Recasting American Liberty

Gender, Race, Law, and the Railroad Revolution, 1865–1920

Barbara Young Welke
University of Minnesota

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Contents

1

The Railway Journey: The Technological Transformation

A transportation revolution had begun early in the nineteenth century. With a rapidly expanding population and the addition of nonseaboard states, Americans dedicated themselves to building canals and turnpikes. Yet canals froze in winter; steamboats though fast were plagued by technological and natural hazards and, more important, bound by the natural course of the river; and travel on the nation's roads was slow, expensive, and uncomfortable. Only railroads offered the promise of rapid year-round transportation on a route of the developers', rather than nature's, choosing. By the mid-nineteenth century the railroad had achieved the position of dominance in American transport that it would retain well into the twentieth century. And what railroads were to the nation, streetcars were to American cities. In essential respects, the streetcar was the progenitor of the modern city.

The dawn of this era broke on a culture in which were embedded two fundamental beliefs: a belief that accidents were a part of life and a belief in and commitment to the ideal of America as a nation of free men. Americans celebrated ingenuity and autonomy; liberty depended upon freedom of action. Even at midcentury, the ideal of America as a nation of free men was a complex blend of fact and fiction. But by the 1880s the delicate balance between reality and ideal had been irreversibly tipped. The daily human toll of accidents, punctuated at ever more regular intervals by horrific disasters claiming the lives of hundreds in a single accident, generated a tide of anger at corporations that seemed increasingly distant even as they penetrated the landscape more thoroughly. The systemization of accident reporting and the sheer number of casualties, coupled with the undeniable fact that the agent of injury and death was so obviously of human creation, led Americans to a new understanding of the term "accident." Accidents were not unexpected or beyond human control; they fell into knowable categories, they could and must be limited. Faith in individual ingenuity was supplanted by a sense of the vulnerability and even reckless stupidity of the individual in the face of technology. Safety could not be left to individual choice.

By the early twentieth century, then, what we recognize as the modern understanding of individual liberty in a technologically sophisticated world had been born and firmly established in the American psyche and American culture. The era of steadfast commitment to American ingenuity and independence was replaced by the era of ordered liberty, liberty assured through restraint.

In American railroads before midcentury foreign travelers to America saw reflected the contrast between the American character and the European. In 1840, Alexis de Tocqueville noted of American railroads, "The Americans arrived but as yesterday on the territory which they inhabit and they have already changed the whole order of nature for their own advantage…."[1] Closer to midcentury, the Argentinean writer, philosopher, educator, and statesman Domingo Faustino Sarmiento found in railroads now common in both Europe and the United States the perfect vehicle for studying "the spirit that pervades both societies." His was a contrast of prisoners versus free men; safety at the price of a hermetically sealed jail versus risk which encouraged the exercise of reason, daring, and discernment; protective guardianship versus liberty. In France, Sarmiento explained, double tracks of cast iron were guarded all along the route with wooden fences; strong gates at crossings "scrupulously" closed "a quarter of an hour before the cars are to pass in order to avoid accidents." Sentinels were posted at intervals along the road to keep the tracks clear and provide warning to the trainmen of any danger. At stations, the "train does not leave the platform until four minutes after an army of guards have ascertained that all travelers are in their seats, the doors closed, the road clear, and no one closer than a yard to where the train will pass." "Everything," Sarmiento noted, "has been foreseen, calculated, and examined so that all can tranquilly sleep in their hermetically sealed jail."[2]

The situation could not have been more different in the United States. In America, flimsy wooden rails stretched mile after mile; a single track serving two-way traffic. These "roads" were just that, thoroughfares for foot traffic as well as trains. "There is not a soul to warn of accidents." At crossings, there were no gates, only a simple sign warning the traveler to beware of approaching trains. At stations, "the train starts slowly from the station, and when it is already underway [*sic*] passengers jump aboard and fruit and newspaper vendors jump off. Everyone walks from one car to the other just for the fun of it and to feel free, even when the train is going at top speed."[3]

[1] Alexis de Tocqueville, *Democracy in America,* 2 vols. (1840, New York, 1980), 2:157.
[2] Domingo Faustino Sarmiento, *Travels in the United States in 1847,* trans. Michael Aaron Rockland (Princeton, 1970), 156–58.
[3] Ibid.

Sarmiento insisted that the "physical and moral consequences of both systems are all too perceptible." Europe, with all its science and riches, had not managed to open half the railroads that crossed the American landscape. But more fundamental were the moral consequences: "The European is a minor under the protective guardianship of the state. His ability to take care of himself is judged to be inadequate. Warning signals, inspection, insurance, every means to preserve his life is put at his disposal. Everything but his reason, his discernment, his daring, his liberty." In marked contrast, Sarmiento insisted,

> The Yankee stands on his own two feet, and if he wants to commit suicide no one will hinder him. If he wants to run after a train and dares to jump aboard, grabbing hold of a bar to save himself from the wheels, he does it. If a little urchin newsboy, in his eagerness to sell one more paper, has allowed the train to pick up speed before jumping off, all will applaud his skill as he lands on his feet and walks away.

"Here is how nations' characters are formed and how liberty is applied," Sarmiento concluded. "There may be a few more victims and accidents, but on the other hand there are free men and not disciplined prisoners whose lives are administered."[4]

Chroniclers like Sarmiento, Tocqueville, and others captured a critical cultural moment. Beyond the promise of the transportation revolution lay the reality that the *real* revolution still loomed on the horizon. In 1840, after a decade of development, track laid across the entire country totaled only 3,000 miles. In 1850, mileage was still a mere 9,000. Even in 1870, with track mileage increased to 53,000 miles, the era of rapid development still lay over a decade in the future.[5] Moreover, these apparently significant jumps in mileage masked significant continuities. The early railroad system was a jumble of discontinuous segments. Each railroad company had its own exclusive track. The gauges of track varied widely. Most runs were short. Few rivers had bridges.

Just as each railroad company had its own tracks, each had its own time, generally set by the local time at the company's headquarters. Stations used by several different lines had clocks for each line showing the time: three different times in Buffalo, six in Pittsburgh.[6] The separate times expressed a large reality – this was still the America of Wiebe's island communities.[7] Moreover, trains, like time, ran slowly. In the 1830s and 1840s trains ran slow, seldom going over 10 to 18

[4] Ibid.

[5] John F. Stover, *American Railroads* (Chicago, 1961), 19, 26, 144–45.

[6] Stephen Kern, *The Culture of Time and Space, 1880–1918* (Cambridge, 1983), 12–13.

[7] Robert H. Wiebe, *The Search for Order, 1877–1920* (New York, 1967), xiii.

miles an hour; the quality of track was too poor to allow trains to go very fast. Night travel was almost unknown until after 1850. And finally, there simply was not much traffic. As a result of all of these factors, rail accidents were limited, and fatal accidents an anomaly.[8] It was common enough in the annual reports of railroads to come across statements of accidents followed by the phrase "and no blame was attached to the company by the friends of the persons killed."[9] Through the 1870s, presidents and superintendents of railroads and streetcar companies handled accident claims personally; railroads paid more in damages for killing livestock and other damages to property than they did for accidents injuring or killing people. In 1877, Illinois railroads, for example, paid only $3,538 in damages for "persons killed or injured," but paid $105,018 for stock killed, and another $30,794 for property damaged by fire from locomotives.[10]

The same patterns held true for streetcars.[11] The earliest form of urban public transit, the omnibus, a sort of urban stagecoach, was first introduced in American cities in the Northeast in the 1820s, but was quickly replaced by the horsecar, an elongated version of the omnibus which ran on rails. Rails meant that horses could pull longer cars with more passengers for a smoother ride at faster speeds.[12] They created wholly new possibilities for urban growth, allowing people to live farther from their places of work, spurring suburban construction.[13] But although rails meant faster speeds – horsecars moved at an average speed of about 6 to 8 miles an hour – they did not introduce a new type of motive power to the city. Men and women of all backgrounds shared a basic familiarity with horses and their ways. Even before the introduction of the omnibus, horses

[8] Robert C. Reed, *Train Wrecks: A Pictorial History of Accidents on the Main Line* (Seattle, 1968), 9–19; Edward Chase Kirkland, *Men, Cities, and Transportation: A Study in New England History, 1820–1900,* 2 vols. (Cambridge, 1948), 1:316.

[9] See, e.g., *Annual Report of the Commissioner of Railroads and Telegraphs to the Governor of the State of Ohio for the Year 1867* (Columbus, 1868), 76.

[10] *Seventh Annual Report of the Railroad and Warehouse Commission of Illinois, for the Year Ending November 30, 1877* (Springfield, 1878), 88–89.

[11] For the best overviews of the history of urban public transit, see George Rogers Taylor, "The Beginnings of Mass Transportation in Urban America: Part I," *Smithsonian Journal of History* 1 (Summer 1966): 35–50, and "The Beginnings of Mass Transportation in Urban America, Part II," *Smithsonian Journal of History* 1 (Fall 1966): 31–54; Charles W. Cheape, *Moving the Masses: Urban Public Transit in New York, Boston, and Philadelphia, 1880–1912* (Cambridge, 1980).

[12] See, e.g., Scott Molloy, *Trolley Wars: Streetcar Workers on the Line* (Washington, 1996), 100 (noting that horsecars had "speeded life's tempo by replacing the personalized omnibus, whose operators, like a private hack, waited patiently for patrons").

[13] Sam B. Warner, Jr., *Streetcar Suburbs: The Process of Growth in Boston, 1870–1900* (Cambridge, 1962), 15–25.

had long pulled carriages and wagons through city streets. Horses, or in some cities mules, remained the motive power for urban public transit through the 1870s.[14] Moreover, except in a few cities, the urban congestion that would so mark photographs from the turn of the century still lay in the future. In 1880, less than one third of the population lived in cities. Under these circumstances, accidents of any sort were rare and fatalities exceptional.[15]

This is the context in which belongs the sense that accidents were a fact of life which men bore individually and the celebration of American liberty and independence of action unrestricted by law and technology. In 1870, this world was on the verge of an immense change. The moment is captured by a request of the Massachusetts legislature to the state railroad commission. Was legislation necessary, the legislature asked, to reduce the number of accidents involving passengers boarding and alighting from trains? The commissioners concluded that legislation was neither desirable nor defensible. It would be "useless," the commissioners contended, "to enact laws which are opposed to the habits, and, indeed, to what may be called the genius of the people for whose protection they are enacted." Echoing Sarmiento, the commissioners explained, "The whole system of American institutions is based upon the principle that, with due warning given, people can take quite as good care of themselves as government and corporate officials can take of them." The commissioners celebrated American exceptionalism by comparing American practice with that of "foreign countries." "In many foreign countries," the commissioners disdainfully explained, "a different principle obtains."

> [F]rom the moment they [passengers] reach a station to that on which they leave it, they become almost irresponsible agents. They are fenced in until a train arrives; they are then made to pass through a particular gate to get into it, and, when in, they are locked up until a destination is reached, when they are released, and again made to pass through a gate, and thus to leave the premises of the company.

The commissioners argued that the exercise of state police power legislation should be limited to matters that were outside passen-

[14] Glen E. Holt, "The Changing Perception of Urban Pathology: An Essay on the Development of Mass Transit in the United States," in Kenneth T. Jackson and Stanley K. Schultz, eds., *Cities in American History* (New York, 1972), 327; William D. Middleton, *Time of the Trolley* (Milwaukee, 1967), 77; Clifton Hood, *722 Miles: The Building of the Subways and How They Transformed New York* (New York, 1993), 38.

[15] *Second Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1871* (Boston, 1871), cxxviii.

gers' ability or opportunity to judge or control, such as brakes, bridges, switches, and the like. Boarding and alighting bore no resemblance to such matters; the state should respect the freedom and intelligence of Americans and leave such matters to the individual.[16] There was nevertheless a certain irony in the board's pronouncement: The very existence of state railroad commissions represented a dramatic governmental intervention on behalf of individuals. Through their authority to demand annual reports from railroads and to investigate accidents, state railroad commissions would play a central role in transforming the cultural meaning of accidents and in turn the understanding of the relationship between individual autonomy and liberty.

The meaning of liberty, the balance between individual autonomy and corporate and state authority in America, was transformed, in part, by statistics. One of the defining marks of the last quarter of the nineteenth century was America's obsession with statistics. Massive statistical studies underlay every major social welfare reform effort of the late nineteenth and early twentieth centuries.[17] Systemization of accident reporting created a numerical composite of danger which number by number stripped the term "accident" of its definitional core. As Americans came to see, railroad "accidents" were not unexpected events; they fell within discrete, knowable categories of activity which daily repeated themselves.

Massachusetts offers a compelling example.[18] From the beginning of the railroad era, railroads in Massachusetts were required by law to submit annual reports to a legislative committee, the Joint Committee on Railways and Canals. Beginning in 1846, Massachusetts required railroads to include in their annual reports a record of accidents for the year causing death or serious

[16] Ibid., xii–xiv.

[17] See Dorothy Ross, *The Origins of American Social Science* (Cambridge, 1991); William R. Brock, *Investigation and Responsibility: Public Responsibility in the United States, 1865–1900* (Cambridge, 1984), 148–85; Kathryn Kish Sklar, *Florence Kelley and the Nation's Work: The Rise of Women's Political Culture, 1830–1900* (New Haven, 1995). More generally, see Ian Hacking, *The Taming of Chance* (Cambridge, 1990); Theodore M. Porter, *The Rise of Statistical Thinking, 1820–1900* (Princeton, 1986).

[18] Although Massachusetts was not the first state to adopt a regulatory commission for railroads, it became "the most important regulatory pioneer" largely due to the efforts of Charles Francis Adams, who played a critical role in the Massachusetts legislature's decision to establish a commission and served on the commission in its first decade. See Thomas K. McCraw, *Prophets of Regulation: Charles Francis Adams, Louis D. Brandeis, James M. Landis, Alfred E. Kahn* (Cambridge, 1984), 1–56.

injury.[19] One year later, in its 1847 report, the Joint Committee included the first tabulated report of any sort based on railroad reports: a list of deaths and injuries for the year by railroad.[20] Yet, through the 1850s and 1860s, apart from an abstract or list of casualties, the committee's reports to the state legislature remained simply compilations of the reports filed by the railroads. The committee did not divide accidents into categories based on the status of the person injured or killed or based on the cause of the accident, or analyze the accident data individual railroads presented. The railroad returns themselves worked against categorization and analysis; most railroads' reports were silent on the question of accidents, and for those railroads that did report accidents the status of the injured individual, even the cause of injury, was often unclear.[21]

Systemization began in earnest with state railroad commissions established in the late 1860s and 1870s.[22] Massachusetts, a pioneer in railroad regulation, established its State Board of Railroad Commissioners in 1869, the same year that it established a Bureau of Labor Statistics.[23] In its first annual report, filed in January 1870, the Massachusetts Board of Railroad Commissioners insisted that it, not the Secretary of State, should be responsible for collecting and analyzing railroad reports. In a tabular abstract based on reports railroads in the state had filed that year, the board then offered a sense of what study of accident reports could do. It noted the number injured for each road reporting and then broke down the accidents by status (passenger, employee, at crossing, unlawfully on track or cars, children, adults), within status by circumstance, and finally, by

[19] The number of items railroads in the state were required to report on went from eleven in 1837 to 150 in 1849. Most of the items related to financial matters (e.g., capitalization, debt, and profits and losses), inventory (e.g., number of locomotives, cars of various sorts), and miles of track. *Laws of the Commonwealth of Massachusetts,* 1837 and 1838, ch. 226, pp. 254–57; *Acts and Resolves Passed by the General Court of Massachusetts,* 1846, ch. 251, pp. 175–79; *Acts and Resolves Passed by the General Court of Massachusetts,* 1849, ch. 191, pp. 124–29.

[20] Massachusetts General Court, Committee on Railways and Canals, *Annual Reports of the Railroad Corporations in the State of Massachusetts for 1847* (Boston, 1848).

[21] In 1860, Massachusetts began formally requiring railroads to attach an abstract with their report, the last category of which was "casualties" "fatal" and "not fatal." Railroads were required to summarize both the cause and circumstances of such accidents. Commonwealth of Massachusetts, *Returns of the Railroad Corporations in Massachusetts, 1860* (Boston, 1861), Appendix, pp. 7–11. The title of the annual report itself is indicative.

[22] On state railroad commissions and the increase in railroad regulation generally in the last quarter of the nineteenth century, see Chapter 9.

[23] *Acts and Resolves Passed by the General Court of Massachusetts, in the Year 1869,* pp. 699–703. On the Bureau of Labor Statistics, see James Leiby, *Carroll Wright and Labor Reform: The Origins of Labor Statistics* (Cambridge, 1960).

result (fatal, not fatal).[24] The next year, the board established a new form for railroad and streetcar company reports, which included a quantitative tabular component as well as a descriptive component for reporting accidents. The form divided accidents into two basic types: accidents "from causes beyond their own control" and those "from their own misconduct or carelessness." Within each category railroad and streetcar companies were to report the number of passengers, employees, and others killed and the number injured. Beneath this tabular statement, railroad and streetcar companies were to report a statement of each accident.[25]

Systemization of accident reporting meant that the human cost of technology could be seen in cumulative terms. Now to the horrific accidents that stole away life by the tens or hundreds could be added the daily toll of death and injury. The number of deaths and injuries from one year added to those for the previous year, which had been added to those for the year before, and so on. With their numbers lined up in one column after another under neat headings, the tables published in official state reports substantiated the message that sensational headlines first created: human casualty had become a frighteningly regular feature of railroad travel.[26]

Systemization, though, did more than feed public anger at railroads; it allowed railroad commissions and, through their published reports, the public to see accidents in terms of a causal chain. Systemization made it possible to compare the records of various railroads within the state; to compare the overall accident record of railroads in one state with that of railroads in other states and even other countries; to compare the accident record of railroads, individually and cumulatively, over time; and to compare accident records involving various kinds of circumstances.[27] Differences in accident rates over time or between

[24] *First Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1870* (Boston, 1870), 11, 90–98.

[25] *Annual Report Mass. R.R. Commrs, 1871,* xciv-cvii.

[26] *Eleventh Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1880* (Boston, 1880), 89 (tabular statement of accidents on Massachusetts railroads for the preceding ten years); *Thirty-Ninth Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1908* (Boston, 1908), 26 (tabular statement of accidents on Massachusetts railroads for the preceding ten years, presenting total figures as well as figures broken down by passengers, employees, travellers on highway at grade crossings, trespassers, and unclassified).

[27] See, e.g., *Seventeenth Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1886* (Boston, 1886), 21–25 (comparing accidents on Massachusetts railroads with accidents in New York, Ohio, Michigan, Iowa, Great Britain, and the United States as a whole). The quantification of accident provided the foundation for what historian Thomas Haskell calls "recipe knowledge." Thomas Haskell, "Capitalism and the Origins of the Humanitarian Sensibility, Part I," *American Historical Review* 90 (1985): 357.

roads fed the growing sense that accidents, whether resulting in injury or death, were not simply necessary costs of living in a technologically sophisticated society. Injury was not random, not accidental in the sense of being without apparent cause. Patterns began to leap out; certain kinds of actions led to injury or death again and again. Systemization meant that the toll in life and limb for "employees" coupling cars, for "passengers" in collisions and derailments or boarding and alighting from cars, and for "others" at grade crossings or walking on railway tracks resolved into discrete problems, like separating the component parts of a chemical compound.

State railroad commissions had superseded the independence and authority of corporations in matters of accident recordkeeping. In turn, the first federal regulatory agency, the Interstate Commerce Commission (ICC), superseded the independence and authority of state railroad commissions. Section 20 of the Interstate Commerce Act passed in 1887 required railroads engaged in interstate commerce to file annual returns with the ICC and gave the new commission the power to designate the form and details of the returns.[28] From the outset, the ICC mandated that returns include data relating to accidents.[29] Initially, the ICC made accident reports a portion of the annual return, but in 1901, under the authority of a new federal law, railroads were required to report accidents involving on-duty employees and passengers on a monthly basis, of which the commission, in turn, offered public analytical summaries in quarterly "Accident Bulletins."[30] From the initial three-page report, the ICC's accident reports became increasingly longer and more detailed, with page after page of tables offering comparative summaries of railway accidents in different parts of the country, railway accidents by kind

[28] Interstate Commerce Act (February 4, 1887), 24 Stat. 379. Although section 20 of the act specifically focused on financial data, it provided generally that the commission could "require from such carriers specific answers to all questions upon which the commission may need information."

[29] The ICC and state railroad commissioners established a system of uniform reports by carriers in 1888, a year after the act became law. *Third Annual Report of the Interstate Commerce Commission, Dec. 1, 1889* (Washington, 1889), 38–43.

[30] *Second Annual Report of the Interstate Commerce Commission, Dec. 1, 1888* (Washington, 1888), App. G; "An Act requiring common carriers engaged in interstate commerce to make full reports of all accidents to the Interstate Commerce Commission" (March 3, 1901), 31 Stat. 1446, in *Fifteenth Annual Report of the Interstate Commerce Commission, January 17, 1902* (Washington, 1902), 295. In 1910 Congress extended the monthly reporting requirement to all accidents. "An Act Requiring common carriers engaged in interstate and foreign commerce to make full reports of all accidents to the Interstate Commerce Commission and authorizing investigations thereof by said commission" (May 6, 1910) (Accident Reports Act), 36 Stat. 350, in Interstate Commerce Commission, *Accident Bulletin No. 37, Railroad Accidents in the United States During July, August, and September, 1910* (Washington, 1911), 22–23.

of accident, and status of the person injured or killed.[31] The commission compiled lengthy books of instructions to guide railroads in completing the requisite forms, prescribing numerical and alphabetic codes for everything from classes and causes of accidents, to injuries sustained, to light and weather conditions at the time of the accident.[32]

Accidents had been reduced to a science; class, phylum, and kingdom in the animal world had their analogues in the world of accident. Categories had replaced individuals in the chain of causation. Once more the moment is captured in Massachusetts, this time by a change in the published reports of the Massachusetts Board of Railroad Commissioners. In 1902, the board stopped including, as part of its annual published report, company statements of each individual streetcar accident. The following year, the board adopted the same practice for steam railroads. In place of the statements noting the names of the injured and the details of each accident were numbers, a statistical portrait of death and injury over the preceding year. A terse notice offered that "[a] detailed statement of each accident is on file in the office of the Board."[33] Any number of factors likely influenced the board's decision. The board's annual reports, which included the individual railroads' returns, had become increasingly unwieldy over the years: thick, heavy volumes, thousands of pages long. No doubt the decision also reflected the increasingly national focus of railroad regulation generally and the legitimacy which statistical reports had attained. But, whether a component of the decision or not, the change also showed that individual identity was no longer

[31] Interstate Commerce Commission, Bureau of Transportation and Statistics, *Twenty-Second Annual Report on the Statistics of Railways in the United States for the Year Ending June 30, 1909* (Washington, 1910), 85–118.

[32] See, e.g., Interstate Commerce Commission, Bureau of Statistics, *Rules Governing Monthly Reports of Railway Accidents, 1918 Revision* (Washington, 1918). The ICC provided that only accidents resulting in "injury" to person or property were to be reported. Strikingly, the definition of "injury" differed for employees and nonemployees. An employee was injured if he was incapacitated from performing his ordinary duties for more than three of the ten days following an accident; a passenger or other person was injured if he was incapacitated for a period of more than one day with respect to his "customary vocation."

[33] Compare the Report of the Boston Elevated Railway Company for the years 1901 and 1902. *Thirty-Second Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1901* (Boston, 1901), 269–86; *Thirty-Third Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1902* (Boston, 1902), 252. Compare the Report of the Boston & Albany Railroad Company for the years 1902 and 1903. *Annual Report Mass. R.R. Commrs, 1902,* 18–30; *Thirty-Fourth Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1903* (Boston, 1903), 17.

central to the understanding of accidents. In 1850, accidents had been individual events. By 1900, each accident merely added to the statistical portrait of safety and danger.

The shift in understanding of the causal chain for accidents was part of a broader shift in the dislocation of the individual from the causal chain more generally. For example, in the world of medicine, discoveries like germ theory at the end of the nineteenth century contributed to a trend away from locating the cause of disease in the idiosyncratic qualities of particular individuals and toward seeing disease and ill health in terms of sets of predictable symptoms indicative of the disease rather than the individual.[34] Likewise, criminologists, social scientists, settlement house workers, and journalists increasingly traced poverty, poor health, and the miseries of urban, industrial life not to individual failings but to social causes.[35] In an ironic twist, the individual, in being discovered, disappeared.

Even as state railroad commissions spun elaborate webs of safety and danger on the rails from the fine thread of numbers provided by railroads in their annual reports, they questioned the meaningfulness of the numbers on which their claims were based. Annual report forms imposed by state commissions fashioned a superficial uniformity in railroad company reports, creating the impression of a uniform underlying system of recordkeeping that, in fact, did not exist. At the outset many roads simply did not have any system in place for keeping a record of accidents. In 1870 – the first year of the newly created Massachusetts Railroad Commission – fully half of the twenty-eight railroads filing annual reports were simply silent on the issue of accidents.[36] In its 1879 report, the Massachusetts commissioners noted that the high number of reported deaths (150) relative to reported injuries (154) for the year suggested that railroads were not reporting all injuries, "in spite of the efforts of this Board to get full returns of all accidents."[37] Again and again over the years, the Massachusetts commissioners bemoaned the failure of all companies to adopt a uniform practice for reporting accidents. The discrepancies among the number of accidents reported by various roads in a state itself became proof of differences in reporting. Complaining in

[34] Charles E. Rosenberg, *The Care of Strangers: The Rise of America's Hospital System* (Baltimore, 1987), 151–52.

[35] Ellen Fitzpatrick, *Endless Crusade: Women Social Scientists and Progressive Reform* (New York, 1990); Sklar, *Florence Kelley and the Nation's Work;* Leiby, *Carroll Wright and Labor Reform.*

[36] *Annual Report Mass. R.R. Commrs, 1870,* 94–98.

[37] *Tenth Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1879* (Boston, 1879), 31. See also *Twelfth Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1881* (Boston, 1881), 23.

its 1894 report of the huge differences in reported accidents on the Boston & Albany and on the Old Colony, the board explained that the difference "is due not so much to the number of accidents, as to the system of reporting adopted by the two railroads." "To the casual reader," the board noted, "such a record is very misleading, and, for purposes of comparison, worthless."[38]

But underlying the frustration expressed by state and federal commissioners was a fundamental transformation in the practice of accident recordkeeping and the locus of authority. At the beginning of the railroad era, individual railroads worked out their own systems for recording accidents. Even the word "system" to describe the early era is misleading; many, perhaps most, railroads kept no record of accidents at all. Beginning in the 1860s and 1870s, state railroad commissions initiated the movement toward uniformity. Although they lacked the authority to impose a uniform system of recordkeeping, their requirement that all roads furnish accident data based on a standard form and their authority to impose penalties for noncompliance exerted pressure on the individual roads to conform to a standard presentation. Where the states brought pressure for statewide uniformity, the ICC brought pressure for national uniformity, imposing stiff penalties for noncompliance.[39] The externalization of recordkeeping hence captured a broader transformation in state authority even as it provided a factual basis for further extending the authority of the state.

The annual reports of state railroad commissions and the annual and then quarterly reports of the ICC documented a rising tide of accidents on American railroads. For the ten-month period from December 1869 through September 1870, Massachusetts steam railroads reported 108 nonemployees injured or killed. By the century's end, the numbers had

[38] *Twenty-Fifth Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1894* (Boston, 1894), 41–43. The issue of a uniform system of reporting accidents was no less a problem on streetcars. See *Twenty-Eighth Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1897* (Boston, 1897), 100–2.

[39] The goal of uniformity was aided by concurrent developments such as the establishment of internal claims departments and professional associations which brought together corporate officers handling accidents at annual meetings or addressed their shared concerns in journal articles, and the pressure created by damage awards against railroads and streetcar companies in suits by injured individuals. See, e.g., "Claim and Other Departments," *The Street Railway Journal* (Sept. 23, 1905): 529–35; "Papers Presented at the Claim Agents' Convention," in *The Street Railway Journal* (Oct. 7, 1905): 673–75; "Papers Read at the Atlantic City Convention of the American Street and Interurban Railway Claim Agents' Association," in *The Street Railway Journal* (Oct. 19, 1907): 707–22. Alfred D. Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, 1977), 131–32.

mushroomed to 472 nonemployees injured or killed, a fourfold increase.[40] The record in other states and the nation as a whole was much the same.[41] In 1901, for example, America's steam railroads reported 5,270 passengers and another 12,707 "other persons" injured or killed.[42] The number of persons injured and killed on America's railways peaked in 1913, with 16,942 passengers and 19,198 "others" (nonemployees) injured or killed.[43] Everywhere railroads wreaked an increasingly unbearable toll in human suffering.

The numbers reflected the transformation in America's railroads that had taken place between the Civil War and the end of the century. In the single decade from 1880 to 1890 total railroad mileage in the United States had almost doubled, from 87,801 miles to 163,562 miles.[44] In those same years, the number of passengers carried more than doubled, from just under 241 million in 1881 to over 498 million in 1890.[45] By 1890, American railroads, initially a patchwork of separate lines, had been integrated into a national system. On November 18, 1883, "the day of two noons," American railroads imposed a uniform time. Six years later, in 1889, the United States established four time zones – essentially the same used today – known as railroad time.[46] The standardization of time was matched by the standardization of track. In two days in early summer 1886, railroads across the country

[40] *Annual Report Mass. R.R. Commrs,* cxxv (34 passengers, 7 people at crossings, 67 people unlawfully on the track or cars); *Thirty-First Annual Report of the [Massachusetts] Board of Railroad Commissioners, January, 1900* (Boston, 1900), 134 (205 passengers, 76 others at crossings and stations, 201 trespassers).

[41] See, e.g., *Annual Report Ohio R.R. Commissioner (1884),* 32–33.

[42] U.S. Interstate Commerce Commission, Bureau of Transportation, Economics, and Statistics, *Fourteenth Annual Report on the Statistics of Railways in the United States for the Year Ending June, 30, 1901* (Washington, 1902), 97. See also Lawrence M. Friedman, "Civil Wrongs: Personal Injury Law in the Late 19th Century," *American Bar Foundation Research Journal* (1987), 353.

[43] Interstate Commerce Commission, Bureau of Statistics, *Accident Bulletin No. 48, Railway Accidents in the United States During April, May, June, 1913, and Year Ended June 30, 1913* (Washington, 1914), 20; ibid., *Accident Bulletin No. 78, Collisions, Derailments, and Other Accidents Resulting in Injury to Persons, Equipment, or Roadbed, Arising from the Operation of Steam Roads Used in Interstate Commerce, October, November, and December, 1920 and Year 1920* (Washington, 1921), 23 (Chart No. 3 showing passengers injured, passengers killed, and passenger-miles for years 1890 through 1920).

[44] Dept. of the Interior, Census Office, *Report on Transportation Business in the United States at the Eleventh Census: 1890, Part I. Transportation by Land* (Washington, 1895), 4.

[45] Ibid., 623. The number of passengers carried each year in the United States would continue to rise through the mid-1940s. Stover, *American Railroads,* 203, 205.

[46] These zones, which in practice became regional standard times, were legally recognized only in 1918. Kern, *Culture of Time and Space,* 12–13; Stover, *American Railroads,* 157.

shifted their tracks to "standard gauge" (4 feet, 8½ inches).[47] The combination of standardization of time and space made real scheduling possible for the first time. But, as seems to be a property of technological innovations, the possible quickly moved from the realm of the potential to the realm of the expected. Speed was money. Attuned to the financial bottom line, railway companies imposed ever tighter schedules that left little or no allowance for mishap even as they increased the risk of mishap.[48] Being "on time" and meeting ever tighter schedules became the obsession of trainmen. In fact, appellate cases decided in the South in the 1870s and 1880s give a sense of a region playing a furious and fatal game of catch-up.[49]

On streetcars, an even more staggering explosion of injury occurred between the middle and the end of the century. For the year 1899, streetcars in Massachusetts reported 1,616 passengers and 800 other nonemployees injured or killed.[50] For the United States as a whole in the June 1902 fiscal year, street railways reported 43,712 nonemployees injured, 26,672 of whom were passengers, and 1,094 nonemployees killed.[51] The increase in injuries and fatalities over those for the 1870s was due to a number of factors. In the closing decades of the century, more Americans competed for space on urban thoroughfares with increasing numbers of vehicles moving at increasingly faster speeds. To meet the needs of

[47] Stover, *American Railroads,* 154–56.

[48] On the loss of local ownership and control of streetcar and railway companies in the 1880s and 1890s that led to increased attention to the financial bottom line, see Chapter 7.

[49] One marker of the obsession with speed was the number of cases involving alighting injuries decided by state courts. Between 1870 and 1890, for example, the Georgia Supreme Court decided nineteen cases involving alighting injuries on railroads in the state. See *Georgia Supreme Court Reports,* 1870–1890. Accident reports compiled by the ICC which broke the country down by region also highlighted far higher accident rates in the South, as well as the West, than in other parts of the country. See, e.g., Interstate Commerce Commission, *Fourth Annual Report on the Statistics of Railways in the United States for the Year Ending June 30, 1891* (Washington, 1892), 93–102; Interstate Commerce Commission, *Twelfth Annual Report on the Statistics of Railways in the United States for the Year Ending June 30, 1899* (Washington, 1900), 100–13; William G. Thomas, *Lawyering for the Railroad: Business, Law, and Power in the New South* (Baton Rouge, 1999), 66.

[50] *Annual Report Mass. R.R. Commrs, 1900,* 77. Not all states required streetcar companies to make reports to the state commission. Streetcar companies strongly opposed any move to force them to publish their damaging record of accidents, arguing that publication would merely encourage "lawyers of a certain class" to bring damage suits and would prevent out-of-court settlements. *The Street Railway Journal* 8 (July 1892): 424–25.

[51] *The Street Railway Journal* 21 (1903): 890.

the burgeoning urban population, cities in the 1880s embraced cheaper, faster, and stronger alternatives in place of the horsecar. The first cable cars appeared in San Francisco in 1872; in 1882, Chicago became the second city to adopt cable power. The trend continued, so that by the early 1890s cable railways were operating in twenty-eight American cities. But cable power was as quickly displaced by electric power. Although cable power substantially reduced the operating costs of street railways, the initial capital outlays were huge, requiring heavy use to make them profitable. Operation itself was awkward. A broken cable stopped the entire line, and repairs were costly and time-consuming.[52] Electricity offered all the advantages of cable systems, without their significant drawbacks. Electric cars were generally half as expensive as cable systems to install and cheaper to operate than either cable or horsecars. Moreover, electricity could power longer cars with heavier passenger loads at speeds that could not even be imagined with horsecars. Electrification increased the speed of streetcars to 9 to 12 miles per hour, with even higher speeds possible beyond the crush of dense urban centers. In 1890, just over 15 percent of streetcar miles in the United States were powered by electricity; by 1902, 97 percent were.[53] Street railway mileage itself multiplied geometrically in the closing decades of the century. Between 1880 and 1890 street railway mileage increased from just over 2,000 miles to 8,000 miles; track mileage neared its peak by 1902, with over 22,000 miles, an increase from 1890 of 244 percent.[54]

Injury to passengers on streetcars dramatically outpaced that on steam trains. The contrast in the number of passengers alone would have led one to expect a difference. In 1890, street railways in the United States carried just over two billion passengers. By 1902, they were carrying approximately five billion – more than

[52] Cheape, *Moving the Masses,* 6.

[53] Department of Commerce and Labor, Bureau of the Census, *Special Reports: Street and Electric Railways, 1902* (Washington, 1905), 8; Cheape, *Moving the Masses,* 6–7; David E. Nye, *Electrifying America: Social Meanings of a New Technology, 1880–1940* (Cambridge, 1990), 85–97; Holt, "The Changing Perception of Urban Pathology," 330–33; Harold C. Passer, *The Electrical Manufacturers, 1875–1900* (Cambridge, 1953), 216–55; John Anderson Miller, *Fares Please! From Horse-Cars to Streamliners* (New York, 1941), 35–69. New technologies did not sweep up every American community in their path at the same moment. In small towns and cities, horsecars continued to provide the urban transit for inhabitants well after larger cities had adopted electric traction. Even in large cities, like New York, horse cars continued to roll along the streets well after the construction of the first "elevated lines." Middleton, *Time of the Trolley,* 31, 168–69.

[54] *Special Reports: Street and Electric Railways, 1902,* 6, 7.

seven times the total number carried on American steam railroads. In Massachusetts alone, steam railroads in 1900 carried just over 87 million passengers, as compared with 395 million carried on the state's streetcars. By 1917, street railways in the United States were carrying close to 11 billion passengers per year.[55] More Americans rode more often on streetcars than they did on steam trains. Between 1890 and 1902 the average number of streetcar rides per urban inhabitant increased from just over 100 a year to 177. By 1917, the number had grown to 260 rides per year per urban inhabitant.[56]

The huge number of passengers carried annually on America's steam and street railroads suggests a counterargument to that of the danger of modern life. In one respect, rail travel, whether by steam train or streetcar, was remarkably safe. Commenting in 1872 on the relative safety of rail travel, Charles Francis Adams noted that a passenger was more likely to die of sunstroke in Massachusetts than he was to be killed on the railroad from causes beyond his own control.

> Taken even in its largest aggregate, the loss of life incident to the working of the railroad system is not excessive, nor is it out of proportion to what might reasonably be expected.... A practically irresistible force crashing through the busy hive of modern civilization at a wild rate of speed, going hither and thither, across highways and byways and along a path which is in itself a thoroughfare, – such an agency cannot be expected to work incessantly and yet never come in contact with the human frame.[57]

At the turn of the century, one passenger was killed for every two million carried and one passenger injured for every 152,000 carried on America's railroads. Compared with the depressing regularity of accidents for railroad employees (one employee killed for every 420 employed and one injured for every 27 employed), the

[55] Ibid., 77, 103; *Annual Report Mass. R.R. Commrs, 1901,* 29, 79. For statistics on individual street railway lines across the nation, see Department of the Interior, Census Office, *Report on Transportation Business in the United States at the Eleventh Census: 1890, Part I. Transportation by Land* (Washington, 1895), 782–91.

[56] Middleton, *Time of the Trolley,* 77. In his account of the New York subway, Clifton Hood notes that between 1904 and 1914 the average number of rides each New Yorker took on public transport per year climbed from 274 to 343. Hood, *722 Miles,* 114.

[57] Charles Francis Adams, Jr., *Notes on Railroad Accidents* (New York, 1879), 243, 248, 249.

safety record for passengers looked even better.[58] Comparing passengers carried to accidents on streetcars at the turn of the century, the picture could be also read as one of remarkable safety. The 1902 census of street railways reported one passenger killed for every 18 million fare passengers carried; and one injured for every 178,000 fare passengers carried.[59]

Focusing on the comparison between passenger and employee casualties on steam railroads or the casualty rate for passengers on steam and street railroads, however, misses the larger point: rail travel had dramatically increased the risk of daily life. A man or woman walking, riding a horse, or driving a buggy or wagon had always faced the risk of accident, but the risk had been of a different order of magnitude in terms of the likelihood of death or life-

[58] U.S. Interstate Commerce Commission, Bureau of Transportation Economics and Statistics, *Annual Report on the Statistics of Railways in the United States for the Year Ending June 30, 1899* (Washington, 1900), 107 (summary of railway accidents showing numbers of employees and passengers killed, injured, etc., in U.S. and by groups). As ICC reports made painfully clear, even this picture of the accident record for employees is misleading; certain categories of employees, including brakemen, were far more at risk of accident than others. Moreover, the risk of accident for all groups varied substantially depending on the region of the country, with a far higher risk of injury or death on Southern railroads than in the Northeast. The study of industrial accidents has produced a rich literature. See, e.g., John Fabian Witt, "Toward New Histories of American Accident Law – The Case of the Cooperative First-Party Insurance Movement," *Harvard Law Review* 114 (January 2001): 690–842; John Fabian Witt, "The Transformation of Work and the Law of Workplace Accidents, 1842–1910," *Yale Law Journal* 107 (March 1998): 1467–1502; Christopher Tomlins, *Law, Labor, and Ideology in the Early American Republic* (Cambridge, 1993), esp. 301–84; Jonathan Simon, "'For the Government of Its Servants': Law and Disciplinary Power in the Workplace, 1870–1906," in Austin Sarat and Susan S. Silbey, eds., *Studies in Law, Politics and Society* (Greenwich, Conn., 1993); 105–36; Lawrence M. Friedman and Jack Ladinsky, "Social Change and the Law of Industrial Accidents," *Columbia Law Review* 67 (1967): 50–82.

[59] *Special Reports: Street and Electric Railways, 1902,* 16. A number of factors make it difficult to compare the casualty rates for steam railroads and streetcars. For example, although streetcars carried far more passengers than steam railroads, passenger journeys on railroads were far longer. In a different vein, whereas the lion's share of accidents on streetcars involved passengers and others lawfully using the public streets, the vast majority of steam railroad accidents involved employees and trespassers. At least prior to federal intervention, railroads faced far less risk of legal liability for accidents and thus had less incentive for complete record-keeping than streetcar companies, which needed accurate records to protect them from fraudulent claims and to promptly settle legitimate claims.

long, disabling injury; of individual ability to avert accident; and of the risk the horse, buggy, or wagon posed to others. "Seventy-five miles an hour is one hundred and ten feet a second," reported one observer, "and the energy of four hundred tons moving at that rate is nearly twice as great as that of a two-thousand pound shot fired from a hundred-ton Armstrong gun."[60] Trains appeared to represent the antithesis of individual control. Charles Francis Adams's own description – "a practically irresistible force crashing through the busy hive of modern civilization at a wild rate of speed" – conveyed an unmistakable image of human vulnerability in the face of technology. The contours of modern life made escape from technology nigh impossible. Industrialization had made travel a concomitant of daily life. The separation of home and work, the production of food, clothing, and other basic necessities of life outside the home, and the commercialization of leisure all fed a need to travel that was fundamentally modern. Risk then had become an unavoidable fact of life for virtually all Americans. And Americans faced that risk at the wheels of trains and streetcars that were controlled by foreign, faceless corporations.

Accounting for a significant percentage of accidents was the seemingly simple act of stepping from a streetcar or train – "alighting." On streetcars, alighting produced half of all accidents. On any given day, at the turn of the century, in every season, on the streetcar lines in major cities across the country, women and men, with numbing regularity, fell and suffered injury in their attempt to get off streetcars. By year's end in 1900, the tally of passengers falling as they got off the Boston Elevated Railway was just shy of 450; include those who fell boarding the cars and the number doubled.[61] Neither the year 1900 nor the record of the Boston Elevated was exceptional.[62]

[60] Quoted in W. B. Outten, "Railway Injuries: Their Clinical and Medico-Legal Features," in R. A. Witthaus and Tracy C. Becker, eds., *Medical Jurisprudence, Forensic Medicine and Toxicology,* 2 vols. (New York, 1894), 2:523.

[61] Ibid. The name Boston Elevated Railway is misleading. Only a small fraction of the company's total mileage was in fact "elevated." Most of its tracks – the product of a long-term lease from the West End Street Railway – were level with the street. The consolidation of Boston's public transit system is described in Cheape, *Moving the Masses,* 107–53.

[62] See, e.g., Chicago City Ry. Co., *1908 Station Record of Accidents;* Chicago City Ry. Co., *1912 Station Record of Accidents;* Chicago Surface Lines, *1920 Station Record of Accidents,* all on file at the Chicago Transit Authority (CTA), West Branch Facility (Chicago, Ill.).

On steam trains boarding and alighting combined amounted to roughly one quarter of all accidents involving nonemployees.[63] For the year ending June 30, 1904, the Interstate Commerce Commission reported that 115 passengers had been killed and 1,517 injured boarding or alighting from steam trains in the United States.[64] Seven years later, the ICC reported 129 passengers killed and another 2,678 injured boarding, alighting, or otherwise getting on or off passenger trains. As in other years, almost as many trespassers as passengers were injured (2,260) and far more trespassers than passengers killed (909) in getting on or off cars.[65]

The significance of alighting accidents extended beyond their numbers. Alighting, an act common to virtually all Americans, exemplified the new physical, emotional, and intellectual relationships among person, technology, and environment. Stepping from a train or streetcar in late nineteenth- and early-twentieth-century America was fraught with possibilities for mishap. One woman's experience can speak for many. Anna C. Larson boarded a train in Albert Lea, Minnesota, on March 28, 1900. The train was over an hour late leaving the station. Pulling out of Albert Lea, it sped along the track, stopping for what seemed only a matter of moments at stations and then sped on. The day was stormy and dark. Frost covered the train's windows, making it impossible to see out. The effect was disorienting. Suddenly, the brakeman threw the door of the car open and called out "Waseca." "I hurried," explained Anna Larson, gathering up her things – a hat, a cape, a package under one arm, a satchel grasped in her other hand.

The train stopped. Larson went out on the car's platform and, with her arms full, stepped down to the second step of the car. The wind whipped her face and body. Snow whirled thickly around her; snow and ice covered the steps. Two more steps and she would be on the station platform. She stepped forward with her right foot to go down. So deep had been her concentration on the icy steps that only then did she realize there was no depot. And then, just as suddenly as the train

[63] It is difficult to fix a definite percentage for a number of reasons, including variation in state railroad commission accident reporting forms and in railroad reporting. Moreover, a significant percentage of alighting accidents involved trespassers and the circumstances of these accidents were often unclear. Finally, in any given year, in any state, the number of collisions – which could involve hundreds of casualties in one accident – could significantly alter the total accident figures for the year and thus the ratio of alighting to other accidents. With these caveats in mind, see, e.g., *Annual Report Ohio R.R. Commr, 1884,* 34–35; Interstate Commerce Commission, *Accident Bulletin No. 40* (Washington, 1911), 22–23.

[64] ICC, *Accident Bulletin, No. 12,* 9.

[65] ICC, *Accident Bulletin No. 40,* 22–23 (year ending June 30, 1911).