Early in the nineteenth century, fire insurance companies established an approach to the problem of fire that was very different from the tactics and tools used by volunteer fire companies. Whereas firemen endangered their physical bodies in the performance of public service, fire underwriters imperiled financial assets in pursuit of profit. Not surprisingly, the returns on their work also were dissimilar. Volunteer firefighters received social, cultural, and political esteem from their neighbors. By contrast, fire insurers earned dollars, and in time they acquired increasing amounts of political and social capital as well.

If underwriters knew well that fire had a physical dimension, they nonetheless viewed it primarily as an economic problem. To entrepreneurial merchants, fire represented a commercial opportunity, even as it threatened their mercantile endeavors. However, turning a profit—much less building a durable industry—proved exceptionally difficult, even though conceptually the business of fire insurance was relatively simple: underwriters sold contracts that furnished indemnity against economic loss caused by fire. Profits were achieved by setting the price of insurance high enough to cover losses without driving business away and/or by preventing losses from occurring altogether. Over time, accomplishing this goal generated a host of different management strategies, organizational forms, and
systems of practice. Although these tactics would change over time, the same basic conundrum confronted every insurance company and every generation of insurance worker: How was it possible to make income (from premiums and investments) exceed liabilities (losses and expenses)?

Underwriters’ approach to fire—as a business and societal problem more broadly—is reflected in the language with which they described their endeavor. When insurers underwrote policies, they “took risks.” That is, fire underwriters transformed a highly specific environmental hazard—that a blaze would strike a property located in a concrete and particular physical and cultural context—into an economic abstraction. Represented as a rate, this premium reflected, in theory at least, the likelihood that the insured property would be destroyed by fire in a given time period. However, firms were less concerned about the effect that fires had on individual policies than they were about their effect on the thousands of risks that they had accumulated. Insurers sought to minimize the risk in their portfolios with a variety of management techniques and information tools—some of which were utilized in other financial industries of the era—including account books, administrative guidelines, behavioral prescriptions, and later on statistics and maps. As they refined the use of such technologies over the course of the nineteenth century, underwriters sought not only to better comprehend the problem of fire but to make out of it an abstract commodity, easily salable in the nation’s expanding capitalist economy.¹

The development of the fire insurance industry paralleled the shifting division of labor in firefighting organizations. In much the same way that the Philadelphia Hose Company’s formation exemplified a movement away from the communal arrangement of firefighting, the establishment and expansion of “joint-stock” insurance companies represented a new mode of organizing to combat the problem of fire. By turning to these incipient corporations, a limited number of urban residents embraced a more specialized form of social organization—as compared to the relatively community-focused strategies of dispersing risk that were championed by mutual insurance companies. When the Insurance Company of North America (INA) began selling fire insurance policies in 1794 and wrote its first fire insurance policy in 1792, it offered an alternative to subscribing to mutual societies. Later, when INA expanded its business beyond Philadelphia’s boundaries, it further signaled that insurers had begun to sever their connection to local community. The appearance of joint-stock firms also coincided with a broader shift in how underwriters organized their business to confront the problem of fire. Insurers began to create bureaucratic hierarchies, establish formal management procedures to guide their labor, and experiment with new ways of representing danger.
The expansion of the Aetna Fire Insurance Company—an exceptional firm located in Hartford, Connecticut—also offers insight into the development and history of the industry. Aetna’s approach to the problem of fire distinguished it from the majority of the industry, in which individual firms cultivated markets in tightly circumscribed geographic areas. Aetna bucked this trend by expanding across the nation almost from its inception in 1819. Yet, like other firms, Aetna’s practice centered on gaining and manipulating knowledge of risks. However, because they could not scrutinize every risk personally, Aetna’s managers created a network of surrogates to transact business in distant locations. In order to control a rapidly expanding network of agents, the company also developed relatively sophisticated administrative procedures to manage its daily operations. Although Aetna’s early innovations in management and strategy made it unusual, other companies were emulating its practices by midcentury. In fact, many of the industry’s future leaders learned the business at Aetna, and many practices peculiar to Aetna—such as drawing diagrams of risk—would develop into standards used across the industry. By the end of the century, Aetna became one of the largest and most influential companies, and along with a handful of Hartford, New York, and Philadelphia firms, including INA, dominated the fire insurance industry.

Despite significant organizational innovations, achieving solvency—much less profitability—eluded the fire insurance industry during its initial stages and preoccupied it for much of the nineteenth century. Developing business practices that would help to turn a regular profit proved difficult because underwriters had little skill in predicting how fire would manifest itself in the environment. Insurers lacked a definitive sense of how the problem affected both the policies they underwrote and their portfolios of risk. Of course, from common sense and on-the-job experience, underwriters knew that some buildings were more likely to catch fire than others. For instance, they recognized that wood structures burned more often than stone buildings. However, insurers had no sense of how much more often frame construction burned. Not surprisingly, insurance rates fluctuated wildly. More significantly, perhaps, underwriters did not possess adequate means to assess how fire affected their portfolios more broadly. In other words, they could not precisely determine how a single fire, groups of fires, or conflagrations would affect their financial standing. As a result, insurers faced an uncertain and arbitrary financial future, and writing policies became more akin to gambling than many would have liked. Although ambivalent about the uncertainty of early underwriting methods, one insurer underwriting fire and marine risks along the Mississippi River nonetheless savored the excitement of his risk-taking behavior. In his mem-
oir, James Waterworth recalled with nostalgia the adventures of his early days in the industry, when ignorance about risk had been nearly complete.²

The Fire Insurance Industry’s Early History

Philadelphia was the birthplace of the American fire insurance industry. The nation’s first fire insurance company, the Philadelphia Contributionship, offered fire insurance beginning in 1752. Organized as a mutual insurance company, the Contributionship was a financial cooperative based in Philadelphia’s elite and middling communities. Recognizing the omnipresent danger of fire, well-to-do citizens banded together for their common economic good and created risk communities mediated by their face-to-face relationships. Members shared in the company’s losses as well as gains. As the company’s charter noted, it provided “for the common Security and Advantage of our Fellow Citizens and Neighbors,” and it promoted “so great and public Good as the Insurance of Houses from Loss by Fire.” However, the Contributionship’s vision of the public good was limited. In the eighteenth century, mutual insurance companies placed strict requirements on what constituted insurable property. They extended protection to a narrow segment of property owners—mostly those who owned homes constructed of brick or stone.³

Discussions about what type of property the Contributionship should insure reveal the limitations of eighteenth-century fire insurances protection. The company’s organizing document, its “Deed of Settlement,” specified that it could insure no frame dwelling constructed after 1752. In 1769, the company prohibited insurance on wooden dwellings altogether, concentrating exclusively on property built of brick or stone. In 1781, the Contributionship precluded insuring houses with nearby trees, even refusing to renew existing policies. More than a mere extension of fears about the flammability of wood, the exclusion was a response to a treatise on lightning danger and complaints that trees obstructed fire companies’ ability to effectively fight fire. However, the policy of prohibiting insurance on houses with trees did not receive universal welcome from the Contributionship’s members, and generated dramatic controversy. About forty members of the Contributionship expressed their dissatisfaction in the Pennsylvania Gazette; in particular, they questioned whether trees posed an additional danger. The disaffected members were dismayed that the Contributionship refused to repeal its policy, and were equally distressed that the organization was unwilling to assess them an additional premium “for the supposed risk attending trees in cases of fire.” In 1774, after securing enough capital, they formed a rival association: The Mutual Assur-
ance Company for Insuring Houses from Loss by Fire. The new organization adopted a tree as its symbol, and provided insurance to those with shade trees for only a small additional premium.\textsuperscript{4}

Strikingly, despite such generous exemptions, the “Green Tree” mirrored the practices of the Contributionship. Neither company provided coverage for goods and personal items located within buildings, nor could businessmen purchase insurance for commercial risks. Indeed, debates about coverage, and insurance policies themselves, occurred among a narrow segment of the population that could afford the relative expense of such restrictive conditions of purchase. Perhaps the most revealing insight about the boundaries of insurance protection can be found among the large numbers of well-to-do property owners who joined mutual societies as an investment strategy because policies sometimes returned a small dividend. Ultimately, mutual fire insurance companies provided only limited protection to a narrow range of demographic and geographic communities.\textsuperscript{5}

By the last decade of the eighteenth century the boundaries of fire insurance protection expanded as more companies entered the field and as fire insurance was transformed into a purely commercial endeavor. In 1792 local merchants initiated the first “joint-stock” fire insurance company, INA, and established the Insurance Company of Pennsylvania in 1794. These firms offered a wider range of protection, including policies for commercial properties. Moreover, they differed from mutual companies in that they organized to benefit private interests; these were not communities of property owners banding together to share their risks. Yet, INA and the other new firms entered the insurance business cautiously, reflecting uncertain markets and the relative novelty of insurance in the late eighteenth century. For instance, although conceived as a general insurance company able to write life, fire, or marine contracts, INA concentrated most of its resources in the marine insurance business. Life insurance was not well understood in North America, and mutual insurers dominated Philadelphia’s fire insurance market. By contrast, underwriting marine cargoes and hulls offered vast economic potential. The business of marine insurance was relatively better understood than fire or life. Additionally, the marine insurance business played a significant role in international commerce and Philadelphia was one of the nation’s principal ports. Moreover, over $600,000 in permanent capital made INA the city’s largest marine underwriter. Not only could INA underwrite greater risks than regional firms, but it could competed on equal footing with international companies.\textsuperscript{6}

Insurance companies drew upon the business practices and culture of marine underwriters as they prepared to enter the fire insurance field. In particular, the development of INA illustrates how the commercial culture of the coffeehouses—
where marine insurance was commonly underwritten—shaped the early fire insurance industry. Conducted by generalist merchants within demographically circumscribed communities, early marine insurance was a collaborative endeavor in which many different merchants—often familiar with one another, related by family ties, or tied together by significant financial exposure—shared risk. As specific firms formed, they capitalized on family and personal relationships with shippers, builders, and other merchants. Moreover, though marine underwriters insured international and regional cargoes, they usually operated within the context of local ports like Philadelphia or Boston. When INA opened for business, it tapped into the experience of the Philadelphia insurance community, which transacted business in the City Tavern. INA named to its board at least six of the city’s most prominent marine underwriters and commercial leaders. However, day-to-day authority resided in the hands of company secretary Ebenezer Hazard, who made business decisions about risks and wrote policies. Hazard and the secretaries of the other upstarts in the fledgling industry struggled to manage a steady flow of information about risk and to incorporate that knowledge into increasingly complex business transactions. Although later firms no longer worked out of the coffeehouse, gathering and evaluating large quantities of information dominated the concerns of underwriters for many years, mirroring the struggles of the financial industries more broadly and predicting a central dilemma facing managerial capitalists in the postbellum era.7

Buoyed by a growing market for fire insurance, increasing fire danger, and an expanding economy in Philadelphia, INA began to offer fire insurance in 1794. Unlike mutual companies, which restricted themselves to underwriting dwellings and were backed only by the premiums of their members, INA’s capitalization of $600,000 gave it access to an extraordinary amount of funds. Moreover, the ambitions of the merchants who founded INA extended both beyond the local geographic region and beyond the limitations of the market in selling protection for residential structures. INA became the first insurance company on the eastern seaboard to insure “goods, wares, and merchandize, or other personal property” against loss by fire. This significant innovation followed precedents set decades earlier by London companies and was crucial to the expansion of INA and the insurance industry in North America. More broadly, American firms now could assure both the integrity of capital investment in the built environment and in the commodities that flowed through the nascent industrial economy. INA took advantage of its strong financial position; in its first six months, the firm collected over $60,000 in premiums, along with another $3,000 in interest, and paid about $4,500 in losses.8
As they cultivated new business early in the nineteenth century, insurance firms began to focus on developing a better understanding of the problem of fire and on setting guidelines for everyday business practices. During the first three decades of the century, several activities became central to the fire insurance business: surveying a risk, corresponding with field representatives and customers about hazards and rates, and compiling records of surveys and transactions in ledgers, and classifying danger. By the 1810s, companies transformed such informal procedures into formal written guidelines and organizational structures. In particular, the industry diversified its risks, and underwriters established rudimentary distinctions between different sorts of property, manufacturing activities, and construction methods. Initially such divisions resided in the minds of company secretaries—in an expanding qualitative knowledge base about fire danger that they developed from their own experience. During the first two decades of the century, many companies transformed these qualitative understandings into formal written categories, albeit incompletely and in an idiosyncratic fashion. Although such systems of classifying risk remained relatively primitive, they nonetheless helped to guide firms in making decisions about risks—especially in setting rates, which were quantitative expressions of insurers’ qualitative understandings of danger. Both rates and categories of risk were in a constant state of flux, as underwriters entered into a dialogue with prospective customers and the landscape.

Both extensive use of property surveys and the evolving manner of their use underscore the intensity with which insurance companies gathered information about the risks they underwrote. Of course surveys had long served as the first step in the insurance transaction, but during the eighteenth and early nineteenth century such surveys provided only the most basic information about a structure, its contents, and value. The Philadelphia Contributionship employed two men to inspect and survey property. Surveyors examined how buildings were constructed and commented on basic construction details or unusual architectural features. They especially examined the thickness of walls, materials used, and what types of activity took place within or nearby the structure. In addition to this basic property description, surveys included the policyholder’s name and an estimate of the property’s replacement value. Finally, each survey was numbered and associated with a policy, which specified the dates of the contract, its value, and the extent of coverage.9

The practice of collecting surveys, as well as the surveys themselves, became increasingly formalized in the early years of the nineteenth century as firms spread beyond the locale of their home offices. In 1807, INA, which already wrote contracts in Philadelphia’s hinterland, extended its business into the Ohio River val-
The American Fire Insurance Industry

As INA expanded, it created more formal procedures for writing insurance contracts, including provisions for obtaining property surveys. The company’s proposals demanded that in places where it had no agent, applications for insurance required a property description “made by a master carpenter.” The application, which was also to be signed by the “owner” and “attested before a notary or magistrate,” was expected to contain a plethora of specific information about the property: its contiguity to water, the state of local fire defenses and fire engines, materials of construction, adjacent dwellings, and how ashes were disposed. In addition, the board directed company president John Inskeep to appoint “trusted persons . . . whose duty it shall be to Survey and Certify the situation of all Buildings and property on which insurance is required, at the expense of the person applying therefore.” INA refused to write any insurance policies “without the return of such survey and Certificate.”

Evaluating the information provided by property surveys allowed underwriters to differentiate risks and to set rates—the basic business transaction in the industry. Insurers set rates and issued policies based upon their assessment of the information supplied from the field, and in conjunction with a company’s financial position and local market conditions. A competitive market, or lack of it, could drive rates down or keep them artificially high; indeed, rates often fluctuated by company, and from year to year. Although market conditions frequently loomed larger in underwriters’ decision-making, the process of evaluating information remained central to the rate-setting endeavor. Indeed, risks deemed more hazardous were underwritten for a higher premium, or not at all. But how were such assessments made?

When evaluating a risk, insurers assessed observable characteristics and gathered those notes into surveys; then they evaluated the information against their knowledge about how often a fire might occur in similar circumstances. Amazingly, even though the act of assigning a numerical value to a risk was a quantitative exercise, the process was not based in any formal statistical tables. Instead, insurers drew upon their experience, based almost entirely on personal recollection and anecdote. Indeed, underwriters did not keep systematic records of losses; instead, they noted them in the most general way, by listing them in ledgers and/or in account books. Material facts describing the loss—data easily obtainable from the survey—were not tied to the financial payments. Companies neither compiled quantitative tables about their losses nor engaged in rudimentary actuarial record-keeping. Even so, underwriters codified their qualitative evaluations of fire danger into written lists. In these guidelines, insurers assigned a financial value to various structural conditions associated with property: information about its use, owner-
ship, construction, and spatial relation to other property. If insurers’ methods of organizing risk lacked a systematic quantitative character, they nonetheless categorized their knowledge.\textsuperscript{11}

Underwriters’ classifications of risks responded dynamically to changing business conditions; they grew more elaborate as the industry insured a wider range of property and continually refined its views of danger. At its inception, for instance, INA divided the perils it would insure against into four categories. The company identified buildings constructed \textit{wholly} of brick or stone as first-class hazards, and those structures built only \textit{partially} of brick or stone were deemed second-class hazards. Those buildings that housed particular commodities or that contained certain types of manufacturing processes were labeled “extra-hazardous.” Finally, the company refused to insure wood structures, implicitly identifying a fourth category of uninsurable structures. As the industry developed, insurers refined and tinkered with their classification schemes—underscoring the dynamic nature of these seemingly fixed information technologies. For instance, as INA accepted more diverse risks in the first decades of the nineteenth century, the company categorized danger in a more detailed manner. When INA began to insure wooden structures, it explicitly rewrote its list of rates and dangers to include “slight wooden buildings.” If frequent alterations reveal the industry’s expansion, they also point to the extreme variability of fire danger and the difficulty of pinning it down in rapidly changing urban and industrial settings. For instance, in the 1807 rate table, “first classes of hazard” remained buildings constructed entirely of brick or stone, but now this category reflected an appreciation of how roofs covered with tile, slate, or metal roofs could impede the spread of fire from surrounding buildings. Like other firms, INA remade its classifications regularly and with subtlety, and it repeatedly refined earlier categorizations of risk. Even though such categories reflected the idiosyncratic styles of particular companies, many companies evaluated risk using similar categories. More broadly, such categories represented underwriters’ continued desire to move beyond anecdote and personal recollection and create an objective measure of fire risk.\textsuperscript{12}

During the first three decades of the nineteenth century, underwriting firms also began to enumerate many exceptions to their policies and guidelines. These alterations reflected the growing scope and intensity of fire hazard in the expanding economy, underwriters’ changing—and limited—knowledge of fire risks, and the pressures of a more competitive marketplace. The industry identified many more risks as extra-hazardous, which meant elevated rates, additional inspections, or policy prohibitions. In particular, buildings that held flammable commodities or included fire-intensive manufacturing processes became subject to greater
scrutiny. Many traditional artisanal crafts as well as new manufacturing processes were included in lists of “hazardous occupations”: distillers, sugar refiners, bakers, painters, carpenters, and turpentine distillers. In addition, some firms, such as INA, also identified certain goods and merchandise as extra hazardous because of their susceptibility to water damage or theft. Although many companies had once prohibited insuring such properties altogether, by the 1820s many companies underwrote these dangerous risks at a higher premium. For instance, the American Fire Insurance Company (AFIC), which shared many of INA’s philosophical underpinnings, routinely wrote policies on cotton manufactories, albeit under a plethora of exceptional conditions.13

With the development of more detailed classification systems, surveys and correspondence became more effective conduits through which insurers developed experience without having to suffer financial loss. For instance, AFIC acquired significant expertise at underwriting cotton mills from studying its surveys, and it published that knowledge in an 1823 pamphlet. Unusually detailed for its time, the tract commented on the industry’s approach to underwriting manufactories, especially the process of setting premiums on cotton mills. The secretary of the AFIC, William Jones, reported that cotton manufacturers were not a typical situation, but could be underwritten if “more ample investigation of the nature of each particular risk” was acquired. Jones specified that two disinterested observers should compile cotton mill surveys. Those observers should sketch “a ground plot” of the premises and all structures within fifty yards, identify the “situation”—its location more generally, including the town and nearby water sources or landmarks—describe the building, and remark on the heating, manufacturing processes, and lighting used in the structure. AFIC’s secretary then explained how surveys could be used to calculate adequate premiums on property, and even to encourage manufacturers to embrace safe practices, which “might abate the premium” and reduce the possibility of a fire.14

Despite underwriters’ growing sophistication, taking risks continued to confound their ability to produce a profit from the chaos caused by fire. If fire risk was difficult to pin down, underwriters nonetheless created financial strategies to minimize their exposure, especially evident in their approaches to single large risks. Then, as now, the industry recognized that writing an insurance contract of an especially large value exposed them to greater jeopardy from a single fire. In light of this concern, in the early nineteenth century, INA established a sliding scale for premiums that depended upon the amount of insurance sought. For instance, on the first class of hazard (stone or brick construction) the company insured structures and goods valued at less than $8,000 at the rate of $0.30 (per $100 of insur-
ance.) If a property was valued at between $8,000 and $16,000, INA charged $0.045; property valued between $16,000 and $25,000 was assessed at $0.60. On the more dangerous second class of risk, the company insured only up to a value of $8,000, at a higher rate of $0.75 cents per hundred dollars. As insurers developed strategies for dealing with very large single contracts, they soon realized that the ever-changing urban landscape posed a new, albeit similar, threat. Conflagration became frighteningly common and represented a more profound danger to property owners and insurers. Not surprisingly, insurance firms became increasingly alarmed by concentrations of risks within a single geographic district, but a strategy to deal with losses from conflagration proved elusive.\(^{15}\)

As underwriters became more and more aware that social and political approaches to the problem of fire affected their bottom line, they demonstrated consistent support for legislation aimed at improving public safety, but they did not advocate a systematic approach to fire prevention. On a number of occasions underwriters supported the restriction of various types of fire use in certain city districts or sought to prevent certain types of construction. For instance, in Philadelphia at the turn of the nineteenth century, underwriters supported limitations on wood construction, and such “fire limits” became standard in many cities throughout the nation. Likewise, many cities also enacted prohibitions on the storage and production of certain very hazardous materials, such as gunpowder, within city limits. These legal codes appear to have had limited effect. They dealt almost exclusively with the most profound threats, and it is unclear how extensive they were or whether they were enforced. Similarly, other economic and political interests in cities too often frustrated attempts to expand public safety legislation. Such difficulties in battling fire speak volumes about the nascent insurance industry and American society more broadly. Significantly, the insurance industry remained relatively small, poorly organized, and fragmented, and developing a focused cross-industry approach to the problem would have to wait until the insurers forged a common interest and built lasting trade associations. Perhaps more importantly, the challenges of industrial and urban change, including especially shifting and new fire dangers, impeded efforts to promote urban fire safety. Therefore it is hardly surprising that most insurance firms focused on the basics of their business: refining daily practices, managing information, administering policies, and paying losses.\(^{16}\)

Underwriters may have had a limited ability to shape broader issues of public safety, but they sometimes used market mechanisms to promote fire safety. In the face-to-face communities of the eighteenth century, when the insurance industry was small and close-knit, this tactic appears to have succeeded on several occasions.
In a number of instances insurers forced customers/shareholders to revise their construction plans. This strategy worked within the tightly circumscribed community of a local mutual insurance company whose clients were also company owners—a much different situation than that faced by stock insurers during the early days of industrialization in the nineteenth century. Yet, even into the nineteenth century, such strategies may have continued to work. Certainly insurers used an increasing number of restrictions on policies in an attempt to avoid the most dangerous risks. If not heeded, these prohibitions could negate a policy altogether, thus pressuring property owners to build more safely or to avoid renting their property to certain types of manufacturers. Alternately, such restrictions could force industrialists or commercial interests to avoid dangerous practices. However, such market coercion succeeded only when insurers collectively chose not to insure certain types of property. Increased competition for business and the expanding number of risks would increasingly limit the coercive power of the industry early in the nineteenth century.17

By the 1820s, the fire insurance industry had expanded significantly, and the consumer market in fire insurance also continued to grow steadily. In the 1790s, at the inception of INA, there was, according to the historian of Philadelphia’s insurance industry, J. A. Fowler, “little readiness on the part of even business men to accept the new [from INA] fire insurance.” Just two decades later the market in insurance had grown, but it remained relatively sparse. In a letter to Poulson’s Daily Advertiser, an “Old Citizen” puzzled that “the practice of insuring against loss by Fire, is far from being a general one” and that “but a small proportion of the houses in Philadelphia are insured, and a much less proportion of the goods in stores and warehouses.” By the 1830s, fire insurance coverage had become more common. According to the ledgers of a Philadelphia fire company that attended approximately forty fires in 1830, over $110,000 in property had burned in those fires; only $56,000 was indemnified by insurance. Although such figures likely overstate the pervasiveness of insurance, they reveal how rapidly the industry was expanding early in the nineteenth century as it aggressively raced to keep pace with the problem of fire in the changing American landscape.18

Aetna, Fire Insurance Practice, and Industry Expansion

Understanding the changing built landscape, which grew more complex and more vulnerable to fire, increasingly posed a dizzying challenge to the insurance industry. For instance, in Philadelphia in 1810, nearly one hundred thousand people lived in 15,814 houses, of which 6,582 were constructed of wood. Within
twenty years, the number of structures in the region had increased to over forty thousand, and housed over 160,000 residents. At the same time, the built environment became crowded with many new dangers. Anthracite coal displaced wood as the most common combustible used in homes, and matches replaced steel and flint as the most common way to ignite a fire. On the other hand, gas lighting was introduced in the United States in the 1810s and fats were used less frequently for illumination. As a result of these and other changes in everyday life, the length and complexity of insurance policies and discussions in company manuals lengthened. The insurance business reflected the growing complexity of urban environments—and underwriters’ appreciation of the changing landscape. By the 1850s, at least one company’s manual included a section on “exceptions” that was more than twice as long as the rating table itself.

To make sense of the changing environment and the fire risks it possessed, the industry expanded dramatically. By the 1830s, firms were entering the business aggressively, in terms of seeking new business and in organizing themselves. For instance, within a year of its formation in 1829, Philadelphia’s Franklin Insurance Company had taken nearly $1,115,000 in risks. This rapid growth could only have occurred with access to a market as robust as Philadelphia’s, where the company wrote 90 percent of its policies. Although some firms continued to serve local markets, others expanded the geographic boundaries of their business. In contrast to the Franklin Insurance Company, INA occasionally underwrote risks in the Ohio River valley as early as 1807, and by 1840 it had established agents in cities as far west as St. Louis and Cincinnati. Likewise, underwriters in cities without expansive markets, such as Hartford’s Aetna Fire Insurance Company, overcome this disadvantage by writing policies over a wide area. Although these business strategies made such companies relatively unusual in the 1820s, underwriting insurance over a broad region had become common by the 1840s.

Examining how Aetna organized and practiced the insurance trade provides a window into the development of the fire insurance industry between 1820 and 1850, and offers insights into the industry’s changing approach to apprehending the problem of fire in America. Indeed, although Aetna often adopted business strategies that distinguished it from the rest of the industry, many of the company’s practices became standard by the century’s final decades. In particular, Aetna placed the manipulation of data at the center of its business activities, reflecting the growing importance and the intensification of information-gathering practices within the industry. To manage it knowledge, Aetna developed an expansive network of field representatives and created formal, bureaucratic procedures to supervise and to guide those agents, as well as the observations they fed to the com-
pany. These management strategies rested on Aetna’s belief that local connections and personal inspections of risk formed the cornerstone of its business. Although the firm employed many of the same surveillance methods favored throughout the industry, it had expanded their scope, intensity, and range. Aetna’s correspondence with its agents underscores the growing sophistication of its knowledge of the built environment and the problem of fire, as well as its evolving business strategies.\textsuperscript{21}

In the 1820s, Aetna expanded according to a novel strategy that hinged upon a relatively simple principle. At a time when most companies advertised by boasting of the size of their capital reserves—signaling that a firm could pay its losses—Aetna, took a different tack. It emphasized making carefully calculated determinations about underwriting risks, an emphasis that became more pronounced after a sweeping fire nearly drove the company to bankruptcy in 1827. For Aetna, exercising good judgment meant dispersing risks widely, thereby reducing the firm’s exposure to a calamitous fire. As company leaders argued, firms that had their “risks duly dispersed” were the “safest.” Aetna distributed its risks by not writing too many policies within a single urban district. Isaac Perkins, Aetna’s first secretary, elaborated on the benefits and strategy for scattering risks geographically. He argued that “if an office with a million of capital should insure to [the] amount on every building in a compact part of Philadelphia, its exposure to ruin would be much greater than . . . insuring $100,000 in each of ten towns.” Yet, good practice extended beyond the prohibition on writing too much insurance within a single district or even on contiguous structures. Indeed, as Perkins implied, a company’s financial exposure derived not just from the position of its risks in the landscape but also from the arrangement of danger within its entire portfolio of risk. If evaluating the dangers evident in individual policies was a good idea, so too was assessing risk in the sum total of a firm’s policies. In practice, this meant minimizing exposure in a single type of manufactory or business endeavor. Aetna, then, sought to manage its entire portfolio, to distribute risks not only across the broad range of the built environment, but also to disburse them across the economic landscape. Scrutinizing individual policies as well as the company portfolio made “assurance double sure” and initiated a new business model in the industry.\textsuperscript{22}

Aetna arrived upon this strategy through “experience and reflection,” revealing the important role that information had begun to play in helping the firm to remake its practices according to the changing dangers of fire. As Aetna learned from its losses, it became increasingly invested in facilitating the gathering and analysis of data about the fire threat. Organizing and categorizing information—about the landscape, about property, about fire—acquired through surveys and writing poli-
cies became the backbone Aetna’s strategies. Not only did the company scrutinize its own record, but also it subscribed to New York and Boston newspapers, recording the place, property, and other details of fire losses. In 1827 Aetna even convened a conference between itself and three other Hartford companies to compare experiences, and rates. From its observations, Aetna sought to understand the minutest details of fire risk and hoped to use that information to give itself a competitive advantage. Eventually such practices would percolate throughout the industry and become the basis for actively producing knowledge about the dangers in the built environment. However, in the first half of the nineteenth century few companies emulated Aetna and peer companies like INA.23

Aetna did not just seek general information about fire danger, but sought to understand each risk intimately, though this posed a serious administrative problem in the decades before the railroad and telegraph would shrink time and space. Hampered by geography, company officials hired intermediaries to conduct business on the company’s behalf, believing that familiarity with the environs and people of a particular locale was crucial in underwriting any risk. Indeed, the company secretary sometimes chastised an agent for insuring a property too far from his home. As James Goodwin explained to an agent in 1834, “One object in appointing agents is to have a personal knowledge of the property insured.” The company wanted an agent nearer to the insured property to underwrite the risk. It expected that that agent would be able to report on the specifics more easily and also be able to judge more easily if the property were over-insured. Aetna had created an expansive network of local agents to help it manage its portfolio of risk, and also to acquire face-to-face “knowledge” of the landscape. Thus, much was at stake when hiring agents, because they received such far-reaching and important responsibilities. They were charged with soliciting business, inspecting property, executing surveys, writing policies, adjusting claims, and paying losses. Not surprisingly, the company appointed agents carefully. Typically Aetna appointed representatives with whom it was familiar, either through family or other interpersonal business networks. Likewise, hiring practices offered prospective employees a model of the discipline and prudence that it sought to fuse into its bureaucratic procedures. To identify such men and to incubate this work culture, the firm scrutinized prospective agents with a zeal that it expected agents to emulate when they conducted the company’s business.24

Like other companies of the period, Aetna became increasingly explicit in its quest to understand and to minimize the cultural component of the fire hazard as a critical component of its expansion and search for better methods of managing information about fire risk. The firm did this by explicitly instructing its agents to
scrutinize the personal qualities of potential customers—a practice that would later be described as identifying the moral hazard. Indeed, when the firm urged agents to know the character of a risk, it did not mean simply assessing physical particulars; Aetna wanted agents to evaluate the personal reputation and qualities of potential customers. Already in the 1830s, the company demanded that agents evaluate the “moral character” of proposed policyholders. In 1837, a new agent learned that “in all cases” it was important “to know that the person for whom you insure possesses a fair reputation.” Several years later, in 1844, the company secretary, Simeon Loomis, wrote to an agent in Burlington, Iowa, “We would have our dealings, as far as possible, with men of integrity.” Such agents, the company reasoned, would be able to identify and insure only the “best quality” of men. Loomis wrote a New York agent that “we want a living, thinking, judicious man for our business—one who can know how things are done, and how people are getting on in the world—whether they are daily practicing fraud in their dealings, or leading good honest lives.” This dictate also urged agents to investigate the people in buildings that adjoined the property under consideration for insurance. Well into the 1850s, the company advised agents to “first learn the character of the applicant and of those who occupy a part of the same, or adjoining buildings—if of bad repute avoid the risk—guard against over insurance, frauds, enemies, or threats to burn, gross carelessness, habitual intemperance, and persons seriously embarrassed or otherwise in desperate circumstances.” Thus the firm sought to transact business with men whose approach to commerce matched the firm’s conservative, risk-averse behaviors and vision of manhood. Aetna’s attention to prudence stood in stark contrast and as a corrective to the aggressive individualism, risk-taking, and competitiveness encouraged by the expanding market economy.25

In the context of the disorder that the middle class so often perceived in the nascent industrial and urban world, Aetna especially expected its representatives to be examples for the agents of other firms. In a letter to a company representative Loomis warned him to be wary of his peer agents: “If they are the agents of reckless, irresponsible companies, they will be reckless too, and their example unsafe.” Aetna further charged its representatives with counteracting the negative example that competing (and careless) agents had on local insurance practice. Aetna urged collaboration as a way “to improve such agents, if their principal has any reputation. It is desirable that agents in a place should be on good terms, and uniform in their rates. We never lose by charging as much as any other company.” If Aetna hoped its agents would be models for good practice and demonstrate the importance of gathering and using information, altruism alone did not motivate the firm. Indeed, Aetna worried that imprudent companies could place its own economic
interests at risk, and the firm advised agents to show care when insuring property nearby structures insured by an irresponsible agent. Aetna, then, expected its agents to function as models of character and practice for the men with whom they transacted business, as well as for the representatives of other insurance companies.

The moral culture of sobriety and discipline that Aetna sought in its customers, as well as in its employees and representatives, was intimately tied to the firm’s methods of gathering information and its system of determining premiums. Not only did Aetna want men of virtue as representatives, but it also sought out men who appreciated the company’s carefully constructed rates and its extensive intelligence procedures. The company imparted these procedures and rate guidelines beginning in 1825, just a few years after incorporation, when it published a manual for its agents titled *Instructions for the Direction of Agents of the Aetna Insurance Company.* Each new agent received a letter of instruction plus the company manual. Updated repeatedly over the century, the *Instructions* demarcated the responsibilities of field representatives and explicitly advised them “not to transcend” company guidelines. Agents could write individual policies valued at less than $10,000 without special authorization from the home office, though in 1830 this amount was reduced to $8,000. From the instructions, agents learned the rules for writing policies, inspecting property, and corresponding with the home office. More broadly, the manual taught Aetna’s culture, especially emphasizing the importance of careful surveillance of the landscape and reinforcing the daily practices that were the heart of Aetna’s long-term business strategy. Moral character alone was not sufficient; rather, careful management of information through administrative routines facilitated good business and the firm’s expansion.

Constant written communication between Aetna’s secretary and company agents further stressed the importance of the instruction manuals and the lessons about proper behavior that they taught. Although initially the board of directors had taken an active interest in daily practice, over time the secretary became the lead figure in writing policies and managing the exchange of information with the field. The secretary acted on behalf of the board and served as the primary conduit through which information and knowledge passed. If the personalities of the men who occupied the position of secretary shaped the tenor of the correspondence, they did not affect the basic procedures that revolved around those business transactions. Regardless of the size of a risk, Aetna instructed agents to return original policies (or renewals) and surveys (revised, if necessary). The returned materials served a basic record-keeping function. If policies were the unit of exchange between Aetna and its customers, correspondence rounded out the file that ac-
The American Fire Insurance Industry

Companied the insurance contract. These exchanges revealed the company’s deliberations about the risk, the nature of the danger, and the expectations of the parties involved. Perhaps more importantly, though, returned surveys and correspondence advanced Aetna’s information-gathering purposes. This conversation contained important intelligence about the fire risks that became part of the company’s expanding record of experience.  

Correspondence educated agents about the company’s rules of practice and gave them performance feedback. In its frequent letters, Aetna evaluated its agents’ policy-writing ability and reviewed their work. Was the rate too low or too high? Had the agent forgotten some important detail about the risk? Because company approval was required, though not automatic, Aetna’s secretaries quickly offered specific advice and recommendations regarding policies. The company’s responses varied widely. Aetna commended or reprimanded agents, and sometimes even specified a section of the Instructions to which the agent should pay more attention. For instance, in a letter to a rural New York agent written in 1829, secretary James Goodwin expressed “full” satisfaction with the agent’s returns, with a “few” exceptions. Goodwin then commented on four policies and surveys in great detail. About two policies, Goodwin informed the agent that he had rated a property in a more hazardous class than it deserved; he criticized him for charging too little in another instance, when a risk was more dangerous than rated; and regarding another policy he complained that the agent had not enumerated the value and risks of particular items in a specific enough fashion. Aetna did not view this correspondence as a mere formality, but as integral to its business. Indeed, in 1830 Goodwin attributed this agent’s higher rate of losses to the “defective mode” in which he prepared his policies and surveys.  

The bureaucratic procedures used by Aetna contributed to the development of a programmatic approach to classifying risks—categorizations that became the basic technology around which the firm organized its business. As the home office, field representatives, and customers constantly exchanged information, the company organized its knowledge about fire risk into categories of danger. Each data-gathering activity and exchange of printed matter between Aetna, agents, and clients—surveys, policies, and correspondence—reflected the dynamic interplay between Aetna’s home office and the field. Such vigorous interchanges helped company leaders and representatives to produce knowledge about fire danger, and they also helped Aetna as it began to bring the built environment under a program of systematic observation. This surveillance contributed to the evolution of the company’s system of classifying risks. With these bureaucratic technologies driving the company’s growth, Aetna’s leaders continuously refined their ability to or-
ganize and to analyze information about fire hazard, and repeatedly altered their program of categorizing it.\textsuperscript{30}

Creating categories of risk—or locating a prospective danger within that scheme—was a dynamic activity. Indeed, placing a policy within Aetna's classification system required that agents be familiar with multitudes of manufacturing procedures and commodities. Company manuals provided guidance about rating and were modified according to the existence of particular hazards. However, not all dangers were written into manuals. For instance, representatives were expected to develop “rules-of-thumb” for various hazardous industrial properties, such as tanneries. In other instances, that guidance came through correspondence. In one situation, Aetna’s general secretary, Simeon Loomis, imparted the company’s “experience” to an agent by reminding him, “We take no risk where the pipe is run up thro the roof or the side of wooden buildings—mind that.” In some cases, details as minor as the location of materials within a building affected the agent's evaluation of the property. Such elaborate, and often unwritten, rules indicate that underwriters did more than simply collect information for rating purposes. Through the lens of its leaders’ knowledge of fire danger, the company analyzed its wealth of data and applied it to the world. Lists of rates—including conditional statements applied through correspondence—were an expression of only a small portion of Aetna's collective experience with fire—the proverbial tip of the iceberg. Critically these guidelines represented a systematic approach to analyzing risk. By implementing common work routines among its representatives, Aetna had created the basis for a system of classificatory technology—a disciplined program of comprehending and applying knowledge about the dangers of fire in the built landscape.\textsuperscript{31}

Aetna's categorizations colored all of its basic business procedures, beginning with the first and most crucial step in the process of taking a risk—making a survey of the danger. Aetna instructed agents on the company’s classifications, and it expected them to analyze risk according to those divisions. By the 1820s, surveys had become more than simple written descriptions; they became evaluative documents that reflected the firm's accumulated knowledge. For instance, in its 1825 Instructions, Aetna divided risks into seven classifications, which the company wanted agents to use when describing danger. “Buildings” the manual advised agents, “should be described by the class to which they belong, or if they do not exactly correspond with either class, that to which they approach nearest should be referred to, and the variation noted.” To Aetna, surveys represented the technical accomplishments of its information-gathering bureaucracy. They were the product of the interaction between carefully selected, prudent men and the com-
pany’s “knowledge” of fire risk, as represented in instructional manuals and correspondence. The survey provided a venue through which agents and the company communicated, and the classification schemes gave them a common language.32

Practically speaking, however, Aetna recognized the limitations of its classification program and did not demand blind fealty to those schemes. Quite to the contrary, the company demanded that agents show excellent judgment, common sense, and above all, a thorough attention to detail that extended beyond the information in its categorizations. Aetna demanded that its agents take stock of everything associated with a structure and its contents, especially its utilization. For instance, the company encouraged agents to describe the materials used in manufacturing, the size of the property (depth, width, and height) and the lot on which it was situated, and how the building was heated. In one case, an agent was asked if a mill under consideration was heated by a stove, what was under it, and how far it was from wood: “Does the pipe enter a chimney, does it have a partition of floor, and how near does it come to wood”? The interrogation continued with a spate of other questions about the manufacturing processes and equipment on hand at the mill. Agents were expected to be experts on industrial processes as well as the built environment. In this particular letter, the agent was asked if there was a drying stove or drying machine. Was there a steam boiler? Was bleaching done in the mills? And, was sizing done in the mill or in a building nearby? The letter continued with still further questions about waste and fuel: “Are the rags assorted and stored in the mill? Is the fuel used wood or coal?”33

As Aetna expanded and intensified its surveillance, its methods of surveying a risk became increasingly less satisfactory to the firm’s directors. Beginning in the 1830s, Aetna wanted agents to draw a graphic plan of the insured property. To this end, the company’s 1830 Instructions advised that “sometimes a better description can be given by a plan of the property drawn on the back of the copy, with the distances in feet marked in figures.” Like earlier maps, such as those used by the Philadelphia Contributionship in the eighteenth century, these diagrams reinforced the physical descriptions that agents made of property and goods; they were not meant to stand on their own as documentary evidence of risk. By the 1840s, however, the company had begun to imagine an expanded role for the plans that accompanied surveys. Rather than simply being illustrative, diagrams played an important role in the rate-setting and risk-taking process. Increasingly, maps became spatial representations of fire risk, not just added description. In an 1838 letter the company advised the agent to survey “the building requiring the most particular description and give a diagram of the others—marking out the relative situation of other buildings within 600 feet of the one insured.” Although Aetna
and other insurers had long shown concern with the structures adjacent to property that it insured, they had not been in the habit of precisely specifying this information. Suddenly, Aetna began to associate the landscape surrounding a structure and its particular spatial arrangements with fire risk.\textsuperscript{34}

Coincident with its endorsement of graphically representing and interpreting fire risk, Aetna embraced other measures that underscored its more intensive exploration of fire danger. In 1837, the company increased its level of supervision and management of risk by sending its director, Joseph Morgan, on a tour of company agencies and on a scouting mission to cities in which Aetna had no representative. Morgan sought to establish agencies, investigate risks, and adjust losses, but most importantly he wanted to help the firm to develop a better understanding of fire danger. In his first inspection tour, Morgan traveled over a thousand miles, crossing northern New England to New Brunswick in three weeks. In 1840, he voyaged to Norfolk and Richmond (in Virginia) and Wilmington (North Carolina), among other places. Morgan was already an experienced cross-country business traveler in 1842 when he began a ten-week, six-thousand-mile junket that covered New York City, Trenton, Philadelphia, Pittsburgh, Zanesville (Ohio), Cincinnati, Louisville, New Orleans, Vicksburg, St. Louis, Chicago, Cleveland, Detroit, and Buffalo.\textsuperscript{35}

Morgan’s travels heightened Aetna’s administrative surveillance of its agents and risks. The extensive diaries kept by Morgan document his travels and underscored how Aetna’s knowledge about fire risk developed within the framework of specific spatial and urban contexts. In the record of his 1843 trip to Montreal, Morgan reported on the company’s agency, Aetna’s financial exposure to the risk of fire, and the city’s fire defenses. As one might expect, he emphasized that agents “know” the landscape and its risk. Morgan’s inspection began with a tour of the city with the company’s agent, Mr. Jones, as well as his “out of doors” man, Mr. Wood. Morgan commented on their knowledge of the city and underwriting practices: “This morning . . . Mr. Jones has with him in business a Mr. Wood with whom I am much pleased. He in fact does the out of doors business for the office. I took a stroll with him. He says they never take a risk without visiting and examining the premises. He appears like a smart business man.” At the end of his visit, before leaving the city, Morgan reiterated the importance of “knowing the business.” He especially praised the “out of doors man,” Mr. Wood, whose intimate appreciation of the city and its dangers made clear that Wood “knows more about our business than Mr. Jones.” Morgan also affirmed the value of his visit: “I now understand much better the nature of our agency here than could be learned from a correspondence.” Of course, even though he thought Aetna well represented, Morgan did not leave without giving what “I considered necessary instructions.”\textsuperscript{36}
If Morgan hoped to acquire intimate knowledge of each city on his route and its diverse fire dangers, he also wanted to learn about each agencies’ business and to view the properties insured by the company. During the tour of Montreal Morgan was pleased with his new and personal understanding of the particular risks that Aetna took in the city—a knowledge he acquired only after his thorough inspection of the agency and a review of its accounts. Morgan reported, “August 21st, Rainy morning. Called on Mr. Jones, found he had not made out his list of risks. . . . [S]pent an hour with Mr. Jones in looking over his account.” After examining the policies and surveys completed by Jones, Morgan accompanied him on a tour of Aetna’s many policies in Montreal. He reported, “I then went with him the whole length of St. Paul Street. He has a large number of risks in this street. It is nearly a mile in length, I cannot designate any particular risk on which it is necessary to make remarks. The average rate on first class of building [and] on goods in them is about 50 cents.” Morgan evaluated a structure according to its use, construction, and exposure to other buildings—all within the framework of the company’s classification scheme.37

Morgan’s inspections allowed him to instruct the company’s representatives about the work and technologies of good underwriting practice and to confirm Aetna’s growing fund of knowledge about the problem of fire. In regard to Montreal, he noted that “after taking a lunch with Mr. Jones, I viewed the site of the late fires, Grahams might have been considered an excellent risk. A large stone building, it burned only the building in which it originated. The other fire . . . was a very large one in the best part of the City, it consumed nearly a whole square mostly of brick buildings which all took from a joiners shop in rear, not from one another.” Once again, Morgan’s thinking about the danger of fire mirrored company instructions, but also reveals his growing awareness that each risk existed in a spatial context. Not only did Morgan emphasize the building’s construction, but he also identified its “exposures.” In the case of the fire “in the best part of the City” Aetna’s loss had occurred because the company had insured a risk that was connected without an interceding wall to a hazardous manufacturing activity that caught fire.38

Morgan’s overall assessment of the built environment of Montreal provided particular insight into the dilemmas facing nineteenth-century insurers. Buildings in Montreal, he reported, “are safer than ours, each building is in fact a separate risk. No fire, I believe, has ever extended any distance in this [St. Paul] street. His [Jones’s] loss in this street since he has been an agent has been very trifling, and he has a very large amount at risk.” Clearly Morgan understood the importance of substantial construction and/or nonattachment of buildings in preventing the
spread of fire. In addition, by contrasting Montreal’s construction style and its lack of fires with “ours”—certainly Hartford but probably America more broadly—Morgan recognized the fragility of the built environment in the United States. Despite demonstrating the extent of his and Aetna’s knowledge, Morgan did not take the next step and suggest that underwriters could prevent incidence or, at the very least, spread of fire. Perhaps his diary was not the place to record such sentiments, but Morgan joined the incipient fire insurance industry more broadly in failing to use company’s storehouse of knowledge about the hazardous of fire to prevent its occurrence or spread. Like other insurance firms, Aetna focused its attention on indemnifying clients against fire loss without depleting financial reserves.39

Of course Aetna did not oppose prevention efforts, and sometimes it told agents that systematic practices and rational manhood could benefit industry and society by providing common-sense fire prevention. For instance, in 1843 Simeon Loomis mused to the company’s agent about Milwaukee, “Now it would be the part of wisdom, when these new cities are going up, to plan for the best possible security of property when the population should become large. . . . We trust you will exert a good influence on such matters when on the ground.” However, for the most part such thoughts were fanciful. Usually the company explicitly argued the opposite position. Rather than telling agents to seek legislative remedies to the problem of fire, Aetna instructed its agents: “Indemnity is the only legitimate object of insurance.” It would be more than fifty years until active programs of prevention explicitly became standard fare in the industry.40

Perhaps the greatest dilemma facing insurers was the utility of their classification programs, especially as they related to setting rates. Although underwriters continuously updated and revised classification schemes, such categorizations provided little security against loss. Indeed, the complexity and intricacy of such schedules belie the capriciousness of their origins. Not only is there no evidence that Aetna’s—or any other company’s—rating tables were statistically based prior to 1850, but everyday rate-setting activities appear to have been only modestly connected to the prescriptions embedded in rating and classification schedules. Quite often rates fluctuated because of a company’s financial position or market competition. For instance, firms often raised rates across the board after they suffered excessive losses. In an 1834 letter, Aetna’s secretary Goodwin bemoaned the failures of the firm’s business in New York State, noting that “our business in New York swallows up our earnings everywhere else. Our whole scale of premiums must be advanced from a third to a half. If that cannot be done we had better withdrawing.” Goodwin’s letter demonstrates the arbitrariness of rates and suggests the precarious state of underwriters’ knowledge. Likewise, the marketplace also frequently
stymied efforts by Aetna and other companies to have their agents follow regularized practices. In response to market conditions, field representatives sometimes ignored the rates set by their companies, or companies themselves lowered rates. Such conflicts occurred periodically. For instance, in 1819 Aetna’s historians recollected that “there was keen competition and reckless slashing of rates that made foreign companies [those not headquartered in a particular city] steer clear of the city [New York], as a prudent man avoids becoming mixed up in a street fight.”

Just as often Aetna’s nascent bureaucratic systems failed. For instance, after a series of disastrous fires, Secretary James Goodwin chastised the company agent for the “defective” manor in which he returned his surveys and policies. If done correctly, Goodwin argued, the company would not have taken so many bad risks on wooden housing arranged in the same block. Almost as frequently, Goodwin chastised agents for underwriting risks that they knew were bad. In 1830 Goodwin told an agent who had just reported a steam mill fire that “all [steam mills] seem to burn sooner or later. I, however, made my calculation that the fire would proceed from another cause, and it probably would before many years had leaped. I regret that we had not adhered to our first impression and declined it.” If Goodwin did not explicitly question the manhood of his agents, the disdain often expressed in his return correspondence tacitly underscored their failure as agents and prudent men. Perhaps more to the point, such letters underscore the difficulties that Aetna had in disciplining its employees and its portfolio of risk.

At best, Aetna’s efforts to confront the danger of fire had mixed success in the first half of the nineteenth century. Unable and unwilling to advocate fire prevention as a company goal, the company’s leaders frequently expressed fatalism about fire, revealing an underlying belief that fire was beyond their control or comprehension. On one occasion, the secretary wrote an agent, “There appears to be only one course left for us to pursue in relation to your agency and that is to acquiesce in everything that takes place and come to the conclusion that our misfortunes are unremediable.” In another, he waxed philosophical: “There is nothing like being used to misfortune. . . . Fires have followed in such rapid succession that I have got hardened, and I can stand it like a philosopher.” Almost heroic in his stoicism in the face of ubiquitous danger, the company secretary reveals the pervasiveness of the problem of fire as well as Aetna’s—and the industry’s—inability to comprehend the danger fully. Moreover, cities throughout the nation experienced dramatic conflagrations more and more often, and dozens, if not hundreds, of insurance firms went bankrupt following such blazes. For instance, after New York’s disastrous fire of 1835, twenty-three of twenty-six local New York companies went broke. Similar statistics followed other large fires of the nineteenth century.
For all its difficulties, Aetna subscribed to a long-term strategy based upon rational management practices and a vision of disciplined, careful manhood. Its leaders endorsed a number of relatively straightforward principles: surveying prospective risks thoroughly, developing routine procedures, providing guidelines to a network of field representatives, hiring and transacting business with men of character, and dispersing risks widely and sensibly across the landscape. The firm believed that these practices and its business culture would guarantee profitability, would provide a model to the nascent industry, and would create a market in insurance that eventually would winnow bad from good companies. In the process, Aetna accumulated and assessed information with greater and greater intensity. Agents visited, described, surveyed, diagrammed, and came to know the built environment. As they acquired knowledge about the physical, agents investigated the moral character of their risks. The company monitored agents and visited agencies with equal care and scrutiny. Aetna had taken the first steps in developing an unprecedented surveillance of the physical and cultural landscape that both augured the future direction of insurance practice and transformed the fire insurance industry and the problem of fire in urban America.

Insurance and Public Fire Safety

Nineteenth-century American fire underwriters conceptualized their role within the system of fire protection as secondary to the public work performed by firefighters. The connections between firefighters and insurers dated back to the formation of the first insurance company in North America, and underwriters provided moral and economic support to firefighters as they helped to protect the nascent industry’s vested interest in protecting property. In addition, underwriters imprinted their assessment of the importance of community-based fire extinction efforts on company policies. Early policies of the Insurance Company of North America, for instance, depicted a scene of a house engulfed by flames. Above the door of the burning house hangs INA’s firemark, the crest of an eagle. The rest of the scene depicts what might be typical behavior at a Philadelphia fire in the first decades of the nineteenth century. In the foreground a line of men pass water from a water spigot into a hand-pumped engine operated by a dozen men. The engine, and another like it, pump water onto the fire as firefighters rescue property and work with axes to thwart the spread of the fire. Similar scenes or metaphoric imagery appeared on other companies’ policies, such as the Protection Insurance Company of Hartford and the Fire Association of Philadelphia.44

Of course, not all firms imagined their work in relation to firefighting nor did
all company symbols—even those that depicted fire scenes—indicate that fire underwriters viewed their own work as unimportant. Aetna’s symbol, which was adopted at its formation in 1819, used classical imagery and allusions to articulate the significant role that fire insurance played in American society. At the image’s center was a shield with the company’s name written across it. Surrounded by two rings of rope, a rising sun and volcano frame the top of the shield, and along the sides and bottom of the shield are the Mediterranean Sea and an unsheathed sword. The *Insurance Index* interpreted the insignia with flowery, metaphoric allusions. The sun represented the strength of the “conserver,” signaling the company’s role as an “underwriter” but not as a “creator.” Mount Aetna symbolized the company’s role as a “safety valve,” removing dangerous gases and energies, and the Mediterranean signified consistency because the sea “knows no tide.” The shield was that of Agamemnon, denoting “singleness of purpose, dignity and daring-do.” Perhaps more importantly, the shield was emblematic of defense, “and of protection, vital and instant when needed.” Although this interpretation was made a century after the symbol was adopted, the company’s founders had clearly intended the seal to reassure its clients of its seriousness and capability through classical allusions to manhood and risk, certainty and steadiness. Balancing the daring nature of its insurance men against their steadfastness, the symbol, like the company, offered protection against the vagaries of nature in a manner akin to firefighters’ noble service, if not as a substitute for it.45

The early insurance industry’s unconditional and often unsolicited pecuniary support for firefighters most clearly indicates their recognition that the system of volunteer fire protection was of crucial importance. Moreover, their advocacy encouraged property owners, municipal governments, and other commercial interests to support volunteer fire companies in a similar manner. During the early nineteenth century, the support of insurance capitalists was generally given without hesitation or qualification. At times, fire companies asked underwriters directly for financial help, but whether requested or not, insurers provided regular and needed assistance to fire companies. It would appear that both parties understood this financial support in terms of a communal effort to check the dangers of fire.46

A letter written by the Vigilant Fire Company to INA in 1813 asking for support identifies the boundaries of underwriters’ and firefighters’ shared obligations. Written by the Vigilant Company’s president, the letter documented the company’s long history and purpose. Established in 1764, Vigilant claimed to have been “influenced by principles of benevolence and humanity [and] associated themselves for the purpose of protecting the property of their fellow citizens from the ravages of fire.” After describing the company’s moral commitment, the Vigilant
representative documented the “large sums of money” that company members had expended on the public good. In conclusion the writer appealed to INA’s economic interest by identifying its geographical location in Philadelphia. Located in the built-up eastern section of the city along the waterfront, the company reported that it was about to lose its lease, which would force the company to relocate. Even more disturbing to Vigilant, several other companies had recently been asked to leave their engine houses in the same vicinity. Unlike those companies, Vigilant wanted to remain in the eastern section of the city, which was “of peculiar importance from the number of valuable buildings there, and the vast quantity of goods stored therein.” Vigilant knew of INA’s commitment to commercial and industrial properties and emphasized its own efforts to protect just such properties. If its appeal was economic, it also drew upon a shared knowledge of Philadelphia’s spatial arrangement. The letter reported that Vigilant was the only company “remaining on Front Street” and that there were “comparatively few [fire companies] eastward of Third.” Lest INA officials not comprehend the severity of the danger and the relatively poor fire-protection infrastructure in the city’s commercial districts, Vigilant made its point distinctly: “If some prompt and active measures are not resorted to, this part of Philadelphia will be seriously unprotected.” Although INA’s response to this particular query is not extant, on at least one other occasion it provided a company financial aid for the purchase of a new building.47

To a large degree, INA and the Vigilant Fire Company were also bound by a sense of a common battle against a terrible foe. This shared struggle—especially the common desire to avoid conflagration—may well have been as powerful an incentive for insurance company support as were the obvious financial benefits. When insurance companies wrote policies primarily in their local markets, their shared connections may have been especially intense. Indeed, this mutual sense of duty may have colored INA’s decisions to offer support to local groups such as the Fire Hose Association.

In its request for support, the Fire Hose Association underscored volunteer firemen’s and underwriters’ mutual interest in order, duty, and community organization as a means to check the ravages of fire. Nine of Philadelphia’s ten hose companies formed the Fire Hose Association in 1807 “for the purpose of securing advantages to the public,” which would accrue from better intercompany communication, reciprocal arrangements to share hose, and increased company unity.48 The association informed INA’s directors that it had formed to preserve order and “harmony” and to facilitate communication between companies for enhanced firefighting performance. The letter explicitly denied that the association was acting in its own “self-interest.” Finally, the letter informed INA that its con-
tributions would make the association permanent and induce nonmembers to join. Volunteer firefighters expressed a vision of their role in preserving public safety that appeared to resonate with fire insurers. In their discussion of the request, Philadelphia’s underwriters recognized the importance of volunteer firefighters’ “laudable exertions for the general preservation,” even as they recognized that firefighters’ work was “especially advantageous” to insurance firms.49

Almost immediately following the receipt of the letter from the Fire Hose Association, INA also began to regularly contribute to each of the association’s member companies. Between 1807 and 1824, INA subsidized the city’s companies with over $300 in donations each year (collectively), in addition to occasionally supporting the odd request from the city’s fire companies. Underwriters were not the only contributors to the urban fire companies; merchants, private citizens, other property holders, and even the municipal government made regular donations to the well-being of volunteer fire companies. Further, this relationship between volunteer fire companies and local underwriters, property owners, and municipal governments was not peculiar to Philadelphia. In St. Louis, for instance, one observer estimated that slightly less than half of the volunteer fire department’s budget prior to 1850 came from the municipal government. Interested citizens, including insurers, within the community provided the other half.50

The close relationship between underwriters and fire companies began to deteriorate during the 1830s and 1840s, with the expansion of the nascent industrial economy. By the 1840s, the flow of solicitations from fire companies had increased to such an extent that INA considered formulating a policy on the matter. Other insurance companies, especially those that did not focus their business in a single geographical region, also began to hesitate in their support of fire companies. Under the pressures of economic expansion, increased competition, and dramatic urbanization, insurance companies increasingly declined to make donations to fire companies. Aetna, for instance, received many solicitations for contributions. Although by the 1840s, the firm had established a policy against making such donations, it nonetheless continued to give money in special situations. For instance, prior to leaving to inspect Aetna’s agencies, Joseph Morgan received a request from a Montreal fire company for a $100 donation. After observing Aetna’s risks in the city, and the nature of fire danger in Montreal, Morgan decided to offer the city’s Union Fire Company Aetna’s support. Morgan recorded that Union was Montreal’s most efficient volunteer association and would use the donation to purchase of a new engine. Moreover, he noted that Montreal had a relatively weak fire-protection infrastructure, and he provided a finely detailed analysis of why the engine being acquired was a significant advance for the city. But, perhaps most im-
portantly, Morgan’s donation came on the heels of evaluating Aetna’s financial position in the city, which was substantial. Clearly, Aetna’s financial interests benefited from such a small investment.51

However, as the insurance industry developed a more systematic surveillance of fire risk, many firms began to view such support as an unnecessary expense. For instance, Aetna began to take this view, which made it unwilling to support local, community-based efforts at fire extinction. This view is perhaps most evident in a letter Aetna sent to one of its agents in 1829 regarding a request that the company support the purchase of a fire engine. The company informed its agent, “It has been found necessary to decline all such applications” because “if we answer them the tax would be more than we could sustain.” More to the point, Aetna complained that it would be “taxed” indirectly anyway, because better fire protection caused a “reduction in premiums.” Aetna’s reply was striking because it adopted a cost/benefit perspective that would not appear again in its company files, manuals, or correspondence for close to twenty years. By the 1850s, such reasoning had become customary. Of course, this did not mean that Aetna had become disinterested in fire defenses. Not only had the company given an agent an additional commission for his “service in securing a fire engine,” but by the 1850s it took fire defenses into account when assessing fire risks. Rather, the company did not want to finance improvements in public fire defense because they hurt the firm’s bottom line. As firms scrutinized their account books, they began to see financial support for fire companies as a liability rather than an asset.52

That Aetna objected to paying for public fire defenses for economic reasons suggests the development of a new way of envisioning fire risk. When companies expanded their business to multiple cities to gain a competitive advantage, they acquired a host of new community obligations. In contrast to firefighters, who had specialized their labor but had not yet removed themselves from their urban neighborhoods, fire insurers became less interested in local community as they developed new bureaucratic technologies to manage information and practice. Insurers became more interested in the community implied in its portfolio of risks than in geographically bound communities. For instance, in Philadelphia, INA officials received requests from their neighbors to support the city’s fire defenses but more and more often declined such requests, especially as the scope and intensity of their business activities expanded. Likewise, Aetna’s agents, who engaged in face-to-face business transactions and other aspects of community life with their neighbors, funneled requests for fire company donations back to the home office in Hartford. However, faced with the growing number of inquiries, increasing expenses, and an uncertain business environment, Aetna’s leadership began to decline all requests for assis-
tance. In some sense, Aetna’s decision abrogated a long-held sense of reciprocity between fire companies and their neighbors, including underwriters. Yet, to Aetna, the face-to-face social relationships on which those obligations had been based were becoming anachronistic. Indeed, company officials had purely market relationships with their customers—whom they had never met nor would ever meet. Aetna’s obligations to those communities where it transacted business increasingly were not those of a fellow resident, but of a transient. Aetna’s interest in the fire safety of distant cities became entirely economic in nature. Thus it reconsidered its responsibility for helping to provide firefighting services, refusing to pay a “tax” for a service that could lower insurance rates, thereby impeding profit taking. The company even began to consider ways to include fire department efficiency in its classification systems. As more insurance companies expanded into the national market, such perspectives gained increased currency, raising questions about the insurance industry’s responsibilities for the provision of fire protection.

Conclusion: Building a New Risk Community

In the first fifty years of the nineteenth century, the American fire insurance industry expanded dramatically, but to many insurers in the 1840s, the industry’s future seemed far from assured. Conflagrations swept New York, Pittsburgh, and St. Louis, and social crises beset cities throughout the nation for most of the decade. Although incendiary cities certainly made the industry apprehensive, underwriters also began to question the efficacy of their business practices. At Aetna, firm leaders feared that the company’s carefully orchestrated strategy had failed. In fact, during the 1840s, the company suspended the symbol of its disciplined culture of manliness and rational administrative procedures: *The Book of Instructions and Tariff of Rates*. Even so, by 1850 the fire insurance industry was rapidly becoming an important factor in the nation’s industrial growth—both as a protector of property value and as an engine of finance—but it stood on shaky footing. Prudent manhood, elaborate business practices, and a commitment to public fire safety had not yet proven to be successful strategies for controlling the problem of fire.53

Aetna’s suspension of its manuals suggests the depth of the confusion that faced the young industry. Aetna’s program of surveillance seemed to be foundering, despite efforts to tie it to a culture of responsible manhood among its agents and continued attempts to develop an elaborate technology of classification. Ironically, as its strategy seemed to be failing, Aetna’s secretary, Simeon Loomis, complained that agents attempted to follow the printed rules too literally. He fumed that they “just turn to the Book, find something which they concluded to be tolerably well
adapted to the case, [and] they would name the rate and make the policy, without exercising any judgment in the case.” Loomis’s critique was an expression of frustration at the complexity of fire danger. After nearly three decades of correspondence with field representatives, after having evaluated many hundreds, even thousands, of policies and claims, Aetna remained unable to classify risks and to set rates at an appropriate level.\textsuperscript{54}

The industry’s failures had deep roots and were reflected in bankruptcies and fluctuating rates, which sometimes covered severe financial losses. Variability in rates resulted from a combination of factors. Most simply, firms could not precisely determine how severely the occurrence of fires might affect them negatively, and most did not keep systematic records of losses. As a result, companies often did not know the nature or scope of the dangers that they faced, either in terms of their entire portfolio, between different classes of property, or across geographic neighborhoods, cities, or regions. Additionally, insurers rarely shared information regarding their experiences of paying losses and calculating rates. Thus, despite paying thousands of claims and frequently discussing danger with agents, companies’ knowledge remained limited—a condition only exacerbated by undisciplined record keeping. Moreover, without rational information management procedures the emphasis on prudent manhood could not overcome the capitalist zeal of opportunistical insurers. Lacking a credible method of determining rates, market competition frequently drove prices down—often with little regard for fire danger. In addition, the prevalence of both large and small fires appears to have increased throughout the nineteenth century, and the tendency of most companies to underwrite insurance in closely proximate neighborhoods made many firms especially susceptible to huge losses.\textsuperscript{55}

Despite the industry’s limitations, insurers did not abandon their attempts to organize and manage the problem of fire. Firms aggressively demanded more precise and detailed observations about insured property, its spatial arrangement, and those individuals involved in the business transaction. Among the most pressing problems that insurance companies continued to confront was how to differentiate between risks in very different geographic environments and landscapes. Aetna’s Simeon Loomis explained with horror that agents in “New England, Canada, and Florida were working by the same rules... it is not easy to imagine a greater inconsistency.” Though Loomis did not, and probably could not, identify the exact differences between places, he recognized that fire risks varied across regions. In addition, he recognized that the business of underwriting also differed by locality (within region.) Aetna often urged its agents not to “expose” a great deal of business to loss from a single fire; Loomis’s advice generally prescribed that agents
“take no risks on wooden blocks having more than three tenements and not to exceed $5000 on merchandise in the same.” However, Loomis’s recommendations also took account of diverse local conditions. For instance, Loomis explained to one agent that “in a village such as yours” he should not put himself in danger of losing $10,000 from any single fire. Although Aetna had abandoned its instruction book, the company had not given up on making sense of the problem of fire and appreciating its complexity. Though classifying risks proved elusive, Aetna and other insurers gradually developed an orderly approach that emphasized procedure, character, and communication.56

Furthermore the insurance industry began to sketch the outlines of a model of security that increasingly differentiated it from the standard definition of safety—the volunteer fireman and his fire company. Rhetorically the insurance industry employed much the same language as firefighters, emphasizing a vision of manliness that balanced prudence, discipline, and aggressive action. However, insurers’ nascent culture of risk became increasingly concerned with symbolic order, represented by bureaucratic technologies, such as classification schemes and economic contracts. Whereas firefighters’ work concerned the public’s safety in the built environment of an urbanizing and industrializing nation, underwriters became less focused on the material landscape and more on their portfolios of risk. Fire, to insurers at least, was becoming an economic matter, abstracted from the physical world. As earning profits and protecting the corporate bottom line became part of the battle to control fire, insurers worked to control risk portfolios by disciplining company practices and agents through bureaucratic technologies and gender norms. More broadly, these strategies offered an entirely new vision for protecting the urban social order from the problem of fire.

During the early nineteenth century, insurers believed that they should work alongside firefighters in helping to eradicate the danger of fire. Even though insurers’ belief about their responsibility to the public would wane by midcentury, early on the two groups shared a common attitude toward their risk-taking activities, believing that their efforts against a common and ubiquitous danger set them apart as men and citizens. Although the connection between insurers and firemen developed for a variety of reasons, it most particularly stemmed from their common enemy and commitment to preserving order. Moreover, these men believed that they shared certain attributes. Men fighting fire—either physically or economically—had to be sober and disciplined. They also needed to demonstrate technological competence. When the American landscape became more physically and socially complex, as industrialization intensified, each experienced similar tensions and faced similar difficulties as they reorganized to contain the fire hazard.
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