight or caution. Legally, perils of the sea are synonymous with "inevitable accidents."[49] They comprise assumed and expected marine risks and represent a clear and present danger for Homer's halibut fisherman. Risk was, for trawl fishermen like those depicted in *The Fog Warning* and *Lost on the Grand Banks*, an occupational hazard, and accidents resulting from perils-of-the-sea were all-too-common.

A World of Risk

The Fog Warning jibes with broader social concerns at the end of the 19th century as Americans—mariners and landlubbers alike—began to think, speak, and see

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[48] Catalogue of the Thomas B. Clarke Collection of American Pictures [exh. cat., Pennsylvania Academy of the Fine Arts] (Philadelphia, 1891), 61.

[49] Perils of the sea are defined thus in an 1856 legal dictionary: "It has indeed been said, that by perils of the sea are properly meant no other than inevitable perils or accidents upon the sea, and, that by such perils or accidents common carriers are, prima facie, excused, whether there be a bill of lading containing the expression of 'peril of the sea,' or not." 1 Conn. Rep. John Bouvier, *487A Law Dictionary, Adapted to the Constitution and Laws of the United States* (1856).

themselves and their world in terms of risk, odds, and contingency. Prognosticating the outcome in terms of probability, an 1884 article described the odds of surviving a scenario such as the one Homer depicts in *Lost on the Grand Banks*: "The chances are that the occupants of the little boat, though they fight ever so bravely, fail to reach their vessel."[50] It is believed that Homer accompanied a halibut crew to the Banks in 1884; he would well have known that their livelihood was one of high risk and inevitable accident.[51] While the outcome of the scenario depicted in *The Fog Warning* is left uncertain, when one considers *Lost on the Grand Banks* as its narrative successor, it would appear that the odds of survival are not favorable.

During the final third of the century, the world was coming to be understood to operate according to predictable, probability-based rules (risk), the most important of which was, paradoxically, that no outcome could be prognosticated with ultimate precision. The world was configured as a place bound by the oxymoronic "law of higgledy-piggeldy," as the astronomer John Herschel characterized the post-Darwinian era.[52] It was, in philosopher Charles Sanders Peirce's more extreme assessment, a paradoxical place of "absolute chance."[53] Homer's 1880s sea pictures—both their subjects and their execution—confirm that Homer was an engaged participant in an

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[50] "Fishing Perils on 'The Banks,'" *Frank Leslie's Illustrated Magazine* (8 March 1884); quoted in Cikovsky and Kelly (1995), 230.

[51] Beam, (1966), 66.

[52] Jonathan Hodge and Gregory Radick, ed., *The Cambridge Companion to Darwin* (Cambridge, UK; New York: Cambridge University Press, 2003), 181.

[53] Peirce, *Collected Papers*, 7:514. Peirce first detailed his theory of absolute chance in an 1891 article in *The Monist*. He subsequently developed it in "The Law of Mind," *The Monist* 2, no. 4 (July 1892): 533–559 in *Papers*, 6:102–163. Peirce held that science achieves statistical probabilities, not certainties, and that spontaneity (absolute chance) is real. Peirce, furthermore, was the first to introduce blinded, controlled randomized experiments, in 1884, the year before Homer painted his trio of fishing pictures (see Hacking, *Taming of Chance*, 205).

emerging discourse on chance and risk. William Howe Downes' 1911 description of Homer's 1883 painting *The Ship's Boat* is illuminating in this regard (see Fig. 2.7). Employing keywords associated with risk, Downes commented on Homer's depiction of a lifeboat floundering in coastal surf thus: "The water is drawn and colored with signal knowledge and power. Its liquidity and translucence, the countless accidents of its surface, the rush and whirl of its eddies, and, above all, the upheaving power of its movement, have been seized, comprehended, and fixed with unsurpassed fidelity and breadth."[54] By juxtaposing accidents, knowledge, and comprehension, Downes evokes the complex nature of risk in a manner strikingly similar to Herschel's "law of higgledy-piggeldy" or the "calculative rationality" of Dean's risk. Homer's ocean, like Herschels' post-Darwinian universe, is knowably random. It is accident-prone, sure, but it is governed by a set of comprehensible, calculable, and representable rules.

Thomas Birch once again proves helpful in teasing out Homer's achievement. Despite his apparent dedication to hydraulic verisimilitude, Birch's water is wispy, feathery, fizzy (Fig. 2.20). The sea effervesces, upon close examination, to near immateriality. It is rendered in the service of an Ideal: a turbulent and frothy Romantic drama. Homer's ocean, on the other hand, poses a genuine material threat. His heaving waves are weighty, physical. They are imbued with appreciable viscosity, credible gravity, palpable frigidity, and a tangible surface tension that suggest a concrete, scientific empiricism. Compared to Thomas Birch's wispy, feathery, and fizzy waves, the

[54] William Howe Downes, *Twelve Great Artists* (Boston: Little, Brown & Co., 1900), quoted in Downes, *The Life and Works of Winslow Homer* (Boston, New York: Houghton Mifflin company, 1911), 104.

caps of which one critic declared "too creamy and clear,"[55] Homer's ocean poses a genuine material threat. Homer's waves are tactile, cold, slick. They are jagged and razor-sharp: sharks' teeth to Birch's creamy caps (Fig. 2.21).[56] For Homer, the sea represents a complex of contingent phenomena that can be known, calculated, and represented, even if as a whole the ocean remains essentially capricious and ultimately unpredictable. Fittingly, the materiality of Homer's rough seas reinforce *The Fog Warning*'s thematic focus: the halibut fisherman's risk analysis takes place on a sea rendered as volatile and predictably unpredictable. Like risk itself, Homer's perilous seas can be characterized by Frank Knight's phrase "determinate uncertainty."

Homer's pictures of nautical risk might be productively interpreted in the context of a broader, late nineteenth-century visual culture of risk. Homer's paintings of rescue closely mirror images published in popular periodicals at this time. For instance, *The Life Line* (see Fig. 2.4) closely mirrors an image of an incapacitated mother and child who have just been saved from a coastal shipwreck in a breeches buoy (Fig. 2.22). The print, "Saved from the Wreck" was published in *Harper's Weekly* on 23 December 1871. Similarly, *Undertow* (see Fig. 2.5) closely resembles an illustration published on 11 December 1875 to accompany the story "An Island Pearl," which was serialized in

[55] "Miscellaneous Notes—American Academy of the Fine Arts," *The American Monthly Magazine* 1, no. 6 (August 1833): 401; quoted in Teresa Carbone, *American Paintings in the Brooklyn Museum: Artists Born by 1876* (New York: Brooklyn Museum of Art, in association with D. Giles, London, 2006), 293.

[56] I am suggesting here that this exceeds conventional naturalism. The story of *The Fog Warning*'s execution, in which Homer propped a dory in the sand dunes, has been passed down to us by Lloyd Goodrich, Homer's biographer. Wanting to be able to study the foreshortening of the boat and the associated atmospheric effects, Homer rehearsed the arrangement of his composition on the beach. The artist went further, though. Posing his neighbor, Henry Lee, in the dory, Goodrich, recounts, "It was a cold day when they began, but the artist went to the well, drew a pail of water and threw it over his model. 'You never heard such profanity in your life,' said a witness" (Lloyd Goodrich, *Winslow Homer* [New York, 1972], 136–137.) Such amusing personal anecdotes serve to reinforce the cult of realism surrounding Homer that can tend to undermine more speculative readings of his work. I contend that Homer's realism jibes with his engagement with the discourse surrounding risk and chance.

Harper's Weekly (Fig. 2.23). Early in his career Homer had numerous illustrations published as woodcuts in *Harper's Weekly*, so it is possible he might have been familiar with these specific illustrations or the conventions of illustrating peril and rescue at sea. Images like *Wreck of the Iron Crown* (see Fig. 2.6), painted after the artist observed a rescue mission in Cullercoats, England, on 21 October 1881 tackles a subject rehearsed in similar illustrations such as "Wreck of the Pliny," which was published in *Harper's Weekly*, 27 May 1882 (Fig. 2.24).

Images of shipwrecks and attempted rescues can be understood as part of a burgeoning visual and literary culture of accident and disaster that, beyond shipwrecks, included images and descriptions of train derailments and collisions, steamboat collisions and boiler explosions, factory accidents, horse drawn carriage mishaps, deaths resulting from streetcars, trolleys, accidental falls, and so forth. Henry Adams, writing in 1905, described the perilous and accident-rife nature of modern life:

> Every day Nature violently revolted, causing so-called accidents with enormous destruction of property and life, while plainly laughing at man, who helplessly groaned and shrieked and shuddered, but never for a single instant could stop. The railways alone approached the carnage of war; automobiles and fire-arms ravaged society, until an earthquake became almost a nervous relaxation.[57]

Industrialization and increased travel spurred more and greater accidents. Faster transportation yielded more spectacular wrecks; larger factories yielded more frequent accidental injuries; and so forth. But their profuse illustration and publication was not merely documentary. As accidents increased, so did their visibility. Spectacular train wrecks presented subjects for full-sheet front page illustrations, as in the case of the *Harper's Weekly* illustration of the Erie Railroad Disaster (Fig. 2.25); elaborately detailed

[57] Henry Adams, *The Education of Henry Adams* (1917), 494–95.

illustrations of steamship collisions and boiler explosions graced the pages of daily and monthly publications (Figs. 2.26, 2.27, 2.28, and 2.29). This phenomenon attests to a number of things: the press's commercialization of the horrific, a basic human fascination with the grotesque, and the perceived random hazards of modern urban life.[58] But an under-examined aspect of this trajectory is the fact that the increase in the visibility of accidents was paralleled by the emergence and rapid growth of an insurance industry dedicated to managing accidents' consequences.

I am not suggesting that every image of an accident acted in the service of some nefarious insurance agency, but it *was* in the insurance industry's interest for the world to be represented as a place of imminent but ultimately unforeseeable accidents: a world of risk, in other words. This is suggested by iconography shared by the popular press and the insurance industry. Just as images of steamer collisions, boiler explosions, and locomotive derailments were appearing in the popular press, the same images were being used on trade cards produced and disseminated by insurance companies.

A trade card published by the Mutual Accident Company and Endowment Association of New Orleans, for example, features an image of an exploding river steamship (Fig. 2.30). As its smokestacks topple, all manner of detritus—mechanical and human—flies through the air overhead. Survivors cling to makeshift flotation devices and look plaintively out from the picture. Modern transportation was rife with risk, according to this trade card. A *Harper's Weekly* cartoon entitled "The Horrors of Modern Travel" supports the point (Fig. 2.31). An angel hurriedly wings her way to safety as a dark and looming locomotive, with smoke belching from its chimney and a dagger of light

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[58] For more on this aspect of modern life, see Ben Singer, *Melodrama and Modernity* (New York: Columbia University Press, 2001), 59–100.

shooting from its cyclopean headlamp, barrels across a landscape strewn with dead bodies. The pilot of this horror train is none other than the Grim Reaper, complete with crowned and grinning skull and scythe slung jauntily over a skeletal shoulder. In the background, a ship burns and a paddle steamer explodes. As Ben Singer has observed, "perennially gleeful death figures" appeared in images representing the "new dangers of the technologized urban environment (Figs. 2.32, 2.33, and 2.34).[59] The visual culture comprising representations of steamer collisions, ferry boat boiler explosions, and so forth portrays a newly visible accident-prone society regulated by the insurance industry. The relationship between representations of accidents and the insurance industry formed a complex dialectic, as suggested by an illustration by Thomas Worth published in *Harper's Weekly* in which a fire engine of the newest design wreaks havoc as it races to tame an unseen conflagration (Fig. 2.35). Men, women, and children scatter before a pair of wild-eyed horses and the steaming engine that clatters behind them.

Worth's image appropriates a common motif from insurance advertising: an image of a steam-powered fire engine racing to extinguish a blaze. The icon of a steam-powered fire engine emblematized recent technological advances in combating the effects of destructive forces. The introduction of horse-pulled fire pumps in the mid-nineteenth century reduced the response time of firefighters to blazes, and the development of steam-powered pumps at around the same time enabled firefighters to propel water to ever-increasing heights, an especially useful innovation in the vertically oriented urban environment. The rapid-response of the horse-drawn, steam-powered fire engine was an especially fitting symbol for the insurance industry, which, like the fire engine and its

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[59] Singer (2001), 70.

crew, was dedicated not to preventing accidents but to ameliorating their consequences. Barrows and Bailey Insurance and Real Estate Agency, in Canton, New York, used an image of a horse drawn fire engine on its letterhead (Fig. 2.36). The emblem on an Aetna Insurance Company's insurance policy dating from 1866, likewise, is remarkably similar to Worth's composition (Fig. 2.37).

Worth's cartoon, however, undermines the progressive message of the insurance imagery it appropriates. Rather than reinforcing the positive relationship between insurance and fire extinguishment, Worth's image carries a quite different association. There were numerous recorded cases of steam fire engines exploding *en route* to conflagrations. An explosion in New York in July 1868 was reported thus:

> The steam from the rent boiler seethed and scalded its way through the dense mass of humanity at the same moment, and with both the scalding steam and the mangling iron came the terrible noise of the explosion, as it shook the neighboring houses, and with it that still more awful sound, the shrieks of human agony.[60]

The report was accompanied by an illustration of the exploding fire engine (Fig. 2.38). Drawing on this imagery, Worth's cartoon argues that accidents spawn accidents. The contingent mayhem in Worth's illustration of a rampant fire engine, notably, is overseen by the prominent signs for the "Accident Insurance Co." and the "Fire Insurance Co." (Fig. 2.39) This hazardous scene is underwritten, literally and figuratively, by the purview of the insurance company. Worth's print suggests that insuring against accidents was closely related to ensuring the visibility of accidents.

Jason Puskar has argued in his study of the importance of chance to late nineteenth- and early twentieth-century American literature that insurance and journalism

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[60] "Fire Engine Explosion," *Harper's Weekly* (4 July 1868): 429.

intertwined to participate "jointly in raising expectation of future accident."[61] Similarly, as insurance became more powerful and visible in the final third of the century, traces of its logic and rhetoric became increasingly evident in all manner of visual culture, from Thomas Worth's woodcut to Winslow Homer's peril-at-sea paintings. Indeed, *The Fog Warning* shares explicit visual motifs with the insurance industry's strategies for creating awareness that Americans were living in a world in which they should fully expect future accident. *The Fog Warning* is emblematic of an insurance-mediated world of risk.

At the end of the nineteenth century, life was coming to be understood to be directed by chance rather than divine predestination or deterministic natural law. Accidents, people were told, "do happen," quite literally, according to a trade card published by the Fidelity & Casualty Company after 1876 (Fig. 2.40). And, it would appear accidents could happen in so many ways, from the comical (bricks falling on heads) to the gruesome (trapped between the cars of a locomotive), as advertising trade cards disseminated by the Fidelity & Casualty Company and the United States Mutual Accident Relief Company, Boston, between about 1875 and 1885 suggest (Figs. 2.41 and 2.42).

The Fidelity & Casualty trade card in Figure 2.40, which advises that "accidents do happen," also constructed the modern world as a place heaving with unpredictable and capricious dynamic energies capable of apocalyptic destruction at any moment. It foreshadows the violent revolt of nature "causing so-called accidents with enormous destruction of property and life" nature Henry Adams would later describe. The trade card quoted from the 26 April 1884 edition of *The Standard*:

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[61] Jason Puskar, "Underwriting the Accident: Narratives of American Chance, 1871–1935" (unpub. Diss. Harvard University, 2004), 11.

> In this age of advanced civilization and scientific improvement, in spite of measures of precaution adopted by government and enforced by law to protect the lives of the people, death lurks behind every stone of our path. Under the very flags at our feet are subdued forces powerful enough to bring the walls down on our heads…."[62]

In less hyperbolic and more circumspect terms, the 1902 trade publication *How To Sell Life Assurance* made explicit the notion that once innocuous actions, like crossing the street, were being reconfigured in terms of risks (Fig. 2.43).[63] Perhaps death didn't literally lurk "behind every stone of our path" and every "flag at our feet," but ambulation was certainly being newly configured as an activity fraught with risk.

Risk and accidents, of course, were not new to the nineteenth century. Nor was insurance, for that matter. The origins of the insurance giant Lloyd's of London, for instance, date to around 1688, when merchants and ship owners pooled funds to offset risk to their business investments.[64] In the United States, the first marine insurer opened for business in 1721. Insurance concerns before the nineteenth century were, for the most part, limited primarily to property underwriting. Life insurance appeared in limited amounts from the beginning of the nineteenth century; it was not until around 1840 that the concern began to effloresce. Insurance covering persons was not a viable proposition until later in the nineteenth century, when sufficient vital and social statistics had been gathered to allow for the calculation of immense actuarial tables. In 1840, fifteen life insurance companies in the United States had less than $5 million worth of life policies in circulation, but by 1860, forty-three companies had almost $205 million worth of policies

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[62] Fidelity & Casualty Company trade card, after 1876. Warshaw Collection, National Museum of American History, Smithsonian Institution, Washington, D.C.

[63] William Alexander, *How to Sell Life Assurance: A Guide for the Agents of The Equitable Life Insurance Society of the United States* (1902).

[64] Antony Brown, *Hazard Unlimited: The Story of Lloyd's of London* (New York: Stein and Day, 1974).

in force. The Civil War only increased the industry's growth: 75 new companies were organized between 1859 and 1867, and by the end of the war in 1865 life insurance in force in the United States was more than three times the amount it was in 1860.[65]

From about 1870, the notion of risk was extended to individuals as insurance companies aggressively advertised the myriad forms accident, injury, and death could take, as well as the disastrous consequences of failing to insure against them. In a Massachusetts Mutual Accident Association trade card, for example, twinned scenarios are juxtaposed, "insured" versus "not insured" (Fig. 2.44). Two men have suffered comparable limb injures. One wears a cast on his lower left leg, the other wears a cast on his left arm. The man with the injured leg is, the trade card's caption informs, insured. He relaxes in a large, comfortable wingback armchair with his injured foot propped on a cushioned stool. As he takes a break from reading the book propped open on his thigh, a maidservant stands in the background with a tea service on a silver tray. This injured, insured man rests comfortably. He is surrounded by the trappings of wealth and luxury; a bouquet of flowers and a large bowl of fruit are prominently placed on the dining table.

The uninsured injured man, in contrast, leans forward in his straight-backed chair with his head resting in his hand in the familiar pose of the disconsolate as he stares glumly at a stack of bills on the table before him. In place of the insured man's domestic employee stands the uninsured man's wife, who covers her face with a large handkerchief, presumably wet with tears. The relative fortunes of the insured man and the uninsured man are reflected in the orientation of their respective mustaches: the insured man's optimism is reflected in his upturned handlebar whereas the uninsured man's bleak

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[65] Viviana A. Rotman Zelizer, *Morals and Markets: The Development of Life Insurance in the United States* (New Brunswick: Transaction Books, 1983), 6.

future is embodied in his drooping Fu Manchu, which, like a downturned horseshoe, alludes to his bad luck.

In the case of the uninsured man, he has been twice unlucky: firstly, in suffering the injury to his arm, and secondly, by not having the foresight to insure himself against injury. Vision is central here: the uninsured man, who failed to anticipate his injury, gazes glumly down at the stack of bills on the table. The insured man, on the other hand, gazes outward and upward at what can only be construed as a promising future. This much is suggested by the abundant bouquet of effulgent flowers and heaving fruit bowl positioned directly in his line of sight—his prospects promise, quite literally, to be fruitful. Another trade card entitled "Satisfaction in Having Protection," in which a man with a cast-encased foot relaxes, smokes a cigar, and clutches his Fidelity and Casualty policy, articulates the message enacted pictorially in the Massachusetts Mutual Accident Association trade card in Figure 2.44: "Every prudent man…to guard against the contingency of accident to life and limb" should make it his "primary duty…no matter what their profession or trade, to take out and keep renewed Accident Insurance in the Fidelity and Casualty Co. adequate to his position in life"[66] (Fig. 2.45).

These ubiquitous trade cards construct a new mode of envisioning and representing the world as replete with potential risks and consequences. The Fidelity trade card in Figure 2.41 warned, "Every man can plan for certain events, but the very uncertainty of causalities renders protection necessary through the laws of average. How many will be hurt in a million is well understood, although who they will be is unknown." The implication is that a life without insurance is akin to a gamble; accidents

[66] Fidelity and Casualty Company trade card, n.d. [c.1875-1885], Warshaw Collection, National Museum of American History, Smithsonian Institution, Washington, D.C.

happen regularly, but to whom they will happen is uncertain. Along these lines, Ewald has written, "Insurance's general model is the game of chance: a risk, an accident comes up like a roulette number, a card pulled out of a pack. With insurance, gaming becomes a symbol of the world.[67]

An anecdote reported in the *Cape Ann Advertiser*, the newspaper of record of Gloucester, Massachusetts, where Homer spent summers in 1873 and 1880, confirms that the game of chance metaphor for life spread beyond the logic of actuarial science: "'In life's great game of poker,' as the aged minister tearfully observed in his funeral discourse, 'our deceased brother has thrown down his hand, which, permit me to say brethren, was equal to four aces and a queen—he has surrendered his chips, drained his glass to the dregs, and walked out."[68] Likening life to a game of poker is an apt period metaphor. Poker is dependent on both a randomizing element—the draw of shuffled cards—and calculable probabilities—the odds of receiving certain cards from a shuffled deck to create winning combinations of cards. This metaphor jibes with Ewald's definition of risk, which "goes together with…chance, hazard, probability, eventuality or randomness on one hand, and those of loss or damage on the other—the two series coming together in the notion of accident."[69] In other words, a world envisioned as a game of poker with its odds and multiple contingent outcomes is a world defined by risk.

PICTURING RISK

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[67] Ewald (1991), 199.

[68] *Cape Ann Advertiser*, 23 Jan 1874, [p.4].

[69] Ewald (1991), 199.

Sociologists Ulrich Beck and Anthony Giddens suggest that the twinned concepts of risk / chance define the essence of modern society.[70] Similarly, Ewald has argued that insurance should be understood as a disciplinary institution that produced certain kinds of modern individuals: "It not only manages them and makes use of them but actively constitutes them as its objects .[71] In Beck's, Giddens's, and Ewald's terms, insurance produced new modern subjects for a new modern risk society. Part of the process of constituting modern subjects involved training them to think, speak, and visualize the world in terms of risk, odds, and contingency. An 1856 article in the *Insurance Monitor*, a trade press publication, entitled "How We May Die—'Now A-Days'" demanded that readers imagine their lives in precisely these terms. The article argues:

> The best thing, therefore, for all of us who live exposed to so many chances—nay, certainties of death—for it is now a certainty that a certain number of us, called *an average*, will be killed every year, every month, every day, is to keep our LIVES INSURED, in order that we may leave wherewith to pay our funeral expenses and furnish our wives and children with bread and butter. Therefore we say to all men—insure—insure—and do it quickly [emphasis in original].[72]

Insurance advertising imagery reinforced the point by depicting a curious mode of supernatural vision or second-sight that revealed previously overlooked but anticipatable perils and their repercussions. A particularly effective illustration of this phenomenon is a series of cleverly designed, two-sided Travelers Insurance trade cards distributed in the 1870s and 1880s. The front of one of these cards depicts a slumbering woman in a horse-drawn carriage (Fig. 2.46). Holding the card to the light causes a reverse-printed image to

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[70] Ulrich Beck, *Risk Society: Towards a New Modernity*, trans. Mark Ritter (London: Sage Publications, 1992); Anthony Giddens, *The Consequences of Modernity* (Stanford: Stanford University Press, 1990).

[71] Ewald (1991), 141.

[72] Quoted in Carlyle Buley, *American Life Convention: A Study in the History of Life Insurance*, 2 vols. (New York: Appleton-Century-Crofts, 1953), 1: 71.

show through from the card's back side. As a result, a new, composite scene is visible in which the woman, now with open eyes, envisions a collision between her carriage and a locomotive (Fig. 2.46). A previously invisible caption reads "Moral: Insure in the Travelers." Another example features a female train passenger who envisions an awful derailment (Fig. 2.48 and 2.49). Not-so-sweet dreams, it would seem, are made of horrific visions of mayhem and destruction, the palliative to which is a policy with Travelers Insurance.

This nightmarish leitmotif appears again in an advertisement entitled "The Dream of a Man: Not Insured" (Fig. 2.50). Sitting bolt upright in bed, hair on end, he stares with saucer eyes at the varied means by which he might at any moment die or be injured, from the violent to the innocuous: drowning, amputation, murder, a headlong fall, horse trampling, and even a slip on an orange peel. Even in the safety of his own bed, the uninsured man fears the worst. The motif is familiar from Thomas Rowlandson's aquatint *Hypochondriac* (1788, Fig. 2.51), in which the character named in the title is surrounded by visions of his own melancholia-induced thoughts of morbidity, suicide, and illness.[73] Rather than fantastical visions conjured by a medical affliction, the uninsured man sees the realities of his modern condition, at least as the Traveler's insurance company would like him to see it. The Traveler's advertisement appeared in numerous publications, including a trade journal called *The Iron Age*, in which Travelers was pitched as the "best insurance for iron men" to appeal specifically to the publication's readership of iron

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[73] Fiona Haslam, *From Hogarth to Rowlandson: Medicine in Art in Eighteenth-century Britain* (Liverpool: Liverpool University Press, 1997), 164–165. Thanks to Prof. William Pressly for recognizing the indebtedness of the Traveler's Insurance advertisement to the Rowlandson print and for sharing this insight with me.

industry workers (Fig. 2.52).[74] In the midst of life we are in death," seems to be the message of "The Dream of a Man: Not Insured." It is a moral articulated in an illustration in the Equitable agents' sales manual in which an insurance salesman gestures to a nearby cemetery with one hand as he thrusts a policy into the chest of a potential subscriber with the other (Fig. 2.53). And it is a moral repeated, yet made even more visually compelling, in another illustration in the same book that depicts a living man entombed in his own coffin (Fig. 2.54). This frightened man, his hands clutched before him, has apparently recognized the unregulated world of risk in which he lives. He imagines that he is as good as "already in his tomb" and concludes "I'm a dead one."

The motif shared by these insurance illustrations of looking out—from bed, from coffin, from carriage, from locomotive—and assessing the world in terms of personal risk and potential death rhymes explicitly with Homer's peril-at-sea pictures *The Fog Warning* and *Lost on the Grand Banks*. Like the man who imagines himself in his coffin, Homer's halibut fisherman sits upright in his vessel with his knees drawn up to his chest and his hands clutched before him. And, like the uninsured man in bed, he can see clearly the potential for a previously invisible accidental death. Similarly, in *Lost on the Grand Banks*, Homer's doomed cod fishermen peer over the gunwale of a dory that, when considered alongside the illustration of "poor No. 15" in his tomb, looks suspiciously like a floating coffinches

The association of Homer's fishing images with death is compounded when they are compared to the tale of the harrowing 1883 misfortune of the halibut fishermen Howard Blackburn and Thomas Welch. Blackburn and Welch were partners in a dory launched from the schooner Grace L. Fears, which sailed out of Gloucester on 25 January

[74] Thanks to Ellery Foutch for sharing this image with me.

1883 and anchored in the halibut fields off Burgeo Bank, some 30 miles from the SW coast of Newfoundland. Their story was recorded for posterity by Capt. John W. Collins and published in the *Cape Ann Advertiser* with illustrations by Paul E. Collins.[75] It was later published in book form as *Fearful Experience of a Gloucester Halibut Fisherman* (1883).

As Blackburn and Welch were engaged in hauling halibut aboard their dory, an unexpected snow storm rolled in and they were separated from the schooner in the impenetrable white out. The pair was lost in the Atlantic for five days. Blackburn lost all of his fingers and a number of his toes; Welch was less fortunate and died during the ordeal. Like Homer's paintings, the story of Blackburn and Welch is explicitly about the courage, tenacity, and determination of these hardy fishermen. Also like Homer's paintings, a closer reading reveals a clear thematics of risk analysis. The varied vocabulary of risk, chance, luck, and accident are prevalent throughout the story as odds, chances, and probabilities are repeatedly calculated and hypothesized. When "Blackburn had the great misfortune to lose his mittens overboard," for instance, "the indescribable suffering and ill fortune which followed may be ascribed, in a great measure, to this unhappy accident."[76] Blackburn hatched a contingency plan that involved holding the oars tight to freeze his hands permanently in a curved grip, "so that when the hour of trial

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[75] Captain Joseph W. Collins was a self-educated Gloucester skipper. He rose to high level in the U.S. Commission of Fish and Fisheries in Washington, D.C. Mounted a personal campaign for greater safety in the Northeastern fisheries through design reform, which eventually led to a revision in the design of schooners. Joseph E. Garland, *Down to the Sea: The Fishing Schooners of Gloucester* (Boston: David R. Godine, 1983).

[76] Capt. J.W. Collins, "Howard Blackburn's Fearful Experience of a Gloucester Halibut Fisherman, Astray in a Dory in a Gale off the Newfoundland Coast in Midwinter," (pamphlet, Boston: F.A. Varnum, 1884), [9]. All subsequent page numbers refer to this edition and will be cited parenthetically within the body of the text.

came he would be able to hold the oars and thus have some chance for rowing, upon which chance he knew his life depended" (9).

At one point Welch speaks "encouragingly of the chances" of being picked up by some passing vessel (9). And, later in the story, Blackburn calculated that "chances for life were certainly as dubious as any that a brave man was ever doomed to encounter" (11). Near the conclusion of the story, Blackburn's luck changes for the good when he calculates that "his only hope of reaching the shore lay in the two oars that, luckily, had not been swept away…." (12). And then he "had the good fortune, about dark, to see three houses, which he had failed to discover before" (14). In perhaps the clearest instance of risk analysis, Blackburn and Welch, Collins writes, "fully sensible of the peril the storm expose[d] them to," chose instead to steadily pursue their work, preferring to "take this risk" than return to the ship without their catch (7).

Blackburn's story, like Homer's paintings, is as concerned with the cluster of concepts and vocabulary associated with chance—accident, risk, probability—as it is with will, courage, or heroism. It contains, furthermore, curious passages that equate the body of man and fish. Blackburn and Welch initially decided to land their trawl lines rather than row back to the schooner when they first became aware of potential danger. Later, however, they ultimately decided to throw their catch overboard in order to lighten their load and potentially precipitate their escape and/or rescue (8). As a result of their changed circumstances, their initial risk calculations are no longer valid—initially, it seemed like a good risk to continue harvesting their nets. Later, when the situation was more perilous, they sacrificed their catch in order to increase their chances of rescue.

The motif of dumping cargo overboard is rehearsed near the conclusion of the tale: Welch dies three days into the ordeal, but rather than further lighten his load to increase his rowing speed, as per the halibut dump, Blackburn pledges to transport Welch's body as long as he is able, even as the "friction of the oars handles wore away the frozen skin and flesh, which crumbled from his unprotected hands 'like powder'" (13). Blackburn's unwillingness to dump Welch's body testifies to a widespread resistance to the idea of treating a human, dead or alive, in a purely contingent manner.[77] When Blackburn finally reached land, he was forced to remove Welch's body from the boat on the rocky shore of a river bank in order to replace the boat's plug, which had jostled loose during the rough landing. During this chore, Blackburn loses his purchase on Welch's inanimate body, "his strength was not equal to the task, and the body slipped from his grasp and fell overboard between the wharf and the rock, where it sank in about twelve feet of water" (13). Twice Blackburn dumped his cargo—dead fish and dead man—overboard, drawing an unsettling parallel between the pair.

Collins notes at the opening of this saga: "Far too often have the daring men, in spite of their utmost endeavors been borne down by the mighty accumulation of nature's forces, and buried beneath some huge wave, they sink 'unknelled, uncoffined, and unknown,' into the seething waters, their requiem sung only by the howling winds and the hard-skinned, screaming seagulls (4)."[78] As if to compensate for the troubling

[77] Welch was literally dead weight, like the dead halibut, but Welch felt compelled to treat his dead body differently. The focus on burying Welch in an appropriate manner jibes with a cultural belief in the sanctity of human life and death.

[78] The quote "unknelled, uncoffined, and unknown" is taken from Lord Byron's poem *Childe Harold* (canto iv, stanza 179):
"Roll on, thou deep and dark blue Ocean—roll!
Ten thousand fleets sweep over thee in vain;
Man marks the earth with ruin—his control

equivalence of dumped halibut and "unknelled, uncoffined" fisherman, the story makes a great deal of assuaging any potential doubt about whether Welch eventually received a proper burial. When Blackburn finally encounters an inhabited settlement, he refused personal assistance until "he had received assurance that some of [his rescuers] would go at once for the body of his dead companion and properly care for it" (15). Lest there remain any lingering doubt, a final note is dedicated to making clear that "Welch's body was recovered, and when returning spring permitted of its transportation it was taken to Burgeo and buried in the church yard at that place, April 12, 1883" (15).

The key illustration of Blackburn's hardship can be found both in the interior of the booklet as well as on the cover (Figs. 2.55 and 2.55). It pictures Blackburn standing in the dory, which is about to crest a large, breaking wave. Blackburn bails water as Welch lies slumped, and presumably dead, in the aft. *The Fog Warning* quite clearly echoes the composition of this engraving. The dories in both pictures rise up a large swell, tilted at approximately forty-five degrees. While Homer's oarsman is seated, grasping his oars, the near-vertical orientation of the dory makes him appear as upright as Blackburn, who stands erect in his precariously bucking boat. The scale of the images is nearly identical: both dories occupy a similar amount of the picture plane and the bow of each breaks the horizon. *The Fog Warning* is an uncannily proximate mirror image of the woodcut of Blackburn's ordeal. Notably, Welch lies in the precise position occupied by Homer's glistening halibut. The dead man's outstretched hand echoes Homer's halibut's caudal

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Stops with the shore;—upon the watery plain
The wrecks are all thy deed, nor doth remain
A shadow of man's ravage, save his own,
When for a moment, like a drop of rain,
He sinks into thy depths with bubbling groan,
Without a grave, unknelled, uncoffined, and unknown."

fin, both of which reach inanimately skywards, and Welch's fingers rhyme with the vertebrae of the fish's homocercal fork, calling attention to a curious equivalence between the dead bodies of fish and fisherman (Fig. 2.57).

At the end of the 19th century, as the sociologist Viviana Zelizer has noted, insurance companies were concerned with death and injury as purely financial episodes. Their business, as Zelizer puts it, "was to make people plan and discuss death in monetary terms."[79] Their avowed goal was to encourage men to "make their own death the basis of commercial action."[80] Lives were reconfigured into a numerical value based on age, health, and life expectancy, as well as monetary value based on the risk the insurance company would have to assume to insure any given policyholder. Human beings, in other words, were conceived in a purely quantitative manner. On a foundation of medical statistics, life expectancy estimates, and investment computations, insurance actuaries had successfully calculated the monetary value of human life.[81] Like a dead fish, to be blunt, a dead man carried a calculable financial value. Insurance calculated a market price for men based on age, health, occupation, and so forth. *The Fog Warning*'s compositional triangulation of fisherman, halibut, and schooner equates death and money in a manner consistent with insurance's achievement of divining a market value for human death. Equidistant from one another, safety, emblematized by the schooner, is

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[79] Viviana A. Rotman Zelizer, *Morals and Markets: The Development of Life Insurance in the United States* (New Brunswick: Transaction Books, 1983), 43. Life insurance defined itself as "the capitalization of affection. …Tears are nothing but salt water, to preserve a fresh grief. Insurance is business, genuine, old-fashioned sixteen-ounce precaution." James T. Phelps, *Life Insurance Sayings*, third ed. (New York: Spectator Company, 1905), 12–13; quoted in Zelizer, 43.

[80] Reverend Henry Ward Beecher, *Truth in a Nutshell* (New York: Equitable Life Insurance Company, 1870); quoted in Zelizer (1983), 43.

[81] Ray Jureidini and Kevin White, "Life Insurance, the Medical Examination and Cultural Values," *Journal of Historical Sociology* 13, no. 2 (June 2000): 190.

equated and balanced against potential profit, embodied in the harvested halibut, and life, signified by the fisherman himself. In the same way that Welch's dead body rhymed with Homer's halibut, the latter also mirrors Homer's fisherman across the horizontal oars, which effectively cleave the pair.

This triangular relationship is subtly articulated in the equivalences between Welch and the dumping of the halibut in Collins's recounting of Blackburn's ordeal. The equation of life, death, and pecuniary value concludes Collins's recounting of Blackburn's story: upon his arrival home, a sum of nearly $500 was collected for him, chiefly through the efforts of the Proctor brothers, proprietors of the *Cape Ann Advertiser*, which first published Blackburn's story. Of this amount, $240 was realized from a benefit ball given by the Athletic Club of Gloucester (16). Blackburn's future income was also supplemented by the sale of the prints illustrating his harrowing ordeal and the booklet describing it.

Fearing that investing in an insurance policy would invite bad fortune, and reluctant to be seen to profit from the death of their loved ones, fishing communities were resistant to formal systems of insurance, choosing instead to rely on the *ad hoc* support of local charities, such as those described in Blackburn's story. For the most part, fishermen's widows relied on public subscriptions, fund-raisers such as musical entertainments and benefit balls, or charitable donations.[82] Masonic fraternities, the Odd-Fellows, and the Knights of Pythias provided systems of assurance to the families of fishermen who were members of these and similar organizations. Given the frequency of disasters in large fishing ports like Gloucester, Massachusetts, and Portland, Maine,

[82] Goode (1887), IV: 127.

charitable societies were formed to try to provide a more consistent form of relief; the Gloucester Fishermen's and Seamen's Widows and Orphans Aid Society is considered the most important and most effective of these societies.[83]

Seeking a plan to ensure consistent fundraising without having to rely on spontaneous donations, efforts were made by the Gloucester Fishermen's and Seamen's Widows and Orphans Aid Society to induce fishermen to join the society, thereby boosting the funds available to their widows and families in event of accident or death. Certificates were issued for one dollar each, but due to the superstitions of the fishermen, the plan was not successful. Beginning in 1864 the Society convinced the fishing firms to deduct half-a-percent of each fisherman's earnings following each expedition, the total collection of which was allocated annually to the Society.[84] Presumably, because the Gloucester Fishermen's and Seamen's Widows and Orphans Aid Society and other similar societies were charitable organization, they escaped the unpalatable association between profit and death carried by the insurance industry.

The logic that informed the relationship between profit and relief societies' aid funds is replicated in *The Fog Warning*. The halibut in *The Fog Warning* could, theoretically, be cast overboard to lighten the load and potentially facilitate the fisherman's escape, as it was by Blackburn and Welch. In this regard, the oars evoke a sort of schematic balance scale on which the fisherman's life is weighed against the commodity exchange value of the halibut. *The Fog Warning* poses a question about risk: what is the value of security? Or, perhaps more to the point, what is the value of human

[83] Ibid., 128. Gloucester had three other major charitable societies, the Tenement Association for Widows and Orphans (organized in 1871), the Gloucester Female Charitable Association (organized 1834), and the Gloucester Relief Association (Organized 1877). Ibid., 129.

[84] Ibid.

life, and what price is it worth to the market and to the individual? This formulation closely replicates the financial motivations of actuarial science.

Ewald has written that risk in the context of insurance has three characteristics: 1) risk must be calculable in that the probability of the occurrence of a given event must be estimable, 2) risk is collective in that an individual accident only becomes calculable when it is socialized, and 3) risk is capital in that it must be possible to equate financial compensation for any given loss.[85] This is what separates insurance from relief from charities, fraternities, or other traditional forms of local community support. Creating an explicit link between risk, life, and market value, *The Fog Warning* appears to argue for the capital underpinning of insurance over the *ad hoc* support of charities and community. Answering the question posed by Homer's painting—what price security?—a broadside advertising the Life and Accident Association of Detroit calculated: "Three cents a day, rightly invested, will furnish you capital when you are gone, and insure you against accident while you live" (Fig. 2.58).

THE PRICE OF SALVATION

The premise of financially evaluating a man's life—"three cents a day!"—was rejected by many as a profanation that transformed the sacred event of death into a vulgar commodity. As Zelizer has outlined, in order to legitimize the business of life insurance, the industry attempted to transform insurance into a kind of religious salvation and moral imperative. For example, the Life and Accident Association of Detroit broadside in Figure 2.58 includes the rhetorical question, "you love your family, do you not?" But

[85] Ewald (1991), 201–205.

marketing attempts went even further, anointing insurance coverage as a kind of religious salvation. As one advocate put it, the insured man dies "with soul sanctified by the deed, wings his way up to the realms of the just, and is gone where the good husbands and the good fathers go."[86] Referencing the New Testament, a children's booklet published by the Knickerbocker Mutual places insurance second only to the peace of God, "the faith that passeth understanding" (Fig. 2.59). Further biblical justification for life assurance is furnished by a quote from the First Epistle of Paul to Timothy: "He is worse than an infidel, who provideth not for his own." Life insurance companies explicitly justified their enterprise and based their sales appeal on the quasi-religious nature of their product. Far more than an investment, life insurance was a "protective shield" over the dying, and a consolation "next to that of religion itself."[87] The noneconomic functions of a policy were extensive: "It can alleviate the pangs of the bereaved, cheer the heart of the widow and dry the orphans' tears. Yes, it will shed the halo of glory around the memory of him who has been gathered to the bosom of his Father and God."[88]

The Fog Warning resonates with life insurance's curious double-discourse: that is, life as commodity, and contingency plan as quasi-religious salvation. In fact, Homer's series can be read as a religious triptych of sorts. Recalling Raphael's *Miraculous Draft of Fishes*, *The Herring Net*'s bountiful harvest is sanctified by the stacked oars in the

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[86] Moses L. Knapp, *Lectures on the Science of Life Insurance* (Philadelphia: E.J. Jones and Company, 1851), 226; quoted in Zelizer (1983), 603.

[87] David N. Holwig, *The Science of Life Assurance* (Boston: Providential Life and Trust Company, 1886), 22; quoted in Zelizer (1983), 54.

[88] Morris Franklin, speech delivered at the First Annual Session of the Convention of Life Assurance Underwriters, 26 May 1859, in *American Life Assurance Magazine* (January 1860), 1:34; quoted in Zelizer (1983), 54.

prow of the dory, which bring to mind the saltire cross on which the Apostle Andrew, patron saint of fishermen, was crucified, as depicted in Bartolomé Estebán Murillo's *Martyrdom of Saint Andrew* (1675–1680, Fig. 2.60).[89] *The Fog Warning* also carries a religious connotation as a Crucifixion at sea. As Homer's lone fisherman's dory crests a wave, his oars perpendicular to his vessel, he is rendered literally cruciform. *Lost on the Grand Banks,* in which the fishermen's fog-induced blindness connotes hopelessness, recalls precedent images of doomed souls in a boat, such as Michelangelo's *Last Judgment* in the Sistine Chapel (1534–41, Fig. 2.61). If nothing else, by overlaying biblical iconography onto commercial fishing scenes, Homer conflated Christian themes with the materialism of the contemporary world, precisely the goal of life insurance marketing that compelled religious leaders like the Reverend Henry Ward Beecher to endorse coverage. Beecher asked "Once the question was: can a Christian man rightfully seek Life Assurance? That day is passed. Now the question is: can a Christian man justify himself in neglecting such a duty?"[90]

Promoted as "the unseen hand of the provident father reaching forth from the grave and…nourishing his offspring," life insurance was imagined as a sort of conduit between the mundane and the heavenly realms, a form of immortality secured by a lifetime of regular payments.[91] As the Knickerbocker's "To Little Folks" booklet illustrated in Figure 2.59 pointed out, "Though a life insurance company can not give

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[89] Paul Provost pointed out the iconographic link to the Apostle Andrew in "Winslow Homer's *The Fog Warning*: The Fisherman as Heroic Character," *American Art Journal* 22, no. 1 (Spring 1990): 20–27.

[90] Henry Ward Beecher, *Truth in a Nutshell* (New York: Equitable Life Insurance Company, 1870); quoted in Zelizer (1983), 57.

[91] Booklet published by the United States Life Insurance, Annuity and Trust Company of Philadelphia (New York, 1850), 5; quoted in Zelizer (1983), 59.

back the living husband and father, it can pecuniarily stand in his place."[92] Referencing the First Epistle of Paul to Timothy, the criteria for a "good death" are articulated in a sermon delivered by T. DeWitt Talmage, editor of the *Christian Herald*, in the 1880s:

> Paul says that a good man who neglects to care for his household is more obnoxious than a man who rejects the Scriptures…. When men think of their death they are apt to think of it only in connection with their spiritual welfare…. It is meanly selfish for you to be so absorbed in heaven…that you forget what is to become of your wife and children after you are dead…. It is a mean thing for you to go up to Heaven while they go into the poorhouse.[93]

The cover of a Brooklyn Life Insurance policy emblematizes insurance's good, Christian-inflected death (Fig. 2.62). As this seaman clings to the mast of his wrecked ship, he looks up and sees a reassuring vision of his family safely "provided for." The visual cues are far from subtle: cruciform mast; heavenly realm in the clouds. The verb "provide," furthermore, shares its etymology with "providence," and carries associated connotations of divine benevolence. Unlike Brooklyn Life Insurance's cover model, however, Homer's halibut fisherman in *The Fog Warning* lifts his eyes to the heavens and appears to see only the fogbank's tendrils snaking skyward like the outstretched and gnarled fingers of some skeletal hand (see Fig. 2.15).

Like his imperiled fisherman, Homer was alert to the signs that he was navigating a world of risk. He personally negotiated life's unforeseen perils by subscribing to the message of the increasingly visible and powerful insurance industry. Homer held an annuity in the Mutual Life Insurance Company. In response to a letter from his early

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[92] Booklet, "To Little Folks, A Present for Good Little Boys and Girls from the Knickerbocker Mutual Life Insurance Company," c.1880. Warshaw Collection, National Museum of American History, Smithsonian Institution, Washington, D.C.

[93] Sermon delivered by T. DeWitt Talmage, quoted in Roger Hull, "Immortality Through Premiums," *Christian Century* 81 (19 February 1964): 240; quoted in Zelizer (1983), 57.

biographer Downes, Homer wrote in August 1910: "No doubt, as you say, a man is known by his works. That I have heard at many a funeral. And no doubt in your thoughts it occurred to you in thinking of me. Others are thinking the same thing. One is the Mutual Life Insurance Co., in which I have an annuity. But I will beat you both." [94] Clearly concerned with his mortality, Homer had, in a letter to his brother of February 1895, predicted—almost accurately—that he would die in fourteen years; he died on 29 September 1910.[95] In October 1907, Homer had written that he intended to set aside money "to be handy in case I want to be buried, but I have postponed it now for the present."[96] This letter was written to Grenville Norcross, Homer's wealthy Boston banker cousin, who, presumably, was to manage Homer's funds. Coincidentally or not, Norcross was the first owner of *The Fog Warning*.

Whether or not Homer felt any affiliation with his imperiled fishermen, he surely was, like all Americans at the end of the century, becoming increasingly aware of the potential risks littering the voyage of life and the options available for managing their consequences. He was probably also aware of the employment of images of the sea as a representation of capricious but calculable risk. Nautical imagery was effectively utilized in insurance marketing materials; the Brooklyn Life Insurance policy illustration is just one example (see Fig. 2.62). To offer another, an Equitable advertisement exhorts: "at the

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[94] Lloyd Goodrich, *Winslow Homer* (New York, 1944), 200; quoted in Charles Brock, "Chronology," in Cikovsky and Kelly (1995), 406.

[95] Homer to Charles S. Homer, Jr., 21 February 1895. Archives of the Bowdoin College Museum of Art, Brunswick, Maine. Franklin Kelly speculates about the connection between Homer's prediction and the thematic focus on death in his late painting *Right and Left* in "Winslow Homer and the Deflections of Narrative," *Antiques* 148, no. 5 (November 1995): 660.

[96] Homer to Grenville Norcross, 11 October 1907. Massachusetts Historical Society.

flood tide of your life make provisions for your mature years"[97] (Fig. 2.63). Similarly, a Metropolitan Life Insurance Company pamphlet entitled "Taking Your Bearings," admittedly published in 1941, some years after Homer's death, employed the nautical metaphor of "charting one's course" to configure the voyage of life as the hazardous navigation of a treacherous ocean littered with accidents and diseases symbolized by all manner of perils-of-the-sea (Fig. 2.64).[98] The voyage of life metaphor is prevalent in insurance rhetoric from the mid-nineteenth century. In a passage describing a life expectancy chart, for instance, *The Insurance Guide and Handbook* (1857) notes, "the course of individual life, indeed, presents such a chequered passage, and seems apparently so surrounded with dangers, at various recurring periods, that it may be, no inaptly, compared to a ship on a dangerous voyage" beset with "various rocks and quicksands," "storms…which greatly endanger its safety," and "breakers."[99] It hardly seems unreasonable to suggest that Homer's imagery of individuals at sea charting their course in uncertain conditions jibes thematically with the insurance industry's marketing strategies.

That the imagery, logic, and rhetoric of risk management is indeed relevant to an interpretation of Homer's 1880s marine images is further supported by the fact that the cover of the Met Life brochure illustrated in Figure 2.64 was clearly modeled on Homer's 1886 painting *Eight Bells*, an ostensibly straightforward image of a pair of sailors taking chronometer and sextant readings following a rough storm (Fig. 2.65). Homer might not

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[97] Advertisement for The Equitable, *Town and Country*, 3 June 1905.

[98] Thanks to Daniel May, archivist at Met Life, for providing the publication date of this pamphlet.

[99] *The Insurance Guide and Handbook [Dedicated Especially to Insurance Agents]: Being a Guide to the Principles and Practice of Life Assurance; and to the Present Position of Existing Offices*… (London: W. & D. Pateman, 1857), 70–71.

have been aware of the ways paintings such as *Eight Bells* and *The Fog Warning* resonated with life insurance marketing, but, if nothing more, some of the same language appears to have spoken through them. Homer's peril-at-sea pictures and the logic and rhetoric of risk management both emerged as integral parts of the late nineteenth-century risk culture that generated the meanings of both.

"OH WHAT A FRIEND CHANCE CAN BE—WHEN IT CHOOSES"

Homer was by nature elusive regarding the intended meanings or even the relevance of certain details of his paintings. For instance, he ignored a question posed in a letter from a woman who demanded to know what was "in that barrel" in the dory in *The Fog Warning*.[100] In other instances he "reacted testily," as Kelly has noted, to "questions about his paintings."[101] For example, *The Gulf Stream* provoked an outburst in which Homer sarcastically lamented to his dealer, "You ask me for a full description of my picture of the 'Gulf Stream.' I regret very much that I have painted a picture that requires any description" (Fig. 2.66).[102] *The Gulf Stream*, a depiction of a black man baking in the sun on the deck of a small sloop with a snapped mast as sharks circle nearby and a squall blows up in the distance, is a late painting that revisits the subject of marine despair and uncertainty in a manner thematically and compositionally similar to *The Fog Warning* and *Lost on the Grand Banks*.[103] Homer concluded his well-known diatribe about *The*

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[100] Downes (1911), 238.

[101] Cikovsky and Kelly (1995), 307.

[102] Homer to Knoedler, 19 February 19 February 1902 (typescript NGA); quoted in Cikovsky and Kelly (1995), 307.

Gulf Stream by sarcastically quipping, "The unfortunate negro who now is so dazed and parboiled—will be rescued & returned to his friends and home & ever after live happily."[104] Kelly has observed, "The 'description' or 'story' of the painting, then, is not the bearer of its true content, only the means of delivering it."[105]

The argument I have laid out in this chapter is highly speculative. While there is no conclusive textual evidence left by Homer that supports the specifics of my reading, Homer appears to have alluded to his thoughts on the broad subject of chance at least once. Lloyd Goodrich, the artist's biographer, tells us that scrawled on Homer's studio wall, alongside all manner of "addresses, memoranda," and mathematical-sounding "additions [and] subtractions," was a cryptic note that read, "Oh what a friend chance can be—when it chooses."[106] Precisely when Homer might have written this is not known, although it must postdate September 1884, when the conversion of the carriage house abutting the family property at Prout's Neck, Maine, to Homer's studio was completed.

The line is a quote transcribed verbatim from Emile Gaboriau's novel *The Clique of Gold*. Originally published in 1871 in Paris as *La Clique dorée*, it was translated and published in numerous editions in Boston and New York during the 1870s, 1880s, and 1890s. Homer's Prout's Neck library contained an anthology of the works of Gaboriau

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[103] Homer produced a series of initial watercolor studies for *The Gulf Stream* in 1885 in Bermuda even though he didn't develop the idea on canvas until 1899. Gardner, Albert Ten Eyck. "Metropolitan Homers," *Metropolitan Museum of Art Bulletin*, New series vol. 17, no. 5 (January, 1959), 135.

[104] Homer to Knoedler, 19 February 19 February 1902 (typescript NGA); quoted in Cikovsky and Kelly (1995), 307.

[105] Cikovsky and Kelly (1995), 307.

[106] Lloyd Goodrich, *Winslow Homer* (New York, Pub. for the Whitney Museum of American Art by the Macmillan Company, 1944), 109.

that included *The Clique of Gold*.[107] *The Clique of Gold* relates the story of a group of motivated collaborators, the titular clique, to mislead and swindle money from an elderly count. Gaboriau is widely acknowledged to be one of the originators of modern detective fiction; his detective Lecoq preceded Sir Arthur Conan Doyle's creation of Sherlock Holmes. Although it is not one of Gaboriau's Lecoq stories, *The Clique of Gold*'s structure is typical of the author's detective novels in that much of the action is revealed through lengthy flashbacks.[108] The narrative starts with the attempted suicide of a destitute young girl, Miss Henrietta, in a decrepit boarding house and proceeds to trace the convoluted course by which she arrived at this decision, finally exposing the characters whose machinations engineered the scenario in the first place.

The story is propelled into action by the chance discovery of the attempted suicide by a lodger in the aforementioned boarding house, Papa Ravinet. "'Quick!' he cried, with a voice full of trouble. '…an accident has happened upstairs.'"[109] Ravinet and others successfully resuscitate the young girl and in the midst of the confusion Ravinet pockets a pair of letters cum suicide notes left by Henrietta and pieces together the rudiments of her recent history. She has, Ravinet and the reader learn, been left destitute by nefarious characters plotting to swindle her aristocratic father. Upon discovering the names of the key players in this plot, Ravinet is transformed and inspired, for he too—

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[107] Katherine C. Woltz, "Additions to Winslow Homer's Library at Prout's Neck," *American Art Journal* 34/35 (2003/2004): 189.

[108] Nancy Ellen Curry, "The Life and Works of Emile Gaboriau" (unpublished diss., University of Kentucky, 1970), 140.

[109] Emile Gaboriau, *The Clique of Gold* (1871), Project Gutenberg, April 13, 2006. http://www.gutenberg.org/files/4604/4604-h/4604-h.htm (accessed 14 October 2011), 3. All subsequent page numbers refer to this edition and will be cited parenthetically within the body of the text.

coincidentally!—had been maltreated by the very same people.[110] Ravinet, once a wealthy banker, spends his days as a dealer in second-hand goods. In a technique favored by Gaboriau, Ravinet's residence functions as auxiliary description of his character.[111] "The good man lived, to tell the truth, in the same rooms in which the thousand and one things he was continually buying were piled up in vast heaps. There was no fixed place for his bed even. He slept where he could, or, rather, wherever an accidental sale had cleared a space for the time…" (7). He is a man of contingency, his life dictated by his business and the caprice of the market.

The line Homer copied on his studio wall, "Oh what a friend chance can be—when it chooses," is uttered shortly after Ravinet makes his discovery and immediately prior to tracing out "in the future the vague outlines of some great scheme" that will occupy the remainder of the novel. Ravinet declares: "'Poor, poor child! And to think that for a whole year I have lived under the same roof with her, without knowing it. But I am here. I am still in time. Oh, what a friend chance can be when it chooses!'" (11). Chance, according to Ravinet / Gaboriau, was responsible for Henrietta's survival ("it was to chance alone she owed her rescue from death" [203]), her intervention in Ravinet's life, his discovery of their shared histories and tormentors, and the inspiration for future revenge for past abuse.

For Gaboriau at least, chance was a great narrative friend indeed. Chance and accidents litter *The Clique of Gold*, driving the action forward. All manner of decidedly

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[110] "The two letters he had just read had opened anew in his heart more than one badly-healed and badly-scarred wound. He was suffering intensely; and his pain, his wrath, and his hope of vengeance long delayed, gave to his features a strange expression of energy and nobility. With his elbows on the table, holding his head in his hands, and looking apparently into the far past, he seemed to call up the miseries of the past, and to trace out in the future the vague outlines of some great scheme" (11).

[111] Curry (1970), 162.

non-accidental machinations, meetings, and escapes are also disguised as such.[112] The vocabulary of risk runs throughout the novel as chances are evaluated, odds are estimated, and bets are hedged.[113] This is hardly atypical of late nineteenth century literature, in which accidental discoveries, mis-deliveries, fires, mistaken identities, collisions, crashes, wrecks, chance encounters, and all manner of coincidental occurrences serve either to propel the plot forward or offer moral lessons and preordained resolutions.

The quote Homer transcribed emblematizes the role of chance in the novel. By ascribing power to the role of chance, by personifying it and giving it some sort of agency to choose when and to whom it might bestow its favor, Ravinet / Gaboriau inscribe it as the motivating force in the universe. Chance itself acts, in a sense, like the author of a book, providing whatever development is required to move the plot forward. It is, to put it another way, a *dues ex machina* for the modern age. Of course, chance, by definition, can have no agency. It is neutral, a stochastic constant. It manifestly does not pick and choose. By suggesting chance has agency or choice, Ravinet / Gaboriau

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[112] For example, Daniel Champcey describes to Count Ville-Handry his meeting with Sarah Brandon thus: "'And to think that chance alone has led me to meet this angel!' A sudden start, involuntary on the part of Daniel, seemed to disturb him; for he resumed his speech, laying great stress upon his words,—'Yes, chance alone; and I can prove it to you.'" (61) Daniel proceeds to lay out a quite explicit "chain of circumstances" as supposed proof of the chance nature of the meeting. The Count Ville-Handry, "utterly unmindful," chooses to believe the story as "chance, a 'blessed chance,' as he said" (68). Similarly, the accidental nature of a series of near-fatal encounters, such as "that block which had fallen on his head, no one knew whence; this boat sinking suddenly, and without apparent cause," is questioned thus: "Were they the work of chance alone?" (236).

[113] Near the conclusion of the novel, as the conspiracy is unraveling, Mrs. Bertolle cautions against error in terms of odds: "You will tell me that we have ninety-nine chances out of a hundred on our side; maybe! Only a single, slight mistake may lead us altogether astray; and then there is an end to all our hopes, and these rascals triumph after all!" (313). Similarly, when Ravinet first conceives of his revenge near the beginning of the story, he utters aloud a threat addressed to Maxime de Brevan, the imposter most immediately responsible for Henrietta's circumstances, using the varied vocabulary of chance "'Aha!' laughed the merchant. 'No chance for you, my fine fellow! You have lost your game, and you'll have to try your luck elsewhere; and this time I am on hand'" (17).

allegorizes the cultural paradigm shift that occurred during the nineteenth century. That is, a shift that occurred from an understanding of the universe as dictated by either some supernatural power or deterministic natural law to an acceptance that the universe was directed by chance. By the 1880s, chance was granted larger and larger responsibility for the regular occurrence of events such as those things of interest to thriller and detective novels like Gaboriau: death, crime, suicide, illness, and so forth. Chance, as Hacking has formulated it, was "no longer the essence of lawlessness, but at the core of all laws of nature."[114] By granting it agency, Gaboriau concedes to chance ultimate power and configures chance as, essentially, a new god-like creative force.

It would probably be unwise to argue for Gaboriau's exceptional literary powers or to look for deep meaning in Homer's transcription on the wall of his studio of this particular quote from *The Clique of Gold*. It would be difficult even to know how Homer understood the meaning of the statement "Oh, what a friend chance can be when it chooses!" It is tempting to wonder if Homer associated somehow with Ravinet's cause and/or motivation or if Gaboriau's *oeuvre* in general and this quote in particular resonated with Homer's own experience with chance's unpredictable interventions in life, love, or business pursuits (as hinted at by the "addresses, memoranda," and mathematical-sounding "additions, subtractions" Goodrich identified nearby on the artist's walls).

Such conjecture is arguably hardly farfetched, and bears brief consideration. Homer avoided commissions, choosing instead to navigate the open water of the

[114] Hacking (1990), 188.

speculative market for American paintings.[115] Like Ravinet, the dealer in second-hand goods, Homer's prosperity was contingent on the seemingly random ebb and flow of the free market. Furthermore, Homer and his family invested heavily in the real estate market, from 1883 buying up properties around Prout's Neck; Homer played an active role in managing the real estate business. But there is no way to know the motivation underlying Homer's act of transcription. At most, it seems fair to acknowledge that Homer appreciated something about Gaboriau's formulation of chance. If nothing more, it situates Homer in the widespread period cultural discourse of chance and risk.

Ravinet's tantalizingly oblique quip, in a way, explicates the narrative arc of Homer's fishing pictures in that *The Herring Net, The Fog Warning* and *Lost on the Grand Banks* illustrate the historically specific "friendly" and "unfriendly" aspects of chance's caprice: *The Herring Net* appears to embody good risk, *Lost on the Grand Banks*, bad risk, and the potential for both is expressed in *The Fog Warning*. Perfectly balanced atop a swell in a boat loaded with halibut and with danger on the horizon, Homer's halibut fisherman has risked laying his line a certain distance from the mother ship, reaped the rewards of so doing, and now finds himself presented with the potential losses involved in this risk. As per the logic of the quote Homer transcribed from Gaboriau's *The Clique of Gold*, chance has been both friendly and unfriendly to Homer's halibut fisherman.

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[115] Kevin M. Murphy, "Painting for Money: Winslow Homer as Entrepreneur," *Winterthur Portfolio* 37, no. 2/3 (2002): 147–160.

Chapter 2

Archaeology of the Blur: Pictorial Portrait Photography and Ideal Averages

The innovative Italian actress Eleonora Duse (1858–1924) is the subject of one of Edward Steichen's (1879–1973) most compelling early portraits.[1] Duse sat for Steichen in 1903. At the time of writing, eight early prints of this image have been located. Made from the same negative, the set of images exhibits the full range of Steichen's technical mastery. The series comprises: a platinum print dated to 1903 in the Library of Congress (Fig. 3.1); a pigment print made that same year now in the collection of the Museum of Modern Art, New York (Fig. 3.2); a 1903 carbon pigment print offered at Sotheby's in 2005 (Fig. 3.3); a photogravure (made from a positive transparency of the 1903 carbon pigment print in Fig. 3.3) in the collection of the Museum Ludwig Cologne (Fig. 3.4); a combination print—gum dichromate print over a platinum print—in the collection of the George Eastman House, also from 1903 (Fig. 3.5); a warm-toned gum print signed and dated 1904 once in Alfred Stieglitz's possession (Fig. 3.6); a gum-dichromate print printed circa 1905–06 that appeared in a Sotheby's auction in 2008 (Fig. 3.7); and a photogravure published in the "Special Steichen Supplement" of *Camera Work* in April 1906 (Fig. 3.8).

From 1903 to 1906, when Steichen made this series of prints of his portrait of Duse, he made a wide range of choices in paper weight and texture and developing

[1] Born Eleonara Duse, her name was sometimes spelled Eleanora in English and American sources. Both spellings are used in the titles of Steichen's photographs of the actress. In one case, he wrote her name "Eleonora Duse" on the image itself (see Fig. 3.3); in another, he wrote her name "Eleanora Duse" on the back of the image in ink (see Fig. 3.5). Alfred Stieglitz also inscribed her name on a label on the back of the photograph's original frame, spelled "Eleanora Duse" (see Fig. 3.6). I have retained the titles used by the current owners, but shall refer to her as "Eleonora" in my text.

process that resulted in radically different effects of tonality, focus, and mood. While it is not possible to recreate the precise chronological sequence in which the prints were made, it is apparent that Steichen, from 1903 to 1906, utilized techniques that progressively enhanced the blurriness, haziness, fogginess, or fuzziness of Eleonara Duse's physiognomy, costume, and surroundings in subtly distinct ways. Steichen's series' investment in, and investigation of, the nuanced effects of evocative blur, soft focus, physiognomic dissolution, atmospheric enhancement, and tonal modulation epitomize the style of pictorial portraiture, the aim of which has traditionally been understood as a means of lending the photographic print an "artistic" or "painterly" appearance. I do not discount the validity of this explanation, but in this chapter, I offer a new option for interpreting this pictorial aesthetic by undertaking an archaeology of the blur.[2]

At the end of the nineteenth century and beginning of the twentieth century, fine art photographers idealized essentialized, abstracted, and blurred physiognomies. They were far from alone in this endeavor as scientists, amateurs, authors, and the popular media participated in a discourse of blurry effacement. Exposing the discursive connections of effacing faces around 1900 casts new light on pictorialism's foggy portraits. This chapter will examine the profusion of aesthetic, literary, scientific/scientistic and actuarial discourses surrounding blurred and ghostly faces around 1900. Moving beyond traditional art historical accounts, the blurry aesthetic of

[2] I take my methodological bearings in conducting an archaeological analysis from Michel Foucault's exploration of history and discourse formation in *The Archaeology of Knowledge* and rely on his formulation of biopower and biopolitics in *Discipline and Punish*. Foucault, *Archaeology of knowledge*, trans. A.M. Sheridan Smith (London; New York: Routledge, 2002); Foucault, *Discipline and Punish*, transl. Alan Sheridan (New York: Vintage Books, 1995)

portraits such as Edward Steichen's *Eleanora Duse* will be considered alongside the similarly effaced, abstracted, and idealized physiognomies produced by Francis Galton's experimental, eugenics-inflected composite photography and its popular applications; Edward Bellamy's probabilism-based utopian novel *Looking Backward, 2000–1887*, published in 1888; and the contemporaneous reconceptualization of individuals as statistically-configured human equivalents of risk underwritten by a burgeoning insurance society.

Resisting the received art history of pictorialism, this chapter will expose and analyze the discourse of the blur around 1900 to reveal how the art historical narrative built up around pictorialism's aesthetic ruptures under closer scrutiny. To do so, the artificially wide gap separating scientistic/scientific photography and fine art photography must be bridged. Clear connections between the two modes of photography will serve to refute the historically constructed division and identify important fragments of history elided by art and social history. Revealing the selective artificiality of the aesthetic discourse surrounding pictorialism enables a new discursive practice to be revealed that implicates the aesthetic of the artistic blur in a far more complex matrix of social and institutional power. The blur participates in forming newly emergent social practices and institutions—specifically the cultivation of a modern mode of subjectivity related to the notion of the Norm central to the logic of an emerging insurance industry.

Art of the Blur

One of the primary representational strategies of turn-of-the-century American pictorial photographers was the blur.[3] Among its numerous semiotic valences, the photographic blur can connote mis-focus, the jiggle of the camera, movement of the subject, etc. As Michael Leja has noted, in "photography a blur is a physical effect of the movement of reflected light imprinted on a photographic plate." [4] Blurs, of course, can be intentional or accidental in their originches For the purposes of this study, when I use the term *blur*, I refer to a cluster of *intentional* photographic techniques that create blurred effects, those deliberate smears, hazy films, and acts of selective mis-focus that partially obscure and bedim in the manner evoked by James Russell Lowell when he wrote in 1871 of "the vast blur of a north-northeast snow-storm."[5]

Methods of achieving an intentional blurred appearance in photography are manifold, and include intervention before and after development, both on the negative, paper, and printed image. Pre-development approaches include selecting specific lenses to intentionally create a very shallow range of focus or mis-focus. Manual intervention, such as shooting through a veil, shim, or gauze, or coating the lens with a viscous substance, will also produce a blurry appearance. Pictorialists were keen advocates of darkroom manipulation of their negatives and prints, and maximized the expressive

[3] Soft-focus effects are commonly acknowledged to be the most identifiable aspect of pictorial imagery. See, for instance, Christian A. Peterson, *Alfred Stieglitz's Camera Notes* (Minneapolis Institute of Arts; New York: W.W. Norton & Company, Inc., 1993), 20.

[4] Michael Leja's provocative reference, in the course of his investigation of Eakins's semiotically multivalent blurs, to undertaking an "archeology or a semiotics or a phenomenology of the blur" as an interesting pursuit stimulated my thinking about the connotations of blurs. Leja is primarily interested in blurs as indexes or symbols of motion, and focuses his investigation accordingly. "Michael Leja, "Eakins and Icons," *Art Bulletin* 83, no. 3 (September 2001): 485, 486.

[5] James Russell Lowell, *My Study Windows* (Boston: J.R. Osgood and Company, 1871), 39.

potential of chemical toning and combinatory printing methods.[6] They also often hand-tinted or retouched their photographs and reinforced and modified their platinum, palladium, or carbon prints using pigmented or non-pigmented colloid-dichromate processes or photogravure printing procedures. The gum dichromate process in particular was favored for its versatility. It enabled photographers to easily manipulate the tone and hue of the print, and lent itself well to the creation of a painterly appearance. The most explicit argument for gum-dichromate's association with painterly appearance is Steichen's own self portrait as a painter with brush and palette; the artful print reveals the brushstrokes of Steichen's manipulation of the gum-dichromate during the developing process (Fig. 3.9). Alfred Maskell and Robert Demachy, two of the best known proponents of the gum dichromate process, noted in their practical instruction manual *Photo-Aquatint or the Gum-Bichromate Process*, "the freedom and personality of its treatment are its essence and beauty."[7] The process is also well suited to combining with additional printings, the modulated layers of which contributes to a print's luxurious, subtle, and expressive aesthetic.[8]

The umbrella of blurred pictorial effects includes shallow focus, soft focus, diffuse tone, selective mis-focus, and, to use turn-of-the-century terms, "muzziness," and

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[6] Bertrand Lavédrine, *Photographs of the Past: Process and Preservation* (Los Angeles: Getty Conservation Institute, 2000), 136. Late nineteenth-century toner formulations included elements as exotic as uranium and mercury.Alfred Stieglitz, for instance, used gold and uranium toning on his platinum and palladium prints. Constance McCabe and L.D. Glinsman, "Understanding Alfred Stieglitz's Platinum and Palladium Prints: Examination by X-Ray Fluorescence Spectrometry," in *Studies in the History of Art* 51 (1995): 71–85.

[7] Alfred Maskell and Robert Demachy, *Photo-Aquatint or the Gum-Dichromate Process* (London: Hazell, Watson, and Viney, Ltd., 1901), 13.

[8] Sarah Kennel, *In the Darkroom: An Illustrated Guide to Photographic Processes before the Digital Age* (Washington, D.C.: National Gallery of Art; New York: Thames and Hudson, 2010), 52. See also Lavédrine (2000), 170–175.

"fuzziness." Sadakichi Hartmann, the outspoken champion of art photography, suggested that the blur was one of the medium's essential and distinguishing qualities when he exhorted photographers to "embrace" the "beauty of the blurred line, produced by the action of the light" if photography hoped to "assert itself" as an "independent art."[9] Hartmann's exhortation was published in 1899 in *Camera Notes*, which was published quarterly by the Camera Club of New York and edited for most of its 1897 to 1903 run by Alfred Stieglitz. Stieglitz himself clearly shared Hartmann's opinion, as he claimed "diffuse tone" was the key to good photography.[10]

A survey of *Camera Notes* and Stieglitz's subsequent journal, *Camera Work*, published from 1903 to 1917, confirms that Hartmann's call to "embrace" the blur did not fall on deaf ears. Considered "the most dignified and probably most influential of all photographic journals"[11] in its own time, and lauded to this day as "the most significant American photographic journal of its time,"[12] *Camera Notes* provides a representative sample of fine art photographic practice at the end of the nineteenth century. Of the eighty-seven photogravures and four silver gelatin prints published in the pages of *Camera Notes* during its run, fully one third of them—thirty-four—exhibit significant

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[9] Sakakichi Hartmann, "Portrait Painting and Portrait Photography," *Camera Notes* 3 (July 1899): 1–20 (reprinted in Harry W. Lawton and George Knox, eds., *The Valiant Knights of Daguerre: Selected Critical Essays on Photography and Profiles of Photographic Pioneers by Sadakichi Hartmann* (Berkeley: University of California Press, 1978), 54.

[10] Stieglitz, "Some Remarks on Lantern Slides, a Method of Developing: Partial and Local Toning," *Camera Notes* 1 (October 1897): 33–34. By "good," Geraldine Wojno Kiefer suspects that Stieglitz meant "artistic." Geraldine Wojno Kiefer, "The Leitmotifs of *Camera Notes*, 1897–1902," *History of Photography* 14, no. 4 (October–December 1990): 351.

[11] Charles H. Caffin, *Photography as a Fine Art: The Achievements and Possibilities of Photographic Art in American* (1901; reprint, Hastings-on-Hudson, N.Y.: Morgan & Morgan, 1971), 27–28.

[12] Christian A. Peterson, *Alfred Stieglitz's Camera Notes* (Minneapolis Institute of Arts; New York: W.W. Norton and Company, Inc., 1993), 9.

"beauty of the blurred line," to use Hartmann's term, or "diffuse tone," to use Stieglitz's, as do sixty-seven—about one-quarter—of the 270 half-tones published in the journal.[13] Rose Clark and Elizabeth Flint Wade's photogravure, *Portrait of Miss. M., of Washington*, published in the April 1901 issue of *Camera Notes*, is a fine example of the aesthetic of hazy indistinctness prevalent throughout the journal (Fig. 3.10).[14]

After abdicating his editorial post at *Camera Notes*, Stieglitz started *Camera Work*, which was the dominant photography journal in the U.S. from 1903 until the end of its run in 1917. Over the course of *Camera Work*'s run, 559 illustrations appeared on its pages. Eighty-three of these were non-photographic. Of the remainder, which amounted to 476 photographs, photogravures, and half-tones, only 103 do *not* feature significant soft-focus, selective mis-focus, or shallow focus. Only these 103 photographs, in other words, are not blurred. The remaining 374 photographs, nearly 67% of the photographs published in *Camera Work* from 1903 to 1917, are significantly blurred.[15] Steichen's portrait of Eleonara Duse was published as a photogravure in the "Special Steichen Supplement" to the April 1906 issue of *Camera Work* (see Fig. 3.8). Also included in the Supplement was a particularly fine blurry specimen: the photogravure

[13] All of the photogravures and gelatin silver prints published in *Camera Notes* are reproduced in Christian A. Peterson, *Alfred Stieglitz's Camera Notes* (Minneapolis Institute of Arts; New York: W.W. Norton and Company, Inc., 1993).

[14] *Camera Notes* 4, no. 4 (April 1901): 279.

[15] A complete, illustrated chronological inventory of all photographs and other illustrations appearing in *Camera Work* can be found in Marianne Fulton Margolis, ed., *Camera Work: A pictorial Guide, With Reproductions of All 559 Illustrations and Plates, Fully Indexed* (New York: Dover Publications, Inc., 1978). A facsimile of the full run of *Camera Work* was printed in 1969 by Kraus Reprint.

Portraits—Evening, a double portrait of the artist and his wife Clara from a negative made on their honeymoon on Lake George, New York, in 1903 (Fig. 3.11).[16]

That a majority of pictorial photographs was blurry is hardly a newsworthy observation. F. Holland Day's platinum print of a seated woman in a straw hat holding an umbrella, in the Library of Congress, for instance, is exemplary (Fig. 3.12). Day's subject is enveloped in light, which enters from the photograph's right edge. The strong light source, coupled with Day's choice to print the image in a softly unfocused state, creates dark shadows and silhouetted forms on the left half of the image and washed out, diffuse forms on the right side. The image transcends the curious particulars of the *mis-en-scene* to yield a strong abstract composition. Anchored by the latticework of the chair back, tethered by the verticals of the umbrella's central tube and the wall behind the seated figure, and braced by the horizontal of her right arm, the result is a satisfying two-dimensional arrangement hovering tantalizingly between superficial flatness and limitless, hazy depth. The diffuse blur of Day's photograph appears, on first blush, to be an uncomplicated method of dressing up an inconsequential and anonymous subject in the garb of high art. The blur operates here superficially, as a glaze of the beautiful and artistic.

It continues to be common to explain pictorialism's blur along these lines as a purely formal means of elevating photography to the status of Art from its mimetic, technological origins. Soft focus was heralded as a means of endowing the photograph with the beauty and patina of handmade art, thereby releasing the medium from, as

[16] The following images were included in *Camera Work*'s Special Steichen Supplement: *Maeterlinck*; *J. Peirpont Morgan, Esq.*; *Duse*; *Portraits—Evening*; *Wm. M. Chase*; *La Cigale*; *In Memoriam*; *The Model and the Mask*; *The White Lady*; *Rodin—Le Penseur*; *The Big White Cloud*; *Landscape in Two Colors*; *Profile*; *Solitude*; *Poster Lady*; *Road into the Valley—Moonrise*.

Steiglitz figured it in 1899, the mechanical tyranny of the photographic apparatus,[17] and thereby, as Museum of Modern Art curator Peter Galassi more recently summarized, legitimating the "bastard left by science on the doorstep of art."[18] Julia Margaret Cameron, a great practitioner of blurred effects, was explicit about her motivations when she declared, "My aspirations are to ennoble Photography and secure for it the character and uses of High Art by combining the real & Ideal" (Fig. 3.13).[19]

A close reading of the early commentary, though, complicates the standard aesthetic accounts of pictorial photography's fuzzy style. The longstanding correlation between blur and art is complicated by a perusal of the early critical pronouncements. Hartmann, for example, despite his wholehearted embrace of the "beauty of the blurred line," was forthright when he declared in 1904: "In reality, the blurred line is not necessarily more artistic than the sharp, well-defined line."[20] He condemned Zaida Ben-Yusuf (although he diplomatically refrained from naming her) and her like-minded colleagues for making portraits that looked "like a Japanese ghost, all wrapped in mist" (Fig. 3.14).[21] John A. Randall, a British critic, similarly undermined a direct association

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[17] Alfred Stieglitz, "Pictorial Photography," *Scribner's Magazine* 26, no. 5 (November 1899), 528–537; reprinted in Peter C. Bunnell, ed., *A Photographic Vision: pictorial Photography, 1889–1923* (Salt Lake City: Peregrine Smith, Inc., 1980), 125.

[18] Peter Galassi, *Before Photography: Painting and the Invention of Photography* (exh. cat., New York: The Museum of Modern Art, 1981), 12.

[19] Julia Margaret Cameron, quoted in Colin Ford, *The Cameron Collection: An Album of Photographs by Julia Margaret Cameron* (New York and London: Van Nostrand Reinhold in association with the National Portrait Gallery, 1975), 141.

[20] Hartmann, "The Photo-Secession: A New pictorial Movement," *The Craftsman* 6 (April 1904): 104.

[21] Sidney Allen [Hartmann], "The Unconventional in Portrait Photography," *Photo Era* 13, no. 2 (August 1904): 129–132; reprinted in Jane Calhoun Weaver, ed., *Sadakichi Hartmann: Critical Modernist, Collected Art Writings*, (Berkeley: University of California Press, 1991), 179–180. Hartmann had earlier employed this metaphor in an identical passage published in "Portrait Painting and Portrait Photography," *Camera Notes* 3 (July 1899): 1–20, reprinted in *Valiant Knights*: 45. In the earlier publication, the passage is followed by a description of a portrait made of him by an unnamed female photographer who

between blur and Art when he noted, "Sometimes a fuzzy, out-of-focus picture possesses very many art qualities, and has very great charms for a true artist, whether he is a photographer or not; but the charm does not lie in the fuzziness, but in certain leading beautiful lines, which are emphasized by all minor or less important ones being suppressed or indistinct.[22] Similarly, A. Horsely Hinton, editor of the periodical *The Amateur Photographer*, admonished those photographers who make the "common error" of supposing that "merely putting a subject out of focus…shall achieve pictorial success."[23]

Charles H. Caffin, in his 1901 book *Photography as a Fine Art*, also argued for the selective employment of the blur, highlighting successful and unsuccessful blurry passages in specific photographs. Of Clarence White's photogravure *Morning*, for example, which Caffin described as "consisting merely of several masses of tone melting into one another," Caffin offered the diagnosis, "very pretty"[24] (Fig. 3.15). The photograph suffered as a study of nature because, in Caffin's opinion, it "generalize[d] too much and obliterate[d] the sense of facts."[25] White's *At the Window*, likewise, would have been more successful, in Caffin's view, if the view from the window through the

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pronounced it "one of the best she ever made." His description of the photograph conforms to Zaida Ben-Yusuf's 1899 portrait of Hartmann, a print of which can be found in the collection of the University of Illinois Library.

[22] John A. Randall, "Impressionism and Realism: Their Scope and Limits in Photography," *British Journal of Photography* (7 August 1896): 505–507; reprinted in Bunnell (1980), 40.

[23] Hinton, *Practical Pictorial Photography* (London: Hazell, Watson, and Viney, Ltd., 1898) 1: 64.

[24] Charles H. Caffin, *Photography as a Fine Art: the Achievements and Possibility of Photographic Art in America* (1901, reprint; New York: American Photographic Book Publishing Co., Inc., 1972;), 127.

[25] Ibid.

"transparent curtain" revealed something other than "formless and unlovely blurs."[26] Despite this shortcoming, Caffin still conceded that the "diffused atmospheric effect"—the "muzziness"—"has much to do with the beauty of this picture."[27] There existed, it would appear, degrees of blur, or degrees of successful blurring, with regard to its connotation as artfully beautiful.

The blur, for these and other critics, also signified in ways other than aesthetic. Indeed, critics embraced the blur's multivalent and evocative associations even as they warned against its overuse. Caffin, once again, testified to the ubiquity and popularity of the blur in pictorial photography when he drew attention to "a prevalent notion that the necessary and infallible recipe for tenderness in a picture is blurr and muzziness."[28] The blur was also variously endorsed as a means of conveying mystery and evoking suggestiveness. For instance, Hartmann recommended "the losing of form by some blurring process" as one of the "safest" means of "suggesting mystery."[29] Although he cautioned that blurriness was "not the only way" to evoke a sense of mystery, he did admit to the limitations of "clear outlines," acknowledging that they "say everything at the first glance; they conceal nothing and excite no wonder."[30]

When A. Horsley Hinton declared in his illustrated 1898 book *Practical Pictorial Photography* that the goal of art photography was to employ "the image of concrete

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[26] Ibid., 128.

[27] Ibid., 129.

[28] Ibid., 128.

[29] Hartmann, "The Technique of Mystery and Blurred Effects," *Camera Work* 7 (July 1904): 24–26; reprinted in Weaver (1991), 173.

[30] Ibid., 173.

things to create abstract ideas,"[31] one of the foremost pictorial motifs he had in mind was the blurred or fuzzy image. "The Motive" of pictorial work, for Hinton, was to convey "some thought or idea or sensation by means of a chosen object."[32] It was advisable to delineate that chosen object or scene "out of focus and perhaps with details still further suppressed by deep shadow" in order to fulfill the "motive" or satisfy "the temperament of the producer."[33] In a lengthy passage on "Focus, or Definition, and the Value of Detail," Hinton elaborated upon his thesis, which he admitted "may appear at first glance rather far-fetched."[34] Arguing against theorists like Peter Henry Emerson who "have based their arguments [regarding a photograph's appropriate degree of Focus and Definition] upon what the eye sees when looking at a scene," Hinton contends that photographers "endeavor to focus [the camera] so as to as nearly as possible reproduce the mental picture instead of the visual one."[35]

Furthermore, Hinton noted elsewhere that it was acceptable for photographers to distort the truth in order to express more forcefully their ideas, desires, and imagination: "the photograph may even be less pleasing to the public, less truthful to nature, and at the same time be more a work of art…I would rather have the photograph *not* just exactly as the scene was, *but as the artist would have liked it to be, or imagined it to be* [original

[31] Hinton, *Practical Pictorial Photography*, 1: 13.

[32] Ibid., 1: 12.

[33] Ibid., 1: 7.

[34] Ibid., 1: 62.

[35] Ibid.

emphasis].”[36] Hinton acknowledged that the “non-selective character” of photographic instruments necessarily limited a photographer’s freedom to diverge completely from the physical facts of a scene. But he recommended that practitioners be guided by the recognition that “in our general mental impression of a scene there is less detail than might actually be there.”[37] For Hinton, then, the goal was to create “abstract ideas” following a template based on a “mental picture” or “mental impression,” which by their very nature lack plentiful detail.

Despite certain caveats against overuse, individual photographers were championed for their ability to satisfactorily and successfully utilize the blur. Of Frank Eugene, Hartmann declared, “He is a virtuoso in blurred effects (Fig. 3.16).[38] Of Keiley, he opined, “His blurred effects, his losing detail here and discarding it entirely there, and yet suggesting it frequently by entirely empty place—you see a line and yet it is not there—are truly Japanese” (Fig. 3.17).[39] Steichen was, without doubt, one of the most aggressive practitioners of the blur, in portrait and landscape subject. His photograph *The Pond—Moonlight* is counted among his greatest achievements (Fig. 3.18). It is a multiple or combination print, comprising multiple layers of gum-dichromate prints atop a base layer platinum print. The process must have been extremely labor intensive; Steichen, by his own account, spent two months working on a single print of this image, just three of which are extant today. The result is a suggestive and subtly nuanced nocturne evocative

[36] Hinton, “A Blind Leader of the Blind,” *British Journal of Photography* 42, no. 1855 (22 November 1895); reprinted in Bunnell (1980), 28.

[37] Hinton, *Practical Pictorial Photography*, 1: 63.

[38] Hartmann, “Portrait Painting and Portrait Photography,” in *Valiant Knights*, 49

[39] Ibid., 51.

of mystery and symbolist allusions. Reviewing such pictures in 1910, Caffin wrote in *Camera Work*: "It is in the penumbra, between the clear visibility of things and their total extinction in darkness, when the concreteness of appearances becomes merged in half-realized, half-baffled vision, that spirit seems to disengage itself from matter to envelop it with a mystery of soul-suggestion."[40] Hartmann claimed Steichen's "surprisingly eloquent" "blurred and indistinct" line were "as mystic as the visionary forms which rise in our mind's eye, as we peer through the prison-bars of modern life into some nocturnal landscape or twilight atmosphere."[41]

Any number of photographs demonstrate Steichen's penchant for and technical expertise in employing "blurred and indistinct" line, but any list of exemplary prints has to include *The Pool—Evening* (1899, Fig. 3.19) and *Voulangis* (Fig. 3.20). Both are images of forest interiors, but where the former is dark and unctuous as pitch, the latter is a mist of lavender gray from which a pair of spindly saplings struggle to make themselves visible. In the Foreword to *Camera Works*' 1906 "Special Steichen Supplement" the Symbolist poet and playwright Maurice Maeterlinck proposed that Steichen had found a way to "imbue" "impersonal and unsympathetic" light with "thought."[42] Steichen had, Maeterlinck continued, "found a fissure through which to penetrate the mystery of this anonymous force, invade it, subjugate it, animate it, and

[40] Charles H. Caffin, "The Art of Eduard J. Steichen," *Camera Work* 30 (April 1910): 34.

[41] [Hartmann], "A Visit to Steichen's Studio," *Camera Work* 2 (April 1903), 25–28; reprinted in *Valiant Knights*, 204.

[42] Maurice Maeterlinck, foreword to "Special Steichen Supplement," *Camera Work* 9 (April 1906), n.p.

compel it to say such things as have not yet been said in all the realm of chiaroscuro, of grace, of beauty and truth."[43]

Portraiture posed a special set of problems for the artistically-inclined photographer, given its demands for an accurate, or at least recognizable, likeness. Hartmann suggested that the twin aims of portraiture were the production of a likeness[44] and the revelation of the individual character of the sitter, or the "soul life of a human being."[45] Hartmann called for the portraitist to produce the kind of successfully suggestive portrait he referred to as a "plastic psychological synthesis."[46] Although Hartmann was referring specifically to F. Holland Day's portrait of Zaida Ben-Yusuf (Fig. 3.21), Steichen's portrait of Eleonara Duse can also be considered such a portrait in that it appears to conflate or combine both her physical appearance and something of her interior state (see Fig. 3.8).

In Steichen's photograph, Duse leans to her left, her head tilted fully thirty degrees from vertical. Despite her migration from the erect, she engages the camera lens and the viewer directly, fully face-forward. Her gaze is direct, if enigmatic. Her expression—eyebrows arched skywards, the outer edges of her full, heavy-lidded eyes down-turned—evokes melancholy, as though she is impeaching something inexplicable and unknowable of the viewer. Her lips are closed, the outer edges of which, like her eyes, are turned downward; the lack of definition in the photograph suggests that her lips

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[43] Ibid.

[44] Hartmann, "Portrait Painting and Portrait Photography," in *Valiant Knights*, 35.

[45] Ibid., 40.

[46] Hartmann," A Decorative Photographer: F. Holland Day," *The Photographic Times* 32 (March 1900): 102–106; in *Valiant Knights*, 187.

might be read, by degrees, as pursed in either grim fortitude, resignation, or in the act of stemming imminent tears.

Both Day's portrait of Ben-Yusuf and Steichen's portrait of Duse give the impression of spontaneity and accident. Day's composition is off-center, as though the picture were snapped without much arrangement. Likewise, the radical tilt of Ben-Yusuf's head, coupled with its distorting halo of backlight suggest a picture made without the careful consideration of pose and camera position. Steichen's *Duse*, too, carries the suggestion of an accidental snapshot, not necessarily in its hazy or blurry appearance but rather in Duse's facial expression, which is elusive but carries the impression of being slightly surprised or startled, as though the photograph were taken a split second before it was expected and the resulting physiognomic expression unintended or unplanned.

The majority of extant photographs of Eleonara Duse follow the conventions of promotional photography of the period. Images of Duse in Legouve's *Frou-Frou* (Fig. 3.22), and Cleopatra (Fig. 3.23), issued to publicize their respective performances, feature the actress in her characters' elaborate costumes. Each photograph features Duse gazing intently toward the left edge of the image—off-stage, as it were. The effect is one of displacement: the viewer cannot connect visually with Duse or her character, and Duse, in character, is seemingly elsewhere, lost in her character's thoughts and actions. Photographs of Duse in unconventional poses do exist. A photograph in the Biblioteca Teatrale del Buracardo, Rome, for example, shows Duse in a seated posture traditionally connoting masculine power and authority (Fig. 3.24). Jean-Auguste-Dominique Ingres's monumental 1832 portrait of the French newspaper publisher Louis François Bertin is the gold standard for this attitude: arms akimbo, shoulders forward, gaze direct and

challenging (Fig. 3.25). The ever-transgressive Gertrude Stein adopted the pose when she sat for Pablo Picasso in 1906 (Fig. 3.26). Stein's posture is the gendered exception that proves the rule defining the pose's masculine connotation.[47]

Remarkably distinct from either of these iconographic precedents—theatrical publicity shot and masculine potentate—Steichen's portrait of Duse reads as a hallucinatory vision or vaporous specter, simultaneously evocative and elusive. The portrait is blanketed with the visual equivalent of white noise.[48] Curiously, Duse rarely used rouge, powder, or any other make-up in order to facilitate her audiences' appreciation of, as one reviewer recently put it, the "expressiveness of bare skin"[49] She allowed her internal emotions to register transparently through the blush or pallor of her exposed countenance. The elusive and multivalent expression Duse wears in Steichen's photograph is perplexing for an actress celebrated for her unimpeded, direct expressiveness.

That this haziness, both formal and subjective, was central to Steichen's method is explicated by considering a photograph circulated by the Bain News Service from around 1896 (Fig. 3.27). The Bain News Service photograph is similar to Steichen's in a number of ways: the tilted head and direct gaze distinguish both from conventional theatrical portraits of that time. Duse was costumed and coiffed when she sat for Steichen in a manner similar to that depicted in the Bain News Service photograph. This is explicated

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[47] See Robert S. Lubar, "Unmasking Pablo's Gertrude: Queer Desire and the Subject of Portraiture," *Art Bulletin* 79 (March 1997): 57–84.

[48] White noise, a random signal that contains all frequencies at equal power, draws its name from white light, which comprises all colors or frequencies of light in such a way that the eye's color receptors are equally stimulated.

[49] Karen Rosenberg, "La Duse" (review of *Eleanora Duse: A Biography* by Helen Sheehy [New York: Alfred A. Knopf, 2003]), *Women's Review of Books* 21, no. 3 (December 2003): 13.

through comparison with Steichen's 1903 platinum print in the Library of Congress (see Fig. 3.1). Steichen's print exhibits a darker overall tonality than the Bain News Service photograph, but the fashions—elaborate ruching and lacework in the Bain News Service photo, luxurious ermine stole or tippet draped over an intricately bow-festooned, peak-shouldered garment in Steichen's—and the hairstyles—pulled back from the face and seemingly pinned away from the back of the neck—are not wholly unalike.

Each of the prints Steichen made of his portrait of Duse exhibit unique modifications of tonality, mood, and effect. This is typical for Steichen at this point in his career. Following the rough chronology we're able to plot, from the 1903 Library of Congress print (see Fig. 3.1), to the circa 1905–06 gum-dichromate print offered for sale at Sotheby's in 2008 (see Fig. 3.7), to the photogravure published in the 1906 Steichen Supplement of *Camera Work* (see Fig. 3.8), it is apparent that the choices Steichen made in paper weight and developing and printing processes resulted in the progressively increased blurriness of Eleonara Duse's physiognomy, costume, and environment. The distinguishing characteristic of Steichen's final portrait, the one selected by the artist for publication in *Camera Work*, which was made from the original 1903 negative under "Steichen's personal direction," is the eradication of the greater part of the details captured in his initial platinum print.[50]

Little is known of the specifics of Duse's sitting with Steichen beyond the fact that Steichen had an appointment to visit Duse at the Savoy Hotel in New York the same day he photographed J. Pierpont Morgan.[51] In his autobiography, Steichen recorded that

[50] Steichen Supplement, *Camera Work* (April 1906), n.p.

[51] Edward Steichen, *A Life in Photography* (New York, 1963), n.p.

it was the "most concentrated and exciting experience in portraiture. One day I had the job of photographing two great and completely contrasting personalities."[52] The Morgan sitting had been arranged at the request of the painter Fedor Encke, who Steichen probably met through Alfred Stieglitz, with whose family Encke had lived for some time.[53] Encke had been commissioned to paint the financier and employed Steichen to produce a photograph to aid in this pursuit; Morgan was renowned as an uncooperative subject, but Steichen managed to produce one of his most iconic images (Fig. 3.28). Duse, on the other hand, had been referred to Steichen by Stieglitz, who had been captivated by the actress's performance in *Camille* in 1893. "Such a face and what hands!" Stieglitz recounted. "As the woman began to speak, the tears rolled down my cheeks…. Now the Italian woman gripped all of me. Even when silent, she satisfied everything within me."[54]

Unlike Morgan, who resisted Steichen's suggestions regarding pose, facial expression, and so forth, Duse was a completely unselfconscious sitter, the "most natural subject Steichen had ever photographed."[55] Steichen had brought her a bouquet of roses, and he was "spellbound" when she "bowed her head, smelled the roses, and lifted her head."[56] During this session, five of Steichen's plates were "spoiled" as a result of Duse's movements.[57] Upon learning this, Duse offered to go to the photographer's studio to sit

[52] Ibid.

[53] Dorothy Norman, *Alfred Stieglitz: An American Seer* (New York, Random House, 1973), 17.

[54] Stieglitz, quoted in Norman, *Alfred Stieglitz*, 37.

[55] Penelope Niven, *Steichen: A Biography* (New York: Clarkson Potter, 1997), 166.

[56] Carl Sandburg, *Steichen, the Photographer* (New York), 8.

[57] Niven, 166.

for him again. It is unclear whether any new photographs were taken at this second visit.[58]

It is impossible to reconstruct exactly how Steichen's plates were spoiled, but the implication is that rather than sustaining some physical damage, they yielded undesirable images as a result of some unrecorded accident during the sitting. Joanna Steichen, the artist's wife, put it rather more poetically, declaring that "when he went to photograph the legendary actress Eleonora Duse…he was so captivated by her enchanting personality that his camera eye lost its objectivity, and the sitting had to be redone."[59] It is hardly farfetched to hypothesize that Duse's spellbinding posing resulted in an inopportune blur on the plates, the permanent indexical document of an ill-timed or injudicious movement.[60] By the same token, though, it is tempting to imagine that the photograph Steichen chose as the template for his series of reworking, retouching, and embellishments might also represent a moment captured, if not accidentally, then at least spontaneously or without labored consideration and posturing. The feeling of an unguarded or unprepared moment, it must be pointed out, lends Steichen's portrait of Duse some of its undeniable charm.

Steichen's portrait of Duse in the Library of Congress is an un-retouched platinum print exhibiting the characteristic dark rich blacks and a slightly reddish hue in the whites expected of a platinum print. By virtue of its relatively "straight" appearance, this print appears to be the earliest Steichen made of his portrait of the actress; it has not received

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[58] Ibid.

[59] Joanna Steichen, *Steichen's Legacy: Photographs, 1895–1973* (New York, 2000), 89.

[60] This is necessarily speculative, as the current whereabouts of the spoiled plates are unknown.

very much, if any, enhancement, adjustment, or manipulation in the darkroom during developing (see Fig. 3.1).[61] The other prints of the Duse portrait all originated from the same negative as the print at the Library of Congress. They have, however, either received additional darkroom treatment or have been printed using the gum-dichromate process.[62] The gum process can be applied directly atop a photo-mechanically produced print (a platinum print in the case of the Eastman House's print of Steichen's portrait of Duse), and multiple gum-dichromate layers can be superimposed atop one another. The result of Steichen's gum-dichromate applications to his original portrait of Duse is the appearance of an allover diffuse blur; the edges of Duse's anatomy seeming to dissolve into or emerge from an enveloping dark fog.

Traces of the brush Steichen must have used to apply the dichromate emulsion to the paper are half-visible, particularly in the Eastman House Print (Fig. 3.29). The effect further displaces Duse's image; she is effectively viewed through these obscuring marks. Particularly prominent brushstrokes sweep from upper left, from above Duse's right shoulder downwards to the lower left. They cut across Duse's chest, and lend the appearance of swirling mists. If, as seems to be the case, some of the plates Steichen made during his first sitting with Duse were ruined by undesirable and unintended blurs, then it must be pointed out that the blurs of the spoiled plates, if such blurs existed, and

[61] Platinum prints typically exhibit rich blacks and fine detail. Because the light-sensitive iron and platinum salts coating the paper are not suspended in any gelatin or albumen emulsion, as is the case with silver prints, a platinum print's image appears to be an integral part of the paper.

[62] The gum-dichromate process involves the application of an emulsion comprising pigment, such as watercolor, gum arabic, and ammonium dichromate to a sheet of photographic paper, which is then exposed to a negative via contact printing, due to the slow developing time of the gum formula. After development, the unexposed parts of the pigmented gum are washed away in a water bath. While the print is wet, the gum can be stroked, pushed, lifted, and otherwise manipulated using soft badger brushes, which results in brushstrokes approximating wet-in-wet painting techniques, and the blurring of outlines, the diffusion of passages, etc.

the effacing, blur-like effects of Steichen's reworked portrait of Duse are ontologically distinct. Semiotically speaking, if the general, diffuse blur that Steichen went to great lengths to produce in the darkroom connote chance or accident in some way, they are quite distinct from the blurs, which are indexical in nature, produced by accidental mis-focus, the unintentional jiggle of the camera, movement of the subject, etc.

The gum-dichromate print that surfaced at Sotheby's in 2008 appears to have been used for exhibition, judging from traces of what appears to be a larger mount on the reverse of the print (see Fig. 3.7). Based on an address label listing Steichen's 293 Fifth Avenue address, where his studio was located for a short time between the spring of 1905 and the fall of 1906, it has been concluded that this print was included in a major show of his photographs, his first, at The Little Galleries of the Photo-Secession in March 1906.[63] The tonality of the print is darker yet than the Eastman House print; Duse's body is almost altogether lost in caliginous shadows; her face emerges as if from a Stygian pool. Her throat and collar are cast in vivid highlight—a bright diagonal smear on an otherwise bedimmed surface (Fig. 3.30). The photogravure published in *Camera Work* in 1906, on the other hand, offers a tonal inversion (see Fig. 3.8). Where the Little Galleries exhibition print is crepuscular and obscure, the *Camera Work* photogravure is vaporous and misty, a luminous and spectral vision capped by a smudgy halo or nimbus of bouffant. If the Little Galleries print is akin to viewing through murky water, then the *Camera Work* photogravure would be akin to peering through a gauzy veil. If the former is a shadow, the latter is a spirit.

[63] Photographs Sale, Sotheby's New York, 14 October 2008, lot 114.

Steichen's campaign of blurry dissolution and hazy effacement parallels the way the actress was described in roughly contemporaneous descriptions. In 1923, the *New York Times* described Duse's character in language that jibes with Steichen's portrayal when it suggested that her charm was "disembodied, a nameless, magnetic force of the spirit that seems almost intangible."[64] The Italian-born actress is renowned for pioneering an acting technique she described as "elimination of self,"[65] whereby rather than mimicking a conventional repertoire of gestures and facial expressions, she internalized her adopted personae and allowed them to express themselves. In this regard, Duse's description of herself is intriguing: "There are a thousand women within me, and each one makes me suffer in turn."[66] Along similar lines, in a letter to Arrigo Boito, author, poet, and composer of the opera *Mefistofele*, Duse wrote "last night I worked…I had seven lives in my body, in my voice."[67] Of Duse's "double self," the French actress Georgette Le Blanc wrote that Duse "lived her role with such truth that there seemed no distance between the soul of the heroine she was playing and the deepest part of her own soul."[68] Similarly, to Duse, "more than to any other actress of our epoch," wrote a critic

[64] Henrietta Straus, "The Real Duse Behind the Legend," *New York Times*, 21 October 1923, SM4.

[65] Frances Winwar, *Wingless Victory: A Biography of Gabriele d'Annunzio and Eleonora Duse* (New York: Harper, 1956).

[66] Quoted in Stella Rudolph, "Eleanora Duse and Her Times," *Apollo* 101 (January 1958): 58.

[67] Paul Radice, ed. *Lettere D'Amore* (Milan: il Saggiatore, 1979), 772; quoted in Helen Sheehy, *Eleonora Duse: A Biography* (New York: Alfred A. Knopf, 2003), 98.

[68] Georgette Le Blanc, "Mes Conversations avec Duse," *Les oeuvres libres*, LXVI (Paris: Artheme Fayard, 1946), 312, 306.

for the *Boston Herald*, "may be applied the expressive Italian word *immedesimare*—to bring one's self into unity with—the imagined or invented creature."[69]

Steichen's ethereal photographic body parallels Duse's thespian "elimination of self" as part of her process of merging with (*immedesimare*) her character. In an assessment of Duse's career shortly after her retirement from the stage, the Austrian critic and playwright Hugo Wittmann wrote in language that resonates with Steichen's photograph. Recalling her performances in the Karl Theatre in Vienna 1892, he wrote: "Duse possessed a peculiar—I might say physiological—quality I could never explainches When she had to produce a supreme effect…she drew a sort of misty veil across her features, and it seemed as if her hair stood on end and her face was half obscured by the fog of her inner emotion. God knows how she did it…"[70] Steichen fittingly portrayed Duse as a blurred hieroglyph, allowing for the possibility of multiple dimensions of subjectivity—physical, spiritual, mental—to emerge within the unified field of the photograph. Steichen's vaporous and cloudy photograph parallels the "misty veil" Wittman described, and the internal multivalence of Steichen's photograph parallels Duse's own peculiar acting method of emergence through erasure as well as her self-perception as an embodied composite or multiple personality, or what Georgette Le Blanc called her "double self."

Steichen's remarkable portrait of Duse constructs an exceptional individual as disembodied, intangible, and, in some ways, composite. This dynamic resonates with

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[69] Quoted in Bernice Sciorra Anfuso, "The Passing Star, Eleonora Duse in America," (Master's Thesis, University of California, Los Angeles, 1956), 111.

[70] Hugo Wittmann, "Eleonora Duse, *The Living Age* 319, no. 4142 (24 November 1923): 371; this passage is also quoted in "Eleonara Duse," *The Independent* 112, no. 3868 (10 May 1924): 242."

contemporaneous strategies of imagining and imaging individuals in popular visual culture, literature, and science at the end of the nineteenth century. So-called art photographers were not alone in idealizing essentialized, abstracted, and blurred physiognomies at the end of the nineteenth century. Indeed, Steichen's portrait of Eleonara Duse is far from exceptional in this regard. Exposing the broader implications of effacing faces around 1900 will cast new light on foggy portraits such as Steichen's *Duse*.

IDEAL AVERAGES

Synthesis, mental impression, abstract ideas, visionary. These are a few of the crucial terms employed in critics' praise for pictorial photography. Surprisingly, they also provide a rhetorical link beyond the realm of aesthetics. Recall that for the critic Horsely A. Hinton, the goal of art photography was to employ "the image of concrete things to create abstract ideas," following a template based on a "mental picture" or "mental impression."[71] Hinton expected the photographer to "endeavor to focus [the camera] so as to as nearly as possible reproduce a mental picture instead of a visual one."[72] Steichen's "surprisingly eloquent" "blurred and indistinct" lines, according to Hartmann, were "as mystic as the visionary forms which rise in our mind's eye."[73]

This language provides a link, overlooked heretofore, beyond the realm of aesthetics. They echo the keywords of an essay on "mental images" published by Francis

[71] Hinton, *Practical Pictorial Photography* 1:13.

[72] Ibid.

[73] [Hartmann], "A Visit to Steichen's Studio," *Camera Work* 2 (April 1903), 25–28; reprinted in *Valiant Knights*, 204.

Galton in his influential book *Inquiries into Human Faculty* (1883). Galton was a cousin of Charles Darwin, a meteorologist, statistician, criminologist, African explorer, anthropologist, and proto-geneticist. He wrote at length on a wide variety of topics. Best known today as the father of eugenics, Galton believed in social improvement through selective breeding. The ability to reveal character—hereditary, racial, mental—via composite photography was an important preliminary step in his plan for improving mankind. In his analysis of "mental images," Galton examined "analogies" between abstract ideas and his well-known and widely-admired and replicated experiments with composite photography.

At the end of the nineteenth century, the body was a point of intersection of multiple scientific, medical, and folk discourses. A widespread idea that bodies might testify, or be made to testify, to legal and scientific "truths" was built upon a set of eighteenth-century physiognomic and phrenological techniques that claimed to be able to read internal disposition and character in an individual's outward appearance. A new set of disciplines—criminal anthropology, legal psychiatry, forensic medicine, and eugenics, among others—geared towards qualifying and quantifying bodies emerged over the course of the nineteenth century as the belief that certain parts of the body could be made to reveal signs of internal character underwent a renaissance in England, France, Italy, and America.

The visible body was imagined to be an index of an individual's interior state, a sign of the evolutionary status of groups and races, and a valuable indicator of present and future risks to dominant social groups. Criminality, perversion, and deviance were

believed to be signified by anatomy.[74] And so bodies were measured, manipulated, shocked, sketched, photographed, and scrutinized to guide the identification and corrective treatment of individuals.[75] Cesare Lombroso, an Italian university professor and criminologist, believed that the "criminal is a slave eternally chained to his instincts," who is "knowable, measurable, and predictable, largely on the basis of cranial, facial, and bodily measurements."[76] His chief contention was the existence of a hereditary, or atavistic, class of criminals who were in effect biological throwbacks to a more primitive stage of human evolution. Lombroso contended that such criminals exhibited a higher percentage of physical anomalies than did non-criminals. Among these anomalies, which he termed stigmata, were various unusual skull sizes and asymmetries of the facial bones. Lombroso's theories were widely influential in Europe and America for a time, but his emphasis on hereditary causes of crime was later strongly rejected in favor of environmental factors.

Lombroso published numerous editions of his best-known book, *The Criminal Man*, beginning in 1876. Photographs of convicted criminals were of central importance to his project and by the fifth edition of his famous text Lombroso published a separate

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[74] See Allan Sekula, "The Body and the Archive: The Use and Classification of Portrait Photography by the Police and Social Scientists in the Late 19th and early 20th Centuries," *October* 39 (Winter 1986): 3–64; David Green, "Veins of Resemblance: Photography and Eugenics," *The Oxford Art Journal* 7, no. 2 (1984): 3–16; Sander L. Gilman, *Seeing the Insane: A Cultural History of Madness in Art in the Western World* (New York: John Wiley & Sons, 1985); David Horn, *The Deviant Body: Lombroso and the Anatomy of Deviance* (New York: Routledge, 2003); Georges Didi-Huberman, *The Invention of Hysteria: Charcot and the Photographic Iconography of the Salpêtrière* (Cambridge: MIT Press, 2003).

[75] New types of people and human acts come into being hand in hand with the invention of the categories labeling them (split-personality, pervert, suicidal, etc.), a historical process Ian Hacking calls "dynamic nominalism." Hacking, "Making Up People," in Thomas C. Heller, Morton Sosna, and David E. Wellbery, eds., *Reconstructing Individualism: Autonomy, Individuality, and the Self in Western Thought* (Stanford: Stanford University Press, 1986), 236.

[76] Cesare Lombroso, "The Criminal," *Putnam's Magazine* 7, no. 7 [April 1910]: 793; this article was an exerpt of Lombroso's forthcoming book *Criminal Man* (New York: G.P. Putnam's Sons, 1911).

atlas that included pages of photographic portraits of criminals, as well as charts, graphs, and maps relating physiognomy to criminal activity. Lombroso is credited with inaugurating the discipline of criminal anthropology, which was founded on the conception of the congenital criminal as a "partly pathological and partly atavistic revival of the primitive savage."[77]

Many of the photographs Lombroso reproduced in *The Criminal Man* had been collected as part of the French police official Alphonse Bertillon's effort to document criminal offenders. Bertillon's goal was to fix, through careful measurement and documentation, the legal identity of convicted criminals. His system was one of classification that would a) avoid mistaken prosecution and b) assure the identification and punishment of recidivists. By combining photographic portraiture, anthropometric measurement, and written description, Bertillon was able to construct an archive of photo-textual portraits within a comprehensive, statistically-based filing system. Where Lombroso's system aimed at the potential identification of born criminals who may not yet have committed a crime by correlating physiognomic signifiers and proven criminality, Bertillon was interested primarily in the accurate identification of recidivists, individuals "proven" to be, or at least already labeled as, criminals.[78]

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[77] Ibid.

[78] Predicated upon the collection of masses of individual pieces of information, and breaking individuals down into parts, Bertillon's and Lombroso's systems are analytic in nature. Bertillon's system was widely influential until its somewhat complicated combination of measurement, photography, and written description was superseded by fingerprinting as the primary method of criminal identification. Francis Galton published the first analysis of fingerprinting in 1892. He hoped that fingerprints would aid in the detection of race, and in this sense, his project falls within his broader set of concerns with eugenics. The problem, for Galton, vis-à-vis fingerprints is that they are purely indexical and not symbolic. That is, they refer to nothing but identity, which makes them great for police and state identification, but can tell nothing else about the person to whom they belong beyond his or her identity.

Darwin's book, *The Expression of the Emotions of Man and Animals*, which was first published in 1872, was photographically illustrated, and should probably be given attention among the precursors of Galton and Lombroso. In *Expression*, a bestseller in its day, Darwin argues that human expressions of emotions are universal (that is, innate, not learned) and the product of inheritance. Darwin actually used photographs taken by Adrien Tournachon first included in Guillaume-Benjamin-Armand Duchenne de Boulogne's *The Mechanism of Human Facial Expression*. In his book, Duchenne extended his electrotherapy research to the study of human facial expression. Many of Tournachon's pictures show the electrodes Duchenne applied to the nerves and muscles of his subjects' faces to artificially simulate expressions specific to each emotion. Duchenne had used Tournachon's photographs to illustrate the universality of human facial expression. Darwin, however, used them to illustrate cross-species similarity, comparing them to drawings made of animals, specifically apes and dogs. Neither our expressions nor our emotions, Darwin argued, are unique to human beings; other animals have some of the same emotions, and some of the expressions shown by animals resemble our own.

Describing his purpose, Galton wrote that he intended to "obtain with mechanical precision a generalized picture: one that represents no man in particular, but portrays an imaginary figure possessing the average features of any given group of men."[79] Galton formed composite prints of various types by employing a custom-designed multiple-exposure camera to capture the features of a number of individuals upon the same light-

[79] Ibid., 133.

sensitive negative, thus producing a single image composed of the superimposed portraits of each of the individuals in the group.[80]

Galton submitted the first results of his experiments with "composite photographs" in a paper he delivered at the Anthropological Institute of Great Britain and Ireland in 1878.[81] He published his findings that year in an article in *Nature*, which included an illustration of Galton's first composite (Fig. 3.31). The illustration is not a great example of Galton's typical results; he blamed the limitations of the woodcut illustration for the discrepancies between the reproduction in *Nature* and his original composite photograph.[82] Technical advancements would quickly allow for much more faithful reproductions of Galton's and his imitators' composite photographs. For example, in 1885, the journal *Science*, the academic journal of the American Association for the Advancement of Science originally founded with financial support from Thomas Edison and Alexander Graham Bell, published a short article describing an experiment following Galton's findings with composite photographs. Raphael Pumpelly and his assistant B.T. Putnam made a series of composites from individual portraits of members of the National Academy of Sciences (Fig. 3.32). Pumpelly wrote that the composite

[80] Galton's procedure is best explained in a series of publications from 1878, 1879, and 1881 describing his success with the technique. A series of extracts from these publications is appended to Francis Galton, *Inquiries Into Human Faculty and Its Development* ([1883] reprint New York, 1973). The most useful from a technical perspective is probably "Composite Portraits, Made by Combining those of Many Different Persons into a Single Resultant Figure," lecture before the Anthropological Institute, 1878. Facsimiles of many of Galton's publications are also available at www.galton.org.

[81] Francis Galton, "Composite Photographs," *Journal of the Anthropological Institute of Great Britain and Ireland* 8 (19 April 1878).

[82] Francis Galton, "Composite Portraits Made by Combining Those of Many Different Persons into a Single Figure," *Nature* 18 (1878): 98.

"faces give to me an idea of perfect equilibrium, of marked intelligence, and, what must be inseparable from the latter in a scientific investigator, of imaginativeness."[83]

A particularly fine example of Galton's composites is his "Jewish Type" in full-frontal perspective (Fig. 3.33). This original composite is in the Galton Papers at University College London, as are photographs of the individuals whose photographs were superimposed to form the composite. Galton also created a composite of a typical Jewish profile; two of the individual components are in the Galton Papers (Figs. 3.34). The full set of individuals and the final profile composites were published in a special Supplement to the *Photographic News* in April 1885; the individuals are on the right, the composites on the left (Fig. 3.35). Galton also made and published composites of populations of criminals (Fig. 3.36), pthisical (tubercular) patients (Fig. 3.37), racehorses (Fig. 3.38), families (Fig. 3.39), soldiers (Fig. 3.40), and more. Because each individual received equal exposure time, Galton's composites constituted legitimate averages; he called his process "pictorial statistics,"[84] his composites "averaged portrait[s]"[85] or "pictorial averages."[86] He devised a way, in other words, of photographing the average.

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[83] Raphael Pumpelly, "Composite Portraits of Members of the National Academy of Sciences," *Science* 5, no. 118 (8 May 1885): 378. Pumpelly describes a curious observation: "I may mention, as perhaps only a remarkable coincidence, that the positives of the mathematicians, and also of the thirty-one academicians, suggested to me at once forcibly the face of a member of the academy who belongs to a family of mathematicians, but who happened not to be among the sitters for the composite. In the prints this resemblance is less strong, but in these it was observed quite independently by many members of the academy. So, also, in the positive of the naturalists, the face suggested, also quite independently to myself and many others, was that of a very eminent naturalist, deceased several years before the sitting for this composite."

[84] Galton, "Generic Images," *Nineteenth Century* 6, no. 29 (July 1879): 162.

[85] Galton, "Composite Portraiture," lecture before the Photographic Society, London, 24 June 1881, reprinted in *Inquiries Into Human Faculty* (1907 ed.), 234.

[86] Galton, "Photographic Composites," *Photographic News*, 29, no. 1398 (17 April 1885): 243.

The "composite," he wrote, "represents an averaged figure, whose lineaments have been softly drawn."[87]

Galton considered his composite prints to be typical portraits of sample populations, "the portrait of a type and not an individual."[88] They expressed typicality by "bringing into evidence" all common traits and leaving "but a ghost of a trace of individual peculiarities."[89] A hallmark of Galtonian composites is an even and diffuse blur particularly evident around the edges of facial features (Figs. 3.40 and 3.41). Because the sharpest outlines of the composite represent the most common features of the "components," while the faint, blurred, or misaligned outlines represent the "purely individual peculiarities" that "leave little or no visible trace"[90] the type conjured up in the composite appeared spectral to many viewers: "more ghostly than a ghost, more spiritual than a spirit,"[91] or "a shadow of a thing unseen."[92] "The blur of their outlines," Galton wrote in his article on his "generic images," "measures the tendency of individuals to deviate from the central type."[93] In Galton's "Ideal Family Likeness," for example, an equally-weighted superimposition of photographs of eight family members, the

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[87] Galton, "Composite Photographs," *Journal of the Anthropological Institute of Great Britain and Ireland*, 134.

[88] Galton, "Composite Photographs," *Journal of the Anthropological Institute of Great Britain and Ireland*, 133.

[89] Galton, *Inquiries Into Human Faculty*, 7. Much of Galton's important work from 1877–1884, the peak of his scientific productivity, is conveniently reprinted or summarized in this book.

[90] Galton, *Inquiries Into Human Faculty*, 134.

[91] Joseph Jacobs, "The Jewish Type and Galton's Composite Photographs," *Photographic News* 29, no. 1390 (24 April 1885): 269.

[92] "Typical Girl-Portrait by Galton's Method," *Photographic News* 29, no. 1405 (1885): 512.

[93] Galton, "Generic Images," *Nineteenth Century* 6, no. 29 (July 1879): 167.

composite renders visible this particular clan's genetic relationship by way of a mean physiognomic average (see Figs. 3.39 and 3.41). Heredity is exposed statistically and photographically.

Galton also proposed that "another use of this process is to obtain by photography a really good likeness of a living person." He likened his procedure to artistic portraiture:

> The inferiority of photographs to the best works of artists, so far as resemblance is concerned, lies in their catching no more than a single expression. If many photographs of a person were taken at different times, perhaps even years apart, their composite would possess that in which a single photograph is deficient.[94]

I have been unable to locate any evidence that Galton tested his hypothesis on a living person. Galton made composites of historical individuals, including Alexander the Great, Cleopatra, and the Roman Emperor Nero, by superimposing their likenesses taken from coins and medals (Figs. 3.42). Employing language that jibes with that of the pictorialists and their champions, Galton argued that the benefit of a composite photograph of a single individual over any single photograph of that individual lay in the composite portrait's "varied suggestiveness."[95]

Galton's composites produced ideal, abstract, fictional physiognomies: family resemblance, the criminal quintessence, what would have been understood at that time as racial type, or even "varied suggestiveness" individual likeness. I am not suggesting that Galton's and Steichen's projects be reductively thought of as identical. Nor am I suggesting that their intended aims were the same.[96] But, broadly speaking, both Galton

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[94] Galton, "Composite Photographs," *Journal of the Anthropological Institute* 8, 140.

[95] Ibid.

[96] Josh Ellenbogen has suggested that Galton considered his blurs to be artistic and would have been informed by an aesthetic tradition of validating the blur as artistic (he would surely have known Julia

and Steichen were dedicated to rendering the unseen visible and manifesting something akin to a mental idea or thought image. For Hartmann, Steichen's "surprisingly eloquent" "blurred and indistinct" line was, "as mystic as the visionary forms which rise in our mind's eye." Similarly, Galton reckoned that his "blur[s]" provided, among other things, a model for human thought." "A composite portrait," he argued, "represents the picture that would arise before the mind's eye of a man who had the gift of pictorial imagination in an exalted degree."[97]

Both Galton and Steichen created images of faces clouded by a diffuse and all-over blur or fog. Formal similarities exist between Steichen's portrait of Duse and a typical Galtonian composite portrait such as the "Ideal Family Likeness." Both portraits are full frontal. This was a necessity in Galton's case: he needed to ensure the same scale and alignment of facial features in each of his individual portraits in order to be able to superimpose them to create a successful composite. Duse's direct position in front of Steichen's camera, on the other hand, was a choice, either of Steichen's, Duse's, or both. The expression of Galton's composite "ideal family likeness," is, like the expression of Duse in Steichen's portrait, enigmatic, elusive. Both Galton's composites and Steichen's Duse appear slightly startled, as though caught off-guard in a moment of unrehearsed spontaneity. Again, in Galton's case, this is a function of his procedure—focus is on the arrangement and relationships between facial features, and a blank expression is desirable even as it is emphasized through the process of composite printing. Again, it is a choice made by Steichen, Duse, or both.

Margaret Cameron's blurred photographs). Josh Ellenbogen, "Photography and the imperceptible: Bertillon, Galton, Marey" (unpublished dissertation, The University of Chicago, 2005).

[97] Galton, *Inquiries Into Human Faculty*, 223.

Steichen's blurriness, accomplished through innovative manual, chemical, and technical manipulation, has been understood by art historians as a triumph of the intervention of the artist's hand in an otherwise mechanical process. And, while Galton achieved the overall blurs of his composite photographs via the "mechanical precision"[98] of statistical averaging, it is possible to see a similarity in Steichen's and Galton's combinatory processes. Galton produced his composites via multiple exposures: he repeatedly opened the camera lens to expose to the photographic plate the multiple individual "components" of his desired composite. The final composite is built from equally-weighted superimposed multiple exposures. Similarly, Steichen's greatest photographic prints are, technically, composites in that they were created by the superimposition of subtly manipulated, adjusted, tinted, and toned variations of a single, original photographic negative. Alluding to the composite nature of Steichen's technique, which blurred the line between painting and photography, Steichen's gum dichromate prints were called "paintographs" and "photopaints."[99]

Galton was an intellectual descendent of the Belgian astronomer and statistician Adolphe Quetelet, who institutionalized the concept of *l'homme moyen*, or the average man.[100] Quetelet, working and writing in the 1840s, laid the foundations of social statistics, seeking in the statistical regularities of rates of birth, death, and crime a mathematically exact science that would uncover the fundamental laws of social phenomena. As he noted in 1842, "The greater the number of individuals observed, the

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[98] Ibid., 133.

[99] Hartmann, "A Monologue," *Camera Work* 6 (April 1904): 25.

[100] Quetelet, *A Treatise on Man and the Development of His Faculties*, transl. R. Knox (Edinburgh: Chambers, 1842), 9.

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."[101] Quetelet found that social data, notably anthrompometric data, fell into a pattern corresponding to the bell-shaped curve derived by Carl Friedrich Gauss in 1809, the Gaussian Curve of Normal Distribution (Figs. 3.43 and 3.44). Quetelet embraced this curve as the mathematical expression of fundamental social laws, which he hoped in turn would reveal underlying determining causes, for as he put it, "effects are proportional to causes."[102] The statistical fiction of *l'homme moyen* lived within the abstract configuration of the Gaussian Curve of Normal Distribution; the average corresponds to the central portion of the curve that represents the large number of measurements clustered around the mean.

As Allan Sekula has suggested, Galton's "composites emerged from the attempt to merge optical and statistical procedures within a single 'organic' operation."[103] Galton believed he had translated Quetelet's *l'homme moyen* into visual form. As he put it, "The process…of pictorial statistics [is] suitable to give us generic pictures of man, such as Quetelet obtained in outline by the ordinary methods of statistics, as described in his work on *Anthropometrie*…. By the process of composites we obtain a picture and not a mere outline."[104] Quetelet's Gaussian error curve now wears, in Sekula's words, "a

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[101] Ibid., 6.

[102] Ibid., 10.

[103] Allan Sekula, "The Body and the Archive: The Use and Classification of Portrait Photography by the Police and Social Scientists in the Late 19th and early 20th Centuries," *October* 39 (Winter 1986): 44.

[104] Galton, "Generic Images," *Nineteenth Century* 6, no. 29 (July 1879): 162. Reprinted in Galton, *Inquiries Into Human Faculty* (1883), 230. Galton also noted: "The process of composite photography is one of pictorial statistics. It is a familiar fact that the average height of even a dozen men of the same race, taken at hazard, varies so little, that for ordinary statistical purposes it may be considered constant…. Consequently

human face,"[105] albeit a composite face that, in Galton's opinion, is always "better looking than their components, because the averaged portrait of many persons is free from the irregularities that variously blemish the looks of each of them."[106] Galton's composites conflated notions of the average and the ideal.

Galton believed "the ideal faces obtained by the method of composite portraiture appear to have a great deal in common with…so-called abstract ideas,"[107] and wondered whether abstract ideas might not be more correctly termed "cumulative ideas."[108] He was not alone in utilizing the notion of the composite photograph as a metaphor or analogy for discussing abstract ideas and concepts. Indeed, the composite photograph was frequently employed rhetorically in discussions of abstract concepts. The journal *Outlook*, for instance, lobbied for the composite photograph as a metaphor for American character, suggesting that "just as the composite photograph is made up by the continual

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a pictorial combination…would lead to results no less constant than the statistical averages." Galton, "Generic Images," in *Inquiries Into Human Faculty*, 233.

[105] Sekula, 48.

[106] Galton, "Composite Portraits Made by Combining Those of Many Different Persons into a Single Figure," *Nature* 18 (1878): 100. See also Galton, *Inquiries Into Human Faculty*, 230.

[107] Galton, "Generic Images," 169.

[108] Galton, "Generic Images," 169. Remarkably, the example of such an abstract or cumulative idea Galton cites is that of the conventional representation of a galloping horse. Considering the chronophotography of Edward Muybridge, Galton wondered how observant artists had for centuries mistakenly represented galloping horses with all four legs extended simultaneously, as in Theodore Gericault's *Epsom Derby* (1812). Edweard Muybridge, Galton pointed out in an 1882 article, had, "by means of beautiful photographs of twenty momentary successive attitudes, recently shown…that the conventional representation was totally untrue to fact." Galton thought that composites of successive attitudes that were too momentary to be distinguished might answer the question. He made a composite photograph from Muybridge's studies—overlaying each synchronic photograph over the next and the next and so forth—and discovered that the image that emerged from his composite was a "very fair equivalent" to the conventional attitude, seen here inches "I inferred," Galton wrote, "that the brain ignored one-half of all it saw in the gallop, as too confused to be noticed; that it divided the other half into two parts, each alike in one particular, and combined the two halves in a monstrous whole." Galton, *Memories of My Life* (New York: E.P. Dutton and Company, 1909), 264. The article he cites was published in *Nature* in 1882. I have been unable to track down the full citation and locate the article itself.

emphasizing of that which recurs, and thus becomes a fair type or average, so is the character of a nation brought into being."[109] This search for the face of the American nation was also sought, quite literally by the academic journal *Science*, which published an article about and evidence of efforts to create composites of George Washington from a selection of historical portraits painted from life (Fig. 3.45).

A lengthy article in the *Methodist Review* launched a complicated argument that the composite photograph provides a "striking analogy" for Platonic thought, suggesting that "the composite photograph renders the doctrine of ideas, or the existence of a reality corresponding to universal names, not merely possible, but true beyond controversy."[110] Concluding that "it is the composite photograph which embraces all the truths about nature under general principles with which we must deal in every species of reasoning," the article extended the reach of composite photography's analogy to that of revealed religion, arguing that it was an illuminating analogy for "Christ the ideal man," who "contains within himself every feature of [the human family's] character as well as every personality," and "the representative of all who are united to him by deliverance."[111] The specific logic of arguments such as the *Methodist Review*'s is less important than their popularity and pervasiveness.[112]

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[109] Tudor Jenks, "The 'American' Characteristics," *Outlook* (5 August 1905): 876.

[110] "The Platonic Idea Elucidated by the Composite Photograph," *The Methodist Review* 16, no. 4 (July 1900): 560.

[111] Ibid.

[112] *The Methodist Review* was one of America's oldest religious reviews, and *Outlook*, which was first edited by Henry Ward Beecher, was a very successful religious weekly before its focus was changed to current events, autobiographies of famous people, travel writings, and art and literary criticism. Among *Outlook*'s contributors were Harriet Beecher Stowe, Hunt Jackson, Edward Eggleston, Louisa May Alcott, E.E. Hale, and Theodor Roosevelt. *American Periodicals Series Online* (APS).

The logic of revealing religious character via the analogy of the composite photograph had already been applied the year before the *Methodist Review* contemplated it in an 1899 print by the Cincinnati-born artist Joseph Gray Kitchell (Fig. 3.46). Created by superimposing photographs of 271 paintings of the Virgin Mary, the "best Madonnas painted by the great Masters during a period of 300 years,"[113] Kitchell's *Composite Madonna* was declared "the climax of scientific art."[114] Kitchell selected physiognomies, mostly frontal or in three-quarter view, from "a collection of over two thousand Madonnas," including those by Raphael, Murillo, Rubens, Van Dyke, Michelangelo, Rembrandt, Holbein, Correggio, Bellini, Perugino, Giorgione, Botticelli, and others.[115] Kitchell's composite, along with a selection of the individual images from which it was produced, was illustrated in the *San Francisco Call* in 1899 (Fig. 3.47).[116] It was also reproduced in popular periodicals such as *Harper's Bazaar*, *The Ladies' Home Journal*, *Photographic Times*,[117] and *Literary Digest*,[118] as well as daily newspapers such as the *Los Angeles Times*, the *Chicago Daily Tribune*, *New York Tribune*, the *New York Times* and others (Fig. 3.48). Editorials on the subject of Kitchell's composite appeared in these publications as well as numerous others, including the *Sentinel*, *Journal*, and *Press* of Indianapolis; the *Philadelphia Times*, *New York Journal*, *Cincinnati Commercial-*

[113] "The Famous Kitchell Composite Madonna, copyrighted by Joseph Gray Kitchell, Indianapolis," pamphlet published by The Hollenbeck Press, Indianapolis. Helen King Boyer Collection, Special Collections, Georgetown University Library, Washington, D.C.

[114] Excerpt from an article distributed by the Associated Press, 27 November 1899, published in "The Famous Kitchell Composite Madonna" pamphlet.

[115] "The Composite Madonna," *Harper's Bazaar* 33, no. 8 (24 February 1900): 171.

[116] *San Francisco Call* 87, no. 17 (17 December 1899): 3.

[117] "The Kitchell Composite Madonna," *Photographic Times* 37, no. 7 (July 1905): 289–292.

[118] "The First Composite Madonna," *Literary Digest* 30, no. 20 (20 May 1903): 749.

Tribune, *Chicago Tribune*, *New York Herald*, and more; excerpts from a selection of these were included in a pamphlet published by Hollenbeck Press, of Indianapolis. Kitchell's composite was also included as the frontispiece of the book *The Women of the Bible*, published in 1901 by Harper Collins (Fig. 3.49).

Kitchell's photographic composite was transcribed in oil on canvas by Elliott Daingerfield, alleged to be "the greatest American painter of Madonnas."[119] Daingerfield's painting "corrected" certain "errors of line inseparable from the blending of so many faces [that] naturally crept into"[120] the final composite. Despite this correction, it is notable that Daingerfield faithfully replicated the diffuse all-over blur and soft haze of a classic Galtonian composite. Kitchell's composite was displayed in the Tissot Gallery in Wanamaker's New York department store; reproductions, made via the "glowprint method," were sold in three sizes for five, ten, and sixty-five dollars each.[121] The glowprint was seemingly well-suited to the composite image. According to Wanamaker's advertisement, the "permanent luminous effect" of the "glowprint method" radiates light from a reflecting plane, giving true glow to the face, suggesting all the mystic beauties of the picture."[122]

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[119] "The Famous Kitchell Composite Madonna Exhibited in our Galleries," *New York Times*, 20 April 1905, 4. Kitchell also created a composite image based on one thousand faces of Red Cross nurses. Luis Mora transcribed that composite onto canvas; the resulting image was called *Thine is the Glory* and hung in the National Red Cross headquarters in Washington, D.C. Ada Rainey, "Fine Display in Red Cross Art Museum," *Washington Post*, 4 July 1926, F4; see also Jane Frederickson, "Photographer Finishes Task; 'Spirit of Motherhood' to be Seen," *Los Angeles Times*, 30 November 1930, B18.

[120] "The First Composite Madonna in the World," *The Ladies' Home Journal* 22, no. 6 (May 1905): 7.

[121] *New York Tribune*, 20 April, 1905.

[122] "The Famous Kitchell Composite Madonna Exhibited in our Galleries," *New York Times*, 20 April 1905, 4.

The Indianapolis *Press* reckoned the Kitchell Madonna was "beautiful," and "one of the sensations of the day in the world of illustrations."[123] An article in *The Ladies' Home Journal* included a list of impassioned quotes from noted celebrities that reads like a series of "blurbs," those enthusiastic book endorsements by well-known writers or celebrities usually solicited by the author or publisher of the book in question. For example, the prominent educator, author, and orator Booker T. Washington considered it a "beautiful work of art;" Thomas Edison thought it "very fine"; Guglielmo Marconi, Nobel Prize-winning pioneer of wireless telegraphy, admired its "charm"; and Nicola Tesla, inventor and electromagnetic engineer, declared it to be "inspired."[124]

Each individual component that made up Kitchell's composite received equal weight during the process of superimposition; the result, therefore, was theoretically a mean average. According to commentators, though, the oft-reproduced print transcended the mediocrity implied by the concept "average." It was adjudged to have filtered individual imperfections to offer a physiognomy more in keeping with the moral character of the Virgin: "sublime," "perfect," "full of grace, so spiritual."[125] Similarly, a writer for the *Indianapolis Journal* found it to be "strangely mysterious and spiritual.[126] This sentiment is repeated verbatim in the *Chicago Daily Tribune*, which also described it as "remarkably distinct, full of calm repose, maidenly, but with the dignity of maternity—a face indescribably sweet, resigned, sad, a wondrous blend of simplicity and

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[123] *Indianapolis Press*, 16 December 1899; excerpted in pamphlet "The Famous Kitchell Composite Madonna," 2.

[124] "The First Composite Madonna in the World," *The Ladies' Home Journal* 22, no. 6 (May 1905): 7.

[125] *Indianapolis Sentinel*, 26 November 1899; excerpted in pamphlet "The Famous Kitchell Composite Madonna," 2.

[126] Ibid.

inspired wisdom. In the face is seen the loftiest ideal possible in the heart and mind of mankind."[127]

Considerations of ideal beauty—inner and outer, of physiognomy and soul—characterized discussions of composite photographs. In an 1887 issue of *The Critic*, an editor described a photograph of a young lady a friend had shown him that "impressed me not so much by its beauty as by its character."[128] He elaborated, "The expression of the countenance denoted a strong will and a serene if not a volatile disposition. It was the face of a girl whom one would like to know—one to whose care, if he had the responsibility of bringing up a family, he would feel no hesitation in entrusting the minds and morals of his children."[129] The photograph to which *The Critic*'s editor refers was reproduced in the next month's edition of *The Century* magazine: it was a composite photograph of the forty-nine members of the 1886 graduating class of Smith College made by an unknown Northampton photographer following Galton's recommended procedure (Fig. 3.50).[130] She was, as John T. Stoddard the author of *The Century* article riffed, "nine-and-forty sweet girl-graduates baked into a photographic pie."[131]

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[127] "J.G. Kitchell's Composite Photograph of the Madonna Pictures," *Chicago Daily Tribune*, 3 December 1899, p.9; excerpted in pamphlet "The Famous Kitchell Composite Madonna," 2. The latter part of the quote also appears word-for-word in the description of Kitchell's Madonna published in *Harper's Bazaar*, suggesting that the editors of these publications may have been literally reading from the same script, or press release, as the case may be. "The Composite Madonna," *Harper's Bazaar*, 24 February 1900, p. 171.

[128] "The Lounger," *The Critic: a Weekly Review of Literature and the Arts* 165 (26 February 1887): 103.

[129] Ibid.

[130] John T. Stoddard, "Composite Photography," *The Century; a Popular Quarterly* 33, no. 5 (March 1887): 750–757.

[131] "The Lounger," 103.

In fact, she was just one of a veritable bakery's-worth of sweet composite girl-graduate pies from various colleges admired at that time. The "forty-nine" Smith College girl(s) had appeared earlier, in 1886 in *Science*, and resurfaced again in the journal *Outing*, in 1891 (Figs. 3.51 and 3.52).[132] Stoddard's article in the March 1887 issue of *The Century*, which included the "forty-nine," also included composite photographs of seven members of Smith College's graduating class of 1884 (Fig. 3.53); thirteen members of the class of 1883 (Fig. 3.54); co-composites of the classes of 1883, 1884, and 1886. The article also included composite photographs of males, including members of the American Academy of Sciences, clergymen, professors, lawyers, physicians, and a family of eight. But only the Smith College girl composites were describe by Stoddard, despite their "shadowy…outline," as "distinctly human and attractive."[133] Stoddard's follow-up article, "College Composites," published in November 1887 in *The Century*, also included composites of female students from Mount Holyoke, Smith College, Wellesley College, Wells College, Vassar College, as well as nurses from the class of 1886 of the McLean Asylum Training School (Fig. 3.55). *Harpers* also offered a particularly fine college girl composite, the "Composite College Girl of 1900," which was composed of 177 portraits of girls in the graduating class of the Girls' Normal School of Philadelphia (Fig. 3.56).

While composite photographs were also made of male college students, significantly more attention and commentary was focused on the female college student

[132] W.I. Lincoln Adams, "Composite Photography," *Outing, an Illustrated Monthly Magazine of Recreation* 18 (April 1891): 31.). *Outing* was a journal ostensibly dedicated to outdoor recreation.

[133] John T. Stoddard, "Composite Photography," *The Century; a Popular Quarterly* 33, no. 5 (March 1887): 752.

composites. As a critic wrote in the *Christian Advocate*, "in all of these composite photographs we see how beauty of soul transcends all mere beauty of feature."[134] Describing the composite photograph as "one of the most interesting incidents in connection with the recent graduation of the Class of '86 at Smith College," the *New York Times* reported that the "result, as might have been expected, was a face of wonderful beauty, strength, and refinement."[135]

Indeed, these ideal college composites inspired nothing short of hyperbole; authors declared, among other things, "love at first sight."[136] A month after the original Smith composite was published in *The Century*, a poem describing it appeared in the same periodical:

> A picture of a dark-eyed girl
> With pensive, thoughtful air,
> Whose pure sweet face looked from beneath
> Its frame of misty hair.
>
> My heart was captured by her face;
> I loved her at first sight:
> "Sweet maid," I whispered, "let me be
> Your own true chosen knight.
>
> And then I tried to find my queen,
> I sought her near and far;
> Her pictured face shone on my path
> And was my guiding star.
>
> But oh, how can I tell the grief,
> The bitter grief to me,
> When I found out, beyond a doubt,
> There wasn't any *she*.

[134] "Composite Photographs," *The Christian Advocate* 62, no. 46 (17 November 1887): 746.

[135] "Truths and Trifles," *New York Times*, 16 July 1886, p. 4.

[136] Bessie Chandler, "Her Photograph," *Century Illustrated Magazine* 33, no. 6 (April 1887): 976.

For this sweet picture that I loved
(Kind reader, do not laugh!)
Turned out to be a very good
Composite photograph!

And the fair girl whose pensive eyes
Had made my pulses stir,
Did not exist, or rather there
Were forty-nine of her!

One woman's face was in my mind—
How could I then divine
That I, while faithful to one love,
Was true to forty-nine?

O Science! You have done this thing,
On you I lay the guilt:
You've made my honest love appear
Like any crazy quilt!

And this one thing I ask of you,—
Can you, with all your art,
United these forty-nine poor bits
And give me back my heart?[137]

A similarly overblown effort, describing the same Smith College composite, appeared in *Puck* the same month, April 1887:

Composite sunshine, sweetness superposed,
The sum of nine-and-forty girlish faces,
A thousand bits of loveliness disclosed—
A world of charms—a galaxy of graces!

The grand soul windows of a college queen
Are mirthful with Miss Madcap's merry twinkle,
And stately Edith's lofty brow serene
Has just a shadow of Miss Deepdigge's wrinkle.

Here saucy Betty's scornful nose atilt,
Defies grave Gertrude's tender, sad expression,
And languid Maud, who looks as she would wilt,
Is fortified by Abigail's aggression.

[137] Bessie Chandler, "Her Photograph," *Century Illustrated Magazine* 33, no. 6 (April 1887): 976.

Oh, lucky alchemist of later years,
Whose task it is to blend these rare simples—
Smooth tresses, laughing lips, and dainty ears,
Round, rosy cheeks and most bewitching dimples!

Dear girls, I well could love you every one,
But through a cynic, with a heart of leather,
Beholding this blest magic of the sun,
I'd love you—love you madly all together![138]

These poems are undoubtedly intentionally humorous, but that should not discount them as serious indicators of popular sentiment—there is, as they say, truth in every joke. The curious blend of desire ("made my pulses stir," "honest love," "give back my heart," "love you madly altogether") and disorientation ("bitter grief") aroused by these popular composite photo-mirages highlights the perceived unattainable ideality of the composite. Upon learning that these girls didn't actually exist—as individual beings—the writer for *The Critic* claimed "it was a peculiar, a rather uncanny, sensation that I experienced in gazing at these nine-and-forty sweet girl-graduate baked into a photographic pie, as it were, and served at a Barmacide [sic] feast where one might see and scent the savory dish, yet must forever fail to taste it.[139] Heady stuff, indeed.

The popularity of composite photography peaked in the United States around 1900, but as late as 1934 *Vanity Fair Magazine* created composites of ideal Hollywood stars, male and female that continues this odd fusion of composite fantasy and intense desire. The female was composed of equally weighted portraits of Norma Shearer, Joan Crawford, Marlene Dietrich, Ruth Chatterton, Helen Hayes, Greta Garbo, Peggy Shannon, Dorothy Jordan, and Joan Bennett (Fig. 3.57). The composite, "made of sugar

[138] J.S.P., "Composite Photography," *Puck* 21, no. 528 (20 April 1887): 132.

[139] "The Lounger," 103.

and spice and everything nice," created a "resultant beauty" that formed "the ideal." The "ideal male star" was composed of images of Gary Cooper, Fredric March, George Brent, Robert Montgomery, Richard Arlen, Franchot Tone, George Raft, Dick Powell, and Johnnie Weismuller (Fig. 3.58). It was expected that the composite "should spell perfection," but "Mr. Y." was "not quite so effective" as "Mlle. X," but he was "still a charming young man, albeit a trifle effeminate."[140]

[140] *Vanity Fair* (1934): 267. The popular application of composite photograph did not die out in the early twentieth century. And indeed, artists have continued to dabble with it. Most notably, when Nancy Burson collaborated with computer scientists at MIT in the 1980s to create a software program capable of creating a composite photograph of an "average" world citizen based on global population statistics. And, indeed, the link between the composite photograph and a curious heightened desire manifested when, in November 1993, *Time* published a Special Issue on immigration and race in America. The cover is dominated by an image of a woman's face (Fig. 3.59). The image appears to be a photograph, but the face itself calls that assumption into question. This woman reads as a special effect, and the magazine cover's caption confirms as much. It declares: "Take a good look at this woman. She was created by a computer from a mix of several races. What you see is a remarkable preview of…The New Face of America." *Time* constructed their so-called New Face of America using Morph 2.0, one of the first commercially available morphing software programs, produced by Gryphon Software Corporation. *Time*'s assistant picture editor Jay Colton selected and photographed fourteen individuals—seven men and seven women—deemed physiognomically representative of seven geographic regions or ethnicities: Anglo-Saxon; Middle Eastern; African; Vietnamese; Chinese; Italian; and Hispanic. The process selection by which these seven types were chosen is left unarticulated, but given *Time*'s stated goal—"to dramatize the impact of interethnic marriage, which has increased dramatically in the U.S. during the latest wave of immigration," it would not be unreasonable to assume that the magazine's editors selected ethnicities corresponding to the most significant recent immigration numbers or interethnic marriage statistics. How the selected models actually correspond to those ethnicities is open for debate. What was the criteria for "Anglo-Saxon," for instance?

Using Morph 2.0, photographs of each of the seven female faces was blended with each of the seven male faces to create forty-nine virtual offspring; each feature of each face was weighted and combined equally to yield a 50-50 merger of each pair (Fig. 3.60). The forty-nine composite faces appear in the grid comprising the background of the magazine's cover. The "New Face of America" that fills the center of the magazine's cover was created by blending the forty-nine composite progeny of the fourteen original models. The New Face of America is a composite of composites, twice removed from the original pool of representative photographs. *Time*'s cover model was calculated, as a result of this virtual cosmetic collision, to be: 15% Anglo-Saxon; 17.5% Middle Eastern; 17.5% African; 7.5% Asian; 35% Southern European; and 7.5% Hispanic. This face is a fiction generated to symbolize the hypothetical average face of American's multi-ethnic future population.

Time's scenario, which *Time*'s Managing Editor James R.Gaines claims is presented "in the spirit of fun and experiment," does not follow any logic relating to accepted genetic theories; indeed, the magazine "makes no claim to scientific accuracy." The methodology is tautological, in that the original models were selected on the principle that their physiognomies corresponded to a given race's expected appearance. This highly dubious undertaking is identical to Francis Galton's composite photography. *Time*'s final product is suspiciously beautified, aestheticized, and gendered. Technically, all of *Time*'s composites are sexless: each is the result of an equal blend of a man's face and a woman's face. Thus, each is precisely 50% male 50% female, and consequently both and neither sex. The magazine, however, is explicit in gendering the cover model as female. The opening sentence of the letter from the editor on the

Galtonian composites have been perhaps too quickly dismissed by recent historians and art historians as a result of his investment in the burgeoning field of eugenics. Perhaps because Galton's investment in composite photography was motivated by eugenic aims, its widespread popular incarnations, such as the ideal college girls, have been unfairly discounted. Miles Orvell, for example, condemning what he sees as the exclusionary nature of Galtonian composites, concluded that Galton had created in his composites "parodies of the type."[141] Rachel DeLue, writing more recently about a diagnostic mode of vision shared by medical science and Sadakichi Hartmann's art criticism, surprisingly diagnosed Galton's photographs as showing "not much of anything at all."[142] Allan Sekula has provided the seminal reading of Galton's composite

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first page of the issue reads, "The woman on the cover of this magazine does not exists—except metaphysically."

Acknowledging the attractiveness of its composite physiognomy, *Time* describes the face as "beguiling if mysterious." Going further, *Time*'s editor invoked both divine creation and bewitching desire, claiming that when the image of "our new Eve began to appear on the computer screen, several staff members promptly fell in love. Said one, 'It really breaks my heart that she doesn't exist.'" This bizarre hyperbolic reaction mirrors precisely the responses that accompanied the publication of composite photographs of women's faces around 1900. Curiously, not only do composite portraits appear to blend statistics and physiognomy and are imbued with prognosticative power, but they are also seemingly cloaked with a mysterious ability to stimulate intense desire. That this trope of desire, whether genuine or not, resurfaced in 1993 is bizarre and possibly points to an overdetermined positive reaction sublimating a darker tension stimulated by the racial mixing 'evidenced' by the composite photograph. That is, any anxieties provoked by the fact that the "new face of America" is manifestly not white are precluded by Time's editors' claims of intense physical desire, declarations of love, and rhapsodies about her beauty. See "The New Face of America," *Time* Fall 1993 Special Issue 142, no. 21 (18 November 1993).

[141] Miles Orvell, *The Real Thing* (Chapel Hill: University of North Carolina Press, 1989), 94. This argument has also been rehearsed in Orvell, "Almost Nature: The Typology of Late Nineteenth-Century American Photography," in Daniel P. Younger, ed., *Multiple Views: Logan Grant Essays on Photography, 1983–89* (Albuquerque: University of New Mexico Press, 1991), 155.

[142] DeLue relies heavily on Carlo Ginzburg's fascinating "semiotic paradigm," a shared mode of looking that linked the contemporaneous diagnostic projects of art connoisseur Giovanni Morelli, psychoanalyst Sigmund Freud, and creator of literary detective Sherlock Holmes, Arthur Conan Doyle, and it is perplexing that she can find inspiration in the wide-ranging discourse analysis of Ginzburg but then resort to what amounts to a form of "neo-intentionalism" in her overall conclusions. DeLue described herself as a neo-intentionalist in a meeting with predoctoral fellows, a group that included the author, at the Smithsonian American Art Museum in 2007. See Carlo Ginzburg, "Clues: Morelli, Freud, and Sherlock Holmes," in Umberto Eco and Thomas A. Sebeok, eds., *The Sign of Three: Dupin, Holmes, Peirce* (Bloomington: Indiana University Press), 81–119.

photographs, but even as he concedes similarities between Galton and "the neosymbolists of the Photo Secession" in that they both "wanted something more than a mere trace…that would match or surpass the abstract capabilities of the imaginative or generalizing intellect," he concludes that the Photo Secession and its affiliated movements "can be seen as an attempt to resist the archival mode [exemplified by Galton] through a strategy of avoidance and denial based on craft production."[143] In a curious move, the handmade-ness of Stieglitz's and his compatriots' photographs, according to Sekula, rejected the mechanized production of Galton's, thereby disavowing the legitimate search for any discursive similarities, resonances, or overlaps between the two photographic practices. It is as if there exists an unbridgeable gap between the realms of fine art photography and the scientistic mode of representation pioneered by Galton and practiced by any number of his acolytes.

Far from showing "not much of anything at all," I contend quite the opposite. The aim of pictorial portraiture was the construction of what Hartmann called a "plastic psychological synthesis" that combined physical likeness and the interior "soul life." A favored method of accomplishing that involved the utilization of soft, diffuse, blur. Composite photographs made following Francis Galton's formula resemble pictorial portraits such as Steichen's of Eleonora Duse in both their full-frontal pose and all-over diffuse blur. Differences in the status, skill, and renown of their creators; the venues of their respective publication, exhibition, and target audience; and the specifics of their technical facture notwithstanding, it would be hard to argue that Steichen's Duse and

[143] Allan Sekula, "The Body and the Archive: The Use and Classification of Portrait Photography by the Police and Social Scientists in the Late 19th and early 20th Centuries," *October* 39 (Winter 1986):58.

Harper's "Composite College Girl of 1900," to take just one example, do not resemble each other.

Furthermore, the libidinous commentary surrounding the college composites jibes with the arguments championing pictorialism in that both argue that their blurrily evocative portraits reveal the inner state, the character, and the soul of the depicted subject. Like Hartmann's plastic psychological synthesis, the college composites reveal the beauty of soul even as their physiognomic specificity is obscured by subtle muzziness. If Galtonian composites like the "Composite College Girl of 1900" "show nothing," the giddy eulogies surrounding them and the related female co-ed composites suggest that their viewers certainly believed they were seeing something. Or acted like they were seeing something. Or wanted to see something. The art historian Michael Baxandall has suggested that social facts lead to the development of visual habits and skills, which, combined with real experience, contribute to a "cognitive style."[144] Did looking at mysterious, ghostly, and indistinct physiognomies utilize some set of nascent cognitive skills around 1890? Could Steichen's blurs have been accepted and valued without the blurry precedent of composites like the ideal college graduates? If a blur can be defined as a stain which bedims moral or ideal purity, a blemish, or an aspersion on character, then how does such a negative concept become an accolade positively connoting "individuality" and "soul"?[145]

The ideal college student's full anatomy could be seen in three dimensions by the estimated 27.5 million viewers (nearly a quarter of the population of the United States) to

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[144] Michael Baxandall, *Painting and Experience in Fifteenth Century Italy: a Primer in the Social History of pictorial Style* (Oxford: Clarendon Press, 1972), 30.

[145] *Oxford English Dictionary*, s.v. "blur."

the 1893 World's Columbian Exposition in Chicago in 1893, where statues of average male and female American college students were exhibited in the Anthropological section of the Manufacturers and Liberal Arts Building of the (Fig. 3.61). Sculpted by Bostonians H.H. Kittredge and Miss Ruggles, a pair of Statues of Typical Americans, male and female, were based on composite photographs and average dimensions compiled from "more than 10,000 measurements"[146] conducted during mandatory physical examinations executed at Harvard and Radcliffe by Dudley Allen Sargent (1849–1924), an early innovator in physical education during his tenure as professor at the Harvard Summer School of Physical Education and Director of the Hemenway Gymnasium at Harvard from 1879 to 1919.[147] The students' physical exams involved photographing them in the nude from three angles. These photographs, coupled with the data collected from the exams, were used to assess the need for corrective training and exercise:" a selection of these photographs were on view in Harvard's educational display in the Manufacturers and Liberal Art Building of the fair.[148]

The anthropometric statues of the "typical American man and woman"[149] illustrated the presumed physical, racial superiority of the white, upper and upper-middle

[146] "Harvard University," *New York Times,* 26 February 1893, 11.

[147] Julie K. Brown, *Contesting Images: Photography at the World's Columbian Exposition* (Tucson: The University of Arizona Press, 1994), 45. Sargent compiled identification cards for each student he examined or had examined at Harvard and elsewhere. Each measurement card notes detailed measurements of the subject's body and lists some genealogical and family health information as well. This information often includes the subject's birth date and place, subject's father's occupation, and both the nationalities and the causes of death of the subject's parents. These cards are located in Sargent's Papers, held at the Harvard University Archives.

[148] Ibid.

[149] Franz Boas, "Ethnology at the Exposition," *The Cosmopolitan, an Illustrated Monthly Magazine* (September 1893): 609.

class.[150] This is in line with Galton's use of composites of preferred racial characteristics to make visible a "clue to the direction in which the stock of the English race might most easily be improved."[151] In one experiment, Galton made a composite of Greek and Indian portrait coins of Alexander the Great, seeking in the blurred likenesses the vanished physiognomy of what he considered to be a higher race (see Fig. 3.42). "The average ability of the Athenian race is," Galton wrote, "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."[152] Galton's eugenics, which advocated breeding among desirable types, can be understood as an attempt to push the English social average "toward an imaginary, lost Athens and away from an equally imaginary, threatening Africa."[153]

Dedicated to encouraging "vigorous health" in Americans, Sargent, like Galton, recognized the need for "a uniform system of measurements."[154] Lacking knowledge of the state of Americans' physiques, there would be little chance for systematically "showing the relation of the individual to the normal standard [and] the relation which every [body] part of the individual bears to every other part."[155] In attempting to popularize physical education, it was Sargent's belief that, aside from having "a deep moral significance," the "size, shape, and structure of the body have a direct dynamic

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[150] Heather Munro Prescott, "Using the Student Body: College and University Students as Research Subjects in the United States During the Twentieth Century," *Journal of the History of Medicine and Allied Sciences* 57, no.1 (January 2002): 7.

[151] Galton, *Inquiries Into Human Faculty*, 10.

[152] Galton, *Hereditary Genius* ([1869] London: Friedman, 1978), 342.

[153] Sekula, 44.

[154] Dudley Allen Sargent, "The Physical Proportions of the Typical Man," *Scribner's Magazine* 2, no. 1 (July 1887): 7, 12.

[155] Ibid., 12.

relationship to all the vital organs, and appreciably influence the functions of the brain and nervous system."[156] Identifying an individual's deficiencies in relation to an ideal average would enable any perceived deformities to be corrected via a tailor-made series of focused exercises. Sargent made careful examinations of students at Harvard and encouraged his colleagues at other universities and colleges to do the same.[157]

Visitors to the Columbian Exposition could also be examined and measured by physical anthropologists under the guidance of Franz Boas and Joseph Jastrow, assistants to Frederic Ward Putnam, head of Harvard's Peabody Museum of American Archaeology and Ethnology and Chief of the Department of Ethnology and Archaeology of the Columbia Exposition (Fig. 3.62).[158] The statues, installed on pedestals in an adjacent room, were presumably there to indicate the ideal measurements to which each visitor might aspire, and to "teach a lesson; to show the advancement or evolution of man."[159] In a photograph of Room 8, where the visitor assessments occurred, a series of framed composite photographs of physicians, Harvard professors, and soldiers hang on the wall to reinforce the point (Fig. 3.63). The composite photographs appear to match a set produced by H.P. Bowditch, professor of physiology at Harvard University that he

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[156] Ibid., 6.

[157] Thousands of index cards compiling the results of these anthropometrical examinations can be found in his Papers at Harvard University.

[158] Robert W. Rydell, *All the World's A Fair: Visions of Empire at American International Expositions, 1876–1916* (Chicago: University of Chicago Press, 1984), 57. Measurements of the 1893 World's Fair attendees (males and females), are in the Sargent Papers at Harvard University Archives, in Box 8, HUG 1768.60, Papers of Dudley Allen Sargent: measurement cards from schools and organizations other than Harvard, 1880–1902.

[159] Harlan I. Smith, "'Man and His Works,' The Anthropological Building at the World's Columbian Exposition," *The American Antiquarian and Oriental Journal* 15, no. 12 (March 1893): 115.

published in his 1894 article in *McClure's Magazine* entitled "Are Composite Photographs Typical Pictures? (Fig. 3.64) [160]

The Anthropology Building, within the Anthropological section of the Manufacturers and Liberal Arts Building of the 1893 World's Columbian Exposition, where the sculptures of the ideal college students were displayed, was located in the midst of the Expo's Midway Plaisance, a mile-long boulevard populated with ersatz "native" villages alongside food and concession stands. The ideal American college bodies, gleaming white, were prominently displayed in the immediate vicinity of what has been criticized as an architectonic axis linking the savagery of "native" villages and the civilization of Burnham's gleaming, neoclassical White City in a manner conforming to then-current social Darwinist-inflected racial hierarchies.[161] The abstract, statistically-derived ideal of Sargent's college bodies could be visually compared and contrasted, for example, to the "full anthropometrical data,"[162] photographs, and fifty living members of an Eskimo tribe.[163] The measurements obtained from a visitor to the anthropology exhibit

[160] H.P. Bowditch, "Are Composite Photographs Typical Pictures," *McClure's Magazine* 3, no. 4. (September 1894): 331.

[161] Robert W. Rydell, *All the World's A Fair: Visions of Empire at American International Expositions, 1876–1916* (Chicago: University of Chicago Press, 1984), ch. 2.

[162] Harlan I. Smith, "'Man and His Works,' The Anthropological Building at the World's Columbian Exposition," *The American Antiquarian and Oriental Journal* 15, no. 12 (March 1893): 115.

[163] These ethnological specimens had been gathered from the west coast of Greenland beginning in 1891 by world-renowned arctic explorer Lieutenant Robert E. Peary. Peary was just one of numerous field operatives receiving instructions and funding from Frederic Ward Putnam, head of Harvard's Peabody Museum of American Archaeology and Ethnology and Chief of the Department of Ethnology and Archaeology of the Columbia Exposition. Specifically, Peary received orders to "obtain all objects possible, illustrative of the life and customs and the arts of the Arctic Highlanders inhabiting the Whale Sound region…; also photographs and measurements of the people, and, if possible, moulds of a man, woman, and child, for the purpose of making models of actual life size in every particular." Correspondence, Putnam to Peary, in Ralph W. Dexter, comp. and ed., "Correspondence Between Lieutenant R.E. Peary and Professor F.W. Putnam on Arctic Ethnology," *Ethnohistory* 16, no.2 (Spring 1969): 181.

at the Exposition could be instantly compared to Bowditch's composite ideal averages of various "types" illustrated on the wall. This lesson would be driven home when visitors to the anthropological building at the Columbian Exposition compared his or her anthropometrical measurements to those of the inferior races populating their transplanted villages in the Midway.

The concept of an ideal average central to the popular perceptions of the Kitchell Composite Madonna and the female college composites surfaces again in the Statues of the Typical Americans displayed at the Columbian Exposition. A portfolio of twelve photographs of the sculptures resides in the collection of the Boston Public Library (Figs. 3.65 and 3.66).[164] They appear to have been taken in the studio of one "G. Stein" in November 1890 following their display in Chicago, where they were hung on the wall adjacent to the statues in the Anthropology Building (see Fig. 3.61).[165] A label on the back of a number of the Boston Public Library prints appears to closely replicate a sign appended to the statues when they were displayed at the Columbian Exposition. It reads:

> "Statues of the Typical Americans, Male and Female, were made from the medium measurements of several thousand students, ranging from 16 to 26 years of age, selected from Twenty American colleges and secondary schools. The measurements correspond to those of persons 21 years of age. The statues are not intended to represent ideals of physical perfection, but to show measurements which are most common to this class in the community. A large portion of the persons examined (nearly 50 percent) had measurements above those represented by the statues, and an equally large portion had measurements below them. D.A. Sargent."

[164] A portfolio of the photographs is in the archives of the Peabody Museum, Harvard. It is inscribed "3 Plates photographed at G. Stein studio, 11/90." The studio can be seen behind a curtain in the background of Fig. 3.66.

[165] There is no cataloguing information on the process by which they came into the Boston Public Library collection.

Despite the explicit claim that the "statues are not intended to represent ideals of physical perfection," the statues and the photographs of them suggests otherwise. Both the male and female statues evoke classical sculpture (Figs. 3.67 and 3.68). They stand in *contrapposto*, with their weight supported on one leg. The result is a dynamic, serpentine posture. Executed in pristine white plaster, which evokes the smooth marmoreal finish of classical sculpture, the Typical Americans statues efface, in the manner similar to Galtonian composites, the individual blemishes of their component physiognomies. In short, these statues, while ostensibly mean averages, transcend the "most common" associations of the "medium measurements" via the aesthetic associations of classical sculpture. These average Americans are undeniably idealized, like modern day American statistical versions of Durer's *Adam and Eve*.

The aura of idealization is made explicit by Dr. R. Tait McKenzie, former professor of physical education, University of Pennsylvania, in a speech entitled "The Ideal American College Athlete" he delivered at the 20th Annual Convention of American Physical Education Associates in 1913:

> The society of directors of physical education in colleges have sought, in the average proportions of 400 hand picked athletes, a statue whose measurements would represent the ideal American student athlete. His proportions follow closely the 65 percent line on a college student's charts and his type comes about midway between the two extreme ideals of beauty held up to the sculptors of Greece, the thick-set, powerful warrior and the graceful, agile athlete.[166]

In McKenzie's formulation, the ideal American student athlete's body, defined via the extraction of an average from a large representative sample, compares favorably to the

[166] Excerpt from "The Quest for Eldorado," Presidential Address by Dr. R. Tait McKenzie at the 20th Annual Convention, American Physical Education Associates, Newark, N.J., March 26, 1913. Peabody Museum of Archaeology and Ethnography, Harvard University.

standard established by the sculptors of ancient Greece. The ideal American athlete student, furthermore, has been constructed statistically in relation to the average American (65th percentile), the larger population from which it has been extracted. The logic of statistics and the perceived promise of the ideal average was a desirable conflation in that it pointed the way to social and national improvement.

LOOKING BACKWARD

This kind of upwardly mobile statistical reasoning provided the foundation for the second most popular novel of the nineteenth century: Edward Bellamy's utopian best-seller *Looking Backward, 2000–1887*, published in 1888.[167] The story follows Bostonian Julian West, a citizen of Boston in the year 1887. West suffers from insomnia and retires in the evenings to a solid concrete sleeping chamber beneath his large house. He also retains the services of a Professor of Animal Magnetism, who practices the art of mesmerism in order to afford his patient a good night's slumber. Hypnotized thus one night in 1887, West awakes Rip van Winkle-esque to find himself in the year 2000. West's concrete bunker was only discovered in the year 2000 when Dr. Leete began excavations in his back garden to lay a foundation for a laboratory "for the purpose of chemical experiments for which I have a taste."[168]

Much of the novel comprises a series of dry monologues in which Dr. Leete, West's twenty-first century "host," explains how his marvelous modern society operates.

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[167] Bellamy's *Looking Backward, 2000–1887* sold over 100,000 copies in American during its first year of production and went on to sell over a million copies worldwide. It is estimated to be the second most popular novel of the nineteenth century, after *Uncle Tom's Cabinches*

[168] Edward Bellamy, *Looking Backward, 2000–1887* (New York: Signet Classic, 2000), 22. All subsequent page numbers refer to this edition and will be cited parenthetically within the body of the text.

In a nutshell, the novel imagines the idealist promise of control against the vicissitudes of chance offered by statistics-based probabilistic reasoning. This notion is perhaps most perfectly encapsulated in the image of Bellamy's utopian communal umbrella. A few nights after awaking in the year 2000 from his 113-year slumber, Julian West prepares to accompany his adoptive twenty-first-century family—Dr. Leete, Mrs. Leete, and their daughter Edith—to the local community dining hall where they often take their meals. This expedition, like everything in Bellamy's book, forms part of West's, and the reader's, education in the social arrangement and industrial organization of Bellamy's Boston *circa* 2000.

A rainstorm had begun earlier in the day, and West is surprised when the family prepares to leave the house without the protection of boots, coats, or umbrellas. Unbeknownst to West, an engineering feature of Boston in the year 2000 involves the automatic deployment at the onset of inclement weather of a "continuous waterproof covering" over all pedestrian thoroughfares (99). A sidewalk ordinarily exposed to the elements is thereby transformed "into a well-lighted and perfectly dry corridor" (99). Because it "would be considered an extraordinary imbecility to permit the weather to have any effect on the social movements of the people" (100), the risk of such an occurrence has been eliminated altogether through the preemptive deployment of a protective apparatus. Unpredictable precipitation is no longer a thing of concern. Chance, to use the formulation of the philosopher and historian of nineteenth-century statistics Ian Hacking, has been tamed;[169] risk has been averted through the deployment of a sort of literal umbrella insurance policy.

[169] Hacking, *Taming of Chance* (1990), 186.

The communal umbrella is a rich metaphor for Bellamy's utopia, a close reading of which locates Bellamy's text amidst a broader discourse on probability at a historical moment characterized by the erosion of determinism and the rise of "autonomous laws of statistics."[170] As Western "society became statistical," order could be shown to emerge from that which appeared chaotic.[171] This revelation was interpreted during the first half of the nineteenth century according to a mechanistic theory of causality following unseen "social laws," but by the 1880s chance was granted larger and larger responsibility for the regular occurrence of social events such as crime, marriage, death, and consistent distributions of national averages of height, weight, and so forth, from year to year.

Chance, paradoxically, made the world seem less capricious; the greater the level of indeterminism in the conception of the world, the higher the expected level of social control. Such a development was dependent on the rise of statistical reasoning and the privileging of collective regularities over individual actions.[172] Bellamy relies on the same mode of statistical thinking that lies at the nineteenth-century intersection of probabilism and control in order to formulate his utopian "forecast" of the "next stage in the industrial and social development of humanity…in this country," a "prediction" "supported by the indications of probability" "in accordance with the principles of evolution" (218). Bellamy, in short, speaks the popular language of nineteenth-century statistics and probability theory.

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[170] Ibid., 188.

[171] Ibid., 1.

[172] *Empire of Chance*, 62; Theodore M. Porter, *The Rise of Statistical Thinking, 1820–1900* (Princeton: Princeton University Press, 1986), 7–8.

Bellamy makes much of his utopia's communal umbrella. The development from the individual umbrella to the "sidewalk covering" (99) stands for far more than a creative engineering achievement. Indeed, it is employed as a succinct analogy for the difference between the social organization of West's 1887 Boston and Leete's Boston of 2000. As the ever-articulate Dr. Leete explains:

> The difference between the age of individualism and that of concert was well characterized by the fact that, in the nineteenth century, when it rained, the people of Boston put up three hundred thousand umbrellas over as many heads, and in the twentieth century they put up one umbrella over all the heads. (100)

Edith Leete further elaborates on her father's point:

> The private umbrella is father's favorite figure to illustrate the old way when everybody lived for himself and his family. There is a nineteenth century painting at the Art Gallery representing a crowd of people in the rain, each one holding his umbrella over himself and his wife, and giving his neighbors the drippings, which he claims must have been meant by the artist as a satire on his times. (100)

Bellamy's reference to an illustrative artwork—the nineteenth-century painting in the Art Gallery—is unique in a novel composed mainly of a series of long monologues. Although Childe Hassam's *Rainy Late Afternoon, Union Square*, which was painted just two years after *Looking Backward* was published, does not depict Boston and never resided in a public collection in that city, its subject is a close match to the image Edith's explanation was designed to conjure in nineteenth-century readers' minds (Fig. 3.69).

In Hassam's painting's middle-ground a man and woman huddle under an umbrella; the inadequacy of its protection is underscored by the location of the woman's hat, a miniature of the umbrella, directly below its lip; Hassam seems to emphasize the rain's cascade with a strategically placed splash of bright blue paint at the edge of the umbrella immediately over the crown of the woman's hat (Fig. 3.70). The forlorn figure

of the windswept woman in Hassam's foreground seems to match the spirit of Leete's critique of the nineteenth century's "age of individualism." She is isolated from the crowd not only by the inclement weather but also by her means of protection from it. I do not mean to seriously promote an interpretation of Hassam's painting as satire on the every-man-for-himself attitude of the late-nineteenth century condemned by Bellamy's spokesman Dr. Leete (although it is not out of the question), but a close visual match to Bellamy's text is helpful in further illuminating what I take to be the latent meaning of the umbrella in this passage.

The hunched and solitary woman bracing against the whipping rain and wind in the foreground of Hassam's *Rainy Late Afternoon, Union Square* is just one of many umbrella-carrying New Yorkers who perambulate within the painting, huddled beneath their shiny waterproof carapaces. But, despite the proximity of her fellow New Yorkers, she is effectively alone, physically shrunken and withdrawn, and hermetically sealed off from the rest of the crowd by her umbrella. When West walks under the communal umbrella in the year 2000, he is subsumed by the greater whole, that "stream of ladies and gentlemen dressed for dinner" that "fill" the "apparatus" (99), the same "stream of people" West sees "pouring" (100) into the dining hall moments later. Hassam's woman is one, a lone individual, of the nineteenth century's "three hundred thousand" "private umbrella[s]," whereas a citizen in the year 2000 is, by Bellamy's numeric logic, one three-hundred-thousandth of a single umbrella, a fraction in a "stream" of fractions of "1."

An individual, of course, is an individual in both Bellamy's 1887 and Bellamy's 2000, but the way in which they are counted differs in an important way. An individual is

composed fractionally in Bellamy's year 2000 (1/300,000, 1/300,000, 1/300,000…) rather than individually (1, 2, 3…) in Bellamy's critique of 1887, which makes them quite different, ontologically and statistically. It is a situation similar to the statistical paradox described by Balzac in *Le cure de village* (1841), in which the individual is defined by virtue of his or her status as a fragment of a greater whole: "Society isolates everyone, the better to dominate them, divides everything up to weaken it. It reigns over the units, over numerical figures agglomerated like grains of wheat in a cup."[173]

Bellamy's "stream" of people under the umbrella "apparatus" is like Balzac's "grains of wheat in a cup," for when the "stream" of Bostonians "pour[s]" into the communal dining hall, they are immediately re-separated into isolated dining rooms corresponding to the family homes from which they originated (100). There is an apparatus of social control at work here, to be sure. Like Balzac's cup of wheat, Bellamy's umbrella analogy appears at first to be paradoxical in that it is predicated upon precisely counting people, or accounting for individuals ("all the heads" under the umbrella), while simultaneously subjugating those individual numbers to the national whole (the twenty-first century's "one umbrella"). Like Balzac's cup of wheat, in which numerical control equals social control, Bellamy's statistical population is controlled by an apparatus of enumeration, consolidation, and separation.

Bellamy's enumeration is part of a wider force of numerical control at work in Western Europe and American during the nineteenth century. Coinciding with what the philosopher Ian Hacking has called an "avalanche of printed numbers" from about 1830,

[173] Balzac, *Le cure de village* (1841, reprint Paris: Societe d'Editions Letteraires et Artistiques, 1901); quoted in *Empire of Chance*, 39.

there began a shift towards a statistically-determined worldview.[174] Assuming a large enough pool of data, seemingly random phenomena, such as deaths, suicides, and crimes, actually appeared to occur at pretty regular and thus predictable rates. While Hacking dates the statistical "avalanche" to about 1830, he notes that the "volcano" didn't fully erupt in the United States until the 1880s, the decade when Bellamy wrote *Looking Backward*.[175]

Born from Hacking's "avalanche of printed numbers," which took the form of census-taking and record collecting, a belief emerged that answers to social questions could be found by accumulating, analyzing, and categorizing more facts and more numbers.[176] It was believed that society could be better understood through statistical analysis. The examination of census data by Simeéon-Denis Poisson, Henry Thomas Buckle, Pierre-Simon Laplace, and J.B.J. Fourier in France and England led to a various incarnations of a rule known during the nineteenth century as the law of large numbers, which demonstrated mathematically the tendency for events frequently repeated and not too closely dependent on one another to occur in approximately constant numbers from year to year.[177]

There was, it appeared, a pattern and an order even to transgressions of morality and law such as murder, suicide, deformity, and perversion. Scientific, numerical order,

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[174] Hacking, (1990), 2.

[175] Hacking, "Biopower and the Avalanche of Printed Numbers," 290.

[176] Hacking (1990), 2.

[177] The term 'law of large numbers' was coined in 1835 by Poisson, but is not that much different from a theorem expressed in Jakob Bernoulli's 1709 *Ars Conjectandi*, according to which the frequency of events must conform over the long run to the fixed probability governing each trial. Theodore M. Porter, *The Rise of Statistical Thinking, 1820–1900* (Princeton: Princeton University Press, 1986), 12.

for leading social statisticians such as Quetelet, connoted some deep social order, perhaps hidden from view, but discoverable using the broad factual and numeric perspective of the statistician. Order was brought out of chaos by virtue of statistical analysis, which provided compelling evidence that history, the law-like course of social affairs, was subject to deterministic causality.[178] Laplace, for example, understood that "all events, even those which on account of their insignificance do not seem to follow the great laws of nature, are a result of it just as necessarily as the revolutions of the sun."[179] Nineteenth-century statisticians realized that social knowledge was more efficiently promoted by ignoring the sources of individual actions and looking towards society, as statistical regularity was visible only through the analysis of large numbers. As Ludwig Boltzmann wrote in 1886, "As is well-known…if only a sufficient number of people is taken into account, then not only is the number of natural events like death, illness, etc. perfectly constant, but also the number of so-called voluntary actions—marriages at a given age, crimes, and suicides."[180]

As Jonathan Auerbach has pointed out, when Bellamy, via Leete, tries to explain the "logical evolution to…a golden future" of his utopian Boston, he uses the intransitive verb "organized": "The nation, that is to say, organized as the one great business corporation in which all other corporations were absorbed" (37).[181] All individual

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[178] *Empire of Chance*, 44.

[179] P.S. de Laplace, *Essai philosophique sure les probabilities* (Paris, 1814), trans. F.W. Truscott and F.L. Emory, *A Philosophical Essay on Probabilities* (New York, 1951), 3; quoted in Hacking (1990), 11.

[180] Ludwig Boltzmann, *Der zweite Hauptsatz der mechanischen Wärmetheorie* [1886]; quoted in *Empire of Chance*, 62.

[181] Auerbach has read Bellamy's nation's "organizing" in terms of assuaging anxieties arising from contemporaneous developments in American social structure. Jonathan Auerbach, "'The Nation

components were subsumed into a greater whole, where they "organized" logically, seemingly instantaneously, and apparently spontaneously. This quasi-magical process follows the logic of social statistics—order and control emerge from chaos as a result of the "consolidation" (37) and "regulated and systematized" organization (214), of large numbers of individual components in a single composite. Bellamy, in other words, has subjected society to statistical analysis according to the law of large numbers.

Auerbach has also pointed out that Bellamy's Boston is utopian by virtue of the fact that it is devoid of people.[182] It is true that Bellamy's book is populated, in his own words, by "invisible person[s] (178), and people who are "not visible" (71). The citizens of Bellamy's utopia, though, are actually a ghostly presence throughout the text in the form of numbers, statistics, and percentages. The central structure around which Bellamy's utopia functions is the national industrial army, a military-inspired model of social organization regulated and run by the state. Compelling evidence for the superiority of Bellamy's utopian industrial army is offered throughout *Looking Backward* by Dr. Leete. But the "true industrial system" (37) is never actually seen in action. Its workings are explained, and its efficiency, practicality, and functionality proved only by statistics. More often than not, the evidence Leete provides takes the form of favorable proportional comparisons to the nineteenth century, with "its average of four or five failures to one success" (151), during which "four-fifths of the labor of men was utterly wasted" (214).

Organized': Utopian Impotence in Edward Bellamy's *Looking Backward*," *American Literary History* 6, no. 1 (Spring 1994).

[182]Auerbach, "Nation Organized," 43 n.5.

Bellamy's utopian industrial army is organized statistically; it is divided into a graded hierarchy of three classes of two divisions each, "one-ninth" of the industrial army accounting for the lowest rank, the apprentice level. In his general outline of the nation's gross national product, Leete refers to "exact statistics" supporting his "general statements" (148) and provides the assurance that "our statisticians calculate that one-eightieth part of our workers suffices for all the processes of distribution which in your day required one-eighth of the population" (149). Bellamy's people are fractional, statistical; they are presented in the form of percentages and ratios. Bellamy's utopian Boston is, more precisely, what the historian Daniel J. Boorstin calls a "statistical community,"[183] a nation built upon the systematic collecting, counting, and categorization of data according to a belief in a "science of statistics," eloquently defined by Dr. S.N.D. North, the first head of a permanent United States census office and the chief statistician of the 1900 census, as "the chief instrumentality through which the progress of civilization is now measured, and by which its development hereafter will be largely controlled."[184]

As Leete explains to West in *Looking Backward*, *apropos* the control afforded by quantitative analysis on a national scale, "It is easier for a general up in a balloon with a perfect survey of the field, to maneuver a million men to victory than for a sergeant to manage a platoon in a thicket" (123).[185] In order to maneuver that million-man army,

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[183] Daniel J. Boorstin, *The Americans: the Democratic Experience* (New York: Random House, 1973), 165.

[184] Simon Newton Dexter North, *Seventy-five Years' Progress in Statistics, the outlook for the future; an address at the seventy fifth anniversary of the American statistical association, Boston, Mass., February 13, 1914* (Concord, N.H., The Rumford press, [1914]), 3.

[185] This statement comes in the context of a discussion of the nation's system of distribution and production of goods, pricing of commodities, and the nation's method of allocating labor equivalencies across the job market (all citizens earn equally; the number of hours they work is determined on a self-regulating scale

however, the general in his balloon must first know the measure of his soldiers, for "the principle on which our industrial army is organized is that a man's natural endowments, mental and physical, determine what he can work at most profitably to the nation and most satisfactorily to himself" (43). Enumerative and classificatory procedures enacted in conjunction with a policy of "every man for himself in accordance with his natural aptitude" (43) govern the selection, training, and assignment of jobs. Just as the "statistics" of "actual distribution" of consumer goods are "precise" (119), the nation's administration of the working force is made possible by the fact that "records are kept," "parents and teachers watch from early years for indication of special aptitudes in children" (43), and "testing the reality of [one's] suspected bent" (47). "The public policy," Leete explains, "is to encourage all to develop suspected talents which only actual tests can prove the reality of" (47).

The harmonious balance of individuals' "natural endowments, mental and physical," and the nation's need for those talents is guaranteed by the logical operation of the statistical law of large numbers, which dictates statistical stability in oft-repeated events. Nineteenth-century mathematicians were quick to read statistical frequencies as probabilities, and easily translated the normal distributions evidenced by the law of large

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correlated to the job's difficulty and desirability). The general in the balloon stands in for "the group of men at Washington who nowadays direct the industries of the entire nation" in the stead of directors of the "myriad private businesses of [West's] day, who had to maintain sleepless vigilance against the fluctuations of the market, the machinations of his rivals, and the failure of his debtors" (122). Like Jeremy Bentham's panopticon prison, which according to Michel Foucault, institutionalized the power to dominate through a "differential possession of knowledge" (to view without being viewed), looking and accounting for in *Looking Backward* is privileged with both power and truth, as when Leete takes West to the rooftop of his house for an all-encompassing view of modern Boston. Upon surveying the city, West "knew then that [he] had been told the truth concerning the prodigious thing which had befallen [him]" (38). Michel Foucault, "The Subject and Power," in *Michel Foucault: Beyond Structuralism and Hermeneutics*, 2nd ed., ed. by Hubert Dreyfus and Paul Rainbow (Chicago: University of Chicago Press, 1983), 223. See also Foucault, *Discipline and Punish: the Birth of the Prison*, transl. Alan Sheridan (Harmondsworth: Penguin, 1977).

numbers from an explanatory into a predictive tool.[186] Seemingly unpredictable individual events and actions (interests, talents, and professional predilection, in Bellamy's utopia) will follow a normal and predictable pattern of distribution if the number of cases is great enough, as it is "under the national organization of labor" of Bellamy's utopia, in which "all industries are carried on by great bodies of men" (84).

By virtue of the great number of men in the great body of the industrial army, the special and unique talents of each individual can be effectively deployed. As Leete explains: "It is…owing solely to the vast scale on which industry is organized…that we are able by exchanges and transfers to fit every man so nearly with the sort of work he can best do" (84). Just as "estimates" of consumption can be projected "a year ahead" based on the "statistics of actual distribution" (119), the laws of probable dispersion dictate that job-related skills will continue to follow a normal distribution from year to year. Bellamy's self-regulating industry and the individuals that comprise it are made up according to this kind of statistical reasoning.[187]

Notably, when Bellamy does have to grapple with specific individuals rather than abstract and large statistical populations, he constructs them in accordance with Galton. The protagonist Julian West's identity and experience—divided between centuries—are "blurred like the faces in a composite photograph" (50). When Julian West, after awaking

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[186] *Empire of Chance*, 21.

[187] Centralization is key to the smooth operation of the industrial army and the production and distribution of goods in Bellamy's utopia. As Leete points out: "Even in your day [1887] statisticians were able to tell you the number of yards of cotton, velvet, woolen, the number of barrels of flour, potatoes, butter, number of pairs of shoes, hats, and umbrellas annually consumed by the nation. Owing to the fact that production was in private hands, and that there was no way of getting statistics of actual distribution, these figures were not exact, but they were nearly so. Now that every pin which is given out from a national warehouse is recorded, of course the figures of consumption for any week, month, or year, in the possession of the department of distribution at the end of that period, are precise." The same centralized method of counting and classification is used to establish individuals' abilities and job placement.

on his second day in the year 2000 experiencing a "momentary obscuration of the sense of [his] identity" (50), tries to "regain the clew to [his] personal identity" (50), the language Bellamy uses to articulate his subjectivity is photographic. After the "mental torture [he had] endured during this helpless, eyeless groping for [himself] in a boundless void" (50), West manages to reconcile his situation thus: "The idea that I was two persons, that my identity was double, began to fascinate me with its simple solution of my experience" (51).

West's confused identity (a man of the nineteenth century alive in the twenty-first) is projected onto his blurred perception of the city, a walking tour of which he undertakes as a "diversion" from his mental crisis.

> The mental image of the old city was so fresh and strong that it did not yield to the impression of the actual city, but contended with it, so that it was first one and then the other which seemed the more unreal. There was nothing I saw which was not blurred in this way, like the faces of a composite photograph. (52)

In the year 2000, West undergoes an averaging procedure in which his dual identities ("the idea that I was two persons, that my identity was double") are merged into a single composite, a process exactly analogous to Galton's composite photography, which, as has been discussed above, if made of a single person, produced, in Galton's estimation, a "really good likeness."[188] Understanding his situation in terms of composite photography allows West to control "an intolerable swimming of the brain" (51). This is the "simple solution" that allows him to stabilize all that "had broken loose" in his mind, "ideas of persons and things, all had dissolved and lost coherence and were seething together in apparently irretrievable chaos" (51). The chemical connotation of "solution," reinforced

[188] Galton, "Composite Photographs," *Journal of the Anthropological Institute of Great Britain and Ireland* 8 (19 April 1878): 140.

by the notion of being "dissolved" and "seething together," as in the case of a solvent in suspension, further enhances the process of admixture and transformation involved in a Galtonian composite.

West's mental recalibration mirrors Galton's early essay on "generic images," referred to earlier in this chapter, in which Galton examined "analogies" between mental images, which he claimed consisted of "blended images," and composite photography.[189] For Galton, the composite provided a model for human thought itself, a conception best expressed, Allan Sekula has noted, when Galton defined introspection as "taking stock of [one's] own mental furniture."[190] Rather than mental furniture, though, West takes stock of his mental architecture. West's attempt "to regain the clew [sic] to [his] personal identity" draws on a Galtonian conception of reified human thought. West takes stock of his mental architecture when "the mental image of the old city" "blurred" with the "impression of the actual city" like "the faces of a composite photograph" (52).

When West thinks of himself in terms of a composite photograph, he is "generic" in Galton's sense of the term: "real generalizations because they include the whole of the material under consideration…. They are the equivalents of those large statistical tables whose totals, divided by the number of cases, and entered on the bottom line, are the averages."[191] When Bellamy constructs West as an average, or a Galtonian generic real generalization, he also invokes the popular belief that the blurred average ideal somehow reveals the essence of an individual: Bellamy describes West as "no more able to

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[189] Galton, "Generic Images, Proceedings Royal Institution, 25 April 1879, published in "Generic Images," *Nineteenth Century* 6, no. 29 (July 1879): 169.

[190] Galton, *Inquiries Into Human Faculty*, 182, quoted in Sekula, 51.

[191] Galton, "Generic Images," in *Inquiries Into Human Faculty*, 233.

distinguish himself from pure being than we may suppose a soul in the rough to be before it has received the earmarks, the individualizing touches which make it a person" (50).

West's lingering "mental confusion" at this "horror of strangeness" is conveniently alleviated by the appearance of Edith Leete. By expressing sympathy and compassion for West's disorientation, she creates an "assumption" in West's mind "that we were not strangers" (55). West's assumption "seemed scarcely strange" (55) for he begins to see Edith for who, or what, she really is, or at least how she really is constructed by Bellamy. Galton reckoned that family composites could be effectively used as a method of tracing the "hereditary transmission of features" in "ideal family likenesses."[192] He wrote:

> I should say that one of the inducements to making these inquiries into personal identification [composite photography] has been to discover independent features suitable for hereditary investigation…it is not improbable, and worth taking pains to inquire whether each person may not carry visibly about his body undeniable evidence of his parentage and near kinship.[193]

Indeed, Edith's genealogy is made visible by Bellamy following the logic of a Galtonian composite. Edith Leete, it turns out, is the great-granddaughter of Edith Bartlett, West's fiancée in 1887. Not only do they share given name, but they also share genetic material. The coincidence boggles the mind: West was mesmerized in 1887 in his underground concrete vault only to be exhumed in the year 2000 by the father of his

[192] Galton, "Application of Composite Photographic Portraiture to the Production of Ideal Family Likenesses" (1882), quoted in David Green, "Veins of Resemblance: Photography and Eugenics," *Oxford Art Journal* 7, no. 2 (1984): 12.

[193] Galton, "Personal Identification and Description," (part 2), Nature 38 (1888): 202.

nineteenth-century fiance's great-granddaughter.[194] West's subjectivity was ealier overlaid on a composite of the architecture of two cities—the Bostons of 1887 and 2000—"like a composite photograph." Similarly, architecture—West's Boston bunker and Dr. Leete's personal laboratory—is also merged with Edith Leete's identity in the form of a photographic composite.

Coincidentally, or not, a collection of Edith Bartlett's papers descended through the family into the Leetes' possession. Amongst these documents were a number of letters from West and a photograph of Edith Bartlett. This photograph provided Edith Leete with an image of a woman about whom "to imagine all manner of tender and romantic things" (196). When West was disinterred from his coffin-like sleeping chamber, he was wearing a locket containing a photograph of his fiancée. Upon investigation by the Leetes, "the face in the locket found upon [his] breast was immediately recognized as that of Edith Bartlett" (196).

The pair of matching photographs not only provides evidence of West's identity but also inspires a Galtonian blending of the pair of Ediths in West's mind. Upon learning of Edith's lineage, West confesses:

> It was as if from her eyes Edith Bartlett looked into mine…. My love, whom I had dreamed lost, had been re-embodied for my consolation. When at last, in an ecstasy of gratitude and tenderness, I folded the lovely girl in my arms, the two Ediths were blended in my thought, nor have they ever clearly been distinguished. (197)

To compound this curious case of composite identities, West was "not long in finding that on Edith's part there was a corresponding confusion of identities" (197). Just as

[194] West's bunker is discovered during the course of an excavation in Leete's back garden for the foundation of a laboratory "for the purpose of chemical experiments for which [Leete has] a taste" (22). The chemical connection recalls the "simple solution" of West's composite experience."

West's identity was earlier likened to a Galtonian pictorial average, Edith Leete is also "blended" into a multiple or composite. She confesses to West: "What if I were to tell you that I have sometimes thought that her spirit lives in me—that Edith Bartlett, not Edith Leete, is my real name" (198).

This remarkable passage recalls the way in which Eleonara Duse was described as a "double self," , and the way she conceived of her own subjectivity as a conduit to the manifestation or expression of other spirits. As she put it, "There are a thousand women within me…,"[195] and "…I had seven lives in my body, in my voice."[196] Edith Leete's declaration, furthermore, is not the lone example of the construction of identity as a composite, photographic or otherwise, in novels of the period. Frank Norris's 1903 novel *The Pit* includes a passage in which subjectivity is rendered in the language of composite photography in the same curious manner as that in which Bellamy constructs Edith Leete. Norris's heroine, Laura Jadwin, ruminates: "The individual—I, Laura Jadwin—counts for nothing. It is the type to which I belong that's important, the mould, the form, the sort of composite photograph of hundreds of thousands of Laura Jadwins. 'Yes,' she continued, her brows bent, her mind hard at work, 'what I am, the little things that distinguish me from everybody else, those pass away very quickly, are very ephemeral. But the type Laura Jadwin, that always remains, doesn't it?"[197]

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[195] Quoted in Stella Rudolph, "Eleanora Duse and Her Times," *Apollo* 101 (January 1958): 58.

[196] Paul Radice, ed. *Lettere D'Amore* (Milan: il Saggiatore, 1979), 772; quoted in Helen Sheehy, *Eleonora Duse: A Biography* (New York: Alfred A. Knopf, 2003), 98.

[197] Norris, *The Pit* (1903), 193; quoted in Orvell, *The Real Thing*, 313 n.44. Orvell suggests that this passage "capture some of the windy vacuity of the notion" of a Galtonian composite, concluding that Laura's thoughts are a "form of irresponsibility sanctioning the escapism of her life."

Bellamy's bizarre merger of Edith Bartlett and Edith Leete echoes uncannily a composite photograph Galton made of three sisters around 1882, which in his opinion "show[s] how curiously even two faces that have a moderate family likeness will blend into a single one (Fig. 3.71)."[198] The notion that signs of inheritance are rendered more visible when presented in composite form, or rather that genetically related faces will form superior composites, is demonstrated in a letter from the father of the three sisters Galton combined in a composite family picture:

> I put one of the full [composite] faces on the table for the mother to pick up casually. She said, 'When did you do this portrait of A? How like she is to B! Or *is* it B? I never thought they were so alike before.' It has puzzled several people to say whether the profile was intended for A or B. Then I tried them on a friend of mine who has not seen the girls for years. He said, 'Well, it is one of the family for certain, but I don't know which.'[199]

When Bellamy renders Edith Leete as a composite, it becomes apparent that, just as "the blood of the unfortunate heroine was in her own veins" (196) so too, through an invocation of Galton's spectral iconography, does Edith Bartlett's *spirit* live in and around her, altogether invisible even to someone familiar with her ancestors' physiognomies without the metaphorical apparatus and statistical logic of Galton's composite photography. In short, individuals in *Looking Backward* are rendered as invisible statistical percentages or strange "blended" individual composites. Identity is seemingly not a singular entity, but rather a merger or combination. The "average" embodies Bellamy's notion of ideal utopian citizenship, and his citizens are embodied as

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[198] Galton, *Inquiries Into Human Faculty*, 9.

[199] Figure 3.71 shows a composite Galton made of the three daughters of the photographer Henry Peach Robinson, who submitted photographs in response to a request Galton published in an 1882 circular letter to amateur photographers for individual photographic portraits of as many family members as possible. Green, "Veins of Resemblance," 12, 16 n.30. The photograph illustrated here is reproduced in D. W. Forrest, *Francis Galton: The Life and Work of a Victorian Genius* (London: Paul Elek, 1974), 85. See also Galton, *Inquiries Into Human Faculty*, 9.

averages. Individuals are accounted for in terms of Quetelet's "fractions of the species" and rendered as either "invisible" statistics or composite photographs.

Like much science fiction, Bellamy's utopia is rooted in contemporary ideology. A clue is provided in a passage near the book's conclusion. In an effective plot twist, West has a frightening dream in which he awakes in 1887 and believes that his time in the year 2000 had been a hallucination. In this nightmare, West walks the streets of Boston c.1887 and sees his era anew—"the scales had fallen from [his] eyes since that vision of another century" (211). Perhaps unsurprisingly, the image of a Galtonian composite photograph is utilized in the description of the citizens of 1887 Boston.

> Presently, too, as I observed the wretched beings about me more closely, I perceived that they were all quite dead. Their bodies were so many living sepulchers. On each brutal brow was plainly written the *hic jacet* of a soul dead within As I looked, horrorstruck, from one death's head to another, I was affected by a singular hallucination. Like a wavering translucent spirit face superimposed upon each of these brutish masks I saw the ideal, the possible face that would have been the actual if mind and soul had lived. (211–12)

This vision mirrors Galton's analysis of the "imaginary figure" of his "criminal type" (Fig. 3.72).[200] Creating sets of composite portraits from photographs of criminals convicted of murder, manslaughter, or robbery accompanied with violence, Galton concluded: "It will be observed that the features of the composites are much better looking than those of the components. The special villainous irregularities in the latter have disappeared, and the common humanity that underlies them has prevailed."[201] The British physician, psychologist, writer, and social reformer Havelock Ellis used Galton's composite as the frontispiece for his book *The Criminal*, which was published in London

[200] Galton, "Composite Photographs," 135.

[201] Ibid.

and New York in 1890 (Fig. 3.73). As in *Looking Backward*, the wavering faces that emerge from the individual faces in this remarkably subtle and hazy Galtonian composite show the possibility of the future. Of these composites, Galton wrote: "They represent not the criminal, but the man who is liable to fall into crime."[202]

Galton has tried here to make visible the abstract concept of predisposition to criminality. Like Bellamy's, the aim of Galton's project is utopian and prognosticative. Galton's camerawork promises probability, liability. It is the future that confirms the type, after all, not the camera. His composites merge not only optics and statistics, as Sekula elucidated in his seminal study, but also optics and probability. The brutish masks worn by the individuals West sees in his nightmare re-vision of 1887 can be thought of as analogues of the individual nineteenth-century umbrella-metaphors for the misguided individualism of late nineteenth-century society in Dr. Leete's riff on the utopian communal umbrella. Likewise, the future ideal faces West sees when he looks backward in his hallucinatory nightmare of 1887 as "wavering translucent spirit face[s] superimposed upon each" brutish mask can be understood as Bellamy's "invisible person[s]" under the communal umbrella of 2000. Galton acknowledged that "all composites are better looking than their components, because the averaged portrait of many persons is free from the irregularities that variously blemish the looks of each of them."[203] Bellamy used this idea of a Galtonian composite as an ideal average to erase the individual, peculiar body and replace it with the preferred and ideal, albeit ghostly, physiognomy lurking within, invisible until rendered in the language of composite

[202] Ibid.

[203] Ibid.

photography. Bellamy's "wavering translucent spirit face[s]" also resonate with the aesthetic of popular composites, like the Smith graduates (see Fig. 3.50), and pictorial portraiture, like Steichen's *Duse* (see Figs. 3.1–3.8). All divine and render visible an ideal face that deviates from the single "truth" of human vision: a face translucent, blurred, ghostly, and multivalent that is somehow perceived to reveal an otherwise invisible set of ideal mental, moral, or spiritual traits.

Bellamy again points to an intersection with contemporaneous concerns when he makes plain the lesson of the utopian industrial army of the year 2000. Its relevance to West's old nineteenth century worldview is explicated in the form of an inventory of contingencies in a newspaper, dated 31 May 1887, at which West glances during his nightmare revision of the nineteenth century. The horrific "Home Affairs" section begins with a veritable compendium of potential risks common to West's nineteenth-century Boston: "The epidemic of fraud unchecked. Embezzlement of a half a million in New York. –Misappropriation of a trust fund by executors. Orphans left penniless.—Clever system of thefts by a bank teller; $50,000 gone" and so on (202).

This terrifying version of the modern urban world is quickly followed by a man passing by who "thrust an advertising card" in West's hand "which set forth the merits of some new scheme of life insurance" (210). Here was a brief reminder (in West's nightmare of / flashback to 1887) of the twenty-first century utopia West had briefly glimpsed: "The incident reminded me," West decides, "of the only device, pathetic in its admission of the universal need it so poorly supplied, which offered these tired and hunted men and women even a partial protection from uncertainty" (210). Compared to the life insurance industry of the 1880s and its "new schemes," the industrial army of

2000 was, West reckoned, a form of "true life insurance as [he] had seen it among the people of that dreamland, each of whom, by virtue merely of his membership in the national family, was guaranteed against need of any sort by a policy underwritten by one hundred million fellow countrymen" (210).[204]

INSURANCE SOCIETY

Bellamy's individuals are abstracted averages and blurry statistical persons, because a citizenry thus formulated is required for the smooth operation of an insurance society. As *The Independent* pointed out just a few years before Bellamy wrote *Looking Backward*: "…a perfect system of life and health insurance must have as its basis vital statistics and the laws which affect human health."[205] This is because insurance cares not about individuals but precisely about vital statistics, and the laws of averages, norms, probabilities, percentiles—in short, the human equivalent of risk. The sociologist and historian Francois Ewald has written:

> Risk only becomes something calculable when it is spread over a population. The work of the insurer is precisely to constitute that population by selecting and dividing risks. Insurance can only cover groups; it works by socializing risks. It makes each person a part of the whole. Risk itself only exists as an entity, a certainty, in the whole, so that each person insured represents only a fraction of it.[206]

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[204] West's repulsion, prompted by the insurance policy advertising card, is followed immediately by his admiration of a military parade on Tremont Street. Recognizing the "perfect concern of action" West queries the illogical difference between "the scientific manner in which" the nineteenth century "went to war" and the "unscientific manner in which they went to work." "It was the first sight on that dreary day which had inspired me with any other emotions that wondering pity an amazement. Here at last were order and reason, an exhibition of what intelligent cooperation can accomplish" (210).

[205] "Health Insurance Based on Death and Sickness Rates," *The Independent* 33, no. 1710 (8 September 1881): 9.

[206] Francois Ewald, "Insurance and Risk," in Graham Burchell, Colin Gordon and Peter Miller, eds., *The Foucault Effect: Studies in Governmentality* (Chicago: University of Chicago Press, 1991), 203.

Ewald has suggested that the growth of the insurance industry over the final third of the nineteenth century marked the birth of what he calls the "insurance society"[207] in which the Norm functions, as per Foucault's biopolitics model, as an organizing principle of disciplinary power.[208] Ewald defines the Norm as "a way for a group to provide itself with a common denominator in accordance with a rigorous principle of self-referentiality, with no recourse to any kind of external reference point, either in the form of an idea or an object."[209] The "Norm is equalizing," Ewald suggests. It "makes each individual comparable to all others; it provides the standard of measurement."[210] The norm creates what Ewald calls "classes of equivalency," but it also reinforces individuality and irreducible particularity.[211] Importantly, though, individual difference exists only in comparison to the Norm. As Ewald puts it:

> "The norm affirms the equality of individuals just as surely as it makes apparent the infinite differences among them. The reality of normative equality is that we are all comparable; the norm is most effective in its affirmation of differences, discrepancies, and disparities. The norm is not totalitarian but individualizing; it allows individuals to make claims on the basis of their individuality and permits them to lead their own particular lives. However, despite the strength of various individual claims, no one of them can escape the common standard."[212]

With the growth of insurance, the norm came to serve as a means of managing different kinds of actuarial populations. The conceptual category of risk, which makes

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[207] François Ewald, "Norms, Discipline, and the Law," *Representations* 30, Special Issue: Law and the Order of Culture (Spring 1990): 147.

[208] Foucault, *Discipline and Punish*, 184.

[209] Ewald, "Norms, Discipline, and the Law," 154.

[210] Ibid.

[211] Ibid.

[212] Ibid.

insurance possible, is, as Ewald has pointed out, "the precise homologue of the disciplinary norm."[213] That is, in a disciplinary society, risk plays the same role in insurance that the norm does in the constitution of disciplinary strategies. Calculating individuals in relation to Norms, in other words, affords a standardized taxonomy by which risk can be calculated. As *The Independent* put it in 1896: "Life insurance makes scientific adjustment between the possibilities and probabilities, the accidents and averages of life. It enables the individual to merge his constant liability to death in the average longevity of the race, and to share in the productiveness of life in general, whatever may be his own fate. It discounts probability and gives certainty."[214]

This logic is made evident in a Prudential Life Insurance advertisement of around 1885 (Fig. 3.74). In order to successfully market "Life Insurance for the Average man," the Prudential Insurance Company first had to calculate the "average man." Similarly, in order for Travelers to sell life insurance on the back of claims like "Statistics show that One in every Ten of the entire population meets with an Accident Every Year," each individual had to be reconfigured statistically as "one in ten" (Fig. 3.75). In this emerging insurance society, Americans began to think, speak, and see themselves and their relationship to others and events in their world in terms of risk, odds, and contingency.

The Travelers broadside underscores an important paradigm shift. As the century progressed, statistical determinism gave way to probabilism, which calculates the likely occurrence of seemingly random events based on the law of error. It assumes an element of chance is present in every transaction. By so doing, probabilism effectively tamed

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[213] Ibid.

[214] "Insurance," *The Independent* 48, no. 2476 (14 May 1896): 24.

chance, as Hacking has demonstrated. Accidents, previously considered random and indeterminate, now happen regularly: one in ten "average" Americans. Chance was being reconceived as responsible for the regular and predictable statistical shape of the world.[215]

This was expressed visually and mathematically by Galton's shot-dropping machine, the quincunx (a "quincunx" is five points, literally—four corners and one in the middle). Galton unveiled his quincunx at a lecture at the Royal Institution on 27 February 1874 and published drawings of results from experiments using it in *Nature and Proceedings of the Royal Institution of Great Britain* in 1877.[216] The quincunx is a vertically-oriented rectangular box with a glass face containing a funnel through which lead shot could be poured (Fig. 3.76). After passing through the funnel, the shot cascades through an array of equally-spaced pins; each time a shot strikes a pin it falls either right or left with equal probability. The shot collects in compartments at the bottom of the apparatus. Inevitably, they accumulate in the familiar shape of the Normal Curve; this can be seen in the photograph of Galton's prototype quincunx and his illustration of the

[215] The notion of causality was eventually replaced by correlation. In fact, for Karl Pearson, the student, colleague, and biographer of Francis Galton, correlation was essentially the same as causation. "Henceforward the philosophical view of the universe was to be that of a correlated system of variates, approaching by no means reaching perfect correlation, i.e. absolute causality." At the beginning of the twentieth century Charles Sanders Peirce would come to fully embrace a universe of indeterminism as a consequence of living in a world permeated with statistics. Chance was no longer the essence of lawlessness, but at the core of all laws of nature. Quoted in Hacking (1990), 188. See also Hacking, "Nineteenth-century Cracks in the Concept of Determinism," *Journal of the History of Ideas* 44 (1983): 455–75.

[216] Stigler, *History of Statistics*, 276. Galton has a prototype made in 1873 and in 1877 had a quincunx with two stages built in 1877 to illustrate heredity. He formulated his concept of "regression to the mean" or "reversion to mediocrity" using the quincunx to demonstrate how in successive generations (of stages or drops through the quincunx) cluster towards the norm. This demonstrates, for instance, how exceptionally tall parents will have shorter, but still taller-than-average, children. As Galton put it: "We see by them that the ordinary genealogical course of a race consists in a constant outgrowth from its center, a constant dying away at its margins, and a tendency of the scanty remnants of all exceptional members to revert to that mediocrity, whence the majority of their ancestors originally sprang." Galton, Typical Laws of Heredity (London, 1877), 17. See also Hacking, 180–89.

phenomena in his notes (Fig. 3.77).[217] Galton's quincunx demonstrated that a random sequence of many independent random events—that is, the balls pinging from pin to pin as they cascade—always resulted in a regular, expected, normal distribution.[218] Not so random, after all. As Galton pithily concluded:

> I know of scarcely anything apt to express the imagination as the wonderful form of cosmic order expressed by 'the law of error.' A savage, if he could understand it, would worship it as a god. It reigns with severity in complete self-effacement amidst wildest confusion. The huger the mob and the greater the anarchy the more perfect is its sway. Let a large sample of chaotic elements be taken and marshaled in order of their magnitudes, and then, however wildly irregular they appeared, an unexpected and most beautiful form of regularity proves to have been present all along.[219]

This "most beautiful form of regularity" is illustrated in Galtonian photographic blurs. As H. P. Bowditch, professor of physiology at Harvard Medical School, neatly summarized in an 1894 article on composite photography in *McClure's Magazine*: "…they are the ideal forms round which individuals group themselves in accordance with the law of accidental variation, as shots group themselves round the bulls-eye of a

[217] Galton's quincunx demonstrates the outcome of a binomial operation. That is, an operation with two possible outcomes for each event. The shot, in other words, could fall left or right after striking each pinches The probability of a ball falling either left or right is 50%. In theory, if the odds of a given outcome for each event were manipulated (1% chance of shot falling right after striking each pin, for example), a Normal Distribution of shot would still accumulate at the bottom of the quincunx. In other words, no matter what the odds of an event occurring, the overall outcome will still follow the Normal Curve.

[218] The quincunx also allowed Galton to conceive of his data—the shot—as a mixture of very different populations under the umbrella of the normal curve. For even if he interrupted the dropping of the shot at an intermediary point and rereleased it to represent two successive generations, the Normal Curve still resulted. Or, if he released just a portion of the Normal Curve it too would fall and form a smaller Normal Curve, which would then be absorbed by a larger Normal Curve as the rest of the shot was dropped. The Normal Curve, in other words, is normally a mixture of normal distributions.

[219] Galton, "Presidential Address," *Journal of the Anthropological Institute* 15 (1886): 494; quoted in Hacking (1990), 186.

target."[220] Bowditch's metaphor closely replicates the way Galton himself described his composites:

> Those of its outlines are sharpest and darkest that are common to the largest number of the components; the purely individual peculiarities leave little or no visible trace. The latter being necessarily disposed equally on both sides of the average, the outline of the composite is the average of all the components. It is a band and not a fine line, because the outlines of the components are seldom exactly superimposed. The band will be darkest in its middle whenever the component portraits have the same general type of features, and its breadth, or amount of blur, will measure the tendency of the components to deviate from the common type. This is so for the very same reason that the shot-marks on a target are more thickly disposed near the bulls-eye than away from it, and in a greater degree as the marksmen are more skillful. All that has been said of the outlines is equally true as regards the shadows; the result being that the composite represents an averaged figure, whose lineaments have been softly drawn."[221]

The format for composite photographs, as seen, for example, in a pair made by Bowditch of Harvard's exclusive faculty dining club, the "Grub Club," comes to mirror the metaphor: individual shots grouped around the blurred composite bulls-eye (Figs. 3.78 and 3.79). To tease out the analogy: the individual portraits are to the individual shots dropped through the quincunx, as the blurred, ideal bulls-eye composite is to the quincunx's irreducible Normal Curve. The blurred central face embodies the idealizing logic of statistical averaging; that is, the simultaneous *representation* and *erasure* of individual difference and accidental variation. Accidental variation, individual difference: This is what the blur represented c.1900.

A fully-formed "insurance society," populated with blurry, statistical citizens, and safely governed by the laws of probability is precisely the scenario imagined in

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[220] H.P. Bowditch, "Are Composite Photographs Typical Pictures," *McClure's Magazine* 3, no. 4. (September 1894): 331–4.

[221] Galton, "Composite Photographs," *Journal of the Anthropological Institute*, p.134.

Bellamy's *Looking Backward* and enthusiastically embraced by millions of readers. Not only was the novel the second most popular of the nineteenth century, but enthusiastic readers founded Bellamy clubs across the country to discuss and disseminate the book's ideas.[222] The Clubs were eventually renamed Nationalist Club and managed to exert significant impact on Progressive Era politics and reform. Bellamy's novel is a national insurance policy writ large as a utopian dream come true. Insurance's success hinged on people believing that they lived in a world rife with accidents, a world of risk. Travelers' exclamatory "One In Ten!" certainly exhorts such a perception, reinforcing the idea that accidents are a statistical certainty. A world of accidents can only be controlled if it is populated, as per Bellamy's novel, with individuals accounted for numerically, as percentages, ratios, and norms. Accounting for individuals thus is the only way an apparatus like the communal umbrella could succeed.

Insurance policies were often advertised using natural and meteorological metaphors. James T. Phelps, an agent at the National Life Insurance Company of Vermont, compiled a book of sayings representative of the way life insurance was marketed and defended. The book contains many weather-related metaphors. Insurance, "the greatest comfort of modern times," is likened to "dark clouds…made to show their silver lining."[223] Insurance purchases should be made "while the free breezes are blowing things your way….and everything promises a golden harvest."[224] Failing to invest in an insurance policy is "like waiting for a rising river to run by. The longer you wait, the

[222] In the introduction to the 2000 Signet edition *Looking Backward*, Walter James Miller confirms that there existed "more than 162 Bellamy Clubs."

[223] James T. Phelps, *Life Insurance Sayings*, 3rd ed. (New York: Spectator Company, 1905), 14.

[224] Ibid., 38.

smaller becomes the opportunity to cross."[225] And, a father's death is, the saying goes, akin to "a total eclipse of the sun," but "no smoked glass is needed to find the loss and suffering caused, nor spectacles to see the benefit of insurance."[226]

Given the prevalence of ill-weather as a symbol for predictable disaster against which an insurance policy would safeguard, perhaps it is not surprising that Bellamy constructed the communal umbrella as a key symbol for his communal insurance policy-derived utopian society. It can hardly be coincidence that The Travelers Insurance Company, formed in 1864, used a logo consisting of an umbrella to symbolize the protection against a rainy day their company would provide. The icon appeared as early as 1870 in a handsome chromolithograph advertisement (Fig. 3.80). It also appeared in numerous other sources, including a hand-colored art book marketed by Travelers. Part of an advertising campaign, this book was imported from Germany and bore a reminder of Travelers insurance on every other page. One such page features a sweet little illustration of two owls huddled under a red umbrella bracketed by the sage advice, "in time of calm, prepare for storm" (Fig. 3.81).[227] A topographical print of the first section of Travelers headquarters, built at Main and Grove Streets in Hartford, Connecticut, in 1906, cleverly includes the image of a woman standing outside the entrance with a red umbrella over her head (Fig. 3.82). Presumably, as an owner of a Travelers insurance policy, she will be protected against inclement weather; testament to her foresight, she is the only person on the street with the sagacity to carry an umbrella, despite the apparently clear weather.

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[225] Ibid., 39.

[226] Phelps, 75.

[227] George Malcolm-Smith, *The Travelers: 100 Years, a Special Anniversary Edition of Protection and The Travelers Beacon for April 1964* (Travelers, 1964), 33. Courtesy of Citigroup, Inc.,—Center for Culture, New York.

These early umbrella motifs would eventually manifest into the company's well-known twentieth-century red umbrella logo; an example from the 1960s argues "…you can protect them all under The Travelers umbrella" (Fig. 3.83). For Bellamy, 1887 was America's rainy day. A utopian industrial army built upon the foundation of a deep faith in the autonomous laws of statistics represented its democratic umbrella insurance policy.

The great achievement of insurance at the end of the nineteenth century was reconfiguring lives into a numerical value based on age, health, life expectancy, and monetary value based on the risk the insurance company would have to assume to insure any given policyholder. Human beings were imagined in a purely quantitative manner.[228] Reconfiguring people in this manner enabled the individual assumption of risk central to early circles of self-help (community, church, family) to be replaced by a new, broader, collective approach and the expansion of risk-bearing institutions such as insurance companies.[229] As an advertisement for the Equitable Life Assurance Society in *Town and Country* put it, "Life insurance eliminates chance through the operation of the Law of Average. The knowledge of the Law of Average as applied to the duration of human life is gained in but one way and that is through statistics."[230] Bellamy's utopian novel argues convincingly in favor of the kind of statistical insurance society emerging in America at the end of the century. And his readers loved it.

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[228] Viviana A. Rotman Zelizer, *Morals and Markets: The Development of Life Insurance in the United States* (New Brunswick: Transaction Books, 1983), 151.

[229] Ibid., 85.

[230] "Safety and Sanity," Equitable Life Assurance Society advertisement, *Town and Country* 33, no.34 (June 1910): 68.

By portraying individuals that don't conform to human vision, Bellamy, Steichen, Galton, and his imitators traffic in a mode of representation shared by a burgeoning insurance society. Indeed, both the science of statistics and photography trade on their reputations as technical, contingent, and scientistic in the production of fictional beings—ideal and generic, abstract and typological. Steichen's hazy soft-focus and artful gum-dichromate smears can't completely mask the ubiquitous reality of contemporaneous social statistics that lurk in the blur's popular meanings around 1900. Bellamy's statistical utopia, Galton's eugenics, and insurance's average Americans comprise the broad culture of images and ideas in which Steichen's portraits were made and to which they, in turn, contributed. It is within this context that pictorialism might productively be situated.

If Eleonara Duse is an outlier, statistically speaking—an exceptional individual—then, shrouded in Steichen's blur, her portrait slides into the realm of the typological or the ideal average. Artfully effaced, the exceptional is paradoxically revealed via essentialization and de-individualization. Pictorialist portraiture negotiates the conflict between competing models of modern subjectivity: a robust, humanist model of the individual in which the soul is essential and unique, and a statistically-informed mechanistic model in which individuals are accounted for in relation to norms, averages, and percentages extracted from large populations. Pictorialist portraiture has long been championed as the expression of the former. This chapter has laid out an argument that it is equally informed by the latter. Pictorialism's great contribution lies not just in elevating photography to the status of art from its base technological origins, nor in aping the stylistic trappings of Old Master and Aesthetic painting to suggest a portrait sitter's

and/or artist's interiority and character, as has long been argued. Rather, by adopting an aesthetic of the blur, it allowed for the possibility of multiple dimensions of subjectivity—physical, spiritual, mental—to merge within and emerge from the unified field of the photograph.

An individual "accounted for" by late-nineteenth-century actuarial science looks surprisingly similar to so-called fine art photographic portraits. This observation points the way to understanding how visual culture participated in underwriting an emerging conception of the world as an ultimately indeterminate, chance-based system, a world controllable, that is, only if it were understood to be populated with predictable, statistically-configured populations. The reconciliation—absolutely essential for the idea of insurance to be deemed acceptable—of the statistical individual, on the one hand, and the unique individual, on the other, is enacted visually in blurry pictorial photographic portraits. This happens at a historical moment when individuals were being reconceived in relation to the Norm as statistical "fractions of the species" by a burgeoning "insurance society" built on a foundation of vital statistics. Individuals calculated thus were embodied as idealized blurs. The blur obscures *and* reveals: it is the very detail, or lack thereof, that signifies aesthetically *and* statistically, exceptionally and Normally.

Chapter 3

Enumerating George Bellows's *Forty-two Kids* (1907)

Much has been written about George Bellows's painting *Forty-two Kids* (1907, Fig. 4.1).[1] Surprisingly, given the painting's enumerative title, the subject of numbering has not been considered in the scholarly literature.[2] This chapter will demonstrate that the counting of bodies is integral to the way Bellows's audience would have engaged with the painting in the years immediately after its completion. This chapter situates *Forty-two Kids* within a turn-of-the-century culture that fetishized enumeration and placed real faith in the potential of quantitative statistical analysis, in the form of census-taking and

[1] For a complete bibliography compiled by the author under the auspices of the Corcoran Gallery of Art's project *American Paintings to 1945* (to be published in 2010), see the Corcoran's collection website: http://collection.corcoran.org/apcat (checked 18 October 2011). See also Sarah Cash, ed., *Corcoran Gallery of Art: American paintings to 1945* (Washington, D.C.: Corcoran Gallery of Art; Manchester, Vt.: Hudson Hills Press, 2011). Three of the most perceptive and engaged considerations of the painting in recent years have come from Marianne Doezema, Rebecca Zurier, and John Fagg. Doezema has mined the period commentary stimulated by Bellows's tenement and lower class subjects, including *Forty-two Kids*, concluding that they operated as "troubling and titillating" "framable glimpse[s] into the life of the 'other half,' created by a middle-class observer for the delectation of a middle-class audience" (Marianne Doezema, *George Bellows and Urban America* [New Haven, Conn.: Yale University Press, 1992], 161, 159.). Alluding to *Forty-two Kids* multivalency, Doezema points out that even as "reviewers extolled the energy of paint handling and the spirited treatment of figures," beneath their concern with formal qualities, "it was clear that the subject had moved them and that the theme was socially and culturally charged" (Doezema, 162). Zurier has perceptively placed Bellows's painting in relation to the graphic conventions of contemporaneous comics such as *Hogan's Alley*, in which the Yellow Kid made his debut, arguing that the Yellow Kid was "a prototype" for Bellows's *Forty-two Kids*" (Rebecca Zurier, *Picturing the City: Urban Vision and the Ashcan School* [Berkeley: University of California Press, 2006], 221.). And Fagg has considered the way *Forty-two Kids* exemplifies painting that functions "anecdotally," in that the "humor, character and specific detail of the space are granted significance in and of themselves" (John Fagg, On the Cusp: Stephen Crane, George Bellows, and Modernism [Tuscaloosa: University of Alabama Press, 2009], 43–44).

[2] H.V. Allison & Co.'s online catalogue raisonné of Bellows's paintings lists the title as *Forty-two Kids* (www.hvallison.com), following the Corcoran Gallery of Art's favored title. Bellows's Record Book entry for the painting (Record Book A, p.39; see Fig. 4.3, below) lists the painting as "Forty Two Kids." Thanks to Glenn Peck, director of the Bellows Catalogue Raisonné project, for providing a copy of the Record Book page, and to Laurie Booth for permission to access Bellows's Papers, both those copies in Mr. Peck's possession and those located in Amherst College's Archives and Special Collections.

record-collecting, as a means of controlling what was increasingly coming to be understood as a "world of chance."[3]

"…AS UNCONVENTIONAL IN NAME AS IN TREATMENT"

Forty-two Kids was painted in August 1907, less than three years after George Wesley Bellows (1882–1925) had left his home state of Ohio at the age of twenty-two to study art in New York City.[4] He enrolled at the New York School of Art under Robert Henri, the artist and influential teacher around whom congregated a group of urban realists now referred to as the Ashcan School. Bellows fully subscribed to his mentor's credo, creating work adjudged to be "full of vitality and the actual life of the time."[5] *Forty-two Kids* has been esteemed by recent art historians as exemplary of Bellows's early work, much of which depicted metropolitan anecdotes.[6] It numbers amongst a group of works Bellows made during the first decade of the century that takes children as their subject, including portraits of individual boys and multi-figural scenes. *Forty-two Kids*, though, is distinguished by its numerical title.

In *Forty-two Kids*, nude and semi-clad boys engage in a variety of antics on and near a dilapidated wharf jutting over New York's East River: they splash and swim, dive,

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[3] William Dean Howells, *A World of Chance* (New York, 1893).

[4] Bellows withdrew from Ohio State University after his junior year in the spring of 1904 and moved to New York in September of that year. *Forty-two Kids* was painted in August 1907 (Bellows's Record Book A, p.39). For Bellows's biography, see Charles H. Morgan, *George Bellows: Painter of America* (New York: Reynal & Company, 1965).

[5] "George Bellows, "An Artist With 'Red Blood,'" *Current Literature* 53, no. 3 (September 1912): 342.

[6] On Bellows, and *Forty-two Kids* specifically, and an "anecdotal mode" of painting, see John Fagg, "Anecdote and the Painting of George Bellows," *Journal of American Studies* 38, no. 3 (2004): 473–488.

sunbathe, smoke, and quite possibly urinate (Fig. 4.2).[7] Bellows's wharf is painted with broad, fluid strokes from a heavily-laden paintbrush and the "little scrawny-legged kids in their naively indecent movements"[8] are sketched with the artist's characteristic vigor and economy of means. The vague grid formed by the wharf's rough-hewn planks provides a stable compositional platform for the jumble of "spindle-shanked little waifs"[9] distributed seemingly at random across the fore- and middle-ground of the canvas.

Forty-two Kids elicited significant attention when it was first exhibited in early 1908. It was recognized as "one of the most original and vivacious canvases"[10] at the National Academy of Design's 1908 exhibition, where Bellows won the second place Julius Hallgarten Prize for another painting, *North River*, a view from the northernmost tip of Manhattan's Riverside Park across the snow-banked Hudson River towards the Palisades (1908, Pennsylvania Academy of the Fine Arts, Philadelphia).[11] This was only the second year Bellows had submitted to the Academy. It was an auspicious beginning: in April 1909, the Academy inducted Bellows as one of the youngest Associate

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[7] The setting is established by a letter from Bellows's widow, Emma, to Marian King, 23 January and 6 February 1959, in the Corcoran Gallery of Art curatorial files. That the subject was also familiar to urban viewers outside New York was pointed out by a Chicago critic, who noted: "Those who ride on the Illinois Central during the hot summer days may see similar groups of boys jumping into the refreshing waves." Mae J. Evans, "Chicago's Annual Art Exhibition," *Chicago Inter Ocean*, 8 November 1908, Magazine Sec., 5.

[8] Philip L. Hale, "Boston Art Shown in Philadelphia [exh. review]," *Boston Herald*, 26 January 1908, Special sec., 1.

[9] Charles L. Buchanan, "George Bellows: Painter of Democracy," *Arts and Decoration* 4, no. 10 (August 1914): 371.

[10] New York *Herald*, quoted in Morgan, 83.

[11] Peter Hastings Falk, ed., *The Annual Exhibition Record of the National Academy of Design, 1901–1950* (Madison, CT: Sound View Press, 1990), 74. The Hallgarten Prize was bestowed annually from 1884 to three American artists under the age of thirty-five working domestically (Hastings Falk, ed., *The Annual Exhibition Record of the National Academy of Design, 1901–1950*, 14). It is quite possible that the jury deemed *North River* more palatable than *Forty-two Kids*.

Academicians in the history of the organization.[12] Although *Forty-two Kids* was viewed with "a pleasurable sensation"[13] and relished for its "humor" and "humanity"[14] by some commentators, the painting did not receive universally positive reviews; one critic, for example, condemned it for "the most inexcusable errors in drawing and general proportions."[15]

A controversial episode in January 1908 exemplifies the mixed reception that greeted *Forty-two Kids*' early exhibition. The jury of the Pennsylvania Academy's 1908 Annual Exhibition voted 8 to 2 in favor of awarding *Forty-two Kids* the prestigious Lippincott Prize. The accolade, however, was denied Bellows, apparently for fear that the donor of the award, Walter Lippincott, might be offended by the title and subject of the painting.[16] Bellows was aware of this incident. He wanted Robert C. Hall, president of the Pittsburgh Stock Exchange, who purchased *Forty-two Kids* from the Thirteenth Annual Exhibition of the Carnegie Institute in 1909, to know that "the management, feeling that Mr. Lippincott would not like the decision, would not allow the award."[17] When Bellows was asked if he thought the jury feared Lippincott would object to the

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[12] Morgan, 94.

[13] John Cournos, "Three Painters of the New York School," *International Studio* 56, no. 224 [October 1915]: 244.

[14] James Gibbons Huneker, "The Spring Academy: Second Notice [exh. review]," *New York Sun*, 21 March 1908, 6.

[15] Maude I. G. Oliver, "Art News of the Week [exh. review]," *Chicago Record-Herald*, 8 November 1908, sec 6, 5.

[16] Diary of Robert Henri, 23 January 1908, Robert Henri Papers, Reel 886, frame 12, Archives of American Art, Smithsonian Institution, Washington, D.C.

[17] Bellows to John W. Beatty, c.24 May 1909, Papers of the Museum of Art, Carnegie Institute, Pittsburgh, PA., Archives of American Art, Smithsonian Institution, Roll 14, letter group 565.

naked children, he quipped: "No, it was the naked painting that they feared."[18] The artist did not elaborate, leaving unclear whether by "naked painting" he meant *Forty-two Kids*' sketchy appearance or its lowly subject.

Bellows's title also appears to have presented a challenge to viewers. One critic, who deemed "the canvas" to be "quite unusual in conception," adjudged *Forty-two Kids* to be "about as unconventional in name as in treatment."[19] Bellows recorded his paintings in chronological order in his Record Books, often with small sketches of the finished work; he annotated his entries with additional information, including subsequent ownership, sales prices, and exhibition venues. Bellows's "Record Book" documents the title *Forty-two Kids* as his original (Fig. 4.3). Titles are integral to and constitutive of artworks' meaning. They direct spectators' expectations and interpretations. As philosopher Jerrold Levinson has noted, "The title of an artwork is an invariably significant part of that work, which helps determine its character, and is not just an incidental frill devoid of import."[20] Recalling Arthur Danto's observation that a title "is more than a name or label; it is a direction for interpretation,"[21] John Fisher has proposed that "the unique purpose of titling is hermeneutical: titles are names which function as guides for interpretation."[22]

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[18] "Those Who Paint What They See," *New York Herald*, 23 February 1908, Literary and Art sec., 4.

[19] Maude I. G. Oliver, "Art News of the Week [exh. review]," *Chicago Record-Herald*, 8 November 1908, sec 6, 5.

[20] Jerrold Levinson, "Titles," *Journal of Aesthetics and Art Criticism* 44 (1985): 29.

[21] Arthur Danto, *The Transfiguration of the Commonplace* (Cambridge: Harvard University Press, 1981), 119.

[22] John Fisher, "Entitling," *Critical Inquiry* 11 (1984): 288. A good summary of the literature on the function of titles of artworks can be found in Greg Petersen, "Titles, Labels, and Names: A House of Mirrors," *Journal of Aesthetic Education* 40, no. 2 (Summer 2006): 29–44.

Bellows appears to have taken his titles seriously. The artist's penchant for deadpan titles enhances the effectiveness of his works' visual puns, jibes, and parodies; his "straight" titles lend a frisson of mockery that would have been lacking otherwise. This strategy is most evident in Bellows's work in lithography, a medium with which he began experimenting in 1916. For instance, *Business-Men's Class* (1916, Fig. 4.4) illustrates, in Bellows's words, "Brain workers taking their exercise."[23] It is straightforward in its titling, betraying little of its sardonic content: the print quite clearly lampoons effeminate and sedentary intellectuals' routine of physical self-improvement. *The Shower-Bath* (1917, Fig. 4.5), tackles the same topic in what Bellows's called a "humoresque of the Business men's class at the YMCA bathing after the gymnasium."[24] The title of the lithograph *Benediction In Georgia* (1916, Fig. 4.6) is equally benign. Illustrating "the White Georgian preaching the gospel to the negro" [convicts], it is, in Bellows's words, "a satire on hypocrisy."[25] Lauris Mason, author of the catalogue raisonné of Bellows's lithographs, concurs, writing that the "the futility of forcing questionable religious values upon Negro convicts, society's victims, is the subject of this powerful and biting commentary."[26] Bellows intensified the humorous punch or sarcastic bite of his satiric and parodic prints by juxtaposing an explicitly critical image with a

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[23] "*Business-Men's Class*," cat. no. M.20, Lauris Mason, *The Lithographs of George Bellows: A Catalogue Raisonné* (San Francisco, 1992), 63.

[24] "*The Shower-Bath*," cat. no. M.45, Mason (1992), 94.

[25] "*Benediction in Georgia*," cat. no. M.12, Mason (1992), 50. *Benediction in Georgia* was published in the journal *The Masses* in 1917. Many of the illustrations Bellows contributed to *The Masses* are clearly aligned with the journal's socialist politics.

[26] Ibid.

deadpan or ostensibly documentary title; the pretense of serious and detached objectivity or mock-seriousness effectively heightens the incisive barb of the artist's point of view.

A well-known painted example should suffice to make the point. In 1909, Bellows revised the title of the painting now known as *Both Members of this Club* from *A Nigger and a White Man* (Fig. 4.7). The original title is recorded in Bellows's Record Book below the modified title, which is surrounded by quotation marks, indicating its status as an alias (Fig. 4.8). The revision marks a shift from a title that bluntly foregrounds period racial intolerance via its hostile colloquial epithet to one more nuanced and ironic in tone and impact. The current title, *Both Members of this Club*, refers to the illegal status of boxing in New York City in 1909. In order to subvert the law, bouts were held in private, members-only clubs.[27] On a manifestly superficial level, Bellows's revised title directs attention in a straightforward manner to this state of affairs, but it also alludes to an unpleasant but unavoidable truth about sports and race relations at the turn-of-the-century. That is, only as pugilistic combatants in the boxing ring could so-called equality between members of different races be sanctioned. The painting's revised title offers, as Bellows's biographer Charles Morgan noted, a "wry commentary on what 'membership' meant" in such a club.[28] The topicality of Bellows's painting cannot be disputed; the artist was surely cognizant of the resonance of his modified title. But his intended meaning or political position is far from explicit.[29] Indeed, the title allows

[27] The equity of membership in Bellows's painting is, furthermore, shared by the fighters with those outside the ring, a commonality underscored by the ferocious expressions on the faces of Bellows's bestial spectators. The trappings of wealth adorning those in the front row belie the spectators' brutish appetite for the violent spectacle playing out before them.

[28] Morgan, 101.

[29] It is unclear whether or not Bellows was offering a commentary on contemporary race relations in *Both Members of this Club*; any conclusions necessarily rely on the political position of the viewer. Marianne

multiple, and potentially contradictory, interpretations, depending on a given viewer's predisposition and ideological perspective. Without presuming to resurrect Bellows's authorial intentions, a close examination of Bellows's "unconventional" title, *Forty-two Kids*, offers a new, historically-grounded interpretive entrée into the tangle of meanings—multivalent and potentially contradictory—the painting offered its audience in the first decade of the twentieth century.

A Painting By Any Other Name…

It would be misguided to attempt to recreate the authorial intention that motivated the title change in the case of *Both Members of this Club*. Similarly, it would be misguided to attempt to conclusively articulate Bellows's own reasons for choosing the title *Forty-two Kids*. It is not my aim to try to reveal Bellows's intentions or even the painting's "correct" meaning. Rather, I propose that the painting's enumerative title cued a particular set of interpretive options for early-twentieth century spectators. In other words, beginning with its title, *Forty-two Kids* stimulated the operation of a set of culturally constructed and valued cognitive skills that locate the painting squarely in the midst of a period conversation linking a heretofore overlooked set of related contemporaneous concerns and anxieties revolving around the act of counting bodies.

Doezema has suggested that Bellows was deliberately referring to "the current national prominence of the racial issue in relation to boxing" at a moment when a sequence of "great white hopes" had failed to defeat reigning heavyweight champion Jack Johnson (Doezema, 105). Michael Quick, though, has suggested that Bellows was not as prone to "strong social commentary or criticism" as his contemporaries George Luks or Jacob Riis (Quick, 6). Support for Bellows's position on race relations is hard to find elsewhere in his *oeuvre*. *Both Members of This Club* is something of an anomaly in that black persons hardly appear in Bellows's work. See Quick, 6.

The brief description of *Forty-two Kids* in Bellows's Record Book reads: "Forty two naked kids diving off raft[;] dark water in background."[30] The succinct textual caption accompanying Bellow's documentary pen and ink sketch of the completed painting conveys, if nothing else, the importance the artist attached to the painting's and the title's shared numerical component. Significantly, the number *forty-two* is strikingly arbitrary. It encourages and then immediately stymies the search for iconographic correspondence: *forty-two* does not signify in the way that three, seven, or twelve might the Trinity, deadly sins, or justice, respectively.[31] If anything, the number's lack of identifiable referent suggests a random sample arrived at by chance or accident.[32] The paradoxically deliberate randomness, if we can call it that, of the numerical specificity of *Forty-two Kids*' title acts in Fisher's hermeneutical manner in that it directs viewers to concentrate precisely on the numerical component. Consequently, it presents an invitation or an implicit challenge to verify the tally. A critic articulated this when he demanded of viewers: "count 'em, 42."[33] Despite confidently answering his enumerative command, the

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[30] George Bellows, Record Book Entry for *Forty-two Kids*, Bellows's Record Books, Record Book A, 39.

[31] It has occurred to at least one historian with whom I have discussed *Forty-two Kids* that Bellows, a talented college baseball player who turned down the chance to play the sport professionally, might have selected the number forty two in homage to a favorite sportsman. It should be pointed out that roster numbers were not introduced in professional baseball in the United States until 1929, more than two decades after the completion of *Forty-two Kids*. The most famous player to have worn #42 would have to be Jackie Robinson, the first African-American Major League Baseball player of the modern era, who wore the number for the Brooklyn Dodgers between 1947 and 1956. The number was retired by Major League Baseball in 1997, prohibiting any future player from wearing it.

[32] The search for iconographic correlation has led to numerous deductive dead ends. Two of the more interesting but nonetheless fruitless: 1) The dimensions of the painting are 42 by 60 inches. Is it possible that the title of the painting was determined by the canvas's physical properties? 2) Coincidentally, Bellows died unexpectedly early in 1925, at the age of 42 of peritonitis (infection, presumably) following surgery for ruptured appendix. It confounds logic, but the numerological implications of *Forty-two Kids*'s titular prophesy of Bellow's tragic demise is provocative?

[33] Philip L. Hale, "Boston Art Shown in Philadelphia [exh. review]," *Boston Herald*, 26 January 1908, Special sec., 1.

critic's seemingly straightforward task of counting "'em" is easier exhorted than executed. Counting Bellows's forty-two kids, in other words, was, and, for that matter, continues to be, easier said than done.[34]

That early-twentieth century viewers had difficulty verifying the tally is highlighted by various critics' curious characterizations of Bellows's kids in vague quantitative terms: "an army,"[35] "a flock,"[36] and "half a hundred."[37] These descriptors simultaneously mark the quantity as large—armies and flocks are defined as such by their intrinsic enormity—and, despite the titular numeral, essentially unquantifiable. To wit, the caption accompanying a halftone photogravure of *Forty-two Kids* published in the *Telegraph* in April 1911 read "Thirty-six Boys" (Fig. 4.9).[38] One critic claimed, inexplicably, that he counted "twenty-six members of the Gas House Gang."[39] And another critic mistook the title altogether, referring to the painting as "Forty-Five Kids."[40] A cartoon parody of *Forty-two Kids*, published in an unknown New York newspaper in

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[34] The fact that no art historian to date has thought even to confirm the number of children in *Forty-two Kids* is surprising, given the lengthy bibliography on the painting. Numerous talented and diligent scholars have dedicated great energy tracking Bellows's comments, critics' reviews, and considering thematically related paintings. I am at a loss to theorize the complete lack of interest to date in the enumerative component of *Forty-two Kids*.

[35] John Cournos, "Three Painters of the New York School," *International Studio* 56, no. 224 (October 1915): 244.

[36] Maude I. G. Oliver, "Art News of the Week [exh. review]," *Chicago Record-Herald*, 8 November 1908, sec 6, 5.

[37] "Independents' Victory [exh. review]," *Brooklyn Standard Union*, 14 July 1910, 7.

[38] *Telegraph*, 2 April 1911, newspaper clipping, George Bellows Papers, Box 9, Archives and Special Collections, Amherst College Library.

[39] Unidentified source, quoted in Sarah Newman, "New York Pastoral: George Bellows's *Forty-two Kids*," unpublished paper presented at "Encouraging American Genius" symposium, Corcoran Gallery of Art, Washington, D.C., 18 November 2005. Dr. Newman has been unable to supply me with a proper citation for the quote.

[40] Charles L. Buchanan, "George Bellows: Painter of Democracy," *Arts and Decoration* 4, no. 10 (August 1914): 371.

1908 or 1909, hints at an explanation for the plethora of miscounts. For the most part, the cartoon faithfully replicates the composition of Bellows's painting, albeit with the addition of a corpulent policeman entering the scene from the left (Fig. 4.10). An approximation of Bellows's title—"42 Kids"—is written, in the style of handwriting, within the borders of the cartoon panel and a caption beneath the cartoon reads: "Note—The rest of the 42 ducked under the platform."[41] This caption highlights an assumption that a census would have been conducted by the viewer-reader in the course of engaging with the image. Indeed, not only does it presume that a tally would have been undertaken, it concludes that any attempt to corroborate the numeral in Bellows's title by visual examination would inevitably fail. An attempt to count forty-two kids in the painting, in other words, would be unsuccessful because some unspecified quantity of boys had "ducked under the platform." Rather than precluding viewers' engagement with counting, querying, and correctly or incorrectly iterating the quantity of bodies, the focus in the press on the number of Bellows's kids—personified, exaggerated, or mistaken—suggests that the painting's titular numeral triggered a clear and explicit interest in the act of counting that might otherwise have gone unnoticed and unremarked. But, one is tempted to ask, if Bellows was compelled to be so specific about the number of kids in his painting as to tally them in the title, why then did he make them so difficult to see and count? The painting, it is fair to say, confounds the question implicitly posed by its title.

Bellows's enumerative task is complicated by his signature style: a characteristic virtuosity with paint and a tenebrous palette. Bellows's penchant for scenes characterized

[41] The cartoon, undated, is preserved as a clipping in George Bellows Papers, Box 9, Archives and Special Collections, Amherst College Library. The cartoon has been reproduced frequently. The caption has never been reproduced or commented on.

by dynamic energy and action was mirrored in his application of paint.[42] In *Forty-two Kids*, the brio of Bellows's paint-handling matches the energies and "nervous intensity"[43] of the "youngsters disporting themselves…and performing characteristic, boyish antics."[44] The bravura brushstrokes comprising *Forty-two Kids* convincingly convey the kids' animated tomfoolery, but Bellows's gestural application also fragments his subjects and renders them only semi-legible. As a result, it is exceedingly difficult to determine with any confidence where one body ends and another begins on the painting's crowded wharf or in its dark water. It is a real challenge to separate the "tangle of nude boyish forms"[45] and accurately account for forty-two individual bodies (Fig. 4.11). A sure count is further thwarted by what critics described as the "painfully blackish"[46] painting's "inky

[42] The painterly appearance of Bellows's works, described as "virile" "masculine manifestations," was conflated from an early date with both his personality and his painted subjects, and he was described as "primarily an artist of energy," and "an energetic idealist." His art was described as having "snap," "plenty of go," red blood," "gumption," and so forth. His work was characterized by words like "action, force" and "strength" ("Independent's Victory," *Brooklyn Daily Standard Union*, 14 July 1910, 7). One critic noted, "His is a ponderous, powerful visualization, dynamic rather than beautiful." [For the quotes, see: John Cournos, "Three Painters of the New York School," The International Studio 56, no. 224 (October 1915): 242, and Charles L. Buchanan, "George Bellows, Painter of Democracy," Arts and Decoration 4, no. 10 (August 1914): 370.] More recent critics have also commented on the "force" of Bellows' pictures. John Wildmerding has called them "assertive," pointing to the "dynamics of the moment, the immediacy of action, and the contending physical forces" for support (John Wilmerding, "Bellows' Boxing Pictures and the American Tradition," in *Bellows: The Boxing Pictures* (exh. cat. National Gallery of Art, Washington, D.C., 1982), 13, 16.). Robert Haywood, likewise, has commented on the "striking…portrayal of raw power" in *Stag at Sharkey's* and diagnosed "Bellows' slashing brushstrokes themselves [as] a violent act." (Robert Haywood, "George Bellows's Stag at Sharkey's: Boxing, Violence and Male Identity," *Smithsonian Studies in American Art* 2, no. 2 (Spring 1988), 16).

[43] "The Spring Academy: Second Notice," *New York Sun*, 21 March 1908.

[44] John Cournos, "Three Painters of the New York School," *The International Studio* 56, no. 224 (October 1915): 242.

[45] Royal Cortissoz, "The Field of Art: George Bellows and His Americanism," *Scribner's Magazine* 78, no. 4 (October 1925), 442 (illus.), 444

[46] Philip L. Hale, "Boston Art Shown in Philadelphia [exh. review]," *Boston Herald*, 26 January 1908, Special sec., 1.

darkness."[47] It is nearly impossible in some passages to determine whether what one critic called "a faint tinge on the water" delineates one or more partially submerged bodies or merely murky reflections on the water's unctuous surface. It is, to be sure, a formidable task to pick out shadowy figures lurking at the limits of visibility amidst the crowd on Bellows's wharf.

A tenebrous palette was a hallmark of Bellow's work at this time, especially in the boxing pictures for which he is best known. Of the crepuscular illumination in *Club Night* (1907, Fig. 4.12), for example, one critic wrote: "It looks as though the artist had posed the men and then put a lamp near one fellow's back, as the rest of the ring is as dark as the Kentucky cave."[48] Bellows's palette might have been inspired by a reverence for, as Michael Quick has suggested, "the strong studio light of Caravaggio, no doubt as interpreted by Edouard Manet and embraced by [Robert] Henri."[49] Rather than a divine light symbolizing spiritual revelation in line with the standard interpretation of the familiar tropes of Baroque religious painting, though, Bellows's lamp-like illumination reads more like Jacob Riis's harsh magnesium photo flash, a technology the social reformer pioneered in the course of writing *How the Other Half Lives: Studies in Tenement Life* (New York, 1890; Fig. 4.13).

Bellows's light, which only selectively pierces the caliginous blanket of urban darkness, also recalls the wedge of illumination (likely the result of darkroom manipulation) cast by the lantern a London policeman holds over a man slumped against

[47] C. H. C., "Carnegie Institute Exhibition, The Figure Subjects. First Notice [exh. review]," *New York Evening Post*, 1 May 1909, sec. 1, 5.

[48] "TAD Criticizes Pictures He Saw at the Art Show," *New York Journal*, 6 January 1908, 12.

[49] Quick, "Technique and Theory: The Evolution of George Bellows's Painting Style," in *The Paintings of George Bellows* (1992), 11.

a set of low steps in the photograph "Only were to be seen the policemen, flashing their dark lanterns into doorways and alleys," in Jack London's *People of the Abyss* (New York, 1903, Fig. 4.14). Michael Quick has suggested that Bellows was not as prone to "strong social commentary or criticism" as his contemporary Jacob Riis, but the pair appear to share at least a formal impulse. The light in this set of images—Bellows's, Riis's, and London's—barely penetrate the gloom of their respective netherworlds as they presumably search for some hidden social truth. That goal is made explicit, at least, in the advertisement for a weekly newspaper, "Truth," pasted into the window frame at upper left in the photographic illustration featured in London's book. What truth, if any, does Bellows attempt to illuminate in *Forty-two Kids*?

THE NUMBER PROBLEM

In its conflict between enumeration and uncountability, *Forty-two Kids* embodies and engages period anxieties related to the visibility of lower class bodies. This is rendered explicit in the "42 Kids" cartoon, which assumes that an unspecified number of the kids were invisible and therefore uncountable (see Fig. 4.10). At a historical moment when the logic of eugenics and social Darwinism were increasing in popularity, counting and controlling the rapidly reproducing tenement child population was seen to be of paramount importance. *Forty-two Kids*' focus on counting hard-to-see youths can probably best be understood in relation to the highly-publicized debate surrounding New

York's so-called "child problem," which aroused horror and sympathy amongst Bellows's urban middle class audience.[50]

In a 1908 article in *Harper's Weekly* entitled "The 'Child Problem' in New York," Frank Marshall White, a journalist who covered stories relating to crime and social issues, reported that, despite widespread talk about the negative effects of the metropolis's foreign populations, experts in the field were confident that "every child in this big town…may be made a respectable member of society, given the proper training at the proper age," regardless of "conditions of birth" or "congenital criminal traits," and even if they were offspring of "degenerate victims," "depraved exiles," or "criminals."[51] Solutions to the "child problem" aimed to nullify the perceived threat presented by what one "expert" described as the city's "abnormally increasing and polygeneous population" by rescuing and sufficiently "Americanizing" children born to recently-arrived immigrants.[52] White balks, though, at the enormity of the job of "dealing with the juvenile conglomeration."[53] "If only numbers were considered," he frets, "the task would be stupendous."[54] Part of the problem, White points out after listing a plethora of census statistics related to the city's swelling foreign populations, was that fully comprehending the true number of children of foreign parentage in New York City "cannot be calculated

[50] Marianne Doezema notes the connection between some of Bellows urban child pictures and New York's so-called child problem, but overlooks their shared enumerative focus. Doezema, *George Bellows and Urban American*, 142–3.

[51] Frank Marshall White, "The 'Child Problem' in New York," *Harper's Weekly* 52 (8 August 1908): 27.

[52] Ibid.

[53] Ibid.

[54] Ibid.

with any degree of accuracy owing to lack of data."[55] An integral early step in this urban reform crusade was properly assessing the number of children in need of saving. Apparently, no solution could be proposed without first calculating the numerical scope of the problem. The available data, though, was inaccurate as a result of the inaccessibility of tenement neighborhoods and their occupants' "prolific" birth rates.[56] The problem with the "child problem," as well as its potential solution, lay in the numbers.

This emphasis on the efficacy of counting was part of a wider force of numerical control that emerged during the nineteenth century. Born from what the philosopher Ian Hacking has called "an avalanche of printed numbers" in the form of census-taking and record collecting, a belief emerged that answers to social questions could be found by accumulating, analyzing, and categorizing more facts and more numbers.[57] At the very least, statistics promised a way to sort out the disorder of New York City's "polygeneous" population. Rupert Hughes, for example, in the chapter "The Many Peoples of New York" in his 1904 book *The Real New York*, attempted to make the city's vast population more comprehensible via quantitative and comparative statistical analysis. Hughes expressed the relative sizes of the city's immigrant populations by comparing census statistics of numerous international cities. He offers such salient statistics as: "New York is the fourth greatest Italian city in the world, and contains more Italians than Florence and Venice put together."[58] Projecting into the future, he continues,

[55] Ibid.

[56] Ibid.

[57] Ian Hacking, *The Taming of Chance* (Cambridge: Cambridge University Press, 1990), 2.

"At the present rate of immigration New York will, in a few years, be the largest of all Italian cities."[59]

Hughes's statistical mode of envisioning and representing the world was far from unique. Statistical analysis, it was believed, offered the potential to measure, control, and reform the world. Jacob Riis's enumeratively-titled book *How the Other Half Lives: Studies among the Tenements of New York* (1890) explicates the link between numerical data and social reform underlying White's report on the "child problem." Riis saturates his account—the primary goal of which was to expose and alleviate the misery of New York's tenement dwellers—with statistics relating to population density, immigration, crime, and death rates. He even provided an Appendix compiling major cities' population sizes, densities, and corresponding death rates. But, at every step in his narrative he cast doubt on the accuracy of his and others' statistics, even calling into question the official U.S. census; Riis notes that even though he has the latest census numbers in hand, "their correctness is disputed."[60] Riis contends that, following the statisticians of the Health Department, New York's population "has been underestimated a hundred thousand at least."[61]

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[58] Rupert Hughes, *The Real New York* (New York: The Smart Set Publishing Company, 1904), 234. The entire chapter entitled "The Many Peoples of New York" is filled with such statistical comparisons.

[59] So too for the Irish population, Hughes argues, noting that "New York is so distinctly the largest Irish city in the world that its Irish population is nearly three times as large as that of either Dublin or Belfast." Hughes, *The Real New York* (1904), 234.

[60] Jacob A. Riis, *How the Other Half Lives: Studies Among the Tenements of New York* (New York: Charles Scribner's Sons, 1890), 299.

[61] Riis, 299. Riis appears to employ numbers and statistics as a means of validating the objectivity and factuality of his project's exposé. Even in the captions to his photographs Riis seems compelled to squeeze in as many numbers and statistics as possible, including "two-cent restaurant" and "45 cents a dozen." Other enumerative illustration captions in *How the Other Half Lives*, excluding those that incorporate numerical street names, include: *Lodgers in a Crowded Bayard Street Tenement—Five Cents a Spot*; *Bunks in a Seven-Cent Lodging House, Pell Street*; and *Coffee at One Cent*.

In the chapter "The Problem of the Children," Riis declares, "the problem of the children becomes, in these swarms, to the last degree perplexing. Their very number makes one stand aghast."[62] His attempts to count them all cause him to despair completely. He concludes that he "had to give up such census work."[63] He bemoans that he "tried to count the children that swarmed there but could not."[64] For example, in one tenement building he counts "One hundred and twenty-eight" children under ten years of age "in forty families," but laments the "thirteen I had missed.…"[65] Expressing the same skepticism he held for the U.S. census figures, he concludes: "Sometimes I have doubted that anybody knows just how many there are about."[66] Elsewhere he seemingly resigns himself to the fact that his own counts are erroneous, tentatively positing, "the children in the other [tenement], if I am not mistaken, numbered 89."[67] In the end, Riis finds himself relying on averages and projections based on rough estimates: "Applying the average for the forty to the whole fifty-three," he calculates, "the house contained one hundred and seventy children."[68] Riis reduces individuals to averages, estimates, and projections based on representative samples. Identifying Riis's "other half," as cultural historian Cindy Weinstein has pointed out, was a statistical project dependent on counting, classification,

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[62] Riis, 179.

[63] Ibid.

[64] Ibid., 180.

[65] Ibid., 179.

[66] Ibid., 180.

[67] Ibid., 19.

[68] Ibid., 179.

and taxonomy.[69] Riis' mode of social expose and reform took the shape of statistical analysis.

By inundating the readers of his articles and books and the viewers of his popular slide presentations with such flawed census reports from the tenements, Riis accomplished two things: his reports more effectively convey the enormity of the ghastly situation even as they reinforce the idea that a full census would afford a modicum of control and, by extension, would enable the alleviation of the woeful conditions of New York's tenement neighborhoods. Again, the solution to the problem lies in the numbers, and again, the problem itself lies in the difficulty of getting them right: Riis quite clearly believes in the gospel of statistics even as he appears to question his own ability to capture them.

Riis's census fails, in part, due to a lack of visibility. "There was about as much light," he complained, "…as in the average cellar."[70] The photograph *Tenement House Yard* bears out this claim: the light is uneven, a lattice of shadows on the left interior wall confuses an easy reading of the dimensions and depth of the courtyard; hanging laundry blocks sightlines into the depth of the scene (Fig. 4.15). An interior space, ostensibly open to the sky's illumination, is translated photographically into a narrow and obstacle-strewn urban slot canyon littered with obstacles preventing clear visual reconnaissance. It is nigh on visually impenetrable. Prevalent early-twentieth-century visual and literary descriptions of the Lower East Side reinforced this impression. Like Riis's account, they tended to focus on overpopulated and ramshackle tenement buildings; crisscrossing

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[69] Weinstein (2002): 208.

[70] Riis, 179.

laundry lines; narrow streets and alleyways; and dense crowds of the malnourished, dirty, and even criminal. See, for instance, Bellows's *Cliff Dwellers* (Fig. 4.16), or George Luks's *Street Scene (Hester Street)* (Fig. 4.17), which depicts a teeming open-air market in an impenetrable bottleneck of an avenue in the Jewish quarter of the East Village. Any sustained attempt to navigate such scenes is disorienting and off-putting; any attempt to conduct a census of the population of this architectural interior would be difficult indeed.

Like his text, Riis's photographic illustrations, as Weinstein has argued, fail to represent an accurate account, marred, as they are, by shadows, blurs, reflections, and in photographs such as *Knee-Pants at 45 Cents a Dozen at Ludlow St. Sweater Shop* and *Men's Lodging Room, 47th Street Police Station*, indistinct, truncated, and camouflaged bodies (Figs. 4.18 and 4.19). Indeed, Weinstein calls Riis's photographs "failed statistics."[71] Like the pages of Riis's book, Bellows's tenebrous *Forty-two Kids* is populated with swarming and elusive bodies. Both embody a tension between counting and visibility, or the lack thereof.

A Child by any Other Name…

Numbers alone are meaningless without associated categories. As Hacking has noted, "Enumeration demands kinds of things or people to count. Counting," he writes, "is hungry for categories."[72] This is perhaps where Riis's project runs into difficulty. The title of his book says it all: the "other half" is flawed as a definitive category, defined as it is only by its opposite. Bellows, it would seem, makes no such mistake. *Kids*, the other

[71] Weinstein (2002): 195–216.

[72] Ian Hacking, "Biopower and the Avalanche of Printed Numbers," *Humanities in Society* 5, nos. 3 & 4 (Summer and Fall 1982): 280.

half of his title, provides a clear category for counting. Although the term *kids* appears at first glance to be as nebulous a taxonomic label as Riis's *other half*, around 1900 it was as specific an appellation for a "kind of thing or people to count" as Hacking might hope for.

Forty-two Kids' manifest subject—playing boys—is not uncommon in American art. It recalls any number of precedent images, foremost amongst which ranks Winslow Homer's *Snap the Whip* (1872, Fig. 4.20). Art historian John Wilmerding has characterized *Snap the Whip* as a "quintessential embodiment of the American spirit."[73] Circulated widely during the 1870s, images like Homer's—of boys on farms, engaged in vigorous play, or making harmless mischief—have come to be understood by historians as indicators of the perceived well-being of American democracy during Reconstruction.[74] Such reassuring assessments of the robust and healthy state of the nation were prevalent during the centennial decade. In this context, *Snap the Whip* stands alongside Homer's *Breezing Up (A Fair Wind)* (1876, Fig. 4.21). Painted in 1876, the year of the nation's centennial celebration, Homer's dynamic painting suggests an incipient optimism in tune with the national mood a decade after the end of the Civil

[73] Erene S. Sweetkind, ed., *Master paintings from the Butler Institute of American Art* (New York: H.N. Abrams in association with the Butler Institute of American Art, 1994.). See also: Claire Perry, *Young America: Childhood in 19th-Century Art and Culture* (New Haven: Yale University Press, 2006), 28.

[74] Sarah Burns, *Pastoral Inventions: Rural Life in Nineteenth-Century American Art and Culture* (Philadelphia: Temple University Press, 1989), 306.

War.[75] Homer's youthful sailors gaze intently at a clear horizon, symbolic of future promise, rendered with a bright and sparkling palette.[76]

Key to this interpretative line is the fact that both *Breezing Up (A Fair Wind)* and *Snap the Whip* depict subjects engaged in choreographed teamwork. Two generations of sailors pilot the metaphorical ship of state in *Breezing Up*. Similarly, in *Snap the Whip*, a group of boys work in concert to propel the lad on the end of the line off into space at tremendous velocity—the titular snapping of the whip. Homer's youths participate in activities predicated on mutually beneficial creative effort, a collective cohesion that resonates with a post-Civil War theme of national reunification. Homer's composition highlights the logical, geometrically informed foundation of the children's play, even as it balances an internal pictorial and thematic tension by contrasting the dynamic curve demarked by the line of boys against the rigid rectilinearity of the red schoolhouse in the painting's background. The freedom and energy of the former is juxtaposed against the discipline and structure of the latter. The hive of activity in *Forty-two Kids*, on the other hand, is dedicated to no focused communal aim. The action is chaotic, random, and disordered. The smooth parabolic curve of the boys in Homer's *Snap the Whip* signals premeditated, organized, and well-rehearsed exertion. Bellows's jumbled distribution of bodies suggests no such cooperative spirit or effort.[77]

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[75] Nicolai Cikovsky, Jr. *Breezing Up (A Fair Wind),* cat. entry in Franklin Kelly et al., *American Paintings of the Nineteenth Century* (Washington, D.C.: National Gallery of Art, 1996), 1:314.

[76] Joyce Carol Oates has pointed out the "melancholy, even autumnal" palette of Forty-two Kids" distinguishes it from "genre paintings and illustrations of the time; to, for instance, certain of Winslow Homer's sunlit, just-verging –on-the-sentimental depictions of farm boys and girls." Joyce Carol Oates, George Bellows: American Artist (Hopewell, N.J.: Ecco, 1995), 19–20.

[77] The lone instance of cooperative teamwork in *Forty-two Kids* is the exception that proves the rule: at the lower right edge of the wharf, one boy swings out over the water, anchored and supported by another boy standing on the edge of the wharf. Presumably, this is a game similar to Homer's "snap the whip": at some

In addition to recalling Homer's pictures of children engaged in outdoor play, *Forty-two Kids* would also have brought to mind the best known American "swimming hole" picture of the nineteenth century: Thomas Eakins's celebrated painting *Swimming* (1883, Fig. 4.22). A critic writing about *Forty-two Kids* when it was included in the Carnegie International in Pittsburgh, made the connection to the swimming hole subject when he quipped that all the characters of the "Old Swimming Hole were there.[78] Morgan, Bellows's biographer argues that Bellows "had almost certainly never seen" it.[79] *Swimming* was commissioned by Edward Hornor Coates in 1885, but Coates returned the painting and asked Eakins for another in return for another, while it was on public display for the first time from October to December 1885. Eakins took *Swimming* back, and it remained in his and his wife's possession until 1925. Between 1885 and 1907 it was exhibited just twice, in 1886 and 1887.[80] It is unlikely Bellows would have seen *Swimming* in these years, as he would have been four and five years old, respectively.

Overwhelming visual similarities between *Swimming* and *Forty-two Kids*, would seem to indicate that Bellows somehow know of Eakins's painting. Given the fact that *Swimming* was in Eakins's possession in Philadelphia, Bellows, as Morgan acknowledged, could have heard about the painting from Henri or his Philadelphia

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designated sign from his swinging partner, the standing boy will, one imagines, release his grip and catapult his friend high out over the water.

[78] Morgan, 96.

[79] Morgan, 58. Morgan suggests that "except for the basic ingredient of bathers it is hard to imagine two less similar concepts, Eakins with his solidly-knit human triangle in the foreground, Bellows brushing in his tiny actors like shimmering spindrift far away from the river's edge."

[80] *Swimming* was exhibited in 1886 in Louisville, Kentucky, in the Southern Exposition, and in 1887 in Chicago at the Inter-State Industrial Exposition of Chicago. Doreen Bolger and Sarah Cash, ed., *Thomas Eakins and the Swimming Picture* (exh. cat. cat. Amon Carter Museum, Fort Worth, 1996), 124.

friends.[81] Bellows might also have seen an illustration of *Swimming* in the catalogue of the 1886 Southern Exposition.[82] Not only does Bellows's overall composition mirror Eakins's, but precise echoes of Eakins's individual figures can be identified in *Forty-two Kids*. For instance, despite the difference in paint handling and finish, Bellows's and Eakins's diving figures are remarkably similar in position and perspective. In addition, Bellows's lad in the aggressive *contrapposto* stance with arms akimbo apes Eakins's prominent standing central youth. It is unclear whether Bellows intended to pay homage or to lampoon, but he has translated the proudly erect posture and physique of Eakins's youth into a scrawny, ginger-haired, ruddy-complected cigarette smoker. Eakins's boy recalls the harmonious anatomical proportions of the 5th c. BCE Greek sculptor Polyklietos's spear-bearer, the *Doryphorous*. Bellows's, it is fair to say, does not.

It is not surprising that Bellows might have looked to Eakins's *Swimming* as a reference to aid in his own composition. During the first decade of the twentieth century, Eakins was being revitalized as a tragically-neglected American master.[83] Bellows's teacher Robert Henri held Eakins in the highest regard. In an address delivered to the Art Students' League, Henri lauded the exhibition of Eakins's work at the Metropolitan Museum of Art, noting that it "should be viewed and studied by every student and, in fact, every lover of the fine arts."[84] Henri also wrote elsewhere: "I venture to say that

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[81] Morgan, 58.

[82] *Illustrated Catalogue of the Art Gallery of the Southern Exposition*, Louisville, Ky, August 28–October 23, 1886, no. 70, as The Swimmers, $800.

[83] From 1904 until his death he showed at the Academy every year except two; and at the Society of American Artists from 1902 to 1906, when the two bodies, no longer distinguishable, were merged. Lloyd Goodrich, *Thomas Eakins*, 2 vols. (Cambridge, Mass.: Harvard University Press, 1982.), 2: 201.

Thomas Eakins will be spoken of in times to come as one of the very great men in all American art, but he died practically unknown and received only an 'honor' or two."[85] Following an exhibition at the Pennsylvania Academy of Art on the jury of which Eakins sat, John Sloan, whose work was included in the exhibition, declared: "Thomas Eakins's opinion is the only one of the jury that's worthwhile. I'd like to know how he voted…"[86] Bellows himself reputedly declared: "Winslow Homer is my particular pet. And one other American or better, two, stand on the same pedestal with him, in my mind…Thomas Eakins and Whistler."[87] Furthermore, reacting to the Eakins exhibition in New York in 1917, Bellows asserted that it "proves him one of the best of all the world's masters."[88] Bellows declared the exhibition "the greatest one man show I've ever seen and some of the very greatest pictures.... The *Gross Clinic* must equal 'The Night Watch."[89]

Despite Bellows's apparent admiration for Eakins and his possible appropriation of elements of *Swimming* in *Forty-two Kids*, there are undeniable differences: *Swimming* evokes a tradition of Arcadian naturalism, aligning the artist and his nude, sun-dappled students with classical antiquity.[90] Despite the obvious difference in subject, a precedent

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[84] Henri, to the students of the Art Students' League, in *The Art Spirit* (Philadelphia: J.B. Lippincott Company, 1951), 64.

[85] Ibid., 95.

[86] Sloan's diary, 8 January 1909, in Bruce St. John, ed., *John Sloan's New York scene; from diaries, notes and correspondence, 1906-1913* (New York: Harper & Row, 1965), 279.

[87] Morgan, 272.

[88] Ibid., 215.

[89] Ibid.

[90] The striped blue trunks of Bellows's kid at lower right also points to another potential reference: Frederic Bazille's 1869 painting *Summer Scene* (Fogg Art Museum, Harvard University). The overt homo-eroticism

closer to *Forty-two Kids* in terms of composition, mood, and affect might be Théordore Géricault's *Raft of the Medusa* (1818–19, Fig. 4.23).[91] Nothing has been made of this visual connection in the Bellows literature, but the similarity is worthy of further consideration. Bellows's wharf replicates the rough-hewn construction of Géricault's raft. Bellows's wharf also rehearses the perspectival foreshortening and tilt of Géricault's raft. And, strikingly, Bellows's lumpen knot of kids resonate more with the carcasses of Géricault's dead and dying castaway slaves than with Eakins's marmoreal musculature. That Bellows referred to his wharf in his Record Book entry as a "raft" suggests that the connection between *Forty-two Kids* and Géricault's *Raft of the Medusa* is not wholly unreasonable (see Fig. 4.3).[92]

Géricault found models for individual figures in works by Michelangelo, Rubens, Caravaggio, Rosso Fiorentino, and others.[93] The formal quotations lend his emaciated, dead, and dying slaves an aura of historical, religious, and aesthetic pedigree, aligning his contemporary subject with sanctioned subjects of traditional History painting. The same

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signaled by buttocks in Bazille's painting (and Eakins's, for that matter) has, it could be argued, been replaced with a quite different association in Bellows's canvas: the tonality and texture of Bellows's palette and paint surface, coupled with the prominence afforded elimination of bodily waste (expectoration and micturation), serves to conjure an unhappy association with fecal matter. Molly Suzanne Hutton considers connections between Ashcan paintings and dirt in "The Ashcan City: Representational Strategies at the Turn-of-the-Century" (unpub. diss., Stanford University, 2000), Ch. 2.

[91] Rebecca Zurier acknowledges that "a modern-day scholar could identify any number of art-historical antecedents for the painting—even Théordore Géricault's Raft of the Medusa comes to mind," she is more interested in arguing that "in Bellows's day, it reminded people of newspaper comics" (Zurier [2006], 218.) Nothing has been made of this visual connection in the literature, but the similarity is worthy of further consideration. I myself did not warrant this observation worthy of commentary until Prof. William Pressly convinced me otherwise.

[92] Again, I thank Professor Pressly for this keen observation.

[93] Numerous sources have been proposed for Gericault's composition and individual figures: On Caravaggio, see Donald A. Rosenthal, Géricault's *Raft of the Medusa and Caravaggio, The Burlington Magazine* 120, No. 909 (December 1978): 838–836. Other proposed sources include: Rosso Fiorentino's *Moses and the Daughters of Jethro*; Gros's *Plague of Jaffa* and Guerin's *Return of Marcus Sevtus*; Neo-Classical illustrations of the story of Ugolino from Dante's *Inferno*; and shipwreck pictures by Joseph Vernet, Jean Broc, and Jean-Francois Hue.

might be said of Bellows's appropriations. The compositional device cribbed from Géricault lends *Forty-two Kids* a monumentality that transcends its lowly subject even as it side-steps the aura of heroic martyrdom of the *Raft*. The latter move is accomplished by virtue of *Forty-two Kids*' peculiar perspective. The point of view in Géricault's *Raft of the Medusa* is close to sea level; the proximity of the raft's corner and the prostrate bodies to the lower edge of the canvas implicates the viewer in the scene; Géricault's uncomfortably close view is enhanced by the life-size castaways.

Swimming's similarly low perspective also constructs the viewer as a participant in the scene. Eakins included himself in *Swimming*; he appears in the water at lower right. The painted Eakins, who gazes at the group of boys, acts as a stand-in for the viewer. Bellows's elevated point of view, by contrast, suggests a distant, voyeuristic relationship between viewer and subject. The boys, exposed and seemingly unaware of being viewed, are the subject of a literally and figuratively superior view. Where Eakins's and Géricault's grounded perspectives foster an affiliation between subject and viewer , Bellows's aerial vantage point offers a commanding survey of the prospect below and, by implication, a sense of power over the small bodies therein The similarities between *Forty-two Kids*, Eakins's *Swimming*, and Géricault's *Raft of the Medusa* are trumped by this perspectival and associative inversion. Rather than looking up in admiration at the heroic figures in the painting, as is the case with both the Eakins and the Géricault, Bellows's spectators were literally put in the position of superiority, of looking quite literally down on the figures populating the canvas. Rather than aligning his lowly subject with past masters, the formal echoes between *Forty-two Kids*, *Swimming*, and *Raft of the*

Medusa appear to accomplish precisely the opposite, highlighting the gulf between the subjects.

Forty-two Kids's condescending perspective is mirrored in Bellows's title. Contrary to its current use as an informal term for any child or young person, around 1900 the term "kid" was as definitive as Bellows's quantitative modifier forty-two, denoting young hooligans with predilections for mischief and petty crime.[94] These lower-class associations would have been quite clear to Bellows's audience. Indeed, they would only have been intensified by Bellows's sardonic visual references to the idyllic "old swimming hole" trope familiar from nineteenth-century artworks. For even as Bellows's scene quotes vaunted exemplars of past art it also, as Rebecca Zurier has pointed out, echoes the lowbrow style and content of comic strips like *Hogan's Alley*, which chronicled the capers of its slum-dwelling protagonist, the Yellow Kid (Fig. 4.24).[95] Despite or, indeed, as a result of Bellows's clear quotation of Eakins and Géricault, an urban bathing scene like *Forty-two Kids* would have been immediately associated with the immigrant population of Manhattan's lower East Side. An illustration from the journal *Puck*, entitled "An East Side Dive," makes the denotation clear through its adjacency to an article on "the slums" (Fig. 4.25).[96] The anonymous "42 Kids" cartoon

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[94] See Marianne Doezema, *George Bellows and Urban America* (New Haven, Conn.: Yale University Press, 1992), 147.

[95] Rebecca Zurier comments briefly on the visual and compositional similarities between Eakins's and Bellows's paintings. She does not, however, consider Bellows's motivation in seemingly referencing the earlier painting. Indeed, Zurier is not clear about whether she believes Bellows knowingly referred to Eakins's *Swimming*. Zurier (2006), 216–218. Zurier also perceptively places Bellows's painting in relation to the graphic conventions of contemporaneous comics such as *Hogan's Alley*, in which the Yellow Kid made his debut (216–226). She argues that the Yellow Kid was "a prototype for Bellows's painting [*Forty-two Kids*] (221)."

[96] "An East-Side Dive," *Puck* (14 July 1909).

confirms the association with such popular imagery (see Fig. 4.10). A speech balloon issues from the mouth of the boy chased by a policeman, who swings his truncheon above his helmet in a cartoonishly exaggerated but nevertheless threatening manner. The text in the speech bubble reads: "Cheese it Fellers—Der Cops!" The cartoon, which relies for legibility on what must have been a widely recognized visual vocabulary, suggests that people viewing Bellows's painting would have been fully aware of the type of boy, or rather, "kid," featured in *Forty-two Kids*: these were slang-speaking kids who, even if swimming naked in the East River weren't illegal at the time (it was), probably had good reasons to flee the police.[97]

MAGNIFIED ANIMALCULAE

Bellows had painted similar subjects with colloquial titles before, in 1906 with *Kids* (Fig. 4.26) and *River Rats* (Fig. 4.27). *River Rats* treats the same subject as *Forty-two Kids,* albeit from a different perspective; *River Rats* appears to depict a group of boys very similar to those in *Forty-two Kids* from a position across the East River, possibly on Roosevelt Island. According to popular parlance, "river rats" was a slang term for young criminals who frequented the East River docks.[98] Bellows, by using this epithet for juvenile delinquents, draws on an established rhetorical link between immigrants and animals. The bestial association Bellows used in titling *River Rats* was also applied to *Forty-two Kids,* the figures in which were described by one critic as "simian."[99] This was

[97] Rebecca Zurier has suggested that the suitability of cartoon commentaries on *Forty-two Kids* indicates that Bellows's painting reminded his audience of cartoon conventions. Zurier (2006), 221.

[98] Doezema, 147.

[99] John Cournos, "Three Painters of the New York School," *International Studio* 56, no. 224 (October 1915): 244.

likely a reference to the prevalent late-nineteenth-century caricature of Irish-Americans as ape-like by Thomas Nast (Fig. 4.28), Frederick Opper (Fig. 4.29) and other graphic artists (Fig. 4.30),[100] although Bellows's kids' varied skin tones appear to reflect the full range of nationalities—Italian, Russian, German, Polish—that populated the poorer neighborhoods of Manhattan's East Side at the turn-of-the-century.

The "simian" slur was surpassed by another critic who declared of *Forty-two Kids*: "Most of the boys look more like maggots than like humans."[101] Comparison with a contemporaneous published image of the life phases of a root maggot suggests that the vaguely segmented and speckled appearance of the boys' pale bodies, coupled with the sheen and coagulation of Bellows's impastoed paint, might easily have been seen as maggot-like (Fig. 4.31). The boys' spindly limbs, though, actually seem to form a closer visual rhyme with the larva's genetrix, the fly. The protuberant, bald skull of one of the more prominent central boys in Bellows's painting, in particular, rhymes with the flying ant's bulbous head and thorax illustrated in F.R. Crittenden's "Root-Maggots and How to Control Them," a U.S. Department of Agriculture circular distributed in 1905 (Fig. 4.32).

The connection between Bellows's kids and insects or grubs, flying or otherwise, is hardly farfetched. In her popular exposé of New York City, *Darkness and Daylight; or, Lights and Shadows of New York Life* (1899), Helen Campbell described the type of kids Bellows painted. Campbell noted that they disguised their thieving as innocent play and that these "swarms of small street rovers" scattered when accosted like "a swarm of

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[100] L. Perry Curtis, Jr., *Apes And Angels: The Irishman in Victorian Caricature* (Washington, D.C.: Smithsonian Institution Press, 1997).

[101] Joseph Edgar Chamberlin, "An Excellent Academy Show [exh. review]," *New York Evening Mail*, 14 March 1908, 6.

cockroaches."[102] Bellows's widow also used entomological vocabulary when she recalled the "old dock" north of the 59th Street Bridge from which her husband might have made preparatory sketches for *Forty-two Kids*. Recalling Riis's account of his uncountable, "swarming" tenement children (he uses the term no fewer than seven times in *How the Other Half Lives*), Emma Bellows described the area as a "dead end neighborhood—swarming with growing boys."[103]

The word "swarm" most commonly describes bees and other flying insects, but it can also refer to clusters of free-swimming microorganisms.[104] To wit, a perceptive critic simultaneously likened Bellows's kids to insects and microbes when, employing a period term for microorganisms, he suggested that "the tangle of bodies and spidery limbs" were akin to "the antics of magnified *animalculae*."[105] It is an astute observation. Bellows's enmeshed bodies echo the chaotic and fantastical configurations of micro-organisms in both scientific and cartoonish representations. For example, a representative scientific image is the photographic illustration of a microscopic view of *bacillus figurans* in Edgar M. Crookshank's *Photography of Bacteria* (1887, Fig. 4.33). The juxtaposition of thick, knotted colonies and sinuous strands of bacteria give the impression of an explosive energy; the snaking filaments made up of millions of the rod-shaped bacteria read like some sort of spindly mutant arachnid or octopod. That these curving "limbs" extend beyond the edge of the image further conveys an impression of the bacilli's mobility.

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[102] Helen Campbell, Thomas W. Knox, and Thomas Byrnes, *Darkness and Daylight; or, Lights and Shadows of New York Life* (Hartford, CT: Harford Publishing Co., 1899), 153.

[103] Emma Bellows to Marian King, 6 February 1959, Corcoran Gallery of Art curatorial files.

[104] "Swarm," Oxford English Dictionary, 2nd ed. (1989). Notably, according to the OED, when the word "swarm" is used to describe persons, it carries a contemptuous connotation.

[105] "George Bellows, An Artist with 'Red Blood'," *Current Literature* 53, no. 3 (September 1912): 345.

A humorous cartoon by John Leech of a magnified view of a sample of London water similarly crowds the full dimensions of the image (Fig. 4.34). Rather than whiplash lines, though, Leech's view—circular to suggest a direct view through a microscope's eyepiece—is crammed with a plethora of strange and unnerving life forms: floating heads, limbs, turtle-like creatures, and frightening, Hieronymus Bosch-esque human-animal hybrids.[106] In the unlikely case that the illustration's message might have been too subtle for some viewers, the word "pestilence" floats amidst the tangle of bones, limbs, and decapitated heads. Unlike *Punch*'s anthropomorphized bacteria, Emile Levy's 1883 advertisement for *Les Invisibles*, an exhibition of projected images of microscopic organisms, portrays the microorganisms as freakish lizard-like mutations writhing and curling around on the microscopic slide (Fig. 4.35).

Just as the critic linked "spidery limbs" and "magnified animalculae" in his description of *Forty-two Kids*, it was not uncommon to caricature microorganisms as bugs, as historian Nancy Tomes has shown; see, for example, an 1894 advertisement for McConnell germ-proof water filters, in which the microbes believed to cause diphtheria, cholera, and typhoid fever found in a magnified drop of unfiltered water resemble mutated spiders, beetles, caterpillars, ticks, and all manner of quasi-insectesque beings (Fig. 4.36).[107] Similarly, microscopic arachnid parasites in the 1903 film *Cheese Mites* (Fig. 4.37), the most celebrated microscopic film of the early twentieth century, were

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[106] This is a convention familiar in later films in which views through telescopes or binoculars are consistently framed with a black-out circular border to signify the camera/viewer's point of view through the apparatus. For a very early example of a film utilizing a circular format to stand in for the microscopes viewing field, see: "As Seen Through a Telescope" (1900.

[107] Illustrated in Nancy Tomes, *The Gospel of Germs: Men, Women, and the Microbe in American Life* (Cambridge, Mass.: Harvard University Press, 1998). Microphotographs had become widely available from the mid-nineteenth century; they were shown in popular science lectures and published in popular journals and newspapers.

likened to invertebrates in the distribution company's catalogue entry for the film, which describes the mites as "great uncanny crabs, bristling with long spiny hairs and legs."[108] A trick film parody of *Cheese Mites* entitled *The Unclean World*, also made in 1903, featured clockwork insects as stand-ins for microbes.[109]

The comparison with motion pictures is appropriate given the sense of motion conveyed by Bellows's swarm of kids. The word "swarm," after all, implies motion.[110] The sinuous curves of bodies and the juxtaposition of angular limbs in *Forty-two Kids*, coupled with Bellows's tactile patchwork application of impasto, effectively produce an illusion of gentle rhythmic oscillation (Fig. 4.38). The eye is compelled to flit and shift over what Morgan described as "shimmering spindrift."[111] Bellows's many individual bodies appear to slither and shift as a mass, body, or swarm. It is hardly farfetched, in this regard, to suggest that the repetition of lanky appendages and the overlap of bodies on Bellows's canvas create the visual effect of motion in the way that recalls Edweard Muybridge's late-nineteenth-century stop-motion sequences of animal motion (Fig. 4.38), and possibly even anticipates a painting like Marcel Duchamp's *Nude Descending a*

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[108] Charles Urban Trading Company Catalogue, 1903–4 (Science Museum, London, Special Collections, URB 10-1); quoted in Oliver Gaycken, "The Sources of *The Secrets of Nature:* The Popular Science Film at Urban, 1903–1911," in Alan Burton and Laraine Porter, eds., *Scene-Stealing: Sources for British Cinema before 1930* (Trowbridge, Wiltshire: Flicks Books, 2003), 39. The film *Cheese Mites* (1903) was part of *The Unseen World*, 35mm, 150 feet, black & white, silent. Production Company: Charles Urban Trading Company; Director of Photography: F. Martin Duncan. British Film Institute, London.

[109] According to the BFI catalogue, "A professor settles to eat a lunch of bread and cheese with a glass of beer. The taste upsets him and he spits out a mouthful. He takes a small piece of cheese and puts it under his microscope. Two large flying insects are shown crawling around. Hands appear and reveal that they are clockwork." The film is *The Unclean World: The Suburban-Bunkum Microbe-Guyoscope* (1903). Director: Percy Snow; Distributor: Hepworth & Co. 98 ft., black and white, silent. British Film Institute, London.

[110] The primary definition of a swarm is a very large or dense body of insects or other small creatures, especially flying or moving about. A swarm of bees, for example, is a body of bees which at a particular season leave the hive or main stock, gather in a compact mass or cluster, and fly off together in search of a new dwelling-place, under the guidance of a queen. "Swarm," Oxford English Dictionary, 2nd ed. (1989).

[111] Morgan, 58.

Staircase, no. 2 and (1912, Fig. 4.40).[112] Morgan's description seems particularly apt: "Here the bathers…become the components of a small wave in themselves, building up in tension from static figures in the foreground to a crest that breaks in a spraddle of knobby knees and a pair of small splayed feet as one little starveling flops into the placid river."[113]

Motion pictures of microorganisms were a popular attraction in the first decade of the twentieth century, and it is quite possible that Bellows's audiences' reactions to *Forty-two Kids* were prompted by their exposure to and increasing familiarity with microcinematography and the mode of vision the developing technology cultivated.[114] Although microcinematography was developed in laboratories with ostensible scientific aims, the film historian Scott Curtis, one of just a few to have researched the topic, has noted that the "boundary between science and its popularization is hard to draw."[115] The same science films that were shown at professional conferences were also distributed in

[112] Although this post-dates the execution of *Forty-two Kids*, it is worth remembering that Bellows organized the 1913 Armory Show, where *Nude Descending a Staircase, no. 2* was displayed. According to his biographer, Bellows took Duchamp's painting seriously and defended it in arguments.

[113] Morgan, 76.

[114] Within a decade of the development of motion picture technology in the mid-1890s, a number of films featuring microscopic views, or mimicking them via trick cinematography, was produced. The first microscopic films were of bacteria and blood cells, recorded in "real time." Shortly thereafter, Swiss biologist Julius Ries made one of the first time-lapse films; in 1907 he produced a film that condensed to two minutes the fourteen hour process of sea urchin fertilization and development. Hannah Landecker, "Microcinematography and the History of Science and Film," *Isis* 97 (2006): 121, 124.

[115] Scott Curtis, "Cell Life, Physiological Time, and Microcinematography, or the Chicken that Ate Manhattan," *Cinema & cie* 3 (2003): 61. On early scientific films see, Oliver Gaycken, "'A Drama Unites Them in a Fight to the Death': Some Remarks on the Flourishing of a Cinema of Scientific Vernacularization in France, 1909–1914," *Historical Journal of Film Radio, and Television* 22, no. 3 (2002): 353–374; Thierry Lefebvre, "The Scientia Production (1911–1914): Scientific Production through Pictures," *Griffithiana* (1993): 136–55.

Europe by Pathé and in North America by George Kleine.[116] Film historian Tom Gunning has long argued that it is misguided to distinguish early motion pictures according to genres or modes such as science and entertainment or documentary and fiction; in the very early days of cinema the novelty of the medium itself was more important to viewers than such arbitrary distinctions.[117]

Film historian Yuri Tsivian has noted that early audiences would likely have responded to microscopic views with a mixture of "attraction and repulsion."[118] After seeing the show "Wonders of the Microscopic World," at 21 Old Bond Street, London, for instance, the German prince Hermann Ludwig Heinrich Pückler-Muskau declared that a view of the microorganisms in a sample of drinking water was "enough to drive a man of lively imagination mad." He continued:

> Nothing can be more horrible,—no more frightful devilish figures could possibly be invented,—than the hideous, disgusting water *animalculae* (invisible to the naked eye, or even to glasses of inferior power,) which we daily swallow. They look like damned souls darting about their filthy pool with the rapidity of lightning, while every motion and gesture seemed to bespeak deadly hate, horrid torture, warfare, and death.[119]

Pückler-Muskau's fantastical description more than matches the sublime extremes hypothesized by Tsivian. The 1903–4 Urban film catalogue description of *Cheese Mites*

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[116] Curtis, (2003): 61. George Klein secured in 1899 an exclusive arrangement distributing Edison films and film equipment in the Chicago area before expanding to include European motion pictures.

[117] Tom Gunning, "An Aesthetic of Astonishment: Early Film and the (In)credulous Spectator," in *Viewing Positions: Ways of Seeing Film*, ed. Linda Williams (New Brunswick, N.J.: Rutgers Univ. Press, 1995), 114–133.

[118] Yuri Tsivian, "Media Fantasies and Penetrating Vision: Some Links Between X-Rays, the Microscope, and Film," in John E. Bowlt and Olga Matich, eds., *Laboratory of Dreams: The Russian Avant-Garde and Cultural Experiment* (Stanford: Stanford University Press, 1996), 87.

[119] Hermann Ludwig Heinrich Pückler-Muskau, *Tour in England, Ireland, and France, in the Years 1826, 1827, 1828, and 1829…by a German Prince* (Philadelphia, 1933) [1 volume reprint of 4 volume London edition], 172; quoted in Richard D. Altick, *The Shows of London* (Cambridge: The Belknap Press, 1978), 370.

also prescribes a response of attraction-repulsion along the lines of those expected by Tsivian. In effect, the catalogue guides the audience to view microorganisms as repulsive: "A gentleman reading the paper and seated at lunch, suddenly detects something the matter with his cheese. He examines it with his magnifying glass, starts up and flings the cheese away, frightened at the sight of the creeping mites his magnifying glass reveals.[120] In a similar vein, another reviewer described the film as a "blood-curdling picture of cheese-mites taking their walks abroad."[121] These quotes are illuminating in that they convey just how repulsive Bellows's subject must have seemed in order to elicit explicit comparison to microbes.

Although *Cheese Mites* was produced by the Urban film production company in England, similar microscopic films have been traced beyond Britain's borders. A film in the catalogue of the French production company Pathé entitled *Le Déjeuner du savant (The Scientist's Lunch)*, for example, that incorporated crosscut shots of a scientist eating his lunch with "repulsive microscopic close-ups of this lunch,"[122] sounds suspiciously familiar to a French-entitled version of Urban's *Cheese Mites*. A number of additional

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[120] Charles Urban Trading Company Catalogue, 1903–4 (Science Museum, London, Special Collections, URB 10-1); quoted in Gaycken, "The Sources of *The Secrets of Nature*," 39. *Cheese Mites* is the only extant film from the Anglo-American film producer and distributor Charles Urban's series *The Unseen World, Revealing Nature's Closest Secrets by Means of the Urban-Duncan Micro-Bioscope*. Urban was a pioneer of documentary, educational, propaganda, and scientific film, a number of which he presented to music hall audiences. *The Unseen World* is considered the first British public program of scientific films; it was shown at the Alhambra Music Hall in Leicester Square in August 1903. Urban hired the microphotographer and naturalist F. Martin Duncan to produce the series, which by all accounts proved a "huge success." "Nature on the Stage," *The Daily Telegraph* (London), 21 October 1903; quoted in Gaycken, "The Sources of *The Secrets of Nature*," 38. The film is unclear about the specific species of mite it depicts (the title refers to the mites' chosen meal not its identity), but it may well be a grain mite, which is commonly found infesting all types of grain flour, stored foods, cheese, and mushroom beds.

[121] The review also noted that "the tiny creatures looking on the screen as large as small crabs." *Daily Telegraph* (London), quoted at http://bioscopic.wordpress.com/2008/05/29/seeing-the-unseen-world/.

[122] Tsivian (1996), 91.

films that tackled microscopic subjects appear to have been produced in France, although it is unclear whether these are unique or French versions of films originally produced in England. *Love Microbe,* for example, was a "light erotic" comedy produced by the Biograph company in 1907; in 1909, Emile Cohl directed *Les Joyeux microbes (The Happy Microbes),* produced by Gaumont Studios, which combined animation and live action sequences. In *Les Joyeux microbes,* an ill man visits his doctor, who takes a sampling of his patient's hair, places it under the microscope, and sees a variety of microbes that subsequently morph into animated illnesses, which are personified in various guises, including a bored clerk, a nasty mother-in-law, and a happy drunk.[123] The Urban science films, produced in London, have also been found in Edison catalogues, which suggests that they may well have been available to a popular audiences in the United States in the first decade of the twentieth century; more research is required to fully map the extent to which microscopic films were shown in New York.[124]

When the figures in *Forty-two Kids* were likened to microorganisms, the association might well have been signaled by their visual similarity to either motion pictures that featured microscopic views or trick films in which microorganisms were played by children. *Cheese Mites*'s microscopic cinematographic achievement was preceded by a trick film called *Cheese Mites or, Lilliputians in a London Restaurant* (1901) produced by W.R. Booth. The latter film combined jump-cuts with superimposition, so that the miniature people (shot on an exaggeratedly large table-top

[123] Ibid.

[124] Gaycken, "The Sources of *The Secrets of Nature*," 42 n.11.

set) appear on screen alongside the normal-sized diner (Fig. 4.41).[125] The catalogue description reads: "A man, sitting at a restaurant table, orders and drinks a beer. A miniature figure of a boy appears on his beer glass, then two more, a boy and a girl, appear from a large round cheese. The two boys rough and tumble together, while the man laughs heartily."[126] This description of a pair of roughhousing and amusing boys cast as enlarged microorganisms sounds uncannily familiar to the critic's comparison of *Forty-two Kids*' "tangle of bodies and spidery limbs" to "the antics of magnified *animalculae*."[127]

COUNTING IS BELIEVING

Anthropologist Hannah Landecker has suggested that "scientific films did not just teach audiences about things such as cells but, indeed, suggested a very particular way of looking at the world."[128] This "mode of experimental looking"—seeing, imagining, and understanding the world in a way that transcended the threshold of observation—is testified to in the reactions *Forty-two Kids* provoked.[129] By linking boys with microbes, Bellows's audience seemingly drew on their familiarity with a microscopic mode of vision and representation. The "Unseen Worlds" program, which ran about twenty minutes in length, also included the following microcinematographic studies: *The Frog*,

[125] *Cheese Mites or, Lilliputians in a London Restaurant* is included on the DVD *R.W. Paul, The Collected Films 1895–1908* (London: British Film Institute, 2006).

[126] *The Cheese Mites; or, Lilliputians In A London Restaurant* (1901). Directed by W. R. Booth, black and white, silent, 48ft. Production company: Paul's Animatograph Works. British Film Institute, London; http://www.bfi.org.uk/nftva/catalogues/film/8/640/2268.

[127] "George Bellows, An Artist with 'Red Blood'," *Current Literature* 53, no. 3 (September 1912): 345.

[128] Landecker (2006): 123.

[129] Ibid.

His Webbed Foot, And the Circulation of his Blood; *The Fresh Water Hydra*, which were described as "beauties";[130] and *The Circulation of the Protoplasm of the Canadian Waterweed*. According to a program preserved in the British Film Institute, these microscopic studies were shown alongside observational and moralizing macroscopic animal behavior films: *The Greedy American Toad*; *The Pugilistic Toads and the Tortoise Referee*; *Chameleons Climbing and Feeding*; and *The Boa Constrictor*.[131] The critic who labeled *Cheese Mites* "blood-curdling" also noted that "the rapt attention of the audience and the thunders of applause at the conclusion testified to the way in which popularity had been at once secured by these unique pictures."[132] The warm reception granted this cinematic line-up, which juxtaposed comedy and scientific exposé films as well as macroscopic and microscopic views, suggests that the audience had already become, or was fast becoming, fully conversant with a microscopic mode of vision in which ocular access was granted to a zoological realm ordinarily invisible to the human eye.[133] The necessary mental transition that would have been demanded by the zoom from the macroscopic—boxing toads, for instance—to the microscopic—blood cells coursing through the circulatory system of a frog—appears not to have caused problems for audience members.

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[130] "Nature on the Stage," *The Daily Telegraph* (London), 21 October 1903; quoted in Gaycken, "The Sources of *The Secrets of Nature*," 38.

[131] The second part of the program consisted of fifteen short films on bee culture. Timothy Boon, *Cheese Mites*, 1901 (cat. entry, British Film Institute, London; http://www.screenonline.org.uk/film/id/1336505).

[132] *Daily Telegraph* (London), quoted at http://bioscopic.wordpress.com/2008/05/29/seeing-the-unseen-world/.

[133] The context was typical of early cinema, where films were part of a broad and inclusive culture of spectacular entertainments. Tom Gunning, "'Those Drawn with a Very Fine Camel's Hair Brush': The Origins of Film Genres," *Iris* 19 (1995): 58.

The path to audiences' conversance with the conventions of microscopic motion pictures was paved by earlier examples of microphotography. Drawings of microbes were important in establishing a set of conventions for viewing the heretofore unseen inhabitants of the microscopic realm. A set of drawings after photomicrographs of random samples of water from each of the companies that supplied London's city's water, published initially in 1850 in Arthur Hill Hassel's book *Microscopical Examination of the Water Supplied to the Inhabitants of London and Suburban Districts* and the following year in the medical journal *The Lancet*, provide a productive case study for illuminating the conventions of microscopic visual culture (Fig. 4.42).

The *Lancet* illustrations' representational vocabulary of implied scientific objectivity comprises part of what Marina Benjamin has described as the marketing of microscopic information "as evidence that spoke for itself."[134] Benjamin has suggested that the "greatest test of the microscope's ability to deliver truth lay in calibrating what was viewed under the microscope relative to what could be seen with the naked eye."[135] In her estimation, the formerly invisible world had to be "measured in order to be believed."[136] Such "calibration" was, Benjamin concludes, "translated into counting."[137] Seeing, it turns out, was not enough to convince, but belief lay in enumeration and calibration. The enumeration and calibration to which Benjamin refers took on a set of forms that would soon become familiar. A story in the *New York Times*, for instance,

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[134] Marina Benjamin, "Sliding Scales: Microphotography and the Victorian Obsession with the Miniscule," in Francis Spufford and Jenny Uglow, eds., *Cultural Babbage: Technology, Time and Invention* (London: Faber and Faber, 1996), 109.

[135] Ibid.

[136] Ibid., 110.

[137] Ibid.

relied on a rhetorical formula that combined unimaginably large numbers and disgust. Not satisfied with estimating that "one billion [microbes]" inhabit "each square inch,"[138] the story reckoned that female readers would be unpleasantly surprised if they knew the "number of microbes and disease germs" they carried around with them. Despite the "immaculateness" of their dress, the author hypothesized, on a single of "those dainty gloves" there may reside "the bacilli of innumerable loathsome diseases."[139] The unseen threat of disease-spreading microbes is here explicitly correlated to their literally unquantifiable number.[140]

Catalogue descriptions of microscopic films followed a similar trope. The description of *Cheese Mites* (1903) iterates the vast quantities of mites that might lurk unseen in any cheese-based lunch (several hundred mites in a ripe piece of Stilton the size of a shilling, apparently), which, by invoking the disorienting scale of the sublime, would have intensified a reaction of disgust amongst viewers and readers. This kind of message was also iterated in numerous popular periodicals. Chapter 11 of *An Outing in Acadia* by Edward A. Samuels, published episodically in the decidedly nonscientific journal *Forest and Stream; A Journal of Outdoor Life, Travel, Nature Study, Shooting, Fishing, Yachting* cements the point. The chapter, entitled "Natural History in a Cup of Mud," relates a conversation between a doctor and a group of local neighbors on a farm

[138] "The Babies' Microbe Club," *New York Times*, 28 January 1900, 20.

[139] Ibid.

[140] A 1902 article in the journal *Forest and Stream* entitled "In a Cup of Mud," makes clear the anxiety surrounding the number of invisible threats to public health. The article declares that a single drop taken from the titular cup of mud "abounds with an infinite variety of living forms, many of which are so small that thousands of them may be contained in a single drop of water." Edward A. Samuels, "Natural History: In a Cup of Mud," *Forest and Stream: A Journal of Outdoor Life, Travel, Nature, Study, Shooting.…* 58, no. 19 (10 May 1902): 364.

as a visiting doctor demonstrates his microscope on a sample of the region's river mud. The article was illustrated with a selection of detailed and varied drawings of microbes (Fig. 4.43).[141]

Those watching the doctor's demonstration are amazed by the sheer number of microorganisms living in the sample: "'Bless my soul!" declares one onlooker, "Is it possible that all those strange-looking creatures are swimming around in a drop of water[?]" The doctor explains, in characteristically vague numerical terms, that "in this small collection there is an inexhaustible field for the scientist to explore, for it abounds with an infinite variety of living forms, many of which are so small that thousands of them may be contained in a single drop of water."[142] The tendency towards exaggeration in such descriptions was not uncommon in purportedly scientifically accurate photomicrographs themselves. Indeed, some early images of microorganisms were enhanced by the overpopulation of the microscopic field of view. Hassal, for example, admitted that his drawings published in his book and in the *Lancet* were elaborate composites of various samples; the waters were not as crowded as his drawings claimed (see Fig. 4.42).[143]

Around 1900, photomicrographs and microcinematography, combined with X-radiography and telescopic views of the universe, increased what Walter Benjamin has called the "optical unconscious," that realm of vision beyond the limits of the naked eye.

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[141] Edward A. Samuels, "Natural History in a Cup of Mud," *Forest and Stream: A Journal of Outdoor Life, Travel, Nature Study, Shooting…* LVIII, no. 19 (10 May 1902): 364–66.

[142] Edward A. Samuels, "Natural History in a Cup of Mud," *Forest and Stream: A Journal of Outdoor Life, Travel, Nature Study, Shooting…* LVIII, no. 19 (10 May 1902): 365.

[143] Christopher Hamlin, *A Science of Impurity: Water Analysis in Nineteenth Century Britain* (Berkeley: University of California Press, 1990), 104.

A consideration of the descriptions of and reactions to microscopic imagery suggests that a component of negotiating this newly-expanded realm of vision involved the deliberate calibration and translation of the miniature into some form of comparative enumerative statistical scale (one billion microbes per square inch, for example). The central conceit of statistical analysis is that numbers should tell us things we can't see for ourselves. Apparently, in order to believe the existence of such things that people couldn't see for ourselves, the act of seeing had to be translated into counting. Seeing, it would seem, did not automatically engender belief, as the old empiricist idiom goes. Counting, on the other hand, did.

Prompted by the enumerative calibration shared by *Forty-two Kids* and the representations and discourse of microscopy, coupled with art critics' unpleasant commentary linking Bellows's subject and the grotesque inhabitants of the microscopic realm, I am inclined to read Bellows's kids as fantastical personifications of microbes very much like Urban's filmic cheese mites, *The Unclean World*'s clockwork microbe "bugs," and the "disease germs" in the McConnell filter advertisement's "magnified drop of water" (see Fig. 4.36). Familiar with a visual culture of the microscopic that featured grotesque, bug-like microbes, and conversant in a language that conflated bugs, vermin, and immigrants, it is hardly a stretch to imagine that Bellows's audience would have been cognitively and culturally willing and able to see in *Forty-two Kids* a frightening image of swarming, disease-spreading bodies in lieu of an innocent group of frolicking boys. Indeed, Bellows's contemporaries would have found quite familiar the conflation of germs and boys. The East Side Microbes was the name of a youth team that played in the city's Vacant Lot Baseball League. According to league tradition, they were dubbed the

Microbes by their opponents, and the name stuck because it "hit the popular fancy."[144] The Microbes played on "First Avenue near the Rockefeller Institute,"[145] precisely where *Forty-two Kids* was painted.

Risk of Contagion

This rhetorical fusion is part of a discursive practice that linked slum-dwellers and their dirty environments with all manner of unhygienic organisms, contagious diseases, and moral corruption. Newspaper articles referred to immigrant slum neighborhoods as pigsties, rookeries, dens, burrows, lairs, hives, and warrens. For example, the *Boston Daily Globe* printed a report from John Crowley, the secretary of the Anti-Tenement Housing League, who warned that New York City tenement houses were so overcrowded, that "public health was threatened through the danger from cholera germs manufactured in the sweating dens of that city."[146] Slum-dwellers were said to chatter like monkeys, infest, and swarm like insects, and herd like swine.[147] In 1906, the painter John Sloan wrote in his diary that the "doorways of tenement houses" had "grimy and greasy doorframes looking as though huge hogs covered in filth had worn the paint away and replaced it with matted dirt in going in and out."[148] The trope manifested visually, too: The "Poor House" was symbolized as a giant, aggressive fly in a cartoon in *Puck* in

[144] "Heinie Was Kissed and Game Was Lost," *New York Times* 30 May 1909, 4.

[145] Ibid.

[146] "Dirty Streets of New York," *Boston Daily Globe*, 17 September 1892, 8.

[147] Alan Mayne, *The Imagined Slum: Newspaper Representation in Three Cities, 1870–1914* (Leicester: Leicester University Press, 1993), 181.

[148] Sloan, diary entry for 13 February 1906, in *John Sloan's New York Scene*.

1909 (Fig. 4.44). Juxtaposed with a panel in which carefree children chase a butterfly-winged White House, well-to-do adults flee in terror lest they contract the Poor House's contagious disease—poverty. Jacob Riis crafted a similar image when he condemned New York's tenements as "hot-beds of epidemics that carry death to rich and poor alike; nurseries of pauperism and crime." He also dubbed them incubators of "deadly moral contagion."[149] In the context of this rhetoric and imagery, it is not difficult to see *Forty-two Kids* as a threatening swarm of contagious, free-swimming, disease-laden bodies akin to germs in a "drop of water magnified."

Indeed, it is highly unlikely that Bellows's audience would have regarded the painting as merely a free-spirited and playful image of a group of innocent, frolicking boys. The subject would certainly have resonated with contemporaneous ideas and arguments relating to urban hygiene reform. Bathing, in municipal swimming pools and open-water floating baths, was endorsed at the end of the nineteenth century as a healthy and hygienic form of exercise, a way of cleaning, quite literally, dirty lower class bodies.[150] The anthropologist and cultural theorist Mary Douglas has famously explained that "ideas about separating, purifying, demarcating and punishing transgression have as their main function to impose system on an inherently untidy experience."[151]

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[149] Riis, 3.

[150] On hydrotherapy, see William Paul Gerhard, *Modern Baths and Bath Houses* (New York: John Wiley and Sons, 1908).

[151] Mary Douglas, *Purity and Danger: an Analysis on Concepts of Pollution and Taboo* (New York: Frederick A. Praeger, 1966), 4.

Bellows's swimming hole, though, is far from salubrious. As one critic noted, the painting has "a bituminous look ill assorted with the idea of bathing."[152] Bellows's paradoxically filthy bathing scene would likely have stimulated his audience's terror of bodily dirt and dirty water at a moment when, as Kathryn Lofton has convincingly argued, Americans were being subjected to "the persistent repetition, representation, and distribution of a ritual promise" aligning godliness and cleanliness.[153] As Lofton has outlined, trans-denominational religious and capitalist interests were expressed in the marketing of soap at the end of the century. But I would also suggest that the logic of statistics was employed in the advertising strategies of prominent soap manufacturers, including Ivory and Pacific Coast Borax. Bellows's enumerative title, affixed to an image as insalubrious as *Forty-two Kids*, parallels the statistical logic underlying the marketing strategies of certain soap manufacturers.

Daily ablutions were being constructed at this time as fraught with the twinned risks of contamination and infection. "Purity" and "safety" were the advertising watchwords employed as guardians against such risks. A Williams Soap advertisement from 1898, for example, likens the adventure of shaving to "Shooting the Rapids" (Fig. 4.45). Noting that riding a river's rapids is "often very risky business," the ad's copy declares "shaving is risky, too, unless you have just the right shaving soap. In many soaps," the text continues, "disease germs, rank poison, smarting and burning sensations

[152] Philip L. Hale, "Boston Art Shown in Philadelphia [exh. review]," *Boston Herald*, 26 January 1908, Special sec., 1.

[153] Kathryn Lofton, "Saving Soap: An Allegory of Modern Religion," unpublished paper, p.3. My deep thanks to Professor Lofton for her generosity in sharing her remarkable paper.

are the Hidden Rocks that threaten your safety, health, and comfort."[154] The advertisement, illustrated with a picture of a man attempting to shave as he navigates his canoe through a stretch of river filled with half-submerged rocks and turbulent whitewater, exhorts the reader to "rely on the *absolute purity* and *safety* of Williams Shaving Soaps."

Ivory Soap promised the purification of the unclean, a population that was constructed as vulgar, coarse, dark, and animalistic, as in the 1883 advertisement captioned "Passing Through the Woods One Day…," which featured all manner of woodland creatures—bears, foxes, hedgehogs—bathing in a stream with bars of Ivory (Fig. 4.46), or the 1885 advertisement "The Contented Rat," in which Mrs. Rat endorses Ivory Soap to Mrs. Mouse as "good and pure (Fig. 4.47)." In an advertisement that was recycled in slightly different guises in the 1880s and 1890s, the purifying power of Ivory was extended to racial ends.

Cleaning dirty animals was one thing, but Ivory soap was apparently potent enough to purify an entire race commonly held to be a few rungs down the evolutionary ladder. The advertisement "A New Departure," makes precisely this claim (Fig. 4.48)." In this Ivory ad, "civilizing" the American Indian is literalized as the soapy erasure of "their darkest blots. The rhyming text accompanying the advertisement's illustration reads:

> Said Uncle Sam: "I will be wise,
> And thus the Indian civilize:
> Instead of guns, that kill a mile,
> Tobacco, lead and liquor vile,
> Instead of serving out a meal,
> Or sending Agents out to steal,

[154] "Shooting the Rapids," Advertisement for Williams Soap Shaving Stick, published in *Puck* (27 July 1898): 13.

I'll give, domestic arts to teach,
A cake of IVORY SOAP to each.

Before it flies the guilty stain,
The grease and dirt no more remain;
'Twill change their nature day by day,
And wash their darkest blots away.
They'll turn their bows to fishing-rods,
And bury hatchets under sods,
In wisdom and in worth increase,
And ever smoke the pipe of peace;
For ignorance can never cope
With such a foe as IVORY SOAP."

Versions of this advertisement appeared with variations in the illustrations, albeit with the same poetic accompaniment, in 1886 and 1893 (Figs. 4.49 and Fig. 4.50).

The outcome of Proctor and Gamble's soapy civilization of the American Indian was played out in a subsequent advertisement, which appeared in multiple versions in the late-1880s. This advert, entitled "Reclaimed," is the *after* to "A New Departure's" *before* (Figs. 4.51 and 4.52). It reads:

We once were factions, fierce, and wild,
To peaceful arts unreconciled;
Our blankets smeared with grease and stains
From buffalo meat and settlers' veins.
Through summer's dust and heat content,
From moon to moon unwashed we went;
But IVORY SOAP came like a ray
Of light across our darkened way.

And now we're civil, kind and good,
And keep the laws as people should.
We wear our linen, lawn and lace,
As well as folks with paler face.
And now I take, where'er we go,
This cake of IVORY SOAP to show
What civilized my squaw and me
And made us clean and fair to see.

In the latter group of advertisements, the group of male Indians has been replaced by a family unit, illustrating the desirable transition from unruly and unstructured tribe to orderly domestic household. The "Reclaimed" Indians wear Western-style dress rather than the buckskins and moccasins of the earlier image. And, preposterously, they carry bars of Ivory Soap rather than the rifles, knives, and tomahawks with which their "uncivilized" predecessors were equipped. Soap, Ivory's advertising campaign suggests, is an integral component of civilization and a metaphorical extension, no less, of the Federal government's concurrent Indian displacement campaign.

Proctor and Gamble yoked their ideological rhetoric to statistics when the company introduced in 1882 the brand slogan that is still in use today: "Ivory: 99 44/100% Pure" (Fig. 4.53). Invoking the logic and objectivity of statistical discourse by linking 99 44/100% to an argument about cleanliness and purity, the slogan's rhetoric argues that the percentile itself accomplishes the purifying act. Purity and safety from the dangers of germs, disease, and social contamination, in other words, take the form of a fractional percentile.

The Twenty Mule Team logo used by Pacific Coast Borax also links cleanliness and numbers. The trademark, first used in 1891 and registered in 1894, depicts a row of twenty mules, yoked in pairs, pulling a wagon ostensibly loaded with borax ore across the Mojave Desert (Fig. 4.54). The image appeared on Borax packaging, in advertisements, and on all manner of promotional materials (Fig. 4.55). Like Ivory's percentile tagline, Pacific Coast Borax's twenty mule team logo invites the contemplation of numbers in the consideration of cleanliness. If Proctor and Gamble's Ivory soap and Borax's Twenty Mule Team soap invoked enumeration, statistics, and their potential to assuage anxieties

related to unseen dangers and disease, then Bellows's *Forty-two Kids*, likened to microbes swimming in a filthy cesspool of disease, might well have evoked similar associations.

Borax's Twenty Mule Team soap's logo is, notably, orderly and logical in its organization; the mules are arranged in a straight line. It seems that the spatial organization of numbers carries some weight: orderly organization trumps the random disorder of disease bearing germs. This is made abundantly clear in a humorous booklet published by the Pacific Coast Borax Company in 1904 called "The Twenty-Mule-Team Brigade, being a story in Jingles of the good works and adventures of the famous 'Twenty-Mule-Team.'" Illustrated by Peter Newell, the booklet narrates various domestic battles the Twenty-Mule-Team wage against "the King of Dirt who rules his armies, black as night."[155] Each mule stands erect, armed with "a trusty gun—the best that he can find—and this is charged with pure Borax—The 20-Mule-Team kind."[156]

The war between the Borax mules and the armies of the King of Dirt is constructed as a showdown between ordered geometry and chaotic disorder. In the opening illustration, the mule team stands in a regimental formation of arrow-straight rows (Fig. 4.56).[157] Bounded by the horizontal and vertical lines of the room's walls, carpet, and wainscoting, the image is a study in rectilinearity. The illustration of the Battle of Dish Pan Hill pits the mule team's ordered phalanx against the haphazard jumble of King Dirt's rag-tag soldiers (Fig. 4.57). The twinned ranks of mules advance in

[155] Peter Newell, *The 20-Mule-Team Brigade* (New York: The Pacific Coast Borax Co, 1904), n.p.

[156] Ibid.

[157] Ibid.

well-choreographed quick step towards a jumbled pile of pots and pans on the kitchen floor. Or, according to the text: "And so this Borax army marched, in through the kitchen door, and there beheld a tarnished fort of tinware on the floor. Behind the pans and kettles stood, in sullen black array, a grimy band of vicious Imps, All ready for the fray."[158] The mule brigade marches not only as a straight line, but also according to the directional vectors of the kitchen's hardwood floor planks; they march, in other words, as a straight line in straight lines.

The floorboards lead directly to the haphazardly constructed dirt army's fort, which is partially obscured by an advancing cloud of smoke issuing from the mule team's Borax-loaded muskets. The whiteness of the Borax gun smoke is set in coloristic opposition to the dirt soldiers' "grimy" skin, which is described as "black as night." This polarized palette jibes with the way Ivory advertisements prominently featured Caucasian children with blonde hair, and clothed in white (Fig. 4.58). The association of the color white with cleanliness and purity indicates another point of comparison with Bellows's *Forty-two Kids*. Ivory's kids were clean-scrubbed inversions of Bellows's dirty swimmers; Bellows's swarthy and mottled boys, swimming in dark, inky waters offers a coloristic and racialized binary to the clean, white, Anglo child beaming from Ivory soap advertisements.

Indeed, given the numerical resonances between the Borax's Twenty-Mule-Team arguments about cleanliness and Bellows's *Forty-two Kids,* it is not farfetched to see an uncanny resemblance between the Twenty-Mule Team's foes and Bellows's grimy kids. In short, the soldiers in King Dirt's dread armies resemble Bellow's forty-two kids—

[158] Ibid.

dark-skinned with long, whiplash limbs and cartoonishly exaggerated facial features cavorting about in an exuberant manner (Fig. 4.59). Furthermore, the wild bunch of dirty, wildly gesticulating Imps in "sullen dark array" are set off against the order and regularity of the hardwood floor's panels in the same way that the tangle of Bellows's capering gang is juxtaposed to the rectilinear lattice of the riverside wharf. There is no proof that Bellows or Newell knew of the other's work, and it would be misguided to argue for influence in either direction. I would suggest, though, that the fact that Bellows's painting mirrors the imagery of germs and dirt in its varied contexts (advertisements, film, popular entertainment, and scientific illustrations) suggests that *Forty-two Kids* may well form part of the period discourse surrounding issues of cleanliness and bodily health and the relation of statistics and numbers thereto.

Douglas has written that anxieties about pollution arise when the external boundaries of a society are threatened, or when the lines of defining the internal relationships in a culture are threatened.[159] The fixation on the eradication of dirt in American around 1900 can be understood as a reaction to the rapid social change and disintegrating social boundaries that came with the increasing political (and reproductive) power of the working class. Surrounded by an increasing body of dirty and diseased bodies, white middle class was collectively worried about the risk of contagion. A final illustration in "The Twenty-Mule-Brigade" should be considered because it points to a related social concern in that it jibes with the contemporaneous rhetoric reinforcing the logical relationship between chance and the risk of contagion and infection (Fig. 4.60). Accompanied by the caption "He rested in a Borax ring to keep the bugs away," the

[159] Douglas, 146–7.

illustration depicts a slumbering mule protected from the dangers of disease-carrying insects and germs by a Borax force-field of sorts. Unable to cross the thick white line encircling our soporific mule, all sorts of insects, grubs, and beetles stand on tiptoe peering hungrily into the mule's protected sanctuary. Presumably, the protection is so potent that even the numerous winged insects gathered around the Borax ring's circumference are unable to fly into its confines. It is one thing to take the war to dirt that you know exists but what, the "Borax ring" illustration seems to ask, is a sleepy mule to do in order to stay safe from the ubiquitous dangers of an environment known to be rife with disease-laden verminous bugs?

Around 1900, a slew of humorous poems addressed just this theme, riffing on germ theory, the element of chance involved in contracting dangerous diseases, and the illusion that there was a conceivable way of remaining germ-free. A brief quip published in *Puck* entitled "The Germ Theory," for example, quoted an imaginary government chemist saying, "I have found that the foods we daily consume are so fraught with germ life of a harmful nature that I am almost afraid to go to the table."[160] Jokes like this one hint at a serious anxiety aroused by the underlying conceit that the contraction of a contagious illness hinged on the laws of chance. A brief poem originally published in the *American Spectator* argues that germs are, indeed, to be found everywhere, "in the milk we drink," "in the food we eat." The poem concludes, "They flourish in our tea and toast—The marvel is we're not all dead. And yet our forebears ate, 'tis clear,— truly wonder how we're here!"[161] Yet another rhyme contrasts a man who "drank and ate / from sterilized cup and parboiled plate; his every dish was keen inspected / For signs of

[160] *Puck* 59, no. 1521 (25 April 1906): 14.

[161] *Puck* 59, no. 1521 (25 April 1906): 14.

germs and oft rejected," with another, who "drank and ate / From hydrant cup and hash-house plate." The former, who hoped to live "a hundred years" with his fellow mysophobes, "passed away at Forty-One." The other man, whose soap was never new, whose "shaving-lather looked like glue," and "used to say that 'Germs, begosh, Were nothing but a lot of bosh," lived to the age of ninety-seven."[162] The Borax germ force field, in other words, was as much a cultural fantasy as it was a practical recommendation for the use of Pacific Coast Borax Company's product.

The basic conceit of these poems is that germs are ubiquitous and had been before their relatively recent discovery; preventative measures, these wits suspect, contribute as much to anxiety as to prevention. As a poem, "A History of the Case," published in the *Washington Star* in 1904, put it:

> Of Germs a healthy man once read.
> They filled his soul with awful dread.
> They worried him
> And flurried him,
> Till now, poor man, he's sick abed.[163]

If the world was coming to be understood as a place of random risk, as these examples suggest, in which the potential for infection, contamination, or septicity was rampant, then the antidote to chance contagion was to be found, according to Borax's and Ivory's marketing, in the security and logic of numbers, percentiles, statistics, and order.

THE PIED PIPER

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[162] Victor A. Hermann, "Just Germs," *Puck* 61, no. 1573 (24 April 1907): 16.

[163] "A History of the Case," *Washington Star*, published in *Puck* 54, 1401 (6 January 1904): 13.

The broad matrix of associations of which, I am suggesting, the relation between Bellows's immigrant kids and agents of contagion is part, can best be understood as part of the widely-held belief that unrestricted immigration posed a very real threat to Americans' physical health and the nation's social health. Developments in bacteriology, coupled with the rising popularity of eugenic and evolutionary theories, facilitated the social construction of foreigners as dangerous, diseased, and contagious.[164] Indeed, in the 1890s, the term "immigrant" became synonymous with "contagion."[165]

A full-page cartoon by Samuel Ehrhart, published in *Puck* in 1909, entitled *The Fool Pied Piper* illustrates the point (Fig. 4.61). Visual and thematic similarities between Ehrhart's *Fool* and Bellows's *Forty-two Kids* suggest that the pair participate in a broader cultural conversation about immigration and contagion. In Ehrhart's *The Fool Pied Piper*, Europe—signified by personifications of France, Russia, Germany, Italy, Austria, Turkey, and Greece—celebrates as Uncle Sam, in the guise of the Pied Piper, leads what appears to be an unending river of rats into the sea towards the Statue of Liberty, which is just visible on the horizon. The figure of Liberty, her eyes shaded from the sun with her right hand, has spied the arriving masses. She recoils in what can only be deciphered as shock even as she continues to hold aloft the torch symbolizing the illumination of the path to freedom and enlightenment. The rats, whose backs are labeled "thief," "convict," "criminal," "murderer," "degenerate," and so forth, run, dive, and swim after Uncle Sam, lured by the tune he plays on his "Lax Immigration Laws" pipe (Fig. 4.62). Some rats

[164] Howard Markel and Alexander Minna Stern, "The Foreignness of Germs: The Persistent Association of Immigrants and Disease in American Society," *Milbank Quarterly* 80, no. 4 (2002), 757. See also Alan Kraut, *Silent Travelers: Germs, Genes, and the "Immigrant Menace"* (Baltimore: Johns Hopkins University Press, 1995).

[165] Harriet Moore, "Contagion from Abroad: U.S. Press Framing of Immigrants and Epidemics, 1891 to 1893," (unpublished Master's thesis, Georgia State University, 2008), 2.

carry in their mouths sheets of paper marked "Black Hand," referring to crime syndicates established in American cities in increasing numbers from the 1890s by Sicilian Americans. Their practices, built on intimidation, extortion, and threats of violence, murder, and fire-bombing, were well documented in the New York press in the first decade of the twentieth century.[166]

The cultural currency of typing theories is rendered explicit in Ehrhart's cartoon: the bearded and hook-nosed Eastern European Jew is well represented, as is the swarthy, mustachioed Mediterranean type. The racialized physiognomies of the "rats" are coupled with derogatory labels that make clear the widespread acceptance that internal character manifested physiognomically (Fig. 4.63). Ehrhardt's image reveals the anxiety aroused by the perceived questionable moral character of the influx of immigrants entering the United States at this time.[167] From the 1890s, commentators began to make judgmental distinctions between "old" and "new" immigrants. "Old" immigrants referred to those originating in Northern Europe, Britain, and Scandinavia, whereas "new" immigrants were those from eastern, central, and southern Europe. Many considered "new" immigrants like East European Jews and southern Italians, many of whom were uneducated and destitute, to be less assimilable and far more troublesome than their "old" counterparts.[168] Ehrhart quite clearly features the undesirable "new" immigrants in his *Fool Pied Piper*.

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[166] "Black Hand," *World Encyclopedia of Organized Crime* (New York: Paragon House, 1992), 56–59.

[167] See Reed, "Going Through Ellis Island," *Popular Science Monthly* LXXXII, no. 1 (January 1913), and Reed, "Immigration and Public Health," *Popular Science Monthly* LXXXIII (September 1913).

[168] Salvatore J. LaGumina, ed., *Wop! A Documentary History of Anti-Italian Discrimination in the United States* (San Francisco, CA: Straight Arrow Books, 1973), 41; Leon F. Bouvier, *Peaceful Invasions: Immigration and Changing America* (NY: University Press of America, 1992), 13–14.

The enormity of the rat-immigrant colony being lured away by Uncle Sam is a key element of Ehrhart's image. This is unsurprising, as the magnitude of the rat infestation is centrally important to the medieval legend of the Pied Piper of Hamlin upon which the legibility of Ehrhart's political cartoon relies. Robert Browning's version of the Pied Piper legend, which was illustrated by Kate Greenaway and republished extensively following its initial 1842 edition, would have been the most familiar to American readers. In it, Browning describes the rat infestation thus:

> And the muttering grew to a grumbling;
> And the grumbling grew to a mighty rumbling;
> And out of the houses the rats came tumbling;
> Great rats, small rats, lean rats, brawny rats;
> Brown rats, black rats, grey rats, tawny rats;
> Grave old plodders, gay young friskers;
> Fathers, mothers, uncles, cousins;
> Cocking tails and pricking whiskers;
> Families by tens and dozens;
> Brothers, sisters, husbands, wives—
> Followed the Piper for their lives.[169]

The profusion of rats—conveyed alliteratively, rhythmically, repetitively, and numerically in Browning's poem—is supported by Greenaway's illustrations throughout (Fig. 4.64). The significance of the size of the rodent infestation, though, is driven home in Greenaway's illustrations of the story's denouement. When the citizens of Hamelin refuse to pay the Piper for ridding the town of their tide of rats, as they had promised, the Piper enacts revenge by instigating a musical exodus of the town's children, leading every child in Hamelin, bar one young cripple, whose crutches cannot carry him quickly enough to keep up with his fellows, on a musical jaunt out of town, never to be seen againches Greenaway dedicates four full pages to illustrating the trail of children escorted

[169] Robert Browning, illus. by Kate Greenaway, *The Pied Piper of Hamlin* (London: Frederick Warne and Co., Ltd., 1888), 18–19.

out of town by the Piper, underscoring the magnitude of the loss to the parents of the village (Fig. 4.65). While the Pied Piper's central moral lesson relies on a standard three-act narrative—the Piper's extermination of the rats, the villagers' contract violation, and, finally, the Piper's retaliatory punishment—the story is set into motion by the sheer size of the rat infestation. Without the number problem, there is no conflict, no revenge, and no dénouement. The parable's moral lesson, furthermore, hinges on the voluminous exodus and implied eradication of the town's children. Read this way, the story is a tale of the financial calculation of human value; the cost of the rat removal is reconfigured in terms of an equivalent cost in human life.

Erhardt was not alone in drawing on the Pied Piper legend in relation to immigration. Around 1900 the legend was frequently invoked in newspapers in reference to occasions at which large groups of poor children amassed. When, for instance, 6,200 New York City orphans were invited by the management of Barnum and Bailey Circus to attend the show free of charge on "Circus Day," the *New York Times* quipped, "the Pied Piper of New York was out."[170] Similarly, when "miles" of "children of all ages, sizes, and colors thronged the streets" during a parade commemorating the seventy-eighth anniversary of the establishment of the Brooklyn Sunday School Unions, the *Times* doubted that "if there was a pied piper of Brooklyn he could not have brought out more children than crowded the streets of all parts of the borough in the afternoon."[171]

The easy substitution of immigrant kids of all colors for rats as a rhetorical trope is perhaps not surprising. More curious reading, though, is provided by a report published

[170] "6,200 Orphans see the Circus," *New York Times*, 15 April 1908, p. 9.

[171] "Miles of Children in Brooklyn Parade," *New York Times*, 7 June 1907, 9

in March 1907 entitled "Piping Off the Foreigners." In this article, the *Times* described a set of hypothetical calculations and statistical comparisons originally published in the *American Monthly Review of Reviews*. Statisticians had, the *Times* relayed, determined the ramifications that would be expected were the Pied Piper of Hamelin to appear off the U.S. coast in 1900 "piping…the foreign population and the children of foreign parents all back to…Europe."[172] This bizarre hypothetical scenario inverts Erhardt's *Fool Pied Piper* by, in effect, returning all immigrants and their offspring whence they came.

This scenario, which the *Times* characterized as "the calamitous effect of this National might-have-been," was calculated by William S. Rossiter, Chief Clerk of the Census Office in Washington, D.C.[173] According to Rossiter's analysis, 10,341,276 foreign born and 15,646,017 American-born children of foreign-born parents—25,987,203 in total—would have followed the Pied Piper, leaving a scant "50,000,000 native-born of native stock, including some 9,000,000 negroes."[174] New England, the mid-Atlantic region, and the West coast would have been reduced in population by fully fifty per cent; the continental United State would have lost 34.2% of its residents. New York City, furthermore, would have shrunk from its 3.5 million inhabitants, as per the previous census, to a mere 800,000; Philadelphia would have been reduced by half, and so forth. The extensive analysis goes on to project the losses to industry as a result of this imaginary Pied Piper scenario, a projection that mirrors the dénouement of Browning's poem. Just as Greenway's illustrations of the children's exodus tell a tale about the

[172] "Piping Off the Foreigners," *New York Times*, 3 March 1907, 6.

[173] Ibid.

[174] Ibid.

financial evaluation of human life, the *Review of Reviews* configures the ramifications of the rat/immigrant removal in terms of cost to the economy and national well-being.

BODY COUNT

The ideological gulf between Ehrhart's cartoon and the *Review of Review*'s calculations could not be overstated. Erhardt's cartoon is a critique of the perceived lenience of U.S. immigration policy, whereas the *New York Time*'s interpretation of the *Review of Reviews*' statistical hypothetical seemingly celebrates the benefits to national industry of United States immigration policy. The positive slant of the *Review of Reviews*' calculations are, of course, somewhat tarnished by its reliance on the popular association of immigrants and vermin—it is, after all, the famed rat-catching Pied Piper who lures the nation's immigrant populations away. The conflation of vermin, immigrants, and virtually unquantifiable numbers triangulated in Erhardt's cartoon and the *Review of Reviews*' statistical calculations was a point of fascination and anxiety for New Yorkers around the turn of the century. In the chapter "Let Us Go A-Slumming," in *The Real New York* (1904), for example, Rupert Hughes declared that the inhabitants of a Jewish section of the city "look like beggars and live like vermin."[175] Later in the chapter, he neatly joined the twin concerns that appear to connect *The Fool Pied Piper*, the *Review of Reviews*' hypothetical Pied Piper scenario, and *Forty-two Kids* when he linked enumeration and a rodent metaphor. Of a tenement neighborhood bounded by Cherry, Catharine, Hamilton, and Market Streets, Hughes calculated: "This one block of six acres, which a farmer would count hardly big enough for a pasture, houses a city of more

[175] Rupert Hughes, *The Real New York* (New York: The Smart Set Publishing Company, 1904), 334.

than 3,000 persons; on each acre there is an average of 478 men, women and children living a prairie-dog life."[176]

The cause of the anxiety aroused by situations like the Hughes's prairie-dog city is suggested by Ehrhardt's swarm of foreign rats. In the late nineteenth century, immigrants became associated with deadly epidemics, such as cholera, smallpox, typhus, and leprosy. The *New York Times*, for instance, declared Russian and Polish immigrants as "ideal medium[s] for the diffusion of cholera germs because of their extreme filth."[177] Foreignness has long been medicalized as a contagious threat to the nation-state,[178] and the diseases Ehrhart's rats carry transcend the specifically biological and bacteriological: they threaten to infect the national body with defective genes, degenerate morals, and political destabilization. This was a fear echoed in the national press. "The alarm springs from the constantly increasing influx within our borders of classes of immigrants of a most undesirable character," wrote Senator William Eaton Chandler in an article in the popular monthly *The Forum*. He continued, "The danger is the reduction of wages to the injury of the American workman, and of his home and family, the debasement of the suffrage, and wide contamination of society.[179] Unsurprisingly, he makes his point by declaring, "it is necessary to look at a few statistics," before providing a series of charts detailing immigration statistics for the previous eighty years. His numbers demonstrate that "about one-half" of those people entering the United States in the previous year "is

[176] Ibid., 340.

[177] "The Only Safe Course," *New York Times*, 1 September 1892, 4.

[178] Roxana Galusca, "From Fictive Ability to National Identity: Disability, Medical Inspection, and Public Health Regulations on Ellis Island," *Cultural Critique* 72 (Spring 2009), 138.

[179] William Eaton Chandler "Restricting Immigration." *The Forum* 13 (March 1892): 128.

composed of the very worst class of immigrants. They are illiterate, coarse, and stupid—utterly unfit for residence or citizenship in the United States.[180] Chairman of the U.S. Senate Committee on Immigration, Chandler was a prime motivator of the Immigration Act of 1891, which placed the administration of immigration issues under the purview of the federal government. Responsible for the passage of some of the most restrictive immigration regulations at the end of the nineteenth century, he also lobbied for the Rayner-Harris National Quarantine Act of 1893, which set up procedures for the medical inspection of immigrants and permitted the president to suspend immigration on a temporary basis.

Between 1890 and 1920, some 23 million immigrants entered the United States. *The Christian Advocate*, linking typhus, contamination and filth to this influx of undesirable immigrations, called for a total ban on immigrants from "infected" ports of Russia, in which famine and fever were rampant because of the "notoriously filthy life of the Russian peasant.[181] The *New York Times* warned that the "United States would be better off if ignorant Russian Jews and Hungarians were denied refuge here. These people are offensive enough at best; under the present circumstances they are a positive menace to the health of this country. Even should they pass the quarantine officials, their mode of life when they settle down makes them always a source of danger. Cholera, it must be remembered, originates in the homes of human riffraff."[182] Plenty of cartoons riffed on the notion that cholera and other diseases were imported phenomena (Figs. 4.66 and

[180] Ibid.

[181] "Health: Famine and Fever," *Christian Advocate*, May 67 (1892): 320.

[182] "Progress of the Cholera," *New York Times*, 29 August 1892, 2.

4.67). In a slightly more charitable moment, the same newspaper could conceded, "Ignorance and dirt are the chief characteristics of the average immigrant."[183]

With the Immigration Act of 1891, the federal government began a concerted and regimented surveillance of individuals crossing the nation's borders. Bans were established to prevent the entrance of criminals, polygamists, and prostitutes, among other undesirables. Exceeding the prohibitions enacted by the Immigration Act of 1882, the first major congressional law to limit immigration, the Immigration Act of 1891 barred "all idiots, insane persons, paupers or persons likely to become a public charge."[184] Persons suffering from "moral turpitude" and "loathsome or dangerous contagious disease[s]" were prevented from entering the country.[185] In 1907, the "feebleminded" were added to the exclusion list. According to some, the restrictions were not stringent enough. This opinion is expressed in "The Fool Pied Piper," with its virtually unquantifiable infestation of disease-bearing rat-immigrants.

Limitations, quotas, and restrictions were instigated to protect against the importation and transmission of disease. The efficacy of these federally-mandated limitations, quotas, and restrictions relied on the accurate counting of and accounting for immigrant bodies, both those newly arriving and those already residing in the United States. As the medical historians Howard Markel and Alexandra Minna Stern have noted, "one of the most insidious and powerful rationales for restricting immigration was the

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[183] "More Typhus Cases Found," *New York Times*, 13 February 1892, 2.

[184] 1891 Immigration Act *(An act in amendment to the various acts relative to immigration and the importation of aliens under contract or agreement to perform labor)*, Sess. II Chap. 551; 26 Stat. 1084. 51st Congress; March 3, 1891; http://library.uwb.edu/guides/USimmigration/26%20stat%201084.pdf (8 July 2010).

[185] Ibid.

need to safeguard the national public health against contagious and infectious diseases, deleterious genetic traits, and chronic disabilities."[186] Americans have tended to view illness among immigrants already settled in the United States as an imported phenomenon.[187]

Articulating a deep distrust of recently emigrated Italians and Russian residents in U.S. cities (and relying on language associating them with vermin and rodents), Dr. Cyrus Edson, a New York physician and high-ranking official in the New York City Health Department, wrote: "They are sullen and suspicious and refuse all [health] information asked by Americans. When it comes to questions of disease, they will hide in closets, burrow in cellars, run away, do anything to avoid the visit of a physician and lie with the most magnificent elaboration as to all matters touching their own sickness or those of their neighbors.[188] Counting and monitoring these bodies, and the risk of spreading contagious disease that they represented posed an unprecedented administrative challenge. By 1907, Ellis Island, which processed the majority of immigrants entering the country, often received more than 10,000 immigrants on any given day and over 500,000 a year.[189] Keeping track of the influx of bodies and screening them for physical and moral fitness required an unprecedented level of statistical control.

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[186] Howard Markel and Alexander Minna Stern, "Which Face? Whose Nation? Immigration, Public Health, and the Construction of Disease at America's Ports and Borders, 1891–1928, *American Behavioral Scientist* 42, no. 9 (June/July 1999): 1314.

[187] Alan Kraut, *Silent Travelers: Germs, Genes, and the "Immigrant Menace*," (1994).

[188] Cyrus Edson, "Averting a Pestilence," New York Times, 7 August 1892, 1.

[189] Howard Markel and Alexander Minna Stern, "Which Face? Whose Nation? Immigration, Public Health, and the Construction of Disease at America's Ports and Borders, 1891–1928, *American Behavioral Scientist* 42, no. 9 (June/July 1999): 1317.

The future fitness of the nation was linked quite explicitly with control over the numbers, particularly those deemed unhygienic or unfit. Counting promised a form of control over the nation's swelling population. But individuals first had to be reconfigured as types: foreign, naturalized, feebleminded, diseased. To this end, the 1890 census added questions pertaining to physical and mental health and criminal history. Question 22 asked whether the respondent was "suffering from acute or chronic disease;" Question 23 asked whether the respondent was "defective in mind, sight, hearing, or speech, or whether crippled, maimed, or deformed;" and Question 24 asked if the respondent were a "prisoner, convict, homeless child, or pauper."[190] The payoff to collecting these and other vital statistics is that seemingly random phenomena like disease, crime, and death could be made to appear to occur at pretty consistent and thus map-able, predictable, and manageable rates.[191] To this end, the *Statistical Atlas of the United States* (1898) analyzed census data and medical statistics to map disease rates by age, sex, and geography (Fig. 4.68).[192] Contraction of a contagious disease, formerly considered accidental, was reformulated graphically in terms of probability.

Importantly, this kind of analysis elides individuals in favor of norms, trends, types, and averages. Seemingly random data points are fitted to smooth Normal curves or trend lines, as in, for example, the graph of average life expectancies and death rates based on actuarial analysis of 1880 census statistics published in *Scribner's Statistical*

[190] 1890 Census Form, U.S. Census Bureau; http://www.census.gov/prod/www/abs/decennial/1890.html (June 2010).

[191] See, for example: "New York: Number of Deaths, by States, Age and Sex, and Specified Disease," *Eleventh Census of the United States, 1890*.

[192] "Deaths from Known Causes" [diarrheal disease; typhoid fever; consumption; diptheria], *Statistical Atlas of the United States* (1898).

Atlas of the United States (c.1883; Fig. 4.69).[193] In order to extract such statistical "facts" from the raw data, individuals and experiences had to be rationalized and converted to aggregate probabilities distributed across large populations. As the influential statistician Adolphe Quetelet put it, it was vital to regard an individual "only as a fraction of the species."[194] Around 1900, innovative techniques were developed to visualize, dramatize, and publicize the perceived facts, trends, and laws revealed by such comparative statistical analysis. Americans became familiar with this new mode of representational statistical calculus as they began to think, speak, and see their world in terms of statistics, odds, risk, chance, and contingency. I suggest that *Forty-two Kids* is a product of and contributor to his turn-of-the-century statistical worldview.

A cartoon parody of *Forty-two Kids* supports this contention. Despite its humorous veneer, "*Eighty Four Legs" by Geo. Bellows* replicates the quantitative and taxonomic statistical logic of the painting (Fig. 4.70). Enumerating the kids as an accumulation of body parts, the cartoon further fragments and dehumanizes them. "Eighty Four Legs" highlights Bellows's reduction of individuals to a typical statistical sample: a random "fraction of the species" composed of countable fragments. The cartoon riffs on the un-countability at the heart of Bellows's painting in its attempted enumeration. Evoking the identification keys accompanying multi-figural prints or historical maps, the cartoon attempts to literally number the boys (Fig. 4.71). At first glance, the accompanying cipher seems to correspond to a color palette. It might also be

[193] "Mortality (Expectation of Life—Death Rate)," *Scribner's Statistical Atlas of the United States* (c.1883).

[194] Lambert Adolphe Jacques Quetelet, *A Treatise on Man and the Development of His Faculties*, transl. R. Knox (Edinburgh: Chambers, 1842), 5.

interpreted, though, as a code referencing ethnicity: "Naples Yellow" calls to mind southern Italians, an influx of which had arrived in New York City from the 1890s; "Emerald Green" recalls the symbolic color of Ireland, the "Emerald Isle."

If nothing else, the cartoon highlights the twinned concerns of *Forty-two Kids*—enumeration (forty-two) and categorization ("kids")—confirming Bellows's painting as a statistical project dependent on counting and classification. The endeavor, the cartoon implies, is ultimately unsuccessful. Forfeiture is signaled by the caption's concluding *et cetera* ("&c"). This anonymous cartoonist provides as perceptive a commentary as any art critic in offering a gloss on the central issue of Bellows's painting. The cartoon does this by literalizing the process by which *Forty-two Kids* tapped into the broader cultural anxieties I have attempted to map heretofore. That is, the cartoon attempts to enumerate what is an inherently unquantifiable tangle of bodies, thereby replicating the conflicted visual experience of Bellows's audience. *Forty-two Kids*, after all, presents an imperfect and discomfiting visual census. And this seems to be the central message of the cartoon: its unreadability precludes the very task it demands. That task, of course, is to "count 'em." The image, in other words, sabotages any attempt to answer the question implicit in the painting's title.

Around the same time that he painted *Forty-two Kids*, Bellows painted a series of individual portraits of lower class children that have been read by art historians as sympathetic to their subjects. If the statistical logic of *Forty-two Kids* elides individuals, then portraits like these would appear to reclaim that individuality. But even in his individual portraits, Bellows seems unable or unwilling to resist the typological urge. Titles like *The Newsboy* (1908) and *Frankie the Organ Boy* (1907, Fig. 4.72 and Fig.

4.73) push portraiture into the realm of the typological: they are representative samples, statistical averages. *The Newsboy* and *Frankie the Organ Boy* take their place in a tradition of portrayals of urban street children from the nineteenth century. David Gilmour Blythe, who specialized in such depictions, is an obvious precursor. In paintings such as *A Match Seller* (c.1859; Fig. 4.74), Blythe exaggerated the nastiness of the city's wretched youth, his "urchins…seem less like ordinary children than dwarfish men, their grotesque physical irregularities emblematic of disorder of the larger social body."[195]

Bellows's *Paddy Flannigan* (1908, Fig. 4.75), *Cross-Eyed Boy* (1906, Fig. 4.76), and *Portrait of a Laughing Boy* (1907, Fig. 4.77) similarly draw on current physiognomic theories.[196] At the end of the nineteenth century, the body was examined as the point of intersection of multiple scientific, medical, and folk discourses. A widespread idea that bodies might testify, or be made to testify, to legal and scientific "truths" was built upon a set of eighteenth-century pseudoscientific techniques that claimed to be able to read internal disposition and character in an individual's outward appearance. The visible body was imagined to be an index of an individual's interior state, a sign of the evolutionary status of peoples and races, and a valuable indicator of present and future risks to dominant social groups. Criminality, perversion, and deviance were believed to be signified by anatomy.[197] And so bodies were measured, manipulated, shocked,

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[195] Sarah Burns, *Painting the Dark Side: Art and the Gothic Imagination in Nineteenth-Century America* (Berkeley: University of California Press, 2004), 70.

[196] Hutton, for example, has suggested that the claw-like or paw-like appearance of the hands in *Paddy Flannigan* and *Frankie the Organ Boy* situates Bellows's imagery in the context of turn-of-the-century theories of "social types." Hutton, 22.

[197] Allan Sekula, "The Body and the Archive: The Use and Classification of Portrait Photography by the Police and Social Scientists in the Late 19th and early 20th Centuries," *October* 39 (Winter 1986): 3–64; David Green, "Veins of Resemblance: Photography and Eugenics," *The Oxford Art Journal* 7, no. 2 (1984): 3–16; Sander L. Gilman, *Seeing the Insane: A Cultural History of Madness in Art in the Western World*

sketched, photographed, and scrutinized to guide the identification, surveillance, and corrective treatment of individuals.[198] *Paddy Flanagan*, in particular, expresses his character according to this notional set of theories. He stands with left arm akimbo and his head cocked aggressively. His hooded eyes and curled lip convey an attitude of cocky confidence bordering on arrogance. The bare torso adds a soupçon of pugnacious physicality. His protruding front teeth, which appear to be bordering on too large to fit in his mouth, also lend the lad the snarling mien of an untamed animal, all of which was fully in keeping with racial stereotypes linking the Irish with simian features and character.

The idea that essential internal character was revealed in the details of unconscious facial expressions was most famously explored by the French neurologist Jean-Martin Charcot in his photographic studies of women diagnosed as "hysterical" at Salpetriere. Charcot's work closely followed the logic of photographic studies made in 1862 by Adrien Tournachon, the brother of the photographer Nadar, to illustrate a book entitled *The Mechanism of Human Facial Expression*, written by Dr. Guillaume-Benjamin-Armand Duchenne de Boulogne, the founder of electrotherapy, in which electrodes were applied to the nerves and muscles of subjects' faces to artificially create

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(New York: John Wiley & Sons, 1985); David Horn, *The Deviant Body: Lombroso and the Anatomy of Deviance* (New York: Routledge, 2003); Georges Didi-Huberman, *The Invention of Hysteria: Charcot and the Photographic Iconography of the Salpêtrière* (Cambridge: MIT Press, 2003).

[198] New types of people and human acts come into being hand in hand with the invention of the categories labeling them (split-personality, pervert, suicidal, etc.), a historical process Ian Hacking calls "dynamic nominalism." Hacking, "Making Up People," in Thomas C. Heller, Morton Sosna, and David E. Wellbery, eds., Reconstructing Individualism: Autonomy, Individuality, and the Self in Western Thought (Stanford: Stanford University Press, 1986), 236.

expressions specific to each emotion (Fig. 4.78).[199] Tournachon's photographs were also used to illustrate Charles Darwin's *The Expression of the Emotions of Man and Animals*, which was first published in 1872 (Figs. 4.79 and 4.80). In *Expression*, Darwin argued that human expressions of emotions are universal (that is, innate, not learned) and the product of inheritance. Neither our expressions nor our emotions, Darwin argued, are unique to human beings; other animals have some of the same emotions, and some of the expressions shown by animals resemble our own.[200] As Duchenne had used Tournachon's photographs to illustrate the universality of human facial expression, Darwin used them to illustrate cross-species similarity, comparing them to drawings made of animals, specifically apes and dogs. Bellows's portraits of individual boys fully engage with this contemporaneous line of reasoning. If anything, Bellows's portraits of individual kids replicate the very problems of anonymous typology and deindividualization engendered in *Forty-two Kids*.

MONSTERS

Forty-two Kids embodies an anxiety about the relationship between numbers and bodies by depicting a population comprising ghostly figures, disfigured physiognomies, and inhuman anatomies. Floating at the edges of the frame, Bellows's kids hover half-

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[199] G.-B. Duchenne de Boulogne, *The Mechanism of Facial Expression*, ed. and transl. R. Andrew Cuthbertson (Cambridge: Cambridge University Press, 1990). On Duchenne's photographs, see Robert Sobieszek, "'Gymnastics of the Soul': The Clinical Aesthetics of Duchenne de Boulogne," in *Six Exposures: Essays in Celebration of the Opening of the Harrison D. Horblit Collection of Early Photography* (Houghton Library, Harvard University, 1999), 107-129; Nancy Ann Roth, "Electrical Expressions: The Photographs of Duchenne de Boulogne," in *Multiple Views: Logan Grant Essays on Photography 1983-89*, ed. Daniel P. Younger (Albuquerque: University of New Mexico Press, 1991), 105-138.

[200] Charles Darwin, *The Expression of the Emotions in Man and Animals* (1872, reprint; New York: Oxford University Press, 1998).

visible in dark, impenetrable water (Figs. 4.81). They evaporate into smudgy half-hallucinations and fade into murky shadows (Fig. 4.82). They adamantly refuse to be fixed as visible and countable bodies. Despite the enumerative title, *Forty-two Kids* testifies to the impossibility of enumerating particular kinds of bodies. Reduced to nonhumans, Bellows's census reproduces the very problems of anonymity and deindividualization engendered by statistics: understood typologically, Bellows's "kids" cannot be individuated. Thus, they cannot be effectively counted. Bellows reportedly said "One can only paint what one sees," but *Forty-two Kids* confounds such idealized, empirical vision.[201] It demands to be scrutinized, but it cannot offer the gratification of complete visual mastery. It derails the utopian Progressive faith in census statistics that declared that counting could control and reform the world. One might even say that Bellows initiates a search for documentary, numerical knowledge even as he indicts statistics as an inherently fruitless method for achieving such documentation.

In a similar manner, Stephen Crane marks the arbitrary and indeterminate by exposing the pretense of exactitude in his short story "The Monster." Published in August 1898 in *Harper's Magazine*, "The Monster" details the ramifications of an accidental fire at the house of Dr. Trescott. Johnson, Trescott's black coachman, undertakes a brave rescue mission to save Trescott's son Jimmie from the burning house. Johnson suffers severe injuries—physical and mental—in the process: "His body was frightfully seared, but more than that, he now had no face. His face had simply been burned away."[202] The

[201] Those Who Paint What They See," *New York Herald*, 23 February 1908, Literary and Art sec., 4.

[202] Stephen Crane, "The Monster," *Harper's New Monthly Magazine* 97, no. 579 (August, 1898), 356. All subsequent references will be to this, the original publication of Crane's story, and will appear parenthetically in the body of the text.

story details the town's uncharitable reaction to Johnson's loss of physiognomy: "Well, what makes him so terrible?" asked another. "Because he hasn't got any face," replied the barber and the engineer in duet" (361). The story addresses the anxiety aroused by Johnson's disfigurement and the consequent loss of racial signification and taxonomic classification. Crane's amorphous and unidentifiable monster—defaced, deformed, and disfigured to such a degree as to render his features all but unrecognizable—and the accident that caused it, are set in opposition throughout the story with the finite specificity of numbers. The story is marked by the repetitive iteration of numbers and the translation of objects and persons into numbers. The opposition highlights the terrible incomprehensibility of the accidental fire that forged the featureless man-monster. The random event and the non-human it created, in other words, are cast in high relief by its juxtaposition with the empirical logic of quantifiable and calculable integers prevalent elsewhere throughout the story.

The first instant in which a person is configured numerically occurs in the story's opening sentence, in which Jimmie, Trescott's young son, plays with his cart on the front lawn. He is pretending to be a train, "Number 36." "Little Jim was, for the time, engine Number 36, and he was making the run between Syracuse and Rochester. He was fourteen minutes behind time, and the throttle was wide open" (343). Train timetables precipitated the standardization and synchronization of national timezones in the nineteenth century. The railroad's need to maintain punctuality is referred to in Jim's "fourteen minutes." The deviation from the schedule, however, results in an accident. "In consequence, when he swung around the curve at the flower-bed, a wheel of his cart destroyed a peony. Number 36 slowed down at once and looked guiltily at his father, who

was mowing the lawn. The doctor had his back to this accident, and he continued to pace slowly to and fro, pushing the mower" (343).In this opening passage, Crane foreshadows the events of the story: an accident and an injury—the "broken flower." Crane also alludes to the disfiguring nature of the future fire in a sequence of facial references: Trescott is "shaving this lawn as if it were a priests chin"; "scanning [Jim's] countenance," and "During the delivery of the judgment the child had not faced his father" (343). The next section of the story begins with a sentence all but telegraphing the imminent facial injury: "It was apparent from Jimmie's manner that he felt some kind of desire to efface himself" (343).[203]

The fact that the "Number 36" destroyed the flower dialectically links numbers and accidents.[204] This relationship is played out again later in the story as fire engines respond to an alarm set off by a neighbor who first noticed Trescott's burning house. The alarm itself sets off a mass counting as the location of the fire is mapped numerically by a series of blasts from a factory whistle.[205] The fire department's response is also enumerated, as Tuscarora Hose Company Number Six, Chippeway Hose Company Number One, and Never-Die Hose Company Number Three respond to the scene. As in the opening scene, the mechanical and mechanistic "engines"—train and fire engine—are juxtaposed with an accident; the relationship, though, is inverted: Jim's "engine Number

[203] I thank Jonathan Auerbach for suggesting this parallel to me. Auerbach considers, briefly, the emotional content of the link between Jim's effacement in this opening scene and Johnson's later literal physiognomic defacement in his review of Bill Brown's *The Material Unconscious: American Amusement, Stephen Crane, and the Economies of Play* in *Resources for American Literary Study* 26, no. 1 (2000): 133.

[204] "Finally he went to the peony and tried to stand it on its pins, resuscitated, but the spine of it was hurt, and it would only hang limply from his hand. Jim could do no reparation" (343).

[205] "Suddenly, without preliminary bars, there arose from afar the great hoarse roar of a factory whistle…" "And then they wheeled upon each other simultaneously, and, in a single explosion, they shouted, 'One!' Again the sound swelled in the night and roared its long ominous cry, and as it died away the crowd of young men wheeled upon each other and, in chorus, yelled, 'Two!' There was a moment of breathless waiting. Then they bawled, "Second district!" (348).

36” caused the accidental injury to the flower while the numeral-bearing fire engines attempt to manage or control an accident. The battle to fight the fire is played out as a numerical contest: “Five!” “Let ‘er go, One!” “Here comes Number Three!” “That's Three a-comin’!” “Here’s Three!” (355).

“The Monster” concludes with a final flurry of numbers. A new character, John Twelve, is introduced on the penultimate page. The numerically and symbolically named Twelve, the “wholesale grocer, who was worth $400,000, and reported to be worth over a million,” visits Trescott along with “four very active and influential citizens” (374). Twelve, whose name evokes religion, law, and finance in one fell swoop (and whose name Crane repeats no fewer than eleven times in the final two pages of the story), counsels Trescott to disassociate himself from Johnson, whom Trescott is determined to repay for saving his son. After this meeting, Trescott goes home to his wife, who is upset and crying. Her weekly gathering of the town’s ladies was poorly attended, presumably as a result of Trescott’s continued support of Johnson. Mrs. Twelve had attended and appears to have delivered counsel similar to her husband’s advice to Dr. Trescott. Mrs. Trescott is distraught. The story concludes with Trescott enacting a census:

> Later, as he cast his eye over the zone of light shed by the dull red panes, he saw that a low table had been drawn close to the stove, and that it was burdened with many small cups and plates of uncut tea-cake. Glancing down at the cups, Trescott mechanically counted them. There were fifteen of them. ‘There, there,’ he said. ‘Don’t cry, Grace. Don’t cry.’ The wind was whining round the house, and the snow beat aslant upon the windows. Sometimes the coal in the stove settled with a crumbling sound, and the four panes of mica flashed a sudden new crimson. As he sat holding her head on his shoulder, Trescott found himself occasionally trying to count the cups. There were fifteen of them.

In littering “The Monster” with numbers, Crane both aligns and sets in opposition the empirical and the accidental, the enumerative and the indeterminate. In the end, as in

Bellows's *Forty-two Kids*, the enumerative logic of the census and its promise to control the chaotic seemingly fails to offer real comfort. Indeed, Trescott's repeated attempts to tally his wife's teacups, and the critics repeated miscounts of Bellows's kids, suggest that the act of observation and enumeration was an inherently indeterminate operation marked by the law of error. Counting, for Bellows and Crane, was subject to the laws of chance and was a speculative endeavor.

CONCLUSION

The slums were described as breeding grounds to filthy beasts: lairs, hives, warrens, and so forth. But around 1900 the city itself was also oft-likened to an organism; as one historian recently put it, "a grubby, often odorous body."[206] Crane provided one of the more distasteful bodily metaphors for the city's tenement neighborhoods in his 1893 novel, *Maggie: A Girl of the Streets*, when he likened the "dark region" and "the dozen gruesome doorways" of the slum's "careening building[s]" to a giant mother that "gave up loads of babies to the street and gutter."[207] This rather unpleasant obstetric image resonates with Bellows's painting: his jumble of entangled bodies might well be siblings to Crane's slum-gutter infants. For, even as "the American stock is dying out for want of children," as Jacob Riis put it, less desirable immigrant kids, or "bewildering swarms of youngsters," were, as Bellows and Crane confirm, omnipresent in virtually unquantifiable numbers.[208]

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[206] Peter Conrad, *The Art of the City: Views and Versions of New York* (Oxford: Oxford University Press, 1984), 92.

[207] Stephen Crane, "Maggie: A Girl of the Streets" (1893), in Joseph Katz, ed., *The Portable Stephen Crane* (New York: Penguin Books, 1969), 7.

[208] Riis, 28.

Crane and Bellows betray an anxiety about numbers: like Crane's "loads of babies" spilling from "dozens of gruesome doorways," the swarms of insects, microbes, and rats to which Bellows's kids were likened are characterized by their profusion and rapid reproduction rates. Assigning them a fixed number would seem to offer an illusory modicum of control: a logic or limit to their alarming abundance. This is, after all, the unarticulated desire that underwrote the many charts and graphs plotted from census data around 1900: the imposition, that is, of statistical order and rational taxonomy upon the nation's rapidly increasing heterodox population. Indeed, *Forty-two Kids* rhymes visually with data tables like "Growth of States in Population," published in *Scribner's Statistical Atlas* (c.1883; Fig. 4.83). In this population growth chart, individuals are abstracted numerically and fit into a rational structure designed to render digestible otherwise incomprehensible incremental surges in population. Similarly, the vague grid formed by the rough-hewn planks of *Forty-two Kids*' wharf provides a stable compositional platform for the jumble of bodies distributed seemingly at random across the canvas. The grid promises order and control. It connotes rational organization and empirical measurement, given its association with map coordinates, graph axes, and other scientific imagery that signifies, rightly or wrongly, fact, truth, and objectivity.[209]

The taxonomic logic of Bellows's grid, though, is overwhelmed by the haphazard scattering of bodies across it. Indeed, despite its enumerative title, *Forty-two Kids* ultimately fails to assuage the anxieties associated with its subject—anxieties relating to

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[209] Rosalind E. Krauss, "Grids," *The Originality of the Avant-Garde and Other Modernist Myths* (Cambridge, MA: MIT Press, 1985), 9. John Fagg makes the connection between Bellows's wharf and the logic of the grid in his articulation of the reality / accuracy claims of Bellows' painting, but ultimately denies the applicability of Krauss' argument to Bellows's painting. Bellow's grid, in Fagg's opinion, is "staunchly representational" and "ambivalent" in its relationship to the "outside world" as it "simultaneously denies and asserts a world that extends beyond the canvas." Fagg, 45.

contagion, reproduction, and disease. In short, it stands in direct opposition to the progressive era's utopian faith in the census. In counting and accounting for his kids, Bellows obliterates them, reducing them to a tangled statistical lump. Instead of offering a reassuring census, *Forty-two Kids* calls into question the efficacy of the enumerative exercise itself. Rather than an accurate headcount, *Forty-two Kids* proves to be a useless statistic. *Forty-two Kids* comprises a realism that confounds vision, undermining a rational, quantified, and causal view of the modern world on which statistical probabilism relies. The painting's internal dialectic between the random distribution of bodies and the grid-like structure of the wharf, furthermore, mirrors the tension between the numerical specificity of the "forty-two" and the taxonomic arbitrariness of the "kids" in the title. The amorphous and indeterminate social body of the lower East side is underscored by the impossibility of the statistical census to truly control bodies as it promised. *Forty-two Kids* exposes the dream of enumeration as a means of controlling chance—random contagion, chaotic reproduction, and uncontrollable bodies—as precisely that: a dream.

Conclusion

The sociologists Ulrich Beck and Anthony Giddens have written that the twinned concepts of risk / chance define the essence of modern society.[1] We live in what Beck has popularly called a "risk society." The last century has been marked by social flux, economic failures and bailouts, political unrest, revolution, warfare, genocide, terrorism, famine, natural disaster. Rapid and unchecked advances in technology, genetics, and industry and the unforeseen and uncontrolled ramifications thereof (mad cow disease, global warming, genetic modification, etc.) have exponentially increased the number of potential hazards to which we might be exposed. We are also more aware of them through unrelentingly insistent and alarmist 24-hour media outlets. We have come to accept that risk / chance impacts every aspect of our lives, on an individual and global level, and we guard against potential consequences by investing in various forms of insurance. We accept that accidents happen. We accede that investing in insurance coverage is an acceptable way to manage the ramifications of chance. We acquiesce to having our lives calculated as a financial value predicated on medical examinations, vital statistics, family history, and lifestyle choices. This was not always the case, and the path by which we arrived at this state of affairs took a series of radical turns with the rise of the insurance industry at the end of the nineteenth century with the birth of what François Ewald calls the "insurance society," in which statistics, norms, and averages function as

[1] Beck, *Risk Society* (1992); Giddens, *Consequences of Modernity* (1990).

organizing principles of disciplinary power, providing standards of measure by which risk could be calculated according to rules of statistical probability.[2]

At the end of the nineteenth century, the burgeoning insurance industry had to convince potential subscribers that it was both necessary and acceptable to invest in a new scheme that attached a financial value to life, death, and injury. Initially, life insurance was seen as tantamount to tempting fate. It was decried as sacrilegious, and characterized as nothing more than a form of gambling. The insurance industry had to convince prospective customers otherwise, which it undertook to do through an extensive advertising campaign in which the world was represented as a place of ubiquitous risk manageable only through investment in an insurance policy. Companies like Travelers, Metropolitan Life Insurance Company, the Equitable, and others dedicated great energy to convincing Americans that they lived in an accident-prone world.

To illustrate this, the insurance industry trafficked in images and rhetoric aimed at convincing potential subscribers to view their world as a place of high risk and imminent accident, injury, and death. Insurance companies designed trade cards and advertisements that featured images of uninsured people assessing their immediate vicinity for previously invisible threats, perils, and jeopardy. At the same time, the insurance industry attempted to convince potential customers that the risky world in which they lived operated according to predictable rules: statistics showed that accidents, on average, happened regularly. The most important rule, paradoxically, was that no single accident, disaster, wreck, or other misfortune could be prognosticated with ultimate precision. It could be you, in other words, but you couldn't know when. Dangerous events that could

[2] Ewald, "Insurance and Risk," 203.

happen at any time were foreseeable with a sort of actuarial second sight that exposed the modern world as a hazardous place replete with unavoidable but estimable risk.

I have attempted here to reveal what I have called an actuarial cognitive style, following art historian Michael Baxandall, who has suggested that social facts lead to the development of visual habits and skills, which, combined with real experience, contribute to a "cognitive style." An actuarial cognitive style reveals the social facts, visual habits, and skills endorsed and rewarded in a society managed by an increasingly powerful insurance industry. Americans were taught to act, in part, as insurance underwriters, assessing personal risks according to probabilities informed by widely published and illustrated vital and accident statistics and estimating the potential ramifications, in terms of injury and financial cost, of any assessed risk. My dissertation demonstrates that as Americans began to think, speak, and visualize their world and lives in terms of risk, odds, and contingency, a statistical and actuarial calculus manifested in works of art. Visual culture fully engaged with the abstract concepts—chance, risk—and mathematical disciplines—statistics, probabilism—that informed this emerging actuarial worldview. I have examined how a select group of important American paintings and photographs was informed by the insistent discourse surrounding chance and insurance's increasingly social potency at the end of the nineteenth century and beginning of the twentieth century.

Winslow Homer's *The Fog Warning* can be read as an image of risk analysis intimately connected to the insurance industry's construction of the world as a place of predictably unpredictable risk. Images of actuarial second sight—seeing previously invisible potential hazards everywhere—found in insurance industry advertising resemble

Homer's pictures of peril at sea. Homer's endangered fishermen gaze towards a horizon where hazard looms. The motif mirrors insurance advertising images of the uninsured beholding, as if for the first time, spectral visions of impending disaster, imminent accident, or proximate injury. Insurance advertising presented accidents as facts, unseen but expected, if not predictable, their regularity established by the laws of probability. They were, in effect, ordained as constants in a modern world of risk—their randomness assumed and consequently tamed by the laws of probability. The iconography and internal compositional logic of *The Fog Warning* replicates an insurance-underwritten vision of the world as a place characterized by unpredictable peril, unforeseen accident, and chance misfortune.

François Ewald has argued that insurance should be understood as a disciplinary institution that produced certain kinds of modern individuals: modern subjects for a modern insurance society. Part of the process of constituting modern subjects at the end of the nineteenth century involved training them to think, speak, and visualize the world in terms of risk, odds, and contingency. Homer's paintings of peril at sea, *The Herring Net*, *The Fog Warning*, and *Lost on the Grand Bank* reveal art's role in this process. Not only do Homer's paintings incorporate the message of risk assessment promoted in insurance advertisements and other marketing materials, but Homer's paintings also expose the savvy way insurance positioned itself as an extension of traditional means of negotiating the unforeseen accidents of life and the grim realities of death. New forms of hazard and peril arose from urbanization, industrialization, and technological advances, such as factory mechanization and the increased velocity and prevalence of motorized transport. In tandem with these modern hazards, the insurance industry designed

innovative, commodified, and extensive forms of actuarial coverage that were marketed as a natural and suitable extension of traditional forms of relief formerly provided by community, church, fraternities, and *ad hoc* charity organizations. Insurance marketing accomplished this by billing the act of insuring one's life for the benefit of one's family as a spiritual and moral imperative. Homer's fishermen should be viewed not as some sort of anti-modern, nostalgic, or romantic hero, but fully self-aware participants in the successful triumph of modern insurance as a form of faith in a modern world of risk.

A second component of the production of modern individuals for a modern insurance society involved training individuals to understand themselves as both unique and as fractional components of a larger population. Insurance does not care about individuals. It cares about vital statistics and the laws of averages, norms, probabilities, percentiles—in short, the human equivalent of risk. At the end of the nineteenth century, the Norm functioned as an organizing principle of disciplinary power. The Norm, the standard of measurement by which each individual is compared and to which each individual compares him- or herself in a society managed by insurance, creates equivalency even as it reinforces individuality and irreducible particularity. Individual difference in a modern insurance society exists only in comparison to the Norm. Around 1900 blurred faces in composite photographs made following Francis Galton's method and pictorialist photographic portraits by Edward Steichen embodied the idealizing logic of statistical averaging; that is, the simultaneous representation and erasure of individual difference and accidental variation. The blur was an aesthetic means of portraying both the individual *qua* individual *and* the individual configured and accounted as such in relation to a Norm established by the statistical averaging of the entire population of

which the individual was a member. The blur signified both the individual and his or her relationship to a larger population.

Pictorialist portraiture negotiates between competing models of modern subjectivity that are signified by the blur around 1900. On the one hand, a robust, humanist model in which the soul is essential and unique evoked by associations between the blur and fine art, aesthetics, and individual subjectivity, of artist and sitter. On the other, a statistically-informed mechanistic model in which individuals are accounted for in relation to norms, averages, and percentages extracted from large populations. Pictorialist portraiture has long been championed as the expression of the former, but it was equally informed by the latter at a moment when individuals were being recalculated in relation to statistical norms, an integral step in the emergence around 1900 of a society managed by the actuarial logic of the rapidly expanding insurance society. Locating Steichen's blurry portraits in a broader context of blurred physiognomies around 1900 that included idealized composites of female college students and the Madonna made after Francis Galton's method allows us to reinterpret Steichen's portraits in a new, statistically oriented context. Steichen's hazy soft-focus, artful gum-dichromate smears, and hand-tinted pigment printing both masks *and* reveals the ubiquitous reality of contemporaneous social statistics that lurk in the blur's popular meanings at the turn-of-the-twentieth-century. Edward Bellamy's statistical utopia, Galton's eugenics, and insurance's average Americans comprise the broad culture of images and ideas in which Steichen's portraits were made and to which they, in turn, contributed. It is within this context that pictorialism can more productively be situated.

The liminal space or white noise between the individual case and the statistical average embodied by the photographic blur around 1900 is expressed in a different way by George Bellows in the curious number forty-two. Specific, but slippery and difficult to corroborate, Bellows's tally in his remarkable painting *Forty-two Kids* falls somewhere between exact headcount, representative random sample, and projected estimate. By essentially enacting a failed census, Bellows's painting engages and undermines a Progressive, quasi-utopian faith in statistics as a means of controlling chance by exposing the arbitrariness and indeterminacy of enumerative exactitude. By betraying enumeration as an act subject to the law of error and as such exposing it as an inherently speculative operation, Bellows's point of view conforms to Charles Sanders Peirce's description of a world of "absolute chance" characterized by uncertainty and speculation. *Forty-two Kids* shows us that by 1907 the faith in enumerative control over chaotic and random bodies and events expressed by statistically minded theorists in the nineteenth century was beginning to erode. Located at the margins of society and the margins of the city, Bellows's forty-two kids betray the fallibility of social reformers' investment in numbers. Indeed, they expose the margin of error inherent in any attempt to count and control.

In the wake of the Civil War, providentialism gave way to a mode of statistical determinism, which, in turn, gave way to an acceptance that things "just happened." Bellows presciently heralds the moment when chance was ceasing to be characterized as the essence of lawlessness. Rather, as Hacking has elucidated, it was understood to lie at the core of all laws of nature and society. Chance was both appealing and terrifying. It could paradoxically provide an illusion of control, in terms of probability or odds, even as it represented the omnipresence of doubt, risk, and uncertainty. Hacking has suggested

that statistical probabilism "tamed" chance during the nineteenth century.[3] But, the process of taming chance paradoxically instantiated its ubiquity and indeterminate nature. Bellows appears to have knowingly mined this dynamic, embracing the creative and thematic potential of the indeterminate. By so doing, he anticipated later artists and authors who fully embraced chance as a subject and compositional (or anti-compositional) strategy.

This dissertation builds upon recent social histories of chance, enhancing and complicating them by considering understudied imagery—photographs, prints, illustrations, and films of accidents and natural disaster; insurance advertising; Galtonian composite photography; statistical atlas graphics; popular images of microbes—and period documents heretofore overlooked by art historians—census questionnaires; actuarial life tables; the rhetoric of contagious disease, Edward Bellamy's *Looking Backward*—to reveal not only how this material informs major works of art by Winslow Homer, Edward Steichen, and George Bellows, but also how visual culture, both "high" and "low," participated in underwriting an emerging conception of the world as an ultimately indeterminate, chance-based system suitable for management by the insurance industry.

[3] Hacking, *Taming of Chance* (1990).

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