



# HOW OUR DAYS BECAME NUMBERED

Risk and the Rise of the  
Statistical Individual

DAN BOUJ

—SAFETY—KODAK

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Statistical Individual

DAN BOUK

The University of Chicago Press  
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*For my parents,  
Gail and Ted Bouk*



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For all our days are passed away in thy wrath: we spend our years as a tale that is told. / The days of our years are threescore years and ten; and if by reason of strength they be fourscore years, yet is their strength labour and sorrow; for it is soon cut off, and we fly away. / Who knoweth the power of thine anger? even according to thy fear, so is thy wrath. / So teach us to number our days, that we may apply our hearts unto wisdom.

PSALM 90:9–12, *King James Bible*

Do you suppose, he can be estimated by his weight in pounds, or, that he is contained in his skin,—this reaching, radiating, jaculating fellow?

RALPH WALDO EMERSON, "Fate," from *Conduct of Life*





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PREFACE

## Strange Books

In 1936, James Cain's *Double Indemnity* drew popular attention to a peculiarly modern substantiation of fate. At a crucial moment in the novel, Keyes, the hardened claims adjuster, explains to his younger boss, Norton, how closely life insurers have circumscribed the known world. Keyes does not yet realize that the novel's protagonist—an agent—murdered a company policyholder. But he *knows* that the policyholder did not commit suicide by jumping from a train, despite all the evidence pointing to that conclusion. Keyes shows his boss a book full of tables and says, "Here's what the actuaries have to say about suicide." He goes on: "Here's suicide by race, by color, by occupation, by sex, by locality, by seasons of the year, by time of day when committed." He continues: "And here—here, Mr. Norton—are leaps subdivided by leaps from high places, under wheels of moving trains, under wheels of trucks, under the feet of horses, from steamboats. *But there's not one case here out of all these millions of cases of a leap from the rear end of a moving train.* That's just one way they don't do it."<sup>1</sup>

*How Our Days Became Numbered* tells the story behind the books of figures that captured Cain's imagination, a story of Americans seeking certainty and security in an unsettled, industrializing nation and becoming statistical subjects in the process. It tells a story of those who became the sometimes grudging objects of powerful corporations' efforts to forecast their deaths in the years after the Panic of 1873, of those who more happily accepted corporate help to lengthen their lives in the early twentieth century, and of those who submitted to a new system created by the United States government during the Great Depression that would predict the course of

1. James M. Cain, "Double Indemnity," in *Cain x 3* (New York: Alfred A. Knopf, 1969), 417.

their wage-earning lives. It tells the story of statistical systems built around promises of protection from financial ruin that developed into systems for strengthening and reforming bodies too. Such systems made Americans into risks and in the process numbered their days.

Three years before Cain's book appeared, in 1933, Metropolitan Life Insurance Company statisticians Louis Dublin and Bessie Bunzel published *To Be or Not to Be: A Study of Suicide*. Page 59 featured a table of "suicides from jumping," and while it failed to distinguish between leaps under trucks and leaps under horses' feet, Dublin and Bunzel did compare jumps from skyscrapers to jumps from atop a barn.<sup>2</sup> And the book made age, sex, occupation, location, and race crucial factors in explaining and understanding suicide. Cain exaggerated the details, but not the spirit of the enterprise.

Dublin and Bunzel's book belonged to a long tradition in and around life insurers' offices of writing that, as Cain imagined, provided special insights into unknown pasts and uncertain futures. "Methods used by those who commit suicide follow fairly well defined lines," explained Dublin and Bunzel.<sup>3</sup> When Americans killed themselves in the years approaching 1930, more than a third chose shooting (among white men, the figure jumped to over 40 percent), followed by hanging, poisoning, and asphyxiation.<sup>4</sup> "Colored women" preferred poisoning, then firearms.<sup>5</sup> Statistical knowledge became, in the proper hands, evidence of regularities, even *laws* of (human) nature. With such knowledge, one could predict the future in broad strokes; one could read groups' fates; one could number a nation's days.

Yet Cain's story also reveals an impulse that reached past the usual goals of statistics and probability, past merely gaining certain knowledge about populations, to the more difficult puzzle of securing insights into the lives and fates of individuals. Cain solved the problem like a novelist—he invented a situation that statistics showed to be impossible, a situation that involved no chance. But actual life insurers struggled to square probabilistic, statistical methods with a business that contracted with individuals—indeed, a business that often treated individuals differently, demanding of one applicant more payment, rewarding to another's bereaved family a smaller claim. Statistical and probabilistic methods could not discriminate

2. Louis I. Dublin and Bessie Bunzel, *To Be or Not to Be: A Study of Suicide* (New York: Harrison Smith & Robert Haas, 1933), 59.

3. Dublin and Bunzel, *To Be or Not to Be*, 56.

4. Dublin and Bunzel, *To Be or Not to Be*, 56–57, 59.

5. Dublin and Bunzel, *To Be or Not to Be*, 61. Dublin had previously made the argument that "suicide in the United States is almost altogether limited to white people." Louis I. Dublin, "To Be or Not to Be?" *Harper's Monthly Magazine* 161, no. 964 (1930): 486–494 at 487.

so finely: they did not deal with individuals. So life insurers brought in lawyers and investigators, and most importantly, doctors—alongside countless clerks and tabulating machines—to process, evaluate, and forecast individual lives.

When we think of science and life insurance or science and risk, we usually think about actuaries (as did Cain, incorrectly)—in no small part because life insurers touted their reliance on accomplished mathematicians capable of revealing statistical laws of nature.<sup>6</sup> But in practice, life insurers relied just as squarely on the expertise of doctors intent on determining what particularity or difference marked each person. Indeed, when Louis Dublin landed his first job in life insurance, it wasn't in an actuarial position. Instead, he joined a medical department at the heart of a company's bureaucratic assembly line for manufacturing individualized "risks," the sort of line that would have actually been responsible for Cain's imagined catalog of fates.

Insurers hedged their bets by roping the probabilistic to the particular, the actuary to the doctor. They at once proclaimed the surety of statistical laws, but acted as if they could beat the averages—claiming that they could pick only the better lives and avoid those doomed to die too soon. Such hedging came at a cost. Cain's never-recorded suicide from the back of a slow-moving train neatly avoided the troubling tension between smoothing away particularities, as the actuaries advocated, and classing all experience into tiny boxes, as doctors preferred. That tension bedeviled life insurers as their networks expanded and their coffers filled with cash. The question that Cain avoided asking was voiced over and over in the late nineteenth century, in private corner offices and in the people's legislative halls: how should

6. Life insurers had a reason to boast. No other form of insurance adopted probabilistic methods so early. For a discussion of the reasons that life insurance made this jump, while marine and fire insurance did not, see Lorraine Daston, *Classical Probability in the Enlightenment* (Princeton, NJ: Princeton University Press, 1988), 131–133. In the 1840s, life insurance succeeded games of chance as the paradigm case for probabilizing, a shift stemming partly from discomfort with sordid origins in gambling, but even more so from a new commitment to a "frequentist" belief that probabilities were real things in the world that could be determined from past experience. See Theodore M. Porter, *The Rise of Statistical Thinking 1820–1900* (Princeton, NJ: Princeton University Press, 1986), 81–88. On the place of actuaries in the larger scientific community in Britain, see Timothy Alborn, "A Calculating Profession: Victorian Actuaries among the Statisticians," *Science in Context* 7, no. 3 (1994): 433–468; and Timothy Alborn, *Regulated Lives: Life Insurance and British Society 1800–1914* (Toronto: University of Toronto Press, 2009), 102–135. On American actuaries, see E. J. Moorhead, *Our Yesterdays: The History of the Actuarial Profession in North America 1809–1979* (Schaumburg, IL: Society of Actuaries, 1989).

these powerful corporations, their fancy mathematics tensely tied to their surveying ambitions, be allowed to relate to Americans in groups or alone?

A new possible answer came in the early twentieth century in a development that the novelist Cain failed to grasp. For while Cain explored the powerful dream of using statistical methods to see into a life, he missed a more radical, and increasingly influential, vision—one that Dublin, Bunzel, and their peers championed at the same moment. By the 1930s, these life insurance statisticians had new ambitions for all the figures in their books. Unsatisfied with predicting the future, they set out to change it. Where most life insurers remained satisfied with discovering the clues that could point to an early death, that could nose out a potential suicide before he bought a policy, Dublin and Bunzel—with Metropolitan's support and, more importantly, the company's data—aimed to prevent suicide.<sup>7</sup> *How Our Days Became Numbered* explores this fundamental transition from nineteenth-century dreams of reading fate to twentieth-century efforts to master fate, from foretelling death to grasping after (and controlling) life. This transition mattered to insurers, but also to doctors, corporate managers, bureaucrats, and legislators, and it shaped the lives of ordinary Americans (those who read Dublin and Bunzel's book, or the many more who read Cain's noir, and those who read nothing at all). It promised a new beginning, an opportunity for life insurers' tools to migrate into more settings, touch more lives, and foretell more fates than purely mortal ones. Yet even as it allowed our days to be more fully numbered, the transition from prediction to control still failed to solve life insurers' persistent puzzle; it failed to finally reconcile the individual to the statistical.

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I began writing this book fascinated by strange books lurking in lonely corners of university libraries. Books titled *The Money Value of a Man*, or *How to Live*, or *Race Traits and Tendencies of the American Negro*, or *Sources of Longevity*, or *Social Security in America*. These books—concerned with the lives and deaths of men and races, intent on forecasting or extending Americans' lives, determined to make dollars stand in for people, and all hailing in one way or another from America's life insurance industry—begged an explanation. Their origins in an industry that business historians have proven to be central to modern finance and corporate capitalism started me thinking.<sup>8</sup>

7. Dublin and Bunzel, *To Be or Not to Be*, ix.

8. See Sharon Ann Murphy, *Investing in Life: Insurance in Antebellum America* (Baltimore, MD: Johns Hopkins University Press, 2010); J. Owen Stalson, *Marketing Life Insurance: Its History in*

Had I stumbled upon evidence of financial power transmuting into cultural power? American intellectual and cultural historians had up to that time largely neglected life insurance,<sup>9</sup> but the work of other scholars studying the histories of quantification, statistics, and the human sciences made clear that such transmutations were possible, even probable.<sup>10</sup> Looking again at those strange books, I decided that I had indeed found evidence of the cultural power of corporate capital; but more than that, I realized that before me lay a key to understanding the peculiarly powerful way that American capitalism translates people into numbers.

For help in learning how to interpret these books, I looked to historians' efforts over the last few decades to integrate numbers and statistics—as the stuff of culture—into our understanding of modern American life. Their writings taught me how numbers spread across modern societies: how a “quantifying spirit” and an “avalanche of printed numbers” engendered an

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*America* (Cambridge, MA: Harvard University Press, 1942); R. Carlyle Buley, *The American Life Convention 1906–1952: A Study in the History of Life Insurance* (New York: Appleton-Century-Crofts, 1953); Morton Keller, *The Life Insurance Enterprise: A Study in the Limits of Corporate Power* (Cambridge, MA: Belknap Press of the Harvard University Press, 1963); Marquis James, *Metropolitan Life: A Study in Business Growth* (New York: Viking Press, 1947); Shepard Bancroft Clough, *A Century of American Life Insurance: A History of the Mutual Life Insurance Company of New York, 1843–1943* (New York: Columbia University Press, 1946); and Douglass North, “Life Insurance and Investment Banking,” *Journal of Economic History* 14, no. 3 (1954): 209–227.

9. Thankfully, that is changing. Jonathan Levy's example suggests just how much we have been missing by this neglect. See *Freaks of Fortune: The Emerging World of Capitalism and Risk in America* (Cambridge, MA: Harvard University Press, 2012); Viviana A. Rotman Zelizer's earlier works of historical sociology are another important exception. See Zelizer, *Morals and Markets: The Development of Life Insurance in the United States* (New York: Columbia University Press, 1979); Zelizer, *Pricing the Priceless Child: The Changing Social Value of Children* (Princeton, NJ: Princeton University Press, 1994). Scholars in the “Insurance and Society” field make the general case for the cultural embeddedness of insurance. For an introduction to that field, see Geoffrey Clark, Gregory Anderson, Christian Thomann, and J.-Matthias Graf von der Schulenburg, eds., *The Appeal of Insurance* (Toronto: University of Toronto Press, 2010); or Richard V. Ericson and Aaron Doyle, eds., *Risk and Morality* (Toronto: University of Toronto Press, 2003). American intellectual and cultural historians have paid more attention to banking or credit reporting. See, for instance, Stephen Mihm, *A Nation of Counterfeiters: Capitalists, Con Men, and the Making of the United States* (Cambridge, MA: Harvard University Press, 2009); or Scott A. Sandage, *Born Losers: A History of Failure in America* (Cambridge, MA: Harvard University Press, 2005).

10. Key works in this literature include Gerd Gigerenzer, Zeno Swijtink, Theodore Porter, Lorraine Daston, John Beatty, and Lorenz Krüger, *The Empire of Chance: How Probability Changed Science and Everyday Life* (Cambridge: Cambridge University Press, 1989); Daston, *Classical Probability in the Enlightenment*; Porter, *Rise of Statistical Thinking*; and Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, NJ: Princeton University Press, 1995); Alborn, “Calculating Profession”; and Alborn, *Regulated Lives*; Ian Hacking, *The Taming of Chance* (New York: Cambridge University Press, 1990); and Audrey B. Davis, “Life Insurance and the Physical Examination: A Chapter in the Rise of American Medical Technology,” *Bulletin of the History of Medicine* 55, no. 3 (1981): 392–406.



“empire of chance” to which the United States and its peers paid tribute.<sup>11</sup> And they taught me to think about the ways that Americans could and did live their lives through and with numbers. Numbers, I learned, marked off space and time. In the early republic, numbers named buildings on busy streets, described property lines, facilitated the comparison and exchange of commodities—and even the exchange of enslaved human lives.<sup>12</sup> At the same time, numbers offered a media for self-expression (in diaries and ledgers), social imaginings (in newspaper columns), and political struggle (on and off legislative floors).<sup>13</sup> By the eve of the Civil War, Americans had learned in schools and in their marketplaces to reckon; they regularly encountered statistics in the press, and they mobilized numbers in some of the most important public debates of the day, such as the causes of steamboat explosions and the future of slavery.<sup>14</sup> They had become, in Patricia Cline Cohen’s words, “a calculating people.”<sup>15</sup> Numbers, as much as words or wood-cuts, pulsed through American culture.

As I read, I came away especially impressed by the power historians attributed to numbers as tools of aggregation. Numbers, they demonstrated,

11. For a formal overview of the varied uses of numbers and quantification in modern societies, see Wendy Nelson Espeland and Mitchell L. Stevens, “A Sociology of Quantification,” *European Journal of Sociology* 49, no. 3 (2008): 401–436. See also: Tore Frängsmyr, J. L. Heilbron, and Robin E. Rider, eds. *The Quantifying Spirit in the 18th Century* (Berkeley: University of California Press, 1990); Ian Hacking, “Biopower and the Avalanche of Printed Numbers,” *Humanities in Society* 5, nos. 3 and 4 (1982): 279–295; Gigerenzer et al., *Empire of Chance*.

12. For numbers at their worst, used as tools for valuing and pricing the enslaved, see Walter Johnson, *Soul by Soul: Life inside the Antebellum Slave Market* (Cambridge, MA: Harvard University Press, 1999), 135–161.

13. See especially recent work on the history of accounting, including Michael Zakim, “Bookkeeping as Ideology: Capitalist Knowledge in Nineteenth-Century America,” *Common-place* 6, no. 3 (2006), <http://www.common-place.org/vol-06/no-03/zakim>; Caitlin Rosenthal, “Storybook-keepers: Narratives and Numbers in Nineteenth Century America,” *Common-place* 12, no. 3 (2012), <http://www.common-place.org/vol-12/no-03/rosenthal>; Bruce G. Carruthers and Wendy Nelson Espeland, “Accounting for Rationality: Double-Entry Bookkeeping and the Rhetoric of Economic Rationality,” *American Journal of Sociology* 97, no. 1 (1991): 31–69; and Naomi R. Lamoreaux, “Rethinking the Transition to Capitalism in the Early American Northeast,” *Journal of American History* 90, no. 2 (2003): 437–461. Laurel Thatcher Ulrich explores an exemplary diary suffused with numbers in *The Life of Martha Ballard, Based on Her Diary, 1785–1812* (New York: Vintage, 1991).

14. Patricia Cline Cohen, *A Calculating People: The Spread of Numeracy in Early America* (Chicago: University of Chicago Press, 1982); Arwen P. Mohun, “On the Frontier of *The Empire of Chance*: Statistics, Accidents, and Risk in Industrializing America,” *Science in Context* 18, no. 3 (2005): 337–357.

15. Cohen, *Calculating People*. Herman Melville used the phrase much earlier to characterize Nantucket capitalists. See Melville, *Moby-Dick, or The White Whale* (Boston: St. Botolph Society, 1892 [1851]), 117.

made masses of individuals into wholes throughout American history. At the nation's start, Americans introduced to the world the idea of a free people counting itself regularly through the decennial census.<sup>16</sup> Over time the census gave substance to the "imagined community" that Benedict Anderson explains must exist at the root of that crucial, modern abstraction: the nation.<sup>17</sup> After the Civil War, in the years of American industrial expansion and corporate consolidation commonly called the Gilded Age and Progressive Era, different numbers gave substance to that other fundamental abstraction of modernity, "society." Historians' standard narrative of quantification culminates in the years between the world wars when social scientists, market researchers, and government bureaucrats wrote books and released reports aggregating Americans' economic activity, agricultural products, political opinions, and even their sexual proclivities.<sup>18</sup> Out of apparently thin, disconnected numbers, such books and reports created thick, organic representations of Americans and America in the mid-twentieth century.<sup>19</sup>

But books like *The Money Value of a Man* or *How to Live*, though published during those peak years of aggregation, pointed to a problem with this standard narrative. Here were cultural artifacts rooted in statistics and quantification, but they focused on assigning dollar values to one man at a time and on helping each person learn to live more healthfully—out of statistical materials, these books drew individualized conclusions. I read individuation in their pages as much as aggregation.

I should not have been surprised. The ties between the quantified part and the statistical whole were clear enough to nineteenth-century thinkers.

16. The US Constitution overcame the local opposition to censuses that had relegated earlier censuses to colonies and other less powerful places around the world by tying congressional representation to enumeration. But it also tied taxation to the census count, lest power-hungry states encourage overzealous counting. On resistance to censuses before the American example, see Cohen, *Calculating People*, 34–40, 47–80, 231n50. For the constitutional reasoning, see Article I, Section 2 and James Madison's explanation of that section in "Federalist 54" (1788).

17. Margo Anderson, *The American Census: A Social History* (New Haven, CT: Yale University Press, 1988); on censuses and nationalism generally, see Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, rev. ed. (New York: Verso, 1991), 163–170.

18. See Sarah E. Igo, *The Averaged American: Surveys, Citizens, and the Making of a Mass Public* (Cambridge, MA: Harvard University Press, 2008); Emmanuel Didier, "Cunning Observation: US Agricultural Statistics in the Time of Laissez-Faire," *History of Political Economy* 44, suppl. 1 (2012): 27–45; Emmanuel Didier, *En quoi consiste l'Amérique? Les statistiques, le New Deal et la Démocratie* (Paris: La Découverte, 2009); Thomas A. Stapleford, *The Cost of Living in America: A Political History of Economic Statistics, 1880–2000* (New York: Cambridge University Press, 2009); and Daniel J. Boorstin, *The Americans: The Democratic Experience* (New York: Vintage, 1973).

19. Numbers frequently appear thin even as what they are used to create is anything but. See Theodore M. Porter, "Thin Description: Surface and Depth in Science and Science Studies," *Osiris* 27, no. 1 (2012): 209–226.

The philosopher John Venn recognized in the 1860s that the basis for probabilistic laws lay in the combining of “individual irregularity with aggregate regularity”—each defining the other.<sup>20</sup> Quite often, Americans worried that the lone man or woman would be lost in the statistical aggregate.<sup>21</sup> But some found the individual-aggregate tension provocative or inspiring. Emerson, for example, echoed statistical thinking through his idea of the “Over-Soul,” which emerged out of the mass of men’s souls, even as it formed those souls—the one and the many defining each other.<sup>22</sup> Yet in telling the story of creating America’s statistical communities, historians have too often allowed fraught stories behind the making of statistical individuals to fall to the wayside.

The exceptions I encountered in reading other historians’ works made this state of affairs seem all the more lamentable. Studies of credit reporting in the mid-nineteenth century made clear that reducing an individual to a rating could have a profound impact on his future potential in matters economic or social.<sup>23</sup> Scholars looking at mental testing in the early to mid-twentieth century revealed that tools for sorting people according to statistical methods not only opened or closed doors, but affected individuals’ subjectivities as well.<sup>24</sup> The power of statistical studies to inform ordinary people’s understandings of themselves becomes all the more evident when one looks at social surveying, a category encompassing pollsters, sociologists, and sex researchers who helped generate new ways of thinking about personhood in interwar America.<sup>25</sup>

I came to see the potential of my odd books to help me investigate what it meant to be made into a statistical individual in modern America. Not

20. Quoted in Hacking, *Taming of Chance*, 126.

21. Thus, the genius father and son Peirce partnership (the astronomer Benjamin and his son, the logician Charles Sanders) ruffled many feathers when they presented statistical evidence in courtroom arguments to prove the certainty of a forged signature precisely because their contemporaries saw individual freedom imperiled by the very notion of statistical law, as Louis Menand has explained. Menand, *The Metaphysical Club: A Story of Ideas in America* (New York: Farrar, Straus & Giroux, 2001), 163–176.

22. Ralph Waldo Emerson, “The Over-Soul,” in *Essays* (Boston: Riverside Press Cambridge, 1903 [1865]).

23. Josh Lauer, “From Rumor to Written Record: Credit Reporting and the Invention of Financial Identity in Nineteenth-Century America,” *Technology and Culture* 49, no. 2 (2008): 301–324; Sandage, *Born Losers*.

24. Two recent and influential accounts are John Carson, *The Measure of Merit: Talents, Intelligence, and Inequality in the French and American Republics, 1750–1940* (Princeton, NJ: Princeton University Press, 2007); and Nicholas Lemann, *The Big Test: The Secret History of the American Meritocracy* (New York: Farrar, Straus & Giroux, 1999).

25. Igo, *Averaged American*.

only did life insurers think statistically about more ordinary people than any other set of institutions during the period when America became an industrial, corporate nation—a period mainly overlooked by the works I had encountered—but life insurers' peculiar transition from prediction to control during that period helped me realize that making people statistical had implications for bodies as well as for wallets.<sup>26</sup> Moreover, I saw the potential for my sources to reveal how uncomfortably Americans engaged with the entire project of being made statistical, how they often resisted the process, and yet somehow ended up being made statistical anyway.

It finally dawned on me that those strange and fascinating books I had first browsed in library stacks barely traced the edges of life insurers' cultural power. I realized that they could best be understood as *residues*: they were material remnants of a mode of statistical production operating at a massive scale that turned individuals into what life insurers called "risks." Such books had been written to ward off those resisting statistical processing, to justify risk makers' expansions, or to find new methods for thinking statistically about Americans. Those books were the tailings of specialized mills for making statistical individuals.

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And books were not the only traces, the only detritus, left behind by this industrial process. I saw soon enough that my investigation had to go beyond a handful of peculiar books—however interesting and even quite popular they may have been. After all, in 1936, while presses rolled Cain's novel, bit by bit, onto magazine paper, the United States government began printing serial numbers attached to individual Americans' names on little paper cards, the first fruits of the Social Security Act. Those cards and the numbers they carried—especially as they found their ways into wallets and, through a strange 1930s vogue, onto some Americans' bodies in ink—deserved a place in this story as well.

Books, cards, and even tattoos were all ultimately by-products, the ephemeral residues left behind when an individual was made into a "risk."

26. In the period covered by this book, life insurers' methods did not have much impact on people's senses of self. So our story will only in a few places become what we might call, borrowing from Ian Hacking, a "making up people" story. Hacking's work has been particularly influential in pointing out the capacity of statistical, medical, and social scientific categories to change the way people see themselves and therefore live their lives. See Ian Hacking, "Making Up People," *London Review of Books*, 17 August 2006, 7–11; Hacking, "The Looping Effects of Human Kinds," in *Causal Cognition: An Interdisciplinary Approach*, ed. D. Sperber, D. Premack, and A. Premack (Oxford: Oxford University Press, 1995), 351–383.

But just because they were by-products does not mean they lacked value or do not deserve sustained attention. On the contrary, as this book will show, the by-products of risk making—which circulated widely in American culture and through American institutions—came to shape lives in profound and lasting ways. And through the analysis of those by-products, we can come to a deeper appreciation of the larger risk-making systems that spawned them.

It is worth pausing at this point over the idea of making risks. I do not mean this phrase to imply that life insurers created new hazards, that they made existence more dangerous—although they and those around them did sometimes worry that insuring lives made people live more dangerously.<sup>27</sup> To understand what I mean by making risks, we must first think differently about what a “risk” was and is. Societies have always had ways of thinking about the dangers and hazards that face them and their constituents—we sometimes talk about those dangers as risks.<sup>28</sup> But with the spread of insurance, risk took on a more specific definition: a risk became a kind of commodity.<sup>29</sup>

The making of risks from human lives and the events of human lives resembled the other crucial commodification processes that came with America’s commercial and industrial development. The commodified

27. Concerns that insurance could encourage immoral behavior—murder or suicide, chief among them, and gambling too—led to prohibitions against life insurance lasting into the eighteenth century. After life insurance became common, insurers still worried about “moral hazard,” the potential for insurance to actually make the insured live more dangerous lives. More recently, scholars have discussed other ways that life insurance changes behavior. Deborah Stone finds “moral opportunity” in the incentives life insurers create. And Jonathan Levy notes that reliance on life insurance and other financial risk management tools often created new financial risks that individuals had to bear. Deborah Stone, “Beyond Moral Hazard: Insurance as Moral Opportunity,” in *Embracing Risk: The Changing Culture of Insurance and Responsibility*, ed. Tom Baker and Jonathan Simon (Chicago: University of Chicago Press, 2002); Levy, *Freaks of Fortune*. On moral and social concerns inhibiting life insurance, see Zelizer, *Morals and Markets*, 32–39.

28. Mary Douglas and Aaron Wildavsky offer a general argument for the cultural and social origins (and therefore historical specificity) of risk conceptions in *Risk as Culture: An Essay on the Selection of Technological and Environmental Dangers* (Berkeley: University of California Press, 1983). For a model example of a historian considering the multiple construction of risk conceptions in the United States, see Arwen P. Mohun’s *Risk: Negotiating Safety in American Society* (Baltimore, MD: Johns Hopkins University Press, 2013).

29. See Levy, *Freaks of Fortune*. For an attempt to trace out deeper roots of risk thinking and commodification, see Peter Bernstein, *Against the Gods: The Remarkable Story of Risk* (New York: Wiley, 1998); Daston, *Classical Probability in the Enlightenment*; and Ian Hacking, “Risk and Dirt,” in *Risk and Morality*, ed. Richard V. Ericson and Aaron Doyle (Toronto: University of Toronto Press, 2003).

objects differed, but the process (and the by-products) of making some natural thing into a medium of exchange, a financial creature, did not differ in kind. When nineteenth-century farmers sent trainloads of grain to Chicago to be stored and sold from that city's grain elevators, they incidentally set quite a bit of paper in motion: elevator receipts recorded the amount and quality (class) of the wheat deposited; "to arrive" contracts made possible a futures market for gambling on the value of that slip.<sup>30</sup> These were the material manifestations of commodifying grain.

Those same farmers shipping grain—and to an even greater extent the merchants who received their grain shipments—could and often did have their life risks (the risk of death in particular) commodified too through the vehicle of a life insurance policy. Life insurance contracts charged an individual a regular fee (called a premium), while requiring the insurer to pay a set sum (a claim) in the event of that individual's death during an agreed-upon period of protection. That, at least, was the simplest form of a policy. But by the last quarter of the nineteenth century, where this book begins, life insurance policies came in a dizzying variety of forms and commodified a corresponding variety of life risks, for example: the risk of financial embarrassment took on commodity form through policies that accumulated value over time, but could lose that value if a policyholder could not pay his premiums; risks of the early death of a loved one or a business partner came to be commodified through policies that paid out in the form of annuities to a beneficiary.

And while Chicago accepted the lion's share of America's grain, New York in the final decades of the nineteenth century commodified the most life risks, by far. The so-called Big 3 companies of the era—Mutual Life of New York (MONY), New-York Life, and Equitable Assurance Society of the United States—all hailed from New York where they sold "ordinary" policies to those well-off enough to pay yearly premiums, and each in 1890 had extended a quantity of insurance more than double that of their closest rivals.<sup>31</sup> They were key innovators who used their market power (and their close relationships with state legislatures and regulators) to set industry standards. New York's commodifying reach extended further with the rise of "industrial" life insurers like Metropolitan Life and Prudential

30. William Cronon explains this process in *Nature's Metropolis: Chicago and the Great West* (New York: Norton, 1991), 120–125. See also Jonathan Ira Levy, "Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875–1905," *American Historical Review* 111, no. 2 (2006): 307–335.

31. Stalson, *Marketing Life Insurance*, 798.

Insurance Company of America (in nearby Newark), which sold small policies (mainly useful to pay for burials) with weekly premiums to workers and their families. These two newcomers joined the earlier three to make the “Big 5,” which together dominated the industry well into the twentieth century. Because of their size, power, and influence, these five companies shaped the way that most Americans’ life risks came to be commodified and so play central roles in this book’s narrative.

The commodification of life risks through life insurance had only gained significant purchase in the United States in the 1830s and 1840s and succeeded most in reaching male heads of households in or near urban, commercial environments, especially men whose work generated an income: clerks or merchants, lawyers, doctors, or even clergy. Throughout the mid-nineteenth century, life insurers’ local agents sold applicants on the need to replace themselves, at least in a monetary sense, upon their deaths, to ensure that their wives (striving to maintain the new middle-class ideal of separate gender spheres) never had to work and that their children would not become orphaned wards of the state.<sup>32</sup> Life insurers promised to make this alchemical transformation possible: they could turn a life into money. Using a thermodynamic metaphor appropriate to an industrializing age, one contemporary insurance proponent explained this transformation: “Life insurance comes in as a financial invention, by which capital in the shape of a productive life—a life controlling and directing some branch of the wealth-begetting or wealth-distributing machinery of the age—can perpetuate itself, or convert a part of its productive energy into a contingent fund, that will be immediately available in case of death.”<sup>33</sup>

But to qualify for a life insurance policy, the applicant had to submit himself to a thorough interrogation by the agent about his age, his habits, and his economic situation (sometimes verified with a credit report), had to agree to set a value on his life (the value of his eventual policy), and had to see a doctor, who would weigh him, record his pulse, and make a slew of other measurements. In the bargain for economic security, insurance applicants allowed themselves to be made into commodified risks. About eight hundred thousand Americans made that bargain and stood as risks on insurers’ books in 1872. With the industry’s embrace after the Panic of 1873 of southerners, westerners, workers, women, children, and people of color,

32. On the prime targets for life insurance and the role of life insurance vis-à-vis gender roles, see Murphy, *Investing in Life*, chapter 5.

33. Elizur Wright, *Massachusetts Reports on Life Insurance: 1859–1865* (Boston: Wright & Potter, 1865), 303.

the number of those in insurers' corporate files reached over ten million (or one-ninth of the population) by the turn of the century.<sup>34</sup>

Books, cards, medical examination forms, policy applications, credit reports, and sheaves of other paperwork were the equivalents for people of grain slips and futures contracts for wheat. That commodifying life risks generated so much more paper than did commodifying grain—and that life risks resisted so neat and full a commodification as grain—only makes sense: lives were more complicated than grain and the discriminations and classifications that went into making life risks demanded explanation, since after all, an adverse classification meant much more to a person than to the wheat. With mortgages often tied to a lender having life insurance and with few alternatives to life insurance for saving for old age, getting a policy at a reasonable rate mattered especially to those barely holding on to a place in the boom-bust economy of the Gilded Age.<sup>35</sup> Once risk makers began pitching their techniques as means for altering fates and not just predicting them—and as their techniques became tools employed outside of life insurance by doctors, public health officials, and the state—the commodification of life risks came to exert power over individuals' bodies and lifestyles as well. The stakes could be very high indeed.

34. More than a million Americans had been enumerated by the thirty largest life insurers in 1872. See Levi W. Meech, *System and Tables of Life Insurance: A Treatise Developed from the Experience and Records of Thirty American Life Offices, under the Direction of a Committee of Actuaries* (New York: Spectator Company, 1898), 4–5. In 1900, over fourteen million policies were in force. While some significant portion may have been policies on the same life, those should be easily countered in our estimates by policies recently lapsed or terminated on an insured's death. See aggregate statistics prepared by Frederick L. Hoffman in United States Department of Commerce and Labor, *Statistical Abstract of the United States*, no. 33 (Washington, DC: Government Printing Office, 1911), 33, 581. Ten million insured would have amounted to about one-ninth of those counted by the US Census that same year.

35. Edward Bellamy offered a compelling metaphor for late nineteenth-century insecurity when he imagined a "prodigious coach which the masses of humanity were harnessed to" drawing the lucky, comfortable few who made much of pitying the many even as they worried about "slipping out" of their seats, or worse "of a general overturn in which all would lose their seats." See Bellamy, *Looking Backward 2000–1887* (Boston: Ticknor, 1888), 11–14. The historiography on late nineteenth-century responses to American industrialization and corporate growth is immense. Of particular relevance to this book and my thinking have been works interested in legal and social policy responses to the particular insecurities that riddled corporate capitalism, especially Daniel T. Rodgers, *Atlantic Crossings: Social Politics in a Progressive Age* (Cambridge, MA: Belknap Press of Harvard University Press, 1998); John Fabian Witt, *The Accidental Republic: Crippled Workingmen, Destitute Widows, and the Remaking of American Law* (Cambridge, MA: Harvard University Press, 2004); Levy, *Freaks of Fortune*; and Barbara Young Welke, *Recasting American Liberty: Gender, Race, Law, and the Railroad Revolution, 1865–1920* (Cambridge: Cambridge University Press, 2001).



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