Chapter 2

In a Drowsy State: The Underregulation of Overwork

> It seems almost beyond belief that a man who has been a railroad man for years will absolutely sit down on the track and go to sleep, when he knows that another train is liable to come along and kill him, but they will do it. They would not do that if they were not so pressed for sleep. When a man goes without sleep a certain length of time, he is not responsible for what he does.
>
> —Henry Fuller, 1906

Unless the slumbering flagman failed to protect a train full of passengers, his risky situation represented no public concern. Over the course of the twentieth century, the state did nothing to help ensure necessary sleep for the vast majority of the nation's workers (or for other members of society, for that matter). Instead, the prevailing policy in America has been to acquiesce in, if not to encourage, overwork, at the expense of sleep. Where public authority has limited working time, the interventions have targeted those whose sleeplessness posed a threat to general welfare. From that perspective, in the early part of the twentieth century the most important safeguards were extended to wage-earning women, whose reproductive capabilities served societal interests and supposedly depended on adequate rest. When protections for female workers eroded in the second half of the century, women obtained the right to work all day and all night, like their male counterparts. In recent years, governmental expertise has been primarily committed to studying the harmful effects of sleep deprivation, for the enlightenment of policy makers and society as a whole. Thus far, however, fuller recognition of the risks of insufficient rest has not translated into meaningful large-scale exercise of state power for remedial purposes.

Working time became a significant political issue in the United States in the 1840s. The onset of industrialization both lengthened the work day and intensified the labor process. In the prototypical cotton and woolen mills of New England, time on duty approached eighty hours a week. Almost from the outset, health considerations underlay demands for shorter hours on the job. Initially, reformers' objections were vague in nature and did not directly address lost sleep. However, as overwork, particularly in the expanding manufacturing sector, persisted into the late nineteenth century, the forfeiture of sleep entered into the discourse of labor reform. Progressive reformers came to believe that lost rest warranted state action in order to prevent women from toiling after dark. In particular, the spread of night work after the Civil War prompted a good deal of opposition. Thomas Edison's lights facilitated the adoption of second shifts in textile production and other industrial operations that used many female employees. In 1890, Massachusetts lawmakers responded by barring women and girls from manufacturing work between ten P.M. and six A.M. A few other states followed this precedent, with variations in the hours of prohibited employment. In 1907, Massachusetts tightened its law by forbidding female employment in textile factories after six P.M.[1]

After 1900, Progressivism brought legislative safeguards against workplace injuries and illnesses, child labor, sweatshop conditions, and other ravages of industrialism. But any hopes that adult male workers would gain relief from overwork in general and sleeplessness-induced fatigue in particular disappeared with the U.S. Supreme Court's decision in *Lochner v. New York* in 1905. This landmark case brought before the court an 1895 state statute to protect bakery workers, virtually all of whom were men. The key provision of the law limited bakers' daily working hours to ten and weekly hours to sixty. John Lochner did not challenge a section of the law that prohibited sleeping in the workplace itself, thus ending the practice of trying to doze atop flour sacks. At issue, instead, was the state's role in regulating the duration and rhythm of bakers' labor. Many bakers resided in cramped dormitories upstairs from the cellar production site. Under this system, workers put in up to a hundred hours per week on the job, toiling through the night, and then were essentially on call. Master bakers roused the conveniently available employees as the baking cycle required. Over time, inadequate and frequently interrupted rest undermined the health of bakery laborers. Supporters of the New York law saw it as a public-health measure.[2]

Most members of the Supreme Court did not view it that way. Justice

Rufus Peckham expressed the majority opinion that baking was not an unhealthful occupation and that bakers were free men capable of protecting themselves. Moreover, the court rejected the argument that debilitated employees could menace the consuming public: "We think that a law like this one before us involves neither the safety, the morals nor the welfare of the public, and that the interest of the public is not in the slightest degree affected by such an act." Rather than a public-health issue, this was only a private matter concerning terms of employment, a contractual transaction into which the state had no grounds to intrude. Justice John Harlan's dissent defended the hours law as a health regulation. Harlan quoted German medical authority Ludwig Hirt on the perils of "compelling the baker to perform the greater part of his work at night, thus depriving him of an opportunity to enjoy the necessary rest and sleep, a fact which is highly injurious to his health." Harlan's opinion noted bakers' susceptibility to respiratory disorders and other specific conditions, as well as evidence of their poor overall health. But clearly, Harlan's arguments did not prevail, and in the wake of *Lochner* the vast majority of male workers could not expect the state to protect them from overwork.[3]

Reformers retreated to a more tenable position. The revised strategy had two components. Advocates of legislative change concentrated on safeguarding women and children, each of whom could be construed as especially vulnerable to exploitation and, therefore, as legitimate wards of the state. In addition, Progressives intensified their marshaling of empirical evidence to illuminate for the judiciary the adverse consequences of overwork. The crucial test of this strategic adaptation came in 1908, in the monumental case of *Muller v. Oregon*. Like the bakers' legislation, the controversial Oregon law limited hours to ten per day. However, unlike the New York statute invalidated by *Lochner*, this one applied only to female industrial employees, such as those who toiled at Curt Muller's commercial laundry in Portland. In defense of the challenged statute, attorney Louis Brandeis maintained that more was at stake than the welfare of a fraction of the workforce. In support of this contention, he presented a formidable brief—long celebrated for its seminal use of social science data in legal argumentation—comprising medical findings on overwork gathered from around the world by Josephine Goldmark, a most ingenious and industrious researcher (and, as it happens, his sister-in-law). This body of evidence showed that many physical differences made women too weak to endure extremely long hours in industry. Goldmark's review included a Massachusetts report of female factory workers falling asleep

on the job and a French critique of the damage to sleep hygiene wrought by night work, as well as other expert observations on work-induced sleep difficulties. These conditions, in turn, undermined women's capacity to bear healthy children. In the majority opinion upholding the constitutionality of the ten-hour law, Justice David Brewer agreed with Brandeis that Oregon's policy was fundamentally about public health, not freedom to buy and sell labor. From that premise, Brewer declared the court's consensus that "as healthy mothers are essential to vigorous offspring, the physical well-being of woman becomes an object of public interest and care in order to preserve the strength and vigor of the race." By this reasoning, motherhood stood out as a compelling societal concern, not a strictly personal or family one, based on health considerations that encompassed a dangerous lack of sleep.[4]

The *Muller* victory gave renewed energy to the legislative drive against women's overwork. Not all the advocates of such circumscribed reforms accepted either the presumption of female weakness or the notion that men did not need similar safeguards, but the path to partial relief now seemed clear. Sociologist Annie MacLean's 1910 treatise on working women drew on the Goldmark-Brandeis formulation. In her call for more legislation, MacLean translated the brief into economic terms: "The prime function of woman must ever be the perpetuation of the race. If these other [employment] activities render her physically or morally unfit for the discharge of this larger social duty, then woe to the generations that not only permit but encourage such wanton prostitution of function. The woman is worth more to society in dollars and cents as the mother of healthy children than as the swiftest labeler of cans." Reformers worked to build a knowledge base powerful enough to sway legislative and judicial decision makers. The New York State Factory Investigating Commission, created in reaction to the disastrous 1911 Triangle sweatshop fire, delved into nonstandard scheduling, among myriad topics, in an early report to the legislature. Its discussion of night work began with this forceful declaration: "None of the investigations carried on by the Commission has shown conditions more dangerous to health and public welfare than the employment of women at night in the factories of the State." The New York investigators discovered that married women working after sunset at one large upstate factory averaged about four and a half hours of sleep a day under the double load of industrial and household labor. The commission did not leave the meaning of extreme sleep deprivation entirely to the imaginations of legislators: "Experimentation upon animals has shown that in extreme cases death results far more quickly from continuous loss of sleep

than from starvation." This indictment also insisted that "injury to health is the greater because sleep lost at night by working women is never fully made up by day."[5]

Lawmakers in many states responded to these revelations and the agitation that accompanied them. Restrictions on daily and weekly hours for working women spread immediately after 1908. In the interval 1909–17, nineteen states put in place their first limits on women's working time, and twenty of the twenty-one that already had laws strengthened them. California Progressives set the pace by establishing eight-hour daily and forty-eight-hour weekly statutory limits in 1911. New York imposed a fifty-four-hour weekly ceiling the following year. In the numerous jurisdictions where maximum weekly hours were fixed at fifty-four or less, the probability of obtaining a reasonable amount of sleep rose substantially.[6]

The *Muller* precedent also encouraged advances in restricting night work. After 1908, New York, Pennsylvania, and a number of other states passed laws keeping women out of the workplace at night. By 1919, twelve states regulated night work. When the New York statute covering industrial employment faced its inevitable test in state court, Goldmark and Brandeis produced a lengthy brief that captured innumerable facets of the meaning of the sleep deprivation endemic among women employed at late hours. The opening passage of this 452-page document made its priorities clear: "The most serious physical injury wrought by night-work is due to the loss of sleep it entails. This is because recuperation from fatigue and exhaustion takes place only in sleep, and takes place fully only in sleep at night. Sleep in the day time is almost inevitably interrupted and less continuous than sleep at night." The New York Court of Appeals found this law to be a constitutional exercise of police powers. In the same vein, the U.S. Supreme Court unanimously upheld a 1917 Empire State statute that blocked women from restaurant employment in large cities after ten P.M. Justice George Sutherland's opinion construed night work as unhealthful, and particularly so for women: "The loss of restful night's sleep can not be fully made up by sleep in the day time, especially in busy cities, subject to the disturbances incident to modern life. The injurious consequences were thought by the legislature to bear more heavily against women than men, and, considering their more delicate organism, there would seem to be good reason for so thinking." The court recognized that legislators had based their action on the authoritative evidence amassed by Josephine Goldmark and the Factory Investigating Commission.[7]

Despite the cold political climate after World War I, which had brought

an end to the Progressive Era, reformers pressed for additional measures to reduce women's overwork. In 1919, Florence Kelley of the National Consumers' League illuminated the fatigued state of textile workers in Rhode Island, Pennsylvania, and New Jersey. In Rhode Island, she heard a married immigrant laborer summarize her own predicament and that of many of her coworkers on the night shift: "Too much work, too much baby, too little sleep." Kelley's survey of the sleep habits of married night workers found roughly two thirds getting less than six hours slumber a day. This deficiency drove some to try to sleep on bare factory floors during their lunch break. Kelley ridiculed nocturnal employment in manufacturing as "a confession of incompetent management," while noting that by 1910 fourteen European nations had abolished women's night work. A similar Consumers' League inquiry in Passaic, New Jersey, discovered rampant sleep deprivation among textile operatives. Comparing New Jersey and Rhode Island, investigator Agnes de Lima saw "the same appallingly little sleep, the same break-down in health of the women, the same neglect of their children." Among the hundred women she interviewed, de Lima could not locate a single one sleeping eight hours a day. More than two-thirds had a daily allowance of less than five hours. One informant told this activist that she got "little pieces of sleep." The league pressed for a political approach to the mission of aiding workers such as these. Its staff and volunteers stuck with this issue through the 1920s and 1930s, despite adamant opposition and dwindling resources.[8]

From its establishment in 1920, the Women's Bureau in the Department of Labor championed reforms to assure adequate rest. In 1928, the bureau's Mary Hopkins issued a searching indictment of the still largely unregulated phenomenon of nocturnal employment. Hopkins found one night-shift foreman who admitted that he made his subordinates stand for jobs that could be sedentary because workers given chairs fell asleep at their places. This investigator offered a financial metaphor for the impact of forfeited slumber: "The night worker is constantly overdrawing his physical balance. The deficit of rest and sleep, small at first, gradually assumes disastrous proportions; there is no escape from physical bankruptcy." Inevitably, such a state of "general weakness is the open sesame to all diseases." Hopkins called attention to elevated rates of gastrointestinal disorders, anemia, and tuberculosis, among other conditions. She challenged the oft-cited report of the British Health of Munition Workers Committee for its cavalier disregard of the sleep-wrecking realities of combining outside employment with onerous domestic duties. She suggested that "the strain of the twofold job perhaps has hardly been given

its due emphasis by male writers, whose inexperience naturally leads them to minimize the home duties of the woman wage earner." Hopkins also made a critical assessment of the many gaping holes in legislative safeguards in this area. In a companion study, the bureau's Mary Winslow took aim at those, including many feminists, who opposed special protections for women in part because they cut women off from opportunities for advancement. Winslow began with the basic fact that most employed females were laboring in completely unregulated positions. Drawing upon census data, she estimated that hours laws covered little more than one in three gainfully occupied women and that night-work laws reached only one in six. She defended prohibitions on night work by arguing that they effectively kept women out of debilitating rotating-shift schemes. She pointed out that many women did not want opportunities to work at night because of the well-known concomitant sleep difficulties.[9]

The determined efforts of these advocates yielded little. In the 1920s and 1930s, only five more states began to regulate night work, so that working women in almost two-thirds of the states had no such protection as of 1940. Gains over this period in setting maximum hours were similarly meager. Moreover, with regard to both night work and long hours, many laws never covered more than a few occupations. None covered all female employees. None extended to domestic service, still the leading female occupation. Most were riddled with loopholes for "emergencies" and vaguely defined special circumstances. One indication of the minimal nature of some of the patches in this patchwork is a 1923 Minnesota statute regulating employment at late hours by allowing women to be kept on the job overnight for up to twelve hours, provided that they were given four hours during that time to sleep. Enforcement of these laws was also problematic. Several states had no enforcement mechanism whatsoever. Therefore, even after decades of progressive activism, the best way for women of working age to avoid harmful sleep deprivation was to remain outside the paid labor force. However, the protection for women through working-time legislation certainly far surpassed that for men. No state forbade employment of any adult male workers at any hour of the night. (Workers' advocates in a few states did, however, find ways to circumvent the constitutional barricade erected by *Lochner* by creating a health rationale for a handful of highly dangerous or endangering male-dominated occupations.)[10]

The pragmatic shift to defending women and children did not rule out all universalistic initiatives. Day-of-rest laws sought to capitalize upon and

modernize the Sabbatarian tradition. No advocate of these respites pretended that the need for sleep could be met on a weekly rather than daily basis, but supporters did appreciate the potential of such legislation to allow additional rest to compensate for deficiencies accumulating during the work week. Beginning with a measure passed in California in 1893, these statutes did not specify Sunday as the mandated day of the week on which many business activities had to be suspended. But like the old statutes promoting observance of the Christian Sabbath, the modern laws tended to focus on closing commercial and recreational establishments that lured people into secular activities. Work in transportation, manufacturing, construction, agriculture, public services, and other realms generally continued unabated. Indeed, after the turn of the century, seven-day schedules proliferated in continuous-processing industries like petroleum and chemicals. As will be discussed in Chapter 3, arduous, hazardous, nonstop operations in steelmaking caused particular alarm in liberal circles. The American Association for Labor Legislation (AALL) attacked the growing menace of the restless week at its 1911 annual meeting and began a campaign for legislative relief. The association claimed that seven-day employment tended to undermine the health of those engaged in it "by depriving them of the opportunity for reasonable rest." The 1912 platforms of the Socialist Party and the Progressive Party called for a weekly day off duty for the nation's workers. Later that year, the AALL began to circulate a model day-of-rest bill to state legislatures. It noted that sixteen nations guaranteed a day free from marketed work and that a handful of states already barred some employees from working seven consecutive days. Of most importance, in 1906 California had adopted a sweeping law granting twenty-four consecutive hours of respite per week for men, women, and children in all occupations. The labor legislation group made clear that it sought to gain leverage from the recent condemnation of the seven-day system by the Federal Council of Churches. Although unnoted at this juncture, in all probability the AALL also knew of mounting discontent in the Jewish community over the common requirement to work between sunset on Friday and sunset on Saturday. Lawmakers in New York quickly responded to this pressure by passing a law mandating at least twenty-four straight hours free from work in manufacturing and mercantile establishments during any seven-day interval. In neighboring Pennsylvania, home to the world's largest center of steel production, no similar change in public policy came forth. However, the 1913 session of the Pennsylvania legislature did prevent the employment of "any horse, mare, mule, ox, or any other animal" of either sex for more than

fifteen hours in any twenty-four-hour span and for more than ninety hours in a week. Subsequent legislative sessions in both Pennsylvania and Illinois had day-of-rest proposals "ruthlessly strangled," as AALL secretary John Andrews put it in 1923. On the other hand, Massachusetts and Wisconsin enacted statutes based on the association's bill. All in all, the political project of securing a weekly day of relief accomplished relatively little. Reformers could show that the lack of a day off harmed personal health, religious observance, and family life; but they could not make the case that most unrested workers posed a threat to the general public.[11]

In contrast, the predicament of overworked railroad workers at the turn of the twentieth century very much frightened the American public at large. Many of the all-too-frequent collisions and other mishaps involving passenger trains were of disastrous proportions. Investigators traced a sizable share of these sensational events to errors committed by train operators who were exhausted, drowsy, or fast asleep on the job. The Interstate Commerce Commission (ICC) used its 1903 annual report to Congress to agitate for a law to force rail carriers to expand the block system of automatic signaling, an available technology that removed most of the risk associated with manual signaling by allowing only one train at a time to enter a segment, or block, of track. The old system depended upon flagmen whose limitations included the occasional loss of consciousness and consequent failure to place warning lights behind stopped trains. The commission offered Congress a draft bill to fix this problem.[12]

Close observers of the rail system realized that mandating safer signaling amounted to something less than a comprehensive solution. The April 1904 issue of the *Brotherhood of Locomotive Engineers Monthly Journal* carried an appeal from J. F. Freenor, a member in Wisconsin, who considered it essential to place legal restrictions on working hours. According to Freenor, "You may as well have a drunken or crazy man on an engine as one that is unable to keep awake." He suggested a limit on duty hours in the range of twelve to fifteen a day. Later that year, Edward Moseley, secretary of the ICC, brought the issue to a wider audience with an article in the *American Monthly Review of Reviews*. This was a classic illustration of the Progressive formula for launching reform: a body of empirical evidence of a social problem subjected to careful expert analysis would generate public support for the experts' plan for government intervention. Moseley used recently mandated accident data from carriers to construct a profile of accidents that had resulted in passenger fatalities. He then examined the accidents deemed preventable, finding

that installation of state-of-the-art block signals could have averted a sizable share. He impugned the common habit of obtaining low-quality sleep aboard sidetracked trains, citing instances of poorly rested engineers pulling out onto the main track after such an interlude and immediately colliding with an oncoming train. Moseley quoted one Chicago newspaper's mordant commentary on a recent wreck that killed numerous passengers, in which the locomotive engineer had been working over twenty hours at the time of the disaster: "The officials of the company might as well fill their engineers and firemen with whiskey or drug them with opium as to send them out for fifteen and seventeen hours of continuous work." Moseley concluded that the United States needed to emulate effective British innovations instituted by force of law. The British reform package included "rigid rules governing the hours of labor." At the same time, *North American Review* published an article on rail safety by John Esch, a member of the House of Representatives who served on the Committee on Interstate and Foreign Commerce. Esch lamented that "wreck has followed wreck with such regularity, during the last twelve months, as to make the reports of them in the daily press no longer sensational, but rather commonplace." Beyond the general carnage, the congressman observed that in the year ending March 31, 1904, nine sleep-related collisions had taken thirty-eight lives. Esch argued that "no demand of traffic, however urgent, should deprive passengers of the service of alert, wakeful and attentive operatives." He concluded that preventing excessive hours on duty through federal legislation was a necessary corrective step. Adding fuel to the fire, President Theodore Roosevelt's annual message to Congress, sent on December 6, 1904, declared that "the ever-increasing casualty list upon our railroads is a matter of grave public concern, and urgently calls for action by the Congress." Roosevelt requested legislation "in the interest of the public safety limiting the hours of labor for railroad employees." None of these advocates of reform placed any weight on the simple fact that the mass of statistical data accumulated by the ICC showed that over 80 percent of those killed on the rail system were employees, not passengers. For purposes of making national policy, workers were only dangerously sleepy when they imperiled others.[13]

Presidential support for limits on hours increased rail workers' hopes for finding a nationwide solution to overwork. The railroad brotherhoods' long pursuit of reductions in working time through negotiations and state-level legislation had proven an unsatisfactory piecemeal approach. The prospect of standardizing terms of employment and taking this issue out of competition

was, of course, highly attractive to unionists. In February 1905, Atlanta engineer Walter Simmons informed his comrades that Georgia law allowed rail crews to work five twenty-hour stints a week, and that violations of this minimal stricture sometimes left operators out on the job for up to thirty hours at a stretch. Simmons believed that chronic overwork took ten to fifteen years off the lives of railroad men. Many others in charge of speeding locomotives wrote to their union newspaper to complain of the unsafe conditions during trips of twenty or more hours and to offer a variety of ideas for ameliorative legislation.[14]

Labor leaders worked with the Interstate Commerce Commission to draft an hours bill for railroad labor, which John Esch introduced in early 1906. This was a modest proposal to curtail the errors made by exhausted train operators. It mainly sought to codify the private arrangements made through collective bargaining and the legislative standards in place in several states. For engineers and other members of train crews, the proposed daily limit on service was sixteen hours. Employees could not resume work until they had had at least eight hours of rest. Hearings before the House Committee on Interstate and Foreign Commerce gave the coalition of unions representing engineers, conductors, firemen, and trainmen the chance to plead its case. Lobbyist Henry Fuller decried the massive casualties among workers and passengers, dismissed the state laws as "dead letters through lack of enforcement," and conceded that union contracts suffered from noncompliance. Fuller presented a number of cases of fatal accidents caused by unconsciousness in exhausted workers. In one instance, a collision occurred when a flagman keeled over after more than thirty hours on duty and thus failed to set a warning signal. Fuller characterized this overworked man as "working directly against nature, and that is a thing we cannot successfully do." Rather than treat such lapses as culpable behavior, Fuller maintained that "when a man goes without sleep a certain length of time, he is not responsible for what he does." Consistent with his organizations' ingrained aversion to radicalism of any sort, the rail brotherhoods' representative rejected as impractical any interest in establishing by law the eight-hour day.[15]

Other witnesses ranged across the spectrum. George Norris, a House member from Nebraska, put into the record a long list of sleep-induced accidents in which train passengers had perished. But Norris also identified flagmen killed when they passed out on the tracks and were run over. One terse entry described the death of a flagman who had worked the last twenty-five hours of his life: "Sat on track, fell asleep and was struck by train." Over-

all, however, like other proponents of reform, Norris stressed the dangers faced by the traveling public. ICC safety expert W. P. Borland testified that his agency had learned of 225 accidents over the previous five years involving employees who had worked fifteen or more hours. Railroad officials, on the other hand, attempted to shift the discussion away from excessive hours. They argued that this proposal was not only unnecessary in light of their own safety efforts but also futile, given the prevalence of employee carelessness on the job, refusal to sleep during their free time, or other mistakes in judgment. Digesting all this material, the commerce committee endorsed the sixteen-hour cap on hours, with a requirement that anyone working that long be given at least ten hours off before returning to duty. In addition, the committee's report called for a minimum eight-hour rest for train employees who had put in ten hours on the job.[16]

After this initiative stalled in 1906, debate resumed in the next congressional session. Renewed hearings in the House in January 1907 gave the opposition a forum for a more nuanced defense. Rail executives had managed to muster some employee opposition to the proposed regulations, based on these workers' apprehensions about overnight stays away from home or even the possibility of having to move to new communities located within range of sixteen-hour trips. One executive used the opportunity to cast doubt on the manly stamina of those seeking federal intervention. As Daniel Willard, vice president of the Chicago, Burlington and Quincy Railroad, put it, "I have had charge of a locomotive more than sixty hours at a stretch. I did not object to it." However, with the issue framed as one of public safety, the opposition could not rely on masculine posturing and other forms of obstruction alone. Accordingly, the rail carriers strove to slip in as many loopholes as possible to maintain flexibility in operations, irrespective of employee exhaustion. The law that emerged from the legislative mill in March 1907, to take effect in March 1908, was a compromise that did grant rail employees and passengers a new assurance of safety. The Hours of Service Act retained the central demand of the reformers, the sixteen-hour ceiling on work hours. Railway employees who put in sixteen consecutive hours on the job were entitled to ten hours off duty before being recalled. However, workers who worked sixteen hours within twenty-four with any break during that span of time had to be given only eight hours off. This meant significantly less than eight hours' sleep after the inevitable encroachments on one's time in bed caused by commuting, meals, and personal care. The law covered train operators, virtually all of whom were white men, and excluded service workers, such as dining-

car waiters and sleeping-car porters, virtually all of whom were black men. Congress also imposed a nine-hour limit on the daily hours of telegraphers and dispatchers, whose sleepy errors also put others at risk. Railroad management got a loophole it could exploit in the form of an exemption from hours limits whenever acts of God, accidents, or any unforeseen conditions caused delays in the movement of a train. Despite its shortcomings, the law was greeted with enthusiasm by its overworked beneficiaries.[17]

Merchant seamen pursued a similar route to gain limited protection. Andrew Furuseth, the president of the International Seamen's Union, engaged in an unrelenting campaign on behalf of his overworked members. With the 1912 sinking of the *Titanic* added to the list of maritime disasters, Furuseth redoubled his efforts to obtain federal assistance with a barrage of shipboard grievances, ranging from corporal punishment to cramped sleeping quarters in the forecastle. Robert La Follette, a Republican Progressive senator from Wisconsin, sponsored a series of bills to protect seamen and promoted the bills, in part, as measures for the preservation of oceangoing travelers. Furuseth and other advocates of plans to improve the terms and conditions of sailors' employment also invoked a racist rationale for reform: jobs had to be made tolerable for white men, in order to reverse the Asian influx into maritime transportation. In 1915, Congress passed a wide-ranging bill that delivered a modicum of relief with regard to temporal and spatial aspects of rest. The Seaman's Act limited working hours out of port to eight per day for engine-room men and to twelve per day for other members of the crew. For the latter, the statute left untouched the traditional watch schedule of four hours on duty followed by four hours off, a rhythm that could only ensure sleep fragmentation. The law promised every seaman 120 cubic feet of personal space and his own sleeping berth. It also provided vague guarantees of proper ventilation and heating of crew quarters.[18]

The development of commercial air travel also brought regulatory action on behalf of passengers. Given the widespread fear among potential customers of the very idea of sailing above the clouds in a relatively small and highly vulnerable craft, the aviation industry was not as antagonistic to removing any concerns regarding overly tired pilots and other members of flight crews. In 1937, the U.S. Bureau of Air Commerce limited continuous hours of service in the cockpit to eight in twenty-four. However, if spelled by a second pilot, the first officer could be at the controls for as much as twelve hours out of twenty-four. Any pilot who flew more than eight hours in twenty-four had to receive twenty-four hours off duty before going aloft again. Beyond

the cockpit, only flight dispatchers, whose errors most obviously endangered passengers, won limits on their daily working time. Dispatchers could work up to ten hours within twenty-four. Following the prototypical rail workers' restrictions, the rules applying to aviation employees' daily labor were expressed not in calendar days but in uncertain twenty-four-hour blocks, which could well run from dawn to dawn or over other periods that clashed unhealthfully with circadian rhythms and forced workers to sleep at the worst times. Moreover, these rest periods were not fixed and could vary considerably and erratically, further undermining recuperation.[19]

Just as the railway Hours of Service Act had excluded car-service workers, the airline regulations overlooked the cabin crew. Although some air carriers employed male stewards to serve passengers, by the 1930s this occupation was well on its way to becoming a female preserve. To address customers' manifold fears of air sickness and other acute medical problems, a number of airlines hired registered nurses as "stewardesses" and used this policy in their marketing. Provision of health care was not the only criterion by which cabin workers might have claimed a right to protection against overwork. They performed many routine and emergency safety duties. They might also have merited protection as members of the supposedly weaker sex. The several bureaucratic successors to the Bureau of Air Commerce certainly had the authority to institute working-time safeguards for flight attendants. Yet they neglected to do so, despite the readily available public-safety rationale. Instead, for several decades federal officials essentially conceived of cabin workers as carefree hostesses and waitresses, a stereotype made only slightly less implausible by the abandonment of the requirement for nursing expertise. Throughout their marathon campaign for relief, the flight attendants emphasized not their own well-being but that of their passengers. As recently as 1991, for example, Cheryle Leon, president of the Association of Professional Flight Attendants, gave Congress this perspective: "In our view, 200 cases of 200 fatigued flight attendants potentially affecting the safety of thousands of their passengers is a serious safety problem." Of course, flight attendants' responsibilities only grew in the era of terrorist hijackings. After many years of pressure by their unions, attendants finally won limits on their working hours in 1994.[20]

The early aviation regulations did, however, move beyond those pertaining to trains and ships in one important way. Taking cognizance of the phenomenon of cumulative fatigue, the 1937 federal rules also held pilots to thirty hours of working time in seven days, with a requirement of at least

one period of twenty-four consecutive hours of rest during that week. Pilots and other members of the cockpit team were limited to one hundred hours service a month and one thousand hours a year.[21]

Taken as a whole, the body of legal regulations prohibiting work beyond daily, weekly, monthly, or yearly limits never became more than a scrawny one. The half century between the Spanish-American War and World War II witnessed only piecemeal reforms. All these measures were formally limited in scope by occupation, place, or gender. Moreover, all were tacitly hamstrung by inadequate enforcement and an underlying lack of societal and political will.

For the vast majority of American workers whose sleeplessness endangered no more than themselves and perhaps a few of their immediate coworkers, the state took a different stance. The predominant public policy in the twentieth century was not to set clear-cut limits beyond which employees were forbidden to work. Instead, a series of private deals and political decisions established a consistently weak and deeply ambivalent policy. The main tool of policy has been premium pay for work performed beyond some daily or weekly threshold. Even at a glance, it is apparent that the choice of this instrument guaranteed tension by giving employers a disincentive to impose overwork but at the same time luring employees to push themselves too far. The purpose of my analysis of this dilemma is not to review the entire well-known history of overtime-pay legislation, but rather to capture those moments at which there was a real possibility of addressing the predicament of the sleep-deprived worker.[22]

Almost from the first conflicts over working time, mixed messages abounded regarding the time-money tradeoff. In 1832, the New England Association of Farmers, Mechanics, and Other Working Men demanded the ten-hour day, but only for those not receiving bonus pay after ten hours. By the early twentieth century, organized labor in general and affiliates of the economistic American Federation of Labor in particular had made it abundantly clear that premium pay, usually at the rate of time and a half, was all it took to make a bargain that extended working hours, often indefinitely. Public policy largely took its cues from these private trends, reflecting and reinforcing the tendency to waffle on the question of excessive hours. Passage of the Adamson Act in 1916 marked a major step in the development a federal policy based on premium pay rather than hard limits on working time. To avert a strike in an industry deemed essential to the national economy, this statute granted railroad employees a basic work day of eight hours and

mandated time-and-a-half overtime compensation, without placing any lid on working time beyond that imposed by the Hours of Service Act. Shortly thereafter, when World War I drew federal authorities much further into setting national wage-and-hour standards, this precedent served as a template for other groups of workers seeking reduced hours.[23]

In the 1930s, the context for rethinking work hours changed dramatically. To the accepted fungibility of time and money was now added the overriding fact of economic collapse. The unfortunate masses of unemployed and underemployed had plenty of time to sleep during the Great Depression. They also had more pressing fears, like averting the state of homelessness that left so many sleeping outdoors. Accordingly, the immediate objective of Franklin Roosevelt and other New Deal leaders with regard to working time was to distribute more widely the scarce opportunities for employment. In 1933 and 1934, the National Recovery Administration established several hundred industry-specific codes regulating working time and other aspects of employment relations. Although intended primarily to promote work-sharing, limits on hours—commonly eight hours per day and forty hours per week—served to promote adequate rest. More directly addressing sleep-related health concerns, fourteen codes outlawed the graveyard shift for women workers and four more did so for all workers. This brief experiment in comprehensive economic planning ended when the Supreme Court declared it unconstitutional in mid-1935.[24]

In the late 1930s, renewed efforts to curtail hours, now linked to a drive to set a minimum wage, again left prevention of sleep loss at the margins of the reform agenda. The Roosevelt administration's original wage-and-hour bill allowed for creation of special financial disincentives not only for overtime but also for night work. One prominent figure in the legislative debate wanted to go further in that direction. Secretary of Labor Frances Perkins, whose political perspective had been forged during the Progressive Era, boldly called for putting an end to most work on the biologically unnatural graveyard shift—for all workers. In congressional testimony on June 4, 1937, Perkins asserted that it was "not unduly limiting the productivity of machinery to prohibit night work except in those industries which are necessarily continuous." American Federation of Labor president William Green backed the softer alternative of mandating a differential in pay for employees on late shifts, even though his organization four years earlier had taken the position that "night work should be eliminated wherever practicable" for both men and women on health grounds. The House of Representatives combined

these ideas, while maintaining the accustomed gendered order in the workplace. In August 1937, the House passed a labor standards bill that required time-and-a-half pay for all work done between midnight and six A.M., except in continuous-process operations, and banned employment of women and children during that time interval. However, in the dismal circumstances of a protracted depression, it is no wonder that the final version of the Fair Labor Standards Act (FLSA) of 1938 dropped both those provisions. Instead of restricting night work in any way, the law phased in only an obligation for employers to pay a 50 percent penalty in compensating work performed beyond a weekly threshold of forty hours. Exemption of many industries and occupations meant that this stimulus to share the work applied to many fewer than half the nation's employees. Ultimately, the FLSA put the last nail in the coffin of the Progressive drive to recognize excessive hours as deleterious to health, in part because of sleep deprivation and degradation. Politically, lost sleep was a nonissue.[25]

World War II exacerbated overwork. All-out economic mobilization transformed both employment relations and the workforce. Overtime pay and bonuses for accepting second- and third-shift assignments proliferated in booming industries like aircraft manufacturing and shipbuilding. To make the disadvantages of the later shifts more palatable by sharing them broadly, many firms instituted rotational systems that predisposed strongly to poor sleep. The most common arrangement by far was a weekly rotation. In early 1942, Surgeon General Thomas Parran warned the business community that such upheavals in workers' routines unhealthfully disrupted recuperative sleep. Parran recommended changing shifts no more frequently than once every two to three months to allow physiological adaptation to differing conditions. Parran also urged employers to allow employees one day of rest a week and to refrain from putting women with domestic responsibilities on the night turn. The nation's top health official offered this guidance in the interests of sustaining productivity; his proposals took the form of appeals only to management self-interest and to patriotism.[26]

Parran was by no means the only critic of rotating shifts. Nathaniel Kleitman, a professor of physiology at the University of Chicago and the father of modern American sleep science, volunteered his expertise to the war effort. With twenty years of original research on sleep and sleeplessness behind him, Kleitman was one of a mere handful of academic investigators seriously committed to understanding unconscious rest and the only scientist to make sleep his primary research interest. Like Parran, he opposed frequent

changes in working hours. One of Kleitman's major findings, reported in his seminal 1939 work, *Sleep and Wakefulness*, was the importance of "following a definite routine with respect to daytime and evening activity and the time of going to bed." The physiologist advised not only individual firms but the business community in general. The February 1942 issue of *American Business* conveyed his advice to avoid rotation wherever possible and not to change workers' shifts more than once in several months. Kleitman also made constructive proposals for less unsettling nonstandard schedules. He delineated an innovative three-shift plan that improved over the common pattern of eight-hour shifts starting at seven A.M., three P.M., and eleven P.M. Under Kleitman's alternative, workers went to work at noon, eight P.M., and four A.M. This arrangement forced no one to sleep at the worst time of the day, the afternoon. It forced no one to alter normal sleeping time by more than four or five hours. Kleitman also prepared a four-shift variation on this scheme that minimized damage to sleep. The U.S. Department of Labor, which had retained the Chicago physiologist as a consultant, embraced his three-shift proposition, naming its blocks of time the Red, White, and Blue shifts. Federal labor officials actively promoted the system, as did Kleitman himself. In a presentation to the Industrial Hygiene Foundation in late 1942, he described the impact of rapid shift rotation on the worker in a way that presciently captured the essence of what would later be defined as shift work sleep disorder: "It [rapid rotation] causes him to be sleepy at a time when he should be wide awake and wakeful when he should be sleeping." Probably the greatest influence of Kleitman's intervention was to convince employers to adopt permanent shift assignments, whatever their varied starting and ending points may have been.[27]

The war changed the composition of the labor force, however briefly, in ways that had potent policy ramifications in the area of work hours. Women flooded into defense jobs in a host of occupations that had always been reserved for men. The shortage of male labor, together with the imperative to produce around the clock, forced the suspension of state laws that barred women from night work and that set maximum hours for them. The U.S. Women's Bureau and other advocates fought to minimize these reversals. In June 1942, the bureau warned of the toll inflicted by nocturnal work, considering it "inevitable that household duties during the day plus work at night will cause chronic fatigue." The agency considered deployment of women on night duty appropriate only as a last resort and recommended daily exercise, bonus pay, and at least seven hours' sleep a day. At the same time, it conceded

the futility of sleeping well during the day and, therefore, supported shift rotation. In the bureau's view, if conducted at a slow pace, rotation allowed women employees to "repair the results of lack of sleep during the night-work period."[28]

The Women's Bureau signaled a willingness to be flexible but not to desert its constituency. Examining the great experiment under way, bureau investigators brought to light the extraordinary burdens shouldered by female wage earners in important war industries. Ethel Erickson's study of the steel industry, where weekly rotation was long established, found women struggling to adjust to a sleep-wrecking regime. Research into the cramped and noisy conditions in which many industrial recruits had to sleep led the bureau to propose minimal housing standards to ensure a quiet, dark, and relatively uncrowded environment for resting. On the legislative front, the bureau and its allies blocked attempts to weaken permanently or repeal hours limits.[29]

Temporary relaxation of safeguards contributed to a long-term erosion of protections for women. As Sue Cobble's careful analysis has shown, gender-specific labor laws came under increasing attack after the Second World War. Defenders of restrictions on night work did not go quietly, however, even though more feminists came to see the protections as outmoded and discriminatory. (Because by the mid-twentieth century the vast majority of all workers' weekly time on the job was well below sixty hours, i.e., down to a level that left over one hundred hours per week for sleeping and other activities besides work as employees, the primary focus in this period necessarily falls on night work.) Labor feminists and other remaining supporters argued that special provisions remained necessary because working women did the bulk of time-consuming household labor. In 1946, Anna Baetjer, a professor of public health at Johns Hopkins who had examined women workers as a military consultant during the war, presented an incisive critique of the social, not biological, challenges to women laboring at late hours. According to Baetjer, the source of the problem lay in "the household and personal responsibilities which fall on women to a far greater degree than on men." Her study changed the terms of the debate, effectively retiring the old Goldmark-Brandeis brief. The Women's Bureau welcomed her revelations as it struggled to resist the mounting pressure to weaken or abolish state protections. "The explanation [for fatigue]," the bureau argued in a 1949 defense of restrictions on female employment at night, "is not to be found in their lower physical stamina, but in their greater practical difficulty in getting daytime sleep." Some advocates of protection for women also continued to hold out hope

that firm limits on night work and maximum hours would someday extend to male workers, thus removing the charge of preferential treatment.[30]

In a sense, the 1963 debate within the President's Commission on the Status of Women was the last stand of the advocates of humane working time, with its corollary of reasonable rest. Most members of the commission's Committee on Protective Labor Legislation grudgingly accepted night work for women, with only the qualifying suggestion that third-shift assignments be at the employee's option. Moreover, the group's report made no mention of the sleep-disruptive aspects of this issue. In the same vein, the labor-legislation experts abandoned absolute limits on working hours in favor of the weaker premium-pay formulation of the FLSA. Whereas the committee endorsed extension of stronger maximum-hours regulations to working men, the full commission refused to go that far. In contrast, on night work, the commission was more inclusive but unwilling to support strong government intervention: "Nightwork, especially on the graveyard shift, is undesirable for most people, and should be discouraged for both men and women. Overly rigid prohibitions, however, may work to the disadvantage of women in some circumstances. Strict regulations to prevent abuse are therefore normally preferable to prohibitions." The death knell for protective statutes came in 1969 when the Equal Employment Opportunity Commission ruled that labor laws that impeded women's opportunities were discriminatory violations of Title VII of the Civil Rights Act of 1964. America's female workers thus gained a dubious new form of gender equality in the postwar era—the freedom to work all night, all day, all week. This formal equality came, however, without any concomitant informal equality in the sharing of work at home.[31]

In the final quarter of the twentieth century, the state began to reassess the health effects of overwork and sleep deprivation. Scientific discoveries in Europe and the rise of big science under federal auspices in America after World War II opened the way for rigorous inquiries into workers' sleeplessness. The increasing scale and novel manifestations of the old predicament also helped to place sleep deprivation on the national agenda. A prosperous consumer society demanded access to goods and services at all times, forcing the wider adoption of nonstandard schedules. By the 1970s, about one-sixth of the workforce was on a nonstandard shift. Moreover, a substantial proportion of Americans, mainly in the middle class, fell into needless overwork because of the enticements of what Juliet Schor termed "the insidious cycle of work-and-spend." At the same time, blue-collar and pink-collar workers raised their expectations beyond subsistence and security, in pursuit of an

enhanced quality of life that encompassed adequate, restful sleep. But even as most Americans no longer accepted regular bouts of daytime drowsiness and nighttime insomnia, work-induced sleep difficulties were apparently becoming more prevalent.[32]

Although working time was a dead political issue by the end of the 1960s, dangerous conditions on the job were certainly not. In 1970, Congress passed the Occupational Safety and Health Act, which held out to workers the promise of freedom from major workplace risks of injury and illness. That is to say, the nation declared its commitment to safeguarding all workers, not just those whose injuries and illnesses threatened the public at large. The act established the National Institute for Occupational Safety and Health (NIOSH), within the structure of the National Institutes of Health, as the repository of federal expertise in the field of occupational biomedical science. As the authoritative advisor to the Occupational Safety and Health Administration (OSHA), NIOSH had a mandate not only to bring to light unrecognized hazards but also to make the scientific case for new standards concerning exposure to those hazards. In its wide-ranging efforts to fulfill that mission, the institute soon came to the work-related sleep disorders.[33]

By the 1970s, a sizable body of research findings on the sleep-related afflictions of shift workers was already available to American officials charged with controlling occupational health hazards. Beginning in the late 1940s, Scandinavian investigators uncovered elevated rates of gastrointestinal and mental illnesses among shift workers. Expressing the consensus of an expert panel of the Permanent International Committee on Industrial Medicine, pioneering Norwegian researcher Eyvind Thiis-Evensen reported that "a very great number of shift workers sleep badly. This is their most usual complaint." Subsequent studies elsewhere across Europe confirmed this pattern, suggested an increased risk of cardiovascular disorders, and called attention to the inferior work performance of employees disabled by somnolence. In 1965, an interdisciplinary team at the University of Michigan, largely funded by the National Institute of Mental Health, produced a lengthy overview of the diverse effects of shift operations. Summarizing the state of global knowledge at that juncture, one member of the team, social psychologist Floyd Mann, concluded that "the social, psychological, and physical costs of working shifts are not unimportant." Hence, by the time NIOSH entered the field, there was a substantial amount of information and expertise at hand in the scientific world. In fact, by calling attention to a "functional syndrome," the Michigan study had helped to point the way to identification of shift work

sleep disorder as a legitimate disease in its own right. The individual suffering with that syndrome "most commonly reports that he is tired all the time and has difficulty getting up in the morning or getting to work; he reports that this sleep pattern is disturbed in that he has trouble either getting to sleep or staying asleep." Thus, a federal agency was venturing into territory that was already partially, if roughly, charted.[34]

Beginning in the mid-1970s, NIOSH strove to raise awareness of the ill effects of sleep deprivation in the workforce. In 1975, the institute held a symposium, "Shift Work and Health," in Cincinnati to explore a topic that lay well outside the accustomed realm of discrete chemical, biological, and physical agents of occupational disease. Nonetheless, NIOSH representatives advised participants that their ultimate objective was not the acquisition of scientific knowledge but rather the shaping of regulatory action. Peter Rentos indicated in his opening remarks that the event aimed to "place us well on the road to providing criteria essential to the establishment of standards that are both effective and realistic." Despite their cautious refrain regarding the unsettled nature of this field, the conferees could agree that the leading problem associated with shift work was sleep disturbance. Paul Mott, the principal investigator in the Michigan project, put forward the radical idea that "we should encourage more worker participation in the design of their shift patterns." Short of the embrace of workplace democracy that this provocative idea implied, Mott also noted interest in the potential of individual adjustments through flextime scheduling. Attempting to extend the frontiers of inquiry, prominent Swedish researchers Torbjorn Akerstedt and Jan Forsberg encouraged an encompassing view of the damage wrought by shift work, one that went beyond conventional disease entities to a fuller consideration of workers' human well-being. This holistic perspective won a measure of support from discussants: "Some of us felt that 'well-being' was a pretty good concept though difficult to define, especially when it often happens that people say things like . . . 'We don't care if he's sleepy or if he's not functioning well as long as he doesn't injure himself on the job.'" However edifying the more evolved European perspective may have been, public-health authorities in America had a mandate only to prevent disease and injury, not to maximize worker well-being.[35]

Subsequent work within these constraints yielded insights nonetheless. NIOSH made a survey of shift work practices, which estimated their increasing prevalence and explored their many variations. It underwrote an evaluation of groups of nurses and food-processing workers that underscored the

axiom that shift rotation aggravated sleep disorders. A 1979 conference co-sponsored by the institute and the Office of Naval Research brought together a multitude of international experts to offer alternatives to the prevailing schemes now recognized as problematic. The discussion at this event went so far as to broach the possibility of incorporating naps into work schedules.[36]

NIOSH's regulatory partner did nothing to translate the accumulated body of knowledge into protection for workers. To be sure, this would have been quite a leap for OSHA, which was oriented toward setting exposure limits on individual toxic chemicals and other well-defined, discrete agents. Yet through proposals like the Generic Carcinogen Standard and employees' right to know about the hazards they faced, the agency, especially when Eula Bingham oversaw it during the Carter administration, was moving boldly toward setting more expansive and ambitious regulations. With the advent of Ronald Reagan's presidency in 1981, any window of opportunity for safeguarding somnolent members of the workforce closed.[37]

The retreat from any decisive intervention notwithstanding, the federal government could not quite ignore sleep-deprived employees. Questions regarding the ways their behavior might endanger society at large dragged public officials back to this problem. The Three Mile Island incident (which commenced at about four A.M.), the *Exxon Valdez* disaster (which began at about midnight), and other heavily publicized events kept Washington intermittently involved. The Association of Professional Sleep Societies invoked not only the Three Mile Island episode but also the 1986 *Challenger* space shuttle explosion and other catastrophes to justify its recommendations for government countermeasures. But investigators in the legislative and executive branches of government learned that shift workers' fatigue tended to occur in technologically and organizationally complex settings, in which a multiplicity of factors combined to produce disasters or near-disasters. These complexities helped assure political inaction. Following the common pattern of dynamics without change, Congress collected and analyzed masses of information. In 1988, it created the National Commission on Sleep Disorders Research. The commission's report, appearing in 1993 and 1994, illuminated numerous workplace aspects of a multifaceted crisis and encouraged further examination of shift work sleep disorder and other conditions afflicting the workforce. Most remarkably, given that its mandate was to assess research needs and capabilities, the commission's working group on epidemiology recommended that the government review working-time regulations in the transportation sector. In 1991, the Office of Technology Assessment advised

federal lawmakers on the impact of nonstandard schedules. The technology office set out several options for congressional action. One alternative was to "direct the Occupational Safety and Health Administration to determine whether the issuing of standards related to hours of work and scheduling is warranted." Congress did not pursue this course, in part because of an awareness that OSHA had become much less committed to setting and enforcing standards, operating instead largely in a consulting and educational capacity. This nonregulatory method reflected the generally conservative political climate of the 1980s and 1990s.[38]

One small but tragic event prompted corrective legislation in one state in the late twentieth century. On March 4, 1984, Libby Zion, a healthy eighteen-year-old woman, entered New York Hospital in Manhattan, a training site for Cornell University Medical College, for treatment of flu-like symptoms. Within hours, she was dead. Although a number of factors contributed to this fatality, one important cause was the fatigued condition of the medical interns and residents caring for this patient. At that time, the hospital was typical in its lack of any policy on working hours for postgraduate medical trainees. The intern directly in charge of this case worked about a hundred hours a week and was on call every third night. Zion's father Sidney, a lawyer and journalist, launched a furious crusade for remedial action. Although a grand jury in 1986 refused to indict the physicians involved for negligent homicide, it did recommend legal limitations on interns' and residents' time on duty. This proposition led to the creation of an expert panel, chaired by medical professor Bertrand Bell. The following year the Bell Committee proposed restricting weekly hours to eighty, with no stint of more than twenty-four hours, and a guarantee of at least twenty-four consecutive hours off each week. Amid mounting criticism of the man-of-steel culture of postgraduate medical education, many within the profession acknowledged the necessity for some reform. In February 1989, an editorial in the *Journal of the American Medical Association* acknowledged that "the public is outraged that life-and-death decisions are made by residents working thirty-six-hour shifts and 100-hour weeks." The editorial embraced the central working-time proposals of the Bell panel: "Eighty hours per week—the equivalent of two full-time jobs—is enough! The mandated day off per week should also help." A few months later, the New York legislature amended the state health code to reflect the Bell Committee plan, capping weekly hours at eighty and shift hours at twenty-four and mandating a weekly respite of at least twenty-four consecutive hours.[39]

Even though their primary objective was the more politically attractive one of patient safety, not worker well-being, the New York rules did not show the way for authorities in other states or in Washington. To be sure, they received considerable scrutiny in medical academia, leading to corroboration of the manifold dangers associated with chronic sleep deprivation in hospital medical staff. But sobering realizations were undercut by widely expressed fears that a golden age of rigorous training had sadly concluded, succeeded by a decadent era of irresponsible clockwatching. Those anxieties fueled continuing controversy and may have helped divert attention from the decision of the European Union in 2000 to require that its members phase in an average weekly limit of forty-eight working hours for medical trainees. This move aimed to bring the working time of doctors in training into line with that of the European workforce as a whole.[40]

After more than a decade of waiting for legislative relief, the Committee of Interns and Residents, an affiliate of the Service Employees International Union, and other allies in 2001 petitioned the Occupational Safety and Health Administration to set a standard that reduced hours. Although this petition was rejected, it probably helped to catalyze a voluntarist response. In 2002, the Accreditation Council for Graduate Medical Education decided that its constituent medical schools had to bring their student-employee hours down to eighty per week, when averaged over a four-week period, and down to twenty-four per shift. In 2010, the accreditation body revisited this matter, keeping the eighty-hour limit but restricting first-year (but not other) residents to shifts of sixteen hours. The deficiencies in self-imposed regulations, along with persistent widespread violations of them, led the Committee of Interns and Residents and other interested parties to file another petition to OSHA seeking stricter protection. Like the request submitted almost a decade earlier, this petition concentrated on the adverse effects of overwork and sleep loss on medical workers themselves, not on the risks to their patients.[41]

In contrast, the recent drive by other health-care workers for protection maintained the traditional emphasis on second-party victimization. Beginning in the 1990s, organizations representing registered nurses and, to a lesser extent, other providers of health services pressed state legislatures for relief from mandatory overtime as a matter primarily of patient safety. The nurses' wave of activism won them some statutory immunity from forced overtime in five states in 2001–2, with several others following suit over the course of the decade. As of late 2012, seventeen states have placed some restrictions on mandatory overtime for nurses. The momentum generated by

these advances prodded a few jurisdictions to consider reining in mandatory overtime for the entire wage-earning population. Thus far, only Maine has enacted protective legislation along those lines, albeit with more than a few exemptions. In 2001, that state enacted a ceiling of eighty hours of mandatory overtime per two-week period for the majority of its workforce. Although the law in Maine offers only a very modest amount of protection against sleep-denying levels of overwork, its coverage does reflect a striking disregard for the longstanding requirement that sleeplessness place someone beside the worker herself or himself in jeopardy. At the national level, Congress held two brief sets of hearings in 2001 and 2002 that gave nurses' leaders a chance to reiterate their dissatisfaction with exhausting marathons such as sixteen-hour double shifts. Federal legislators were not at all prepared to enact the nurses' demand for a ban on forced overtime.[42]

The minimalist public policy regarding workers' sleep deprivation that has predominated over the past century is of a piece with American public-health policy in general over more than that period. From yellow fever to AIDS, government has forcefully intervened only when widespread fear of a serious infection gripped society as a whole. Consider the classic case of the hapless immigrant Mary Mallon, "Typhoid Mary," a cook in early twentieth-century New York who had the misfortune to be carrying a communicable bacillus. Mallon endured two long terms of imprisonment to protect the community from infection. Conversely, noninfectious conditions have elicited little or no commitment of the police power or other resources of the state. Until very recently, chronic noncontagious conditions that endangered no second parties, like the major cardiovascular disorders and cancers, have warranted little or no preventive action. Of course, most work-related illnesses are not infectious and, therefore, have not prompted state action.[43]

Within the confines set by this narrow perspective, the challenge facing advocates of protection was to take advantage of the elasticity of such socially and politically constructed concepts as "public welfare" and "public safety" in order to carve out protected refuges for a fraction of the working population. For most of the twentieth century, shrewd framing of the plight of women workers as a valid societal concern brought a measure of protection to a sizable minority of employed females. Only a few intrepid agitators went into the political arena to assert the right of all workers to an adequate amount of rest. Despite the futility of their efforts thus far, they have managed at least to make work-induced sleeplessness visible and thus have contributed to making it into a legitimate political issue.