5

THE STRIP

By the late 1960s the United States could no longer ignore the crisis in occupational health. The numbers were staggering. From 1961 to 1970 the incidents of industrial accidents rose by 29 percent, with an estimated 2.2 million workers receiving injuries on the job over that period. Every year 14,500 employees died and 390,000 developed an occupational disease. The economic impact was huge. American workplace injuries and deaths resulted in $1.5 billion in lost wages annually and an estimated $8 billion to the GNP. With the growth of unregulated chemical and nuclear industrial activities, new technological processes were introduced faster than health experts could develop safety standards. In 1965 the PHS estimated that industries developed a new, potentially hazardous chemical every twenty minutes. Americans also embraced a social revolution, protesting the Vietnam War, demanding civil and women's rights, and bringing attention to ecological degradation and dangerous workplaces. Reports of asbestos-related diseases, coke oven emissions–related cancers, and black lung disease among miners infuriated the public. Although industry-specific regulations existed, inspections and enforcement occurred rarely.[1]

Organized labor was also left in the dark, unclear about health and safety statutes and what the law covered. For example, the Walsh–Healey Public Contacts Act of 1936 authorized regular inspections of workplaces under federal contract, but it covered few workers and was nearly impossible to enforce. Congress updated the act periodically, but the last major revision was in 1956. Most health and safety standards were consequently established by private interests via industry-affiliated organizations or voluntary agencies, not the federal government.[2]

Beginning in the early 1960s, the DOL started creating new guidelines for inspections, but without a coherent enforcement plan. At the same time, Congress deliberated proposals for revisions and laws, even considering tasking the AEC to establish health and safety standards, and monitor all workplaces. In 1965 the environmental movement inspired the PHS to act; without a clear mandate, its Division of Occupational Health did not have the authority to help workers. It published "Protecting the Health of Eighty Million Americans: A National Goal for Occupational Health," a study by the Division of Occupational Health revealing how modern technology changed the workplace. Besides reporting about new chemicals, the report revealed that older workplace problems in the United States had not been eliminated. The report concluded with a plea asking for a federal mandate and funding to build a national occupational health program with two goals: to eliminate "any factor" that threatened a worker's "health or life," and to promote the national economy through "the reduction of sick absence."[3]

Still, the movement stalled. Throughout the 1960s Congress introduced legislation but none advanced. In 1968 the rise of industrial accidents led to another bill but it was again defeated. Union leaders eventually prodded President Lyndon B. Johnson to take up the cause, which led to a task force drafting the first national health and safety bill. Johnson declared occupational health a national crisis and proposed tasking the DOL with setting standards and inspection authority. His proposal never reached a vote.[4]

The war also escalated in Vietnam, forcing factories to institute speedups, and requiring long hours and overtime. Similar to World War II, the hurried pace increased the rate of accidents. The increasingly militant American workforce finally had enough, and organized strikes throughout the nation, stalling productivity. The strike action hurt production, encouraging industry to consider health and safety measures.[5]

On November 20, 1968, an explosion at the Consol Energy coal mine near Farmington, West Virginia, killed seventy-eight miners, and in early 1969, an oil spill in the Santa Barbara Channel off Santa Barbara, California, covered the coastline with crude oil, killing thousands of marine animals. The events further encouraged Americans to demand change. After the Farmington mine disaster coal miners marched on the West Virginia capital, inspiring the Coal Mine Health and Safety Act of 1969.[6]

In January 1969 Congressman James G. O'Hara (D-MI) introduced the OSH bill, Senator Harrison Williams (D-NJ) followed suit in the Senate in May, and the Nixon administration introduced a proposal in August. Although the bill originated among labor activists and Democrats, President Richard Nixon embraced it to lure blue-collar White Americans to the Republican Party. However, his proposal called for minimal disruption of the work process, and recommended creating a nonregulatory agency, the NIOSH, to research and develop safety recommendations as part of the CDC and the Department of Health and Human Services (DHHS). Under the DOL, OSHA would handle enforcement, training, outreach, education, and compliance assistance. Nixon eventually conceded to the Democratic-DOL plan but insisted on establishing separate agencies. After another year of revisions, he signed the OSH Act into law on December 29, 1970. It was a significant departure from previous legislation, creating OSHA and NIOSH, two federal agencies authorized to set standards "to the extent feasible," and protect employees from damages and regular exposure to hazards. Since its ratification, much debate has centered around the broad meaning of the word "feasible." Although OSHA has maintained that the word implied "capable of being done," conservative employer groups have adopted a more cost-benefit approach.[7]

Still, it was a significant step forward. For the first time in American history, a federal mandate protected employees in the private sector, safeguarding health and safety through inspection, regulation, and standard setting. It also authorized the imposition of fines and sometimes prison terms, ending the long-standing principle that workplaces were not under federal control; it also guaranteed employees access to information about harmful substances in their workplace. While controversial, the OSH Act underwent few modifications after its passing, with the exception of an amendment in 1990 increasing penalties sevenfold.[8]

As OSHA and NIOSH developed, and the growing recognition of risks involving low-level radiation and chemical exposures played out on the national stage, the American workplace evolved to embrace a new postindustrial economy. The various events marked the beginning of a third period in occupational health history in the United States. In 1970 the manufacturing sector held 17.8 million out of 71 million jobs in the United States. In 2012 only 11.9 million out of 133.7 million jobs represented manufacturing positions. The decline in industrial work occurred because of two factors: automation and imports. Multinational corporations also responded to environmentalism and OSHA by moving their factories to developing nations. The move terminated thousands of jobs, most of them among steel and automotive workers in the Midwest and Northeast. But as the economy deindustrialized, employment in services, research, information technology, health care, and finance grew. In 1973 sociologist David Bell wrote *The Coming of the Post-Industrial Society*, accurately predicting that service employees would surpass the number of industrial and agricultural workers, creating an economy based on the proceeding eras. Post-industrialism was therefore not an entirely new economic realm but depended on manufactured products. Likewise, manufactured products generated services. In the 2000s, 75 percent of Americans worked in postindustrial trades. Older professions, such as jobs in health care, education, and engineering, developed new specialties. Scientific, technical, and finance occupations also grew, marked by the expansion of communications, information, and medical technologies, and computer software and pharmaceutical development.[9]

Employees with the strongest educational credentials fared the best in the postindustrial economy, obtaining the highest-paying jobs because of their ability to manage information and innovate. Those without college educations or special skillsets had fewer prospects, gravitating toward unskilled work. One of the largest sectors of the service industry that offered options for low-skilled labor was hospitality. The Las Vegas Strip was the ultimate manifestation, combining gaming, lodging, food services, conferences, entertainment, and theme park attractions into one over-the-top experience. Unlike an industrial workplace, it did not produce tangible goods, instead providing escape, pleasure, and self-indulgence to guests. The job was an often-difficult task. A factory could stop an assembly line to fix a defect, but Strip employees continuously produced experiences in a scripted environment but uncontrolled setting. With the experiences created and consumed at the same time, there was little margin of error. Success required high commitment from the entire staff. In the process, employees faced similar hazards to industrial workers, but the risks were harder to define and interpret. After the 1970s, the risk of postindustrial work increased in Las Vegas, simply because the new megaresorts provided more services and required a greater number of employees.[10]

Nevada legalized gambling in 1931, but the industry did not generate huge profits until after World War II.[11] In 1941 hotelier Thomas Hull visited Las Vegas to expand his California El Rancho hotel chain to Las Vegas. In a surprise move, he decided against Fremont Street, picking land on Highway 91 outside the city and therefore not subject to municipal taxes. The El Rancho opened in 1941, emerging as a prototype for the roadside hotels that characterized the 1950s and 1960s.[12] The venture was marginally successful, but inspired the future of Las Vegas. As the first casino suburb, it revealed the profitability of combining casinos with resort hotels. Guy McAfee, a former Los Angeles vice policeman and casino entrepreneur, named the area the Las Vegas Strip because of its likeness to the Sunset Strip in Hollywood, California. He also helped solidify the location as a tax shelter, establishing the unincorporated township of Paradise in December 1950.[13] The Strip eventually became synonymous with gambling and entertainment in the United States. Over the following decades, it expanded from small hotels with enormous neon signs to a succession of massive, dense megaresorts. In the process, the Strip helped shift American perceptions of gambling. Although "gambling" was associated with criminals, the Strip provided "gaming," a legitimate recreational activity.[14]

The Strip's occupational health regime varied considerably based on ownership, undergoing two general periods of history. Organized crime syndicates and the International Brotherhood of Teamsters dictated the first period, and corporate ownership defined the second.[15] In the mid-1950s most of the Strip was mob-owned because of the difficulty for casino owners to obtain large bank loans.[16] After 1958 the construction boom waned after an economic downturn in Las Vegas and a federal investigation into Nevada gaming and its ties to organized crime.[17] The inquiry prompted the institution of stricter gaming regulations, establishing the Gaming Control Board in 1955, the Gaming Commission in 1959, and the Gaming Policy Committee in 1961.[18] It soon became apparent that illegitimate capital could no longer support the Strip. Blending legal and illegal practices, the Teamsters entered the business, investing in commercial development and the resorts. Instead of gangsters reaching for shoeboxes of money, the Teamsters offered loans from legitimate banking institutions, funding the construction of Caesars Palace, Aladdin, and the Landmark Hotel and Casino.[19] Opening in 1966 at the cost of $19 million, Caesars Palace inaugurated a new era on the Strip, outshining the first generation of resorts.[20]

The corporate era emerged after Howard Hughes purchased the Frontier, Sands, Castaways, Landmark, and Silver Slipper in 1967. The eccentric billionaire provided a symbol of change, legitimizing investment on the Strip.[21] In 1968 entrepreneur Kirk Kerkorian constructed the largest hotel in the world, the International, and simultaneously acquired the Flamingo. He was the first person to benefit from 1969's Corporate Gaming Act, which allowed publicly traded companies to own casinos.[22] Historian Hal Rothman called the Act "the most important event in the history of modern Las Vegas," ushering in a new era of business.[23]

After completing the International, Kerkorian sold both resorts to the Hilton Hotels Corporation in 1970, marking the first time a publicly owned corporation owned a casino. The Las Vegas Hilton subsequently reported massive earnings, changing the hotel industry's perception of the Strip, and inspiring Sheraton and Holiday Inn to invest. In 1973 Kerkorian opened the MGM Grand, setting a new industry standard of size and luxury. Costing $120 million, it was the first megaresort on the Strip.[24] Despite its success, the MGM Grand was the only property constructed on the Strip until 1989. Various factors prevented new development; Kerkorian had elevated the amount of capital needed to construct a comparable property. The country also experienced a nationwide recession during the 1970s. Steve Wynn provided a solution during the 1980s, redefining corporate ownership on the Strip. With the help of financier Michael Milken, he constructed Las

Vegas's second megaresort, the Mirage, in 1989. Costing $630 million, it doubled the MGM Grand in size. Wynn innovated the megaresort design, making the resort the main source of entertainment. The result was an over-the-top, tropical-themed, volcano-fronted spectacular, with expensive décor, luxury rooms and villas, and a multitude of entertainment, gaming options, and wildlife habitats. His vision revitalized Las Vegas, inspiring corporations to invest billions in the Strip over the following decades. Most existing resorts were imploded or demolished, and dense megaresorts soon outlined the iconic cityscape. The corporate activity not only transformed the Strip, but also the community. When the Mirage opened, approximately eight hundred thousand people lived in Clark County. By 2020 the population exceeded two million.[25]

Given the scope of operations, the Strip required a large workforce. In 1955, 6,000 of Clark County's 30,000 wage earners worked there. By 1975 the hospitality industry was employing 40,000 of 150,000 wage earners in Las Vegas. The Desert Inn and Sahara retained 1,200 each, and the MGM Grand had 4,500. After 1990 service employment skyrocketed. In 2005 the Strip accounted for 109,689 employees, distributing a $4.2 million annual payroll. Nineteen of the largest resorts employed 34.5 percent of Nevada gaming employees and produced 47.4 percent of the statewide revenue. According to the Center for Gaming Research at UNLV, by 2018 revenues continued to increase as well as labor costs; casino employees progressively earned more income each year in both "absolute terms and as a ratio of payroll to revenues."[26]

Most job positions required minimal educational requirements. As explained by historian Hal Rothman, Las Vegas solved a major problem associated with transitioning from industrialism to postindustrialism. It became the "Last Detroit": with barely a high school education, low-skilled employees could earn a middle-class income and could expect to work for the company the rest of their lives. One of the Strip's most coveted jobs—valet—achieved almost mythic status by the 2000s for its supposed earning potential. In 2006 the *Las Vegas Sun* investigated a popular theory that valets could earn $100,000 or more—just for parking cars. Most did not earn that much, but the job paid well considering the educational requirements. As with most positions on the Strip, "tokes," or tips, were an important supplement to their income.[27] A valet's base salary ranged from $9 to $15 an hour. A valet stand staffed around twenty employees at one time, handling between 1,500 to 1,800 vehicles a day. After each shift, tokes were pooled and divided based on employment hierarchy. Supervisors and runners received the biggest cut, and ticket writers the smallest. Most valets collected between $150 to $500 a shift, a yearly toking income of a maximum $60,000 at the highest-rated resorts. The *Las Vegas Sun* concluded that valets did not earn six figures, but the exaggerated income reveals a common perception of the Strip. As cities across the nation struggled to transition to postindustrialism, Las Vegas appeared to operate the perfect service economy with endless financial potential for employers and employees alike. As noted by Rothman, the city also developed higher employment rates, lower unemployment rates, and steadily rising per capita income.[28]

Management styles varied among the resorts, but each incorporated new theories on organizing the postindustrial workplace. In 1960 psychologist Douglas McGregor theorized about two models of managerial motivation. Industrial jobs were mechanical, requiring little decision making on the part of the workers. Theory X was therefore a standardized, segmented, and strictly supervised management style based on penalties. Postindustrial work required employees to think and make choices, encouraging a more discretionary approach to management. Theory Y was based on the theory that service workers were internally motivated and needed to direct themselves. Management also needed to be less paternalistic, necessitating supervisors to relate to employees on a personal level.[29]

Theory Y seemed optimal for most postindustrial work, but it was a risky model for the Strip. Individualism, lack of rules, and limited leadership could create an inconsistent experience for guests, and hurt profits. The Strip therefore combined both models to achieve the most efficient production. In a workplace characterized by open-ended tasks, strong management–employee relationships, task structure, and authority figures became important constructs. The resorts structured operations like an industrial plant, with four categories of workers. The first category was skilled professionals or semiprofessionals, such as executive chefs and orchestra leaders, and the second was white-collar workers like secretaries, clerks, and switchboard operators. The third encompassed blue-collar workers maintaining the gardens, slot machines, and security systems. The largest category was employees with guest contact, operating the gaming areas, restaurants, retail services, lounges and bars, and entertainment. Each resort maintained twenty-four-hour, seven-day operations, departmentalizing employees based on functionary lines: casino, rooms, food, beverage, management, entertainment, and retail. The departments interacted with one another on a regular basis, delivering one seamless experience to guests.[30]

Until the late 1960s, management ran the resorts like a family business with off-site investors that demanded quick returns.[31] Operations were divided into two units: the casino and all other departments. Mob associates oversaw gaming while a separate management team ran the hotel. Both units generally managed their business well, running honest games and cultivating a harmonious working environment. Employees remembered having an almost familial relationship with management, being paid well with the opportunity to better their positions. The friendly relationship was also thanks to the Culinary Workers Union Local 226. Even though Nevada became a right-to-work state in 1953, which prohibited labor union–employer agreements that made union membership a condition of employment, the Culinary Union maintained a strong presence in Las Vegas's hospitality industry, representing Strip and downtown employees in most job classifications. Negotiations between the two parties were generally easy since management was not concerned with the cost of operations. Mob associates were also familiar with establishing strong partnerships with unions; they were key institutions for immigrant neighborhoods in the East and Midwest. No one signed a contract or broke a deal. The system worked well, cultivating an atmosphere that allowed employees to design and construct their own work experiences without being micromanaged by management.[32]

Corporatization dramatically restructured this working environment. Executives began handling management, determining policy and profitability, not daily operations. When Hilton Hotels Corporation acquired the International, Baron Hilton explained that his company was not "involved in the day-to-day operations, [but monitored] the profit and loss statements of the hotel." Unlike the mob, he took a long-term outlook and was not interested in quick returns. The new model dramatically reorganized management divisions. In addition to the casino, hotel rooms, food and beverage, and housekeeping, the corporate model established marketing, accounting, auditing, and financial and legal departments. At the MGM Grand, Kirk Kerkorian's management was particularly intricate, with a board of seven corporate officers, nine senior directors, and fifty-seven lower-level managers and supervisors. Corporate provided each supervisor with clear job descriptions and authority, and communication between the various levels was well defined.[33]

The corporations also incorporated human resources management, a concept that gained popularity among employers during the 1960s.[34] Management theorists argued that achievement, recognition, challenge, growth, and job responsibility motivated employees.[35] Human resources divisions merged management with modern psychology, reorganizing the workplace to maximize return on human capital investment and minimize financial risk. The programs focused on recruitment, hiring, and firing, but also developed strategies to inspire success and develop employer loyalty. One important component was expanding benefits, covering not only medical but also childcare, legal, and other assistance. After the MGM Grand opened in 1973, its human resources division administered a pamphlet signed by President Alvin Benedict outlining the resort's "objective and philosophy." The workplace relationship resembled a family, and employer and employee had similar objectives: "The secret to a successful organization is teamwork where people work together for common interests and goals." The pamphlet promised "positive personal recognition" and other benefits for exceptional performances.[36]

Most employees resented the corporate takeover and changes in management, which reflected national trends. *Work in America*, a 1973 report by Elliot Richardson, secretary of Health, Education, and Welfare, found that the work ethic had diminished as a whole among postindustrial employees, for the most part because of declining job satisfaction and fading opportunities to someday become a boss.[37] This was the sentiment among many Strip employees. When the mob conducted operations, employees easily gained promotions to higher paid positions. If employees made money for the house, managers rewarded them. Dealers consequently easily rose to management level.[38]

Organized crime syndicates treated employees like extended family, offering jobs to their children and relatives. This practice ended after corporatization. Like the rest of the nation, employment became more stratified by the 1980s. Employees could enter management positions only with a business or hotel school degree. The change frustrated existing employees, for whom it was a major point of dissatisfaction. It also shifted employment patterns. Like industrial jobs in previous generations, Strip employment became a transitional step to white-collar status. The poor, uneducated, and immigrant populations took blue-collar jobs at the resorts, and sent their children to college. If their children wanted to work on the Strip, they returned later with management qualifications.[39]

MGM Resorts International job listings invited applicants to "become one of the stars behind the show [as] part of the world's most powerful entertainment brands." The work had "one exciting mission: To entertain the human race." To be considered for employment, the resorts required applicants to submit to physical examinations. El Rancho doctors determined whether applicants were "likely to be all hands and feet," examining dexterity, eyesight, hearing and speaking, and rejected those prone to "accidents, harming themselves or others, breaking or damaging furnishings and equipment." For casino positions, applicants took preemployment exams, testing for mathematical skills, dictation, and memory, and required certification from a gaming school.[40]

Once employed, management issued guidelines on appearance, ethical behavior, and conduct. The El Rancho required employees to appear "wholesome [and] clean, [which conveyed] good health" to their guests. The Stardust articulated that they represented their workplace, "regardless of position [and the importance of] neat dress, grooming, courteous behavior, and a smile and friendly word." Management also issued guidelines for appearance, requiring that females apply makeup in good taste and hairstyles that were business appropriate. All employees were expected to be polite, friendly, and dependable, and to engage briefly with guests because management believed that prolonged conversations resulted in employee errors. Considering the job's close proximity to vice, management also set strict conduct codes, stressing that employees needed to be vigilant and alert at all times. Drinking alcohol was strictly prohibited, and repeated tardiness or absenteeism resulted in immediate termination. Above all, management instructed employees to maintain a good image, because they were team members, even while off duty.[41]

The composition of the workforce varied, but the Strip had a historically checkered approach to employment equality. The state did not have laws requiring segregation and unequal treatment for Blacks, but southern Nevada developed the dubious title of the Mississippi of the West after World War II. The resorts hired young, White males for the most visible jobs to appease White clientele, many of whom were from California after migrating from the South. In 1960, Nevada had the most young, middle-aged White adults in the nation. A third of the population had lived in the state for only five years. Most employees had immigrated from California, Texas, east of the Mississippi River, and the Northern Plains. Since White men held positions with the highest paychecks and power, they had plenty of opportunity to better their position. Female employees faced discrimination patterns, a reflection of postwar conservatism. After the war, employers reasserted the traditional sexual division of labor, offering separate pay scales and job positions. One of the earliest critiques of the female postwar position was Betty Friedan's *The Feminine Mystique* in 1963, a book that reinforced the one-dimensional, conservative stereotype that postwar women were suppressed in a White, middle-class, domesticated suburban cage.[42]

Some women fit this stereotype, but most did not. Lower-class Whites and minority women worked on the Strip, but were limited to housekeeping and cashier positions, or worked as entertainers, cocktail waitresses, keno runners, restaurant workers, and retailers. Female sexuality also played an important role in Las Vegas as a whole.

Instead of openly selling sex, the resorts sold the possibility. The sexual objectification of women by men became an accepted business model. Management retained a multitude of attractive White women to entertain guests in shows and topless revues. In the show "Casino de Paris," the Dunes had strict criteria for its perfect showgirl during the 1960s: 5 feet 10 inches, 134 pounds, and "harmonizes with the globe's curvature with 37–25–37 measurements." Most were twenty-three years old, with blue or hazel eyes. Only two had brown eyes. While the women were "imported from the world over," the majority originated from the United States; according to the show's Paris-born producer Fredric Apcar, "America [was] still in great shape." If a woman gained weight during her time of employment, the Dunes considered it a breach of contract and replaced her.[43]

While female objectification benefited some women, many endured long working hours, abusive bosses, and uninvited sexual advances. In 2018 dozens of employees accused Wynn Resorts CEO and Chairman Steve Wynn of sexualizing the workplace and pressuring subordinate women to perform sexual acts.[44] Strip work also introduced a hard life to many female employees. A pregnancy often resulted in immediate termination. Unable to make ends meet, some women turned to freelance work, becoming strippers, escorts, or prostitutes. The Equal Pay Act of 1963 and the Civil Rights Act of 1964 eventually helped gender equality, but the process took time.[45] Many resorts initially refused to hire female dealers. The city of Las Vegas officially endorsed this discrimination on November 5, 1958, passing a public ordinance recommending against the hiring of female dealers. The ban forced Sarann Knight Preddy, one of Las Vegas's only Black female dealers, out of work, as well as her White coworkers. A year later, North Las Vegas banned the employment of female bartenders.[46]

In the 1970s Las Vegas finally ceased its citywide ban on female dealers. Under affirmative action pressure, the resorts also began employing women in jobs traditionally held by men. Yet most dealers remained male; out of 2,616 dealers, only 25 percent were women in 1976. The situation gradually improved by the 1980s. On January 13, 1981, the Equal Employment Opportunity Commission filed a complaint and at the end of the month, nineteen Strip resorts and four unions settled out of court, agreeing to end discrimination. Still, the marginalization of women continued in Nevada and the nation as a whole. A 2005 Census Bureau survey found that Nevada women earned \$0.82 to every \$1.00 earned by Nevada men. With 3.44 women who died from domestic violence among 1,000 residents, Nevada also statistically reported the highest rate of any state in the nation.[47]

Las Vegas's history of minority discrimination has been well covered by historian Eugene Moehring and others.[48] After World War II the segregation policies enacted during the construction of Hoover Dam and BMI continued. Blacks lived in the Westside slums, and were prohibited from gambling, eating, drinking, and attending shows on the Strip. The resorts allowed the employment of Blacks, but only in the lowest-paying jobs. Management famously ushered entertainers such as Sammy Davis Jr. and Lena Horne out the back door after headlining their showrooms. In 1953 the Hotel Last Frontier even drained the pool after Dorothy Dandridge intentionally dipped her foot in it. A civil rights movement also emerged in Las Vegas, led by the city's first Black dentist, Dr. James McMillan, and physician Dr. Charles West, as well as a group of local ministers, teachers, businesspeople, and parts of the medical community. General surgeon Dr. Kirk V. Cammack Jr. delivered a speech in 1964 entitled "Shall They Not Protest" in Las Vegas and gatherings throughout the United States on his dedication to civil rights, highlighting his relationship with his anatomy cadaver, Evan Keesee, during medical school:

> Since that time, I have explored many human beings and one thing I can assure you—as soon as you cut through the skin you can't tell a black man's brain from a white man's brain. There is no such thing as a stomach that is black or a stomach that is white. There is no special chapter of Negro physiology or Negro biochemistry or Negro neuroanatomy of the brain. They are the same as a white man's. What if Evan Keesee's skin had been white instead of black? Would he have died in a psychopathic hospital and ended up on a dissecting table? It is possible, but I think you will all agree with the completely illogical fact that his skin pigment affected Evan Keesee's life from the day he was born until his death.[49]

The growth of the resort industry during the 1960s encouraged the creation of more low-paying jobs, inspiring thousands of Blacks to move to Las Vegas. The influx of new Black residents assembled enough support to mobilize protests. Local rioting raised attention to the Strip's discrimination policies as well as a 1961 report by the Nevada Equal Rights Commission. After holding meetings in Reno and Las Vegas, this commission concluded that the casino industry was guilty of flagrant discrimination. The Strip had no Black dealers, waitresses, waiters, bellmen, or office personnel on the payroll, and only a "scattering of Orientals." In response, executives insisted they did not have enough qualified, nonwhite applicants to fill the positions. Dunes owner Major Riddle reassured commission members that "things [were] changing. . . . Four or five years ago, there would have been considerable opposition to Negroes in some of the positions." He claimed that Black men and women made up 10 to 20 percent of the workforce at that time.[50]

Local activism and a nationwide civil rights movement helped improve conditions, but did not inspire immediate change. Throughout the decade, the Equal Employment Opportunity Commission and the Nevada Equal Rights Commission continued to prod the resorts, but failed to make progress until corporations assumed ownership of the Strip. In 1970 the Nevada Resorts Association offered a plan to promote minorities to higher-paying jobs. This was a positive step, but it did not end discrimination. Local NAACP attorney Charles Kellar, who had filed complaints with state courts and the gaming commission, took the issue to federal court, suing the Las Vegas gaming industry under Title VII of the Civil Rights Act. In June 1971 U.S. District Court judge Roger Foley forced the resorts and unions to enter meaningful negotiations, and required that Blacks represent 12 percent of the workforce.[51] The state legislature also passed a fair housing act ending residential segregation. During the 1980s the work environment had significantly improved for Blacks, whose efforts benefited a growing contingent of employees from Mexico, other Central and South American countries, and Asian countries. Still, minorities rarely held upper-management positions. The Strip did not appoint its first Black president until 2002, Lorenzo Creighton at the Flamingo.[52]

It might be difficult to visualize a connection between the health and safety concerns discussed in previous chapters—operating a railroad, constructing a dam, manufacturing chemicals, and testing nuclear weapons—and the risks associated with working on the Strip. Postindustrial trades appeared to be a safer alternative, a far cry from working around heavy machinery, explosives, chemicals, and the cumulative effects of low-level radiation. However, it is important to evaluate postindustrial work in occupational health history, especially since it dominated the American workforce by the turn of the century. Seventy-five percent of Americans held postindustrial jobs and the workplaces were not completely safe.

The threat of postindustrial work was especially clear after the MGM Grand fire on the Strip, which resulted in the deaths of seventy-eight guests and seven employees, and over six hundred nonfatal injuries, on November 21, 1980. As shown by historian Michelle Murphy, many postindustrial employees also developed health problems associated with time spent at their postindustrial jobs, but did not have specific diseases or chemical exposures to measure. Still, they suffered from various ailments—headaches, nausea, dizziness, dermatitis, coughing, immune system disorders, muscle pain, and fatigue—which doctors referred to as sick building syndrome (SBS). A mixture of substances or sensitivities to low concentrations of contaminants appeared to cause the symptoms, often disappearing after an employee left the building. SBS was a controversial subject, and many experts disagreed about whether it was a syndrome or a psychologically related phenomenon.[53] With building-related illnesses and other postindustrial hazards entering the conversation, new problems emerged in the third period of occupational health that merited attention.

The Strip provides an example of the blurred risks associated with postindustrial work. Working in Las Vegas was glamourous and exciting, but it was also physically demanding. Most hospitality jobs required employees to work nights, weekends, and holidays, stand for long periods, and tolerate rude and insulting behavior from guests. A multitude of stressors also dotted the casino floor, such as spaces consumed with secondhand smoke and audiovisual and noise overload.

Many reported chronic headaches, racing hearts, upset stomachs, and irritability during working hours. As added pressure, most employees did not have a set income and depended on gratuities, and lacked job security. They were quickly laid off by management during the aftermath of the 9/11 attacks, the Great Recession, and the 2019 coronavirus disease (COVID-19) pandemic.[54]

The Strip operated around the clock, necessitating employees to work irregular hours. The shifts made it difficult for them to interact with people outside the industry, encouraging them to socialize with coworkers. During the 1960s registered nurse Barbara Ann Barnett worked as a cocktail waitress at the Hacienda and described her cohort as "a group... that mimicked the behavior of guests" and "only thought of the thrill of the moment." Personal relationships tended to change quickly and "it was not unusual to see one person being involved with two or three different people at the same time." Overall, Barnett remembered "a lot of drinking and a lot of partying," a lifestyle that inspired her to leave casino work.[55]

Being in close proximity to vice, many employees developed addictive behavior. Casino workers had a more increased risk of pathological gambling behavior than the general public. The threat was especially high among dealers, as the value of money tended to lessen among those constantly handling money. Cases of depression were also significantly higher among casino workers, as well as alcohol and cigarette dependency. While working as Clark County's first chief health officer, Dr. Otto Ravenholt found that there was a "freer atmosphere for indulgence of alcohol [among his patients].... The same historically was true as far as cigarettes go." In a random sampling of casino employees in 1999, two out of five casino workers smoked, 50 percent higher than the rate among the general population.[56] Employees with pathological gambling disorders, depression, and substance abuse reported higher rates of insomnia, intestinal problems, hypertension, and suicide, and an elevated chance of developing cancer, cardiac problems, or engaging in criminal behavior. The conditions also contributed to disability, morbidity, and even premature death.[57]

Of course, Strip workers sustained occupational injuries typical of the hotel industry. In 2007 American hotels and motels employed

1.8 million workers. Hotel positions required standing for long periods of time, performing repetitive, awkward movements to cook food, wash dishes, and change beds, lifting heavy luggage, and cleaning confined spaces. Injuries often occurred during the most mundane tasks. Based on OSHA's three hundred logs in 2003–2005, hotel workers experienced injury rates of 5.2 injuries per 100 worker-years. In 2016 fatal injuries in the leisure and hospitality sector rose 32 percent, a record high of 298 deaths. The Bureau of Labor Statistics also reported a 40 percent increase in fatal injuries in food services and drinking places.[58]

Acute trauma involving cuts, fractures, heat burns, and strains or sprains accounted for 52 percent of hotel worker injuries. Thirty-nine percent were work-related musculoskeletal disorders (WMSDs), soft-tissue injuries caused by excessive standing in unnatural and static postures, heavy lifting, and repetitive movements. In 2015, WMSDs accounted for one-third of all workers' compensation costs in the United States, approximately $2.6 billion in annual direct and indirect costs. Strip employees were at particular high risk. A CDC Morbidity and Mortality Weekly Report in 2015 found that food preparation and serving employees stood 97.2 percent of their shift, the highest prevalence of standing reported among professions. In Las Vegas, servers reported increased cases of back pain, muscle pain, physical fatigue, and varicose veins. Repetitive motion also contributed to arthritis, carpal tunnel syndrome, and tendinitis. Master Sommelier Lindsey Whipple Geddes's doctor diagnosed her with arthritis after a decade of "opening bottles and polishing glassware" at restaurants in the Palazzo and Four Seasons: "The twisting motion when opening wine bottles was the worst. I opened at least 25 bottles or more a night plus gala events could run into the 100s. My doctor said that I had 'Vegas Arthritis' and that card dealers were typical candidates. . . . Card dealers have the worst maladies of all of us hospitality workers. They stand in one spot and contrast wrist action for hours."[59]

Gender, job title, ethnicity, age, and company were all associated with injury risk in hotel work. Female workers experienced higher overall injuries than men, and Hispanic housekeepers were double the risk of injury over their English-speaking female coworkers. Management expected housekeepers to complete heavy workloads under incredible time pressure. Coupled with low job security and limited career advancement opportunities, most accepted the risk. Nearly all housekeepers reported job-related pain during their career. In 2004, 74 percent of Las Vegas hotel room cleaners reported pain associated with work, and 63 percent had severe low back pain in the month prior. Hispanics sustained the most injuries, likely due to language barriers, fear of job termination, and unfamiliarity with OSHA standards and workers' compensation laws. A 1949 edition of "Housekeepers Guide to Selecting and Training Employees" instructed El Rancho management about the risks of room cleaning. It noted that female housekeepers "may find themselves afflicted with arthritis as they grow older." The guide also warned that janitors, window washers, and painters could develop blood pressure conditions and dizzy spells, and were vulnerable to lead poisoning.[60]

In comparison to the workplaces in previous chapters, Strip properties were relatively clean, because unsanitary conditions hurt business. However, some resorts cut corners to help the bottom line. In the early 1960s a number of restaurants imported secondhand appliances from Los Angeles that did not run correctly in the desert heat. The food spoiled, causing a string of food poisonings. The Clark County Health District (later renamed the Southern Nevada Health District) quickly intervened, prohibiting the use of secondhand restaurant equipment in Las Vegas. In 1964 the Flamingo tested the ban. An inspection by the Health District revealed that one of their kitchens recently installed secondhand equipment, and had subpar sanitary conditions. When the Health District threatened to shut the resort down, management immediately complied.[61]

Since the 1980s, recurrent Legionnaires' disease (LD) outbreaks have threatened public health on the Strip. LD is a potentially fatal form of pneumonia caused by inhaling droplets of water containing the bacteria *Legionella pneumophila*. The disease received the moniker from a 1976 outbreak at the Bellevue-Stratford Hotel in Philadelphia that sickened over 180 people, mostly American Legion convention attendees. Twenty-nine died. Approximately 25 percent of LD cases were associated with travel, and typically occurred in large hotels, cruise ships, and hot tubs. From 2000 to 2017 the number of LD cases increased 500 percent in the United States. Each year the disease infected over 6,000 people and caused 250 deaths. LD generally did not harm healthy people, but the elderly, smokers, or individuals with chronic lung disease and weakened immune systems were highly susceptible.[62]

Over sixty cases of LD have been reported in Las Vegas since the Health District began documenting the disease. Epidemiologist Dr. Brian Labus dealt with LD in Strip properties on "numerous occasions" and "repeatedly [investigated] one resort that spent eight years fighting the pathogen." Most freshwater environments naturally contained *Legionella pneumophila*, however low amounts usually did not lead to disease. The Strip's extensive, man-made water systems cultivated and spread the bacteria, especially when temperatures reached between 77- and 108-degrees Fahrenheit. "The longer water [sat] in pipes, such as those in a hotel room that [was] unoccupied for several days," explained Labus, "the more likely . . . the bacteria [would] flourish." From 2001 to 2008 sixteen confirmed and nineteen probable LD cases were identified in guests at a time-share condominium resort. The LD outbreak likely contributed to the death of a sixty-year-old woman with lymphoma. LD resurfaced again from 2010 to 2012 at the Luxor and Aria. In December, a Luxor employee fell ill. By July, the Health District reported six cases at the Aria. A Luxor guest died six months later. In 2017 the Health District confirmed seven cases of LD at the Rio. It also reported fifty-six suspected cases of Pontiac fever, an influenza-like upper respiratory infection caused by *Legionella*. During each outbreak, the resorts disinfected the contaminated water loop multiple times by raising water temperatures to 160 degrees for 24 hours, and killing the bacteria with purification chemicals.[63]

The Health District also repeatedly dealt with the Strip's high epidemic potential, as highlighted during the COVID-19 pandemic. Coronaviruses are a group of viruses belonging to the family of *Coronaviridae*, which infects both animals and humans. Most human coronaviruses cause a mild respiratory infection, but others produce severe disease, such as severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS).[64] In December 2019 a new strain of human coronavirus, COVID-19, emerged in Wuhan, China, and quickly spread worldwide. As an international tourist destination, the Strip was particularly vulnerable. Guests typically did not monitor their health or maintain good hygiene practices. The casinos, restaurants, shopping malls, and conference, concert, and sporting venues also operated in closed-in settings with little air circulation. Respiratory viruses thrive in congested spaces. Close contact typically spreads viruses between people via respiratory droplets. However, viruses can remain viable in the air and surfaces for hours to days. Despite continuous cleaning efforts, the Strip's high-traffic areas and touch points, such as handrails, elevator buttons, and door handles, presented high transmission risks that threatened public health.[65]

The 2009 swine flu pandemic sickened 318 people in Clark County and resulted in thirty-six deaths, but minimally impacted the Strip.[66] COVID-19 was a different story. Following the first presumptive case, the resorts significantly increased cleaning and hygiene protocols, but it was not enough to stop the virus. After several employees tested positive for COVID-19 and a decline in visitation, management began substantial layoffs and furloughs, and an unprecedented shutdown of the Strip. On March 18, 2020, Governor Steve Sisolak issued a mandatory statewide closure of all casinos, hotels, restaurants, bars, and other nonessential businesses. The order froze the Nevada economy, which relied on tourism and leisure spending. By April, Nevada reported the highest unemployment rate in the nation. The rate reached over 33 percent in greater Las Vegas, a number that did not account for the undocumented population. Activist Ashtin Berry described hospitality workers as being on "the front lines of human interaction" during the pandemic, making them "some of the most vulnerable members of our communities." COVID-19 impacted many Strip employees physically, and the experience took an incredible toll on their mental and financial health.[67]

Reopening the Strip involved a considerable gamble with lives. The Gaming Control Board consulted with federal, state, and local health officials to create new operational requirements for gaming licensees to reduce the risk of exposure to infectious diseases. However, the board did not ban smoking indoors, and proposed to "encourage" but not require facial coverings in public areas even though the scientific evidence favored individual mask-wearing to prevent the spread of COVID-19. Moreover, licensees chose and submitted their own "responsible gaming" plans to the Control Board for approval, which created varying protections for employees. For example, Wynn Resorts continuously conducted COVID-19 testing and contact tracing, while MGM did not. When the Strip reopened in early June, many employees accepted the risk because they needed a paycheck. The majority of visitors disregarded the new safety measures. The Culinary Workers Union Local 226 emerged as an important advocate for workers, documenting widespread lack of social distancing and mask usage and shortages of hand sanitizer and other employee protections. The union demanded that the major gaming companies publicly release their safety plans and supported a mandatory mask policy. After a sharp increase in COVID-19 cases and hospitalizations, Governor Sisolak announced a statewide facial covering requirement by the end of the month and the Culinary Union filed a lawsuit against several Strip operators. The complaint encouraged meaningful negotiations, and the union and companies set forth the Adolfo Fernandez Bill (SB4) to the Nevada Legislature, a proposal in honor of a Caesars Palace porter who died of COVID-19 complications after contracting the virus at work. Governor Sisolak signed the bill in August, the first state law in the nation to require comprehensive measures to protect hospitality employees against the spread of COVID-19. The law covered 280,000 workers statewide, and inaugurated higher cleaning, social distancing, and mask usage standards, new testing and contact tracing requirements, and time off for exposed workers. The COVID-19 pandemic fundamentally shifted Strip operations and promised to place greater value in public health protections.[68]

While infectious diseases were a persistent threat, the most common disorder associated with Strip employment was dermatitis, or mild irritations of the skin. Although not fatal, the annoying condition took a long time to heal. Practicing in Las Vegas since the 1950s, dermatologist Dr. Harold Boyer "saw a lot of occupations with dermatitis among anyone who worked on the Strip." In most cases, employees handled "soap and water" and "fish and meat juice." Boyer treated two types of dermatological disorders: atopic and contact. Atopic conditions typically resulted from food allergies, biological factors, or the intake of allergens, while contact conditions resulted from touching irritating substances. Most cases on the Strip involved the latter. Management instructed employees handling food to sanitize their hands with ammonia-based solutions, an action that wreaked havoc on their skin. According to Boyer, dermatitis also afflicted Las Vegas's doctors. He knew at least one that "had to give up surgery because he could not scrub [his hands]" anymore. Boyer typically prescribed cortisone to employees to heal their conditions, but usually received repeated visits after the irritation resurfaced.[69]

Respiratory issues also resulted from poor indoor air quality and exposures to synthetic carpets, inks, adhesives, solvents, and other contaminants. Bakers, hairdressers, and animal handlers regularly handled chemicals, gases, fumes, and dust, and developed asthma. Combustion sources such as oil, gas, kerosene, coal, and wood contaminated the air, along with deteriorating building materials and furnishings, and asbestos-containing insulation. Microbial contaminants such as gases, fungi, and mold fostered adverse health conditions as well. However, the most hazardous indoor air pollutant in the resorts was secondhand smoke. As most of the rest of the nation banned indoor smoking, the Strip became a haven for smokers. It became a joke that Las Vegas was California's smoking section. But secondhand smoke was very dangerous, especially to employees exposed daily. According to the surgeon general and the CDC, there was a no risk-free level of exposure. Burning tobacco indoors released nicotine, particulates, carbon monoxide, tars, and chemicals to help regulate the burning rate. The compound attached to the air, was inhaled by employees and guests, and deposited onto surfaces as a film. The Strip did not designate nonsmoking areas for restaurants and gambling areas until the mid-2000s. Dr. Harold Boyer remembered during the 1950s "not being able to see across the casino because there was so much smoke-filled air." The women wore beautiful gowns, but when they came home, they "smelled like a tobacco pot." But "that was the way it was [at that time], so you can imagine what it was like smoking and having it in our lungs." Another local doctor, Dr. Leonard Kreisler, had a similar impression, even determining that the NTS's tunnels had "better air quality" than local casinos.[70]

The resorts installed sophisticated ventilation technology, but it did not reduce the risk. While the systems removed large particles, small fragments and gases still remained in the air. The operation of heating, ventilating, and air conditioning systems also distributed secondhand smoke throughout the resort. Even a well-ventilated casino contained metabolized nicotine levels 300 to 600 percent higher than in other smoking workplaces. Secondhand smoke regularly affected employees' heart, blood, and vascular systems, and increased the prevalence of heart disease. Brief exposure contributed to respiratory symptoms as well, irritating and damaging airway linings and triggering asthma, cough, phlegm, wheezing, and breathlessness. Secondhand smoke was a human carcinogen as well, containing more than fifty chemicals that cause lung, breast, and other cancers. One study found that smoke-filled casinos contained fifty times more cancer-causing particles than highways and city streets congested with diesel traffic during rush hour.[71]

Dealers, waitresses, and security guards were most affected by secondhand smoke. Whereas guests had the option to smoke outside, employees could not leave their positions to breathe clean air or ask guests not to light up. The resorts facilitated the problem, selling tobacco products on the casino floor and gift shops, and providing free cigarettes and cigars to high rollers. Management also did not monitor employees for secondhand smoke complications because they were not liable; the law specifically allowed patrons to smoke freely indoors.

In 2005 a group of blackjack dealers from Bally's, Paris, and Caesars Palace contacted NIOSH to organize a confidential study of secondhand smoke in their workplaces. Investigators conducted three on-site evaluations at each resort, conducting indoor air quality tests and biomarker assessments of more than a hundred nonsmoking dealers. The results were not surprising. NIOSH found numerous tobacco components in the air, including nicotine, 4-vinyl pyride, respirable dust, solanesol, benzene, toluene, p-dichloromethane, naphthalene, formaldehyde, and acetakdehyde. Although it determined that dealers were in the ninetieth percentile of exposure to secondhand smoke in comparison to the general population, it concluded that all employees were at risk. Dealers had a higher incidence of respiratory symptoms compared to administrative and engineering employees, but the difference was not statistically significant. Tobacco components above the EPA safety threshold were found in all areas of the resort. Since secondhand smoke traveled through air currents and air ducts, it even contaminated nonsmoking areas considered safe.[72]

Dramatic cases of indoor air pollution on the Strip were rare, but they did occur. The Landmark experienced a resort-wide failure involving carbon monoxide. On July 15, 1977, the resort hosted a national convention for the Disabled American Veterans, and had nine hundred guests and employees on property. At 4:10 A.M., a water pipe burst in the subbasement and short-circuited the main power panel, telephone system, air conditioning, and all but one elevator. The power surge also ruptured a refrigerator line in the butcher shop. When the emergency auxiliary generator turned on, carbon monoxide, phosgene, and Freon traveled through the ventilation ducts. Don Thompson, a guest staying at the resort, said the fumes smelled sweet, and he knew something was wrong. His friend Robert Schriever also became ill and began sweating profusely. Thompson tried to call the telephone operator for medical assistance, but the line did not work. The elevators were out as well, so he took the stairs to the lobby to get help. On his way back up to his room, Thompson remembered having extreme shortness of breath. He knew something was wrong, and began knocking on room doors to alert other guests. Meanwhile, Schriever's wife Sue collapsed and had to be carried out with a wet cloth covering her face. At 7:00 A.M., hotel manager Robert Anthony ordered a resort-wide evacuation, instructing security guards to rouse sleeping guests and gamblers in the casino. Anthony recalled that the evacuees did not panic. Fifteen minutes later, an ambulance arrived for Schriever and the fire department sent an intensive care unit to inspect the situation.[73]

Five ambulances, three intensive care units, and the police and fire departments arrived, and Operation Disaster began. Outfitted in gas masks, firefighters entered the Landmark, evacuating hundreds of unconscious and semiconscious guests and employees, and providing oxygen bottles to those sickened by the fumes. Most evacuees sat on the resort's front steps and lawn, gasping for air, crying, and vomiting. Paramedics loaded the critically injured onto stretchers or wheelchairs, and transported them to local hospitals. Since so many patients had been sleeping, some were unconscious and incapacitated, and the hospitals admitted them as John Doe or Jane Doe. A spokesman for Sunrise Hospital reported that many patients had delayed responses to the exposure. One person went to another resort after evacuating and reported symptoms hours later. In the end, there were few serious complications. According to Southern Nevada Memorial Hospital's toxicology reports, 106 patients were treated with carbon dioxide levels varying from 10 to 20 percent. Most were middle-aged and elderly individuals who had been attending the Disabled American Veterans convention. The event produced one fatality. Frank Gulla, an attendee of the convention, had a history of heart disease but no signs of recent activity. The county medical examiner determined that his cause of death was carbon monoxide poisoning.[74]

Indoor air pollution also tested entertainers' ability to perform on a daily basis. The poor air quality, coupled with the dry, desert climate, heavy air conditioning, and strenuous show schedules were especially troublesome for singers. Many developed laryngitis, a disorder that became known as Vegas throat. During or following a performance, their larynxes became inflamed, rendering them unable to talk or sing. The condition garnered considerable media attention during the 1970s. Headliners such as Dionne Warwick and Neil Sedaka complained about the risk. The only way Warwick could sing in Las Vegas was to speak as little as possible. Sedaka reportedly turned off his room's air conditioning unit and set up humidifiers. However, not all singers were afflicted. Wayne Newton called Vegas throat absurd, citing that he worked fourteen days straight and never developed it. He contended that most entertainers did not take care of themselves. They partied, drank heavily, did not get enough rest, and were not used to playing two shows a night, seven days a week. Bad behavior therefore strained their vocal cords, not the desert. Still, the resorts recognized that Vegas throat was a problem, and hired otolaryngologists to manage disorders of the ear, nose, and throat. Singers received treatment before their performances, at intermission, and after the show. During construction of the Colosseum in the early 2000s, Caesars Palace installed special technology, including a $2 million humidifier, to protect Celine Dion's voice.[75]

All entertaining jobs on the Strip involved an element of risk. Each show involved complex production with numerous moving parts. Musicians and dancers entertained large venues, lounges, and bars, and the stage crew unloaded and dismantled sets, and worked on elevated platforms, scaffold structures, ladders, and underground in the stage pit. Objects regularly fell from the elaborate sets, and ventilation issues were a common problem. Concert devices—lasers, pyrotechnics, fog and smoke machines—could also malfunction. Major productions required complex stunts and choreography on uneven platforms and stairs, aerial aerobatics requiring suspension on wires, swings launching performers into the air and water, and the use of roller blades, stilts, and cycles in confined spaces. The bigger the performance was, the more risk was involved. In 2012 alone, fifty-three performers in the Strip's Cirque du Soleil shows sustained injuries, causing 918 missed workdays. During thirty years in the business, Cirque never experienced an onstage fatality until June 29, 2013, when, during the final scene of *KÁ* at the MGM Grand, veteran acrobatic performer Sarah Guyard-Guillot plummeted ninety-three feet to her death. It was the second time that a Cirque show had been halted due to safety concerns that week. During a preview performance of *Michael Jackson One*, an aerialist slipped through a slack rope and suffered a mild concussion. Cirque was a reputable, safety-conscious company, and served as a reminder that Strip entertainment involved inherent hazards, even in productions considered safe.[76]

The Route 91 Harvest music festival shooting on October 1, 2017, one of the deadliest mass shootings in modern American history to date, was a grave reminder of the risk of violence on the Strip. In 2016 Strip violence and injuries by people and animals increased 23 percent to be the second-most common fatal event in the American workplace.[77] Animal acts have been a longtime staple of entertainment on the Strip. The Stardust's long-running *Lido de Paris* paraded elephants on stage. During the 1970s, the Ruppert Bears appeared in Frederic

Apcar's *Casino de Paris* at the Dunes; two-hundred-pound Scandinavian brown bears drove cars, rode bicycles, and walked on a tightrope. Between shows, a bear named Susie "played" the slots, baccarat, and craps on the casino floor alongside guests. Her trainer helped count her winnings.[78] During the 1980s, the Tropicana and Flamingo built a bird atrium outdoors and by 1989 the Mirage had put lions, dolphins, and other exotic animals on full display to complement their headliners Siegfried Fischbacher and Roy Horn. During the mid-1990s, the MGM Grand put a lion habitat inside its casino; later, the Mandalay Bay constructed an impressive shark reef exhibit with fish and reptiles.

Elephants, bears, tigers, and sharks attracted business, but they were still wild animals. Any disturbance could provoke an attack. Besides flesh wounds, an animal bite or scratch could spread disease, increasing the risk of infections and infestations. The highest profile animal attack on the Strip involved a white Bengal tiger. For more than thirteen years, Fischbacher and Horn headlined at the Mirage. Their show *Siegfried and Roy* blended magical illusions with exotic animals, attracting international attention and acclaim. It was so popular that the duo signed a lifetime contract in 2001. Fischbacher worked as a traditional illusionist and Horn, a fearless animal trainer, handled the tigers. During a 7:30 P.M. show on October 3, 2013, a six-hundred-pound tiger named Montecore grabbed Horn's neck and dragged him backstage in front of a live audience. Horrified onlookers recalled him looking like a rag doll in the tiger's mouth and could hear his screams from behind the curtains. After the incident, Horn suffered substantial blood loss, had a massive stroke, and was partially paralyzed. At the UMC trauma center, doctors performed a decompressive craniotomy, removing part of his skull to relieve brain swelling, and transferred him to UCLA Medical Center in Los Angeles for long-term recovery and rehabilitation. The situation could have been much worse if the tiger had punctured a major artery. The incident demonstrated the risk of working with wild animals and the need for improved safety measures to protect audience members. No barriers existed between the tigers and guests, which could have provoked the attack. Steve Wynn believed the tiger became distracted by a woman with a large hairdo sitting in the front row. When she tried to touch the tiger, Horn jumped between them. Both Wynn and Fischbacher claimed that the tiger was trying to protect Horn, not kill him, dragging him offstage to safety like a cub. A year later, Horn claimed that the tiger sensed that he was suffering a stroke onstage. "I started feeling kind of weak... [and] Montecore saw that I was falling down. So he actually took me and brought me to the other exit where everybody could get me and help me." Audience members told a different story. Several remembered Horn hitting the tiger on the nose with a microphone to get his attention. The tiger got upset and dragged his trainer offstage like prey. Regardless of the tiger's motives, one thing was for sure: tigers were wild animals, even if they were well trained.[79]

Although working with animals involved risk, human beings were far more dangerous to employee and guest safety. According to the DOL, violence and other injuries by persons caused the most fatalities in the service industry. In fact, hospitality reported higher rates of violence than protective service occupations. Two types of violence occurred on the Strip: violence directed toward a specific person, or unintentional, implicit violence. Disgruntled employees, frustrated with coworkers, working conditions, or lack of upward mobility, were more likely to engage in threatening or violent behavior. Violence between coworkers was common, prompting the resorts such as Harrah's Entertainment to post rules forbidding "fighting or the use of physical force against another person."[80]

Casino heists were also a violent threat. When mob associates ran the Strip, robberies were rare. After corporations assumed ownership, takeover-style robberies increased substantially. During the 1990s robbers were said to be more daring, and people more violent. Armed men approached the cashier cage, demanding cash payments. Some robberies involved minimal violence, with robbers collecting the money and retreating. Others involved bodily harm or ended in dramatic shootouts. From 1998 to 2000, a series of heists occurred at the Treasure Island, Bellagio, New York–New York, Mandalay Bay, Desert Inn, and MGM Grand. On October 30, 2000, a gunman at the Treasure Island jumped over a casino cage at 12:30 A.M., pistol-whipped the cashier, collected the money, and fired shots at security guards as he fled. After the incident, the Treasure Island installed bars to prevent entrance. A month later, a surprised robber saw the bars and fired shots into the cage. Frustrated, he shot a security guard in the back and left. Luckily, the victim survived.[81]

In some ways, violence became synonymous with the Strip's social environment. The site sold sin and excess, encouraging guests to gamble, drink, and dine. In 2003 the Las Vegas Convention Authority (LCVA) rebranded Las Vegas as more than a gambling destination, promoting adult freedom and liberation. The city promised, "What happens here, stays here." Patrons could party all day and night, engaging in sex and fantasy with little consequences. Even before the rebranding, the Strip had the potential to breed violence, fueled by intoxication, fatigue, loss of funds, aggression, sexual frustration, and other issues. Parking lot and hotel room muggings were common. Everyone was susceptible to unruly guests, even headliners. On February 18, 1973, four drunk men tried to jump onstage during Elvis Presley's midnight show at the Las Vegas Hilton. Bodyguards and hotel security immediately intercepted three of them, but one made it through. When Presley offered to shake the man's hand, he lunged at the singer. Presley dropkicked him and sent the man flying offstage, breaking a table. One witness said Presley was "so upset that it took all of his guys to hold him back once the fight got started." After the incident, he apologized to the audience: "All I can say to any of you is, if you want to shake my hand, fine. If you want to fight, I'll whup your ass." All four men were arrested on drunk charges, but later filed a $4 million suit against Presley and the Las Vegas Hilton charging battery. Other lawsuits followed; an audience member had suffered an eye injury while one of the men tried to climb onstage. Her suit alleged that the resort "negligently failed [to protect her] from riotous guests." The Las Vegas Hilton settled out of court.[82]

Las Vegas Boulevard, the main road connecting the Strip, harbored additional threats. Thousands of vulnerable, distracted, and intoxicated tourists walked the street daily, watching street performers and the city lights, and documenting their experiences on social media, oblivious to oncoming traffic and endless threats around them. Las Vegas Boulevard and surrounding streets have always been prone to violence, but the violent crime rate increased during the megaresort era. Prior to the Route 91 shooting, the most infamous acts of violence involved rapper Tupac Shakur in 1996: Shakur was at the Strip for the Mike Tyson versus Bruce Seldon boxing match at the MGM Grand. After the fight, he had an altercation with a man near the resort's lobby and headed to a nearby club in a BMW. While stopped at a red light at Flamingo Boulevard and Koval Lane, a shooter in a light-colored Cadillac fired twelve to thirteen rounds from a high-powered, semiautomatic handgun at his car. Four bullets struck Shakur in the pelvis, right hand, thigh, and lung. He died six days later. At a red light at Las Vegas and Flamingo Boulevards in 2013, Ammar Harris fired at least five rounds from his Range Rover at Kenneth Cherry Jr.'s neighboring Maserati. Cherry's car then crashed into a taxicab and exploded, killing driver Michael Boldon and his passenger, Sandra Sutton-Wasmund. In 2015 Lakeisha Holloway intentionally drove her vehicle into a crowd of pedestrians standing in front of Planet Hollywood north of Harmon Avenue. With her three-year-old child in the backseat, she plowed down the sidewalk until reaching Bally's, killing one person and injuring thirty-five.[83]

The 1 October tragedy underscored the problems existing between hospitality and security.[84] Hotel security guards faced a unique challenge: providing guests with both privacy *and* protection. In Las Vegas, people famously indulged in their personal freedoms. The experience would change if guards checked and scrutinized the contents of luggage and rooms. Hotel security standards also did not exist. There were no requirements regarding the number of guards employed and arming them, bomb-sniffing dogs, and cameras in non-gaming areas. The Mandalay Bay had a respectable security record, and the organizers of Route 91 hired federally certified, contractor-provided security. However, the existing system did not deter a deranged man from bringing twenty-three rifles into his Mandalay Bay suite, installing a recording device in the hall, securing the thirty-second floor stairwell door with a silver metal "L" bracket to delay police, and firing over a thousand rounds at the festival across the street. The horrifying situation posed many problems for southern Nevada law enforcement: an active shooter in a position of advantage, poor radio reception that hindered communication, false reports of secondary shooters, and chaos as twenty-two thousand people fled for their lives.[85]

After 1 October the Las Vegas Metropolitan Police Department evaluated the strengths and areas for improvement during the response. Sherriff Joe Lombardo listed ninety-three recommendations for future incidents, including active-shooter awareness education, monthly meetings with hotel management, and attaining complete radio reception inside Las Vegas buildings by 2020. Clark County and the resorts responded by adding security measures on the Strip. The county installed thousands of bollards, four-foot-tall concrete posts that connected underground, along Las Vegas Boulevard. The bollards were "strong enough to stop a flatbed truck traveling 55 mph," according to county officials. Wynn Resorts began checking bags with handheld metal detectors, but quickly abandoned the policy. Caesars Entertainment increased its armed security guards. Las Vegas Sands Corporation added K-9 explosive detection teams to their patrol at the Venation and Palazzo. MGM, owner of the Mandalay Bay, hired tactical-style emergency response team officers (ERTOS) that provided "highly visual and covert armed security." ERTOS responded to violent threats through "early detection and/or disruption of criminal conduct." Several resorts also replaced the "Do Not Disturb" sign with "Room Occupied," and upheld the right to enter a room after twenty-four hours of continued display. Lastly, the LCVA initially suspended the advertising slogan "What happens here, stays here" after 1 October, and featured the hashtag #VegasStrong. In 2020 the executive team adopted a new slogan: "What happens here, only happens here." The new campaign affirmed Las Vegas's role as the top source of adult freedom in the world, but abandoned the provocative concept of encouraging visitors to exhibit bad behavior. Two years after the shooting, MGM reached an $800 million settlement that did not admit liability, providing 1 October victims with swift compensation. Survivor Paige Gasper hoped the settlement sent "a message to large companies like MGM to protect people and prevent horrific events" from happening again.[86]

The group effort involving 1 October and its aftermath illustrated the often-complicated occupational health regime that existed on the

Strip. Until the late 1960s, the resorts did not emphasize health and safety, and only adopted basic industry standards. In comparison to other industries, hospitality appeared relatively safe, and the resorts were brand new. Management instituted safety guidelines outlining proper lifting and avoiding slips, trips, and falls, but provided little other instruction. Like the Boulder Canyon Project and BMI before it, the resorts also followed state mandate and supplied their employees with workers' compensation through the NIC. Eventually, high numbers of NIC claims and frequent labor turnover forced management to reevaluate their health and safety policy. The El Rancho moved disabled employees to new, safer positions, and distributed a booklet outlining workplace safety. The resort instructed their painters affected by lead poisoning or in advanced years to not stand on high scaffoldings due to the potential of dizzy spells. They also moved disabled employees to positions related to painting but without the hazards, such as wall washing or furniture polishing. The policies solved some of their compensation claims. The thinking was that longtime employees would have greater loyalty to the resort, limiting the number of hospitalizations and benefit payments. Management also offered new health and life insurance policies, as well as union benefits. For example, the American Guild of Variety Artists (AGVA), an entertainment union representing the showrooms and cabarets, provided welfare benefits to participating members. Its employment contract mandated a contribution from all the resorts, with the employees' duration of engagement days determining the amount.[87]

Corporate management streamlined health awareness and safety protocols. Although no department was completely devoted to safety, the new management hired inspectors to investigate conditions, outlined safety policies in the employee manual, and provided pamphlets and flyers that stressed accident prevention. They also established emergency procedures in the event of a fire, bomb threat, or civil disturbance. Howard Hughes's Summa Corporation told its Landmark employees that it was good business to prevent accidents, and safety was more important than expediency and taking shortcuts. Management instructed employees to report accidents to their department heads and security department, and file claims immediately with workers' compensation. The Summa Corporation strove to achieve a zero-accident workplace. Management at the Stardust applied a preventive approach to health and safety, instructing its employees to report hazards directly to their supervisors, regardless of how small. It offered safety classes as well, covering essentials such as heavy lifting. The Sands hosted a fire prevention class in its parking lot. Employee graduates received a certificate of completion.[88]

The Strip did not emphasize safety programs until the 1970s, but the resorts always supplied employees with medical care. Like industrial employment, management recognized that healthy employees ensured profitably, costing less than compensation payments. Management contracted to third-party health insurance carriers, or employees received union benefits. However, Las Vegas still needed more hospitals and medical talent. As in previous decades, the medical infrastructure struggled to accommodate the growing population. The Las Vegas Hospital operated throughout the postwar period, but failed to expand without the direction of Dr. Roy Martin. After the development of the Strip, hundreds of employees moved to Las Vegas, and the resorts needed to augment local medicine to treat them all. At first, its workforce sought care at Southern Nevada Memorial Hospital, later renamed UMC. The nonprofit county hospital evolved significantly during the postwar period, thanks to federal funding during World War II and the Hill-Burton Act.[89] Hill-Burton loaned federal funds to improve America's hospital system to achieve a minimum of 4.5 beds for each one thousand people. The understaffed and overcrowded county hospital was a perfect candidate, desperately needing modernization. Hill-Burton ultimately invested more than $2 million in Southern Nevada Memorial, which eased the crisis somewhat. In the 1960s the hospital innovated trauma care, opening an innovative burn treatment unit. During that decade there were twenty-four burn units in the nation and the one in Las Vegas was the only one in a ten-thousand-square-mile radius, serving parts of Arizona, California, and Utah. Founding Drs. John Batdorf and Kirk V. Cammack Jr. hosted visiting doctors from UCLA and other top-tier hospitals who wanted to pattern their programs after it. Southern Nevada Memorial also expanded to accommodate 285 beds, an intensive care unit, and emergency and cardiac care equipment. It also finally had the capacity to host sophisticated surgeries, ending the need to transfer its most critical cases to Los Angeles. Thoracic surgeon Dr. Harold Feikes acquired a heart–lung machine as well and performed the first open-heart surgery in Las Vegas. In the 1970s the hospital continued to grow, functioning as a major medical center in the West and teaching institution for physicians, nurses, and ancillary specialties associated with the University of Nevada School of Medicine.[90]

Eventually, the Strip also funded a for-profit, private, more luxurious facility for its employees and guests. As a county hospital, Southern Nevada Memorial required physicians to provide care to indigents. Many doctors resented the arrangement and desired to establish a private practice to expand their profits. The resorts agreed. Not only did they need a more cost-effective way to ensure the health of their employees, but management also wanted to send guests to a luxury facility located near the Strip, and not to a facility serving the poor. Local physicians therefore banded with several businessmen, including developers Merv Adelson and Irwin Molasky, and casino executive Moe Dalitz, to create Sunrise Hospital. The group secured funding from First Western Savings and Loan Association and the Teamsters Union, and purchased a tract of land on Maryland Parkway. The location was carefully chosen; it was in close proximity to the Strip as well as to the Las Vegas Country Club, which could provide upscale housing and golfing to resident physicians. Since the Teamsters funded its initial construction and continued expansion, Sunrise became referred to by locals as the Teamsters Hospital. Opening in 1958, the hospital epitomized Strip luxury. It had sixty beds, a picturesque rose garden, water fountain, and mosaic tile finishes. To recruit medical talent, the hospital took another page from the Strip, offering significant perks to recruit top physicians from all over the nation. Besides considerable medical recourses, it offered free office space and cars, and the promise of getting rich. The promotion worked. Sunrise easily recruited young doctors from all over the nation, including Kirk V. Cammack Jr., who had just completed his surgical residency in

Flint, Michigan. He became the second board-certified surgeon in the state of Nevada. Within a year, the hospital staffed fifty-eight physicians and surgeons.[91]

Sunrise was an immediate success, thanks to the Teamsters' funding as well as thousands of employees obliged to use the facilities. At first it functioned like a company hospital for the Strip. Jimmy Hoffa, the union's general president from 1958 to 1971, mandated that the International Brotherhood of Teamsters and Culinary Union Local 226's medical funds paid for medical treatment only at Sunrise. Like most employee-funding health-care systems, the cost was deducted each month from the workers' paychecks. Besides caring for employees, the hospital had additional benefits. Sunrise allegedly helped the resorts in casino-skimming operations and complementary medical services.[92]

Until the late 1960s, doctors regularly performed surgeries for the various crime syndicates in exchange for discretion and under-the-table cash. The practice was less frequent after the corporatization of hospitals. Kirk V. Cammack Jr. performed numerous comp surgeries at Sunrise, calling Las Vegas the "last Wild West of medicine." He once mended a gunshot wound to the abdomen for Perry "Golddollar" Rose, the 6-foot 6-inch bodyguard of Texas gambler Lester Ben "Benny" Binion. At a follow-up appointment, Rose overheard a family threatening Cammack with a malpractice suit over the death of their drug-addicted daughter. They dropped the suit several days later, asking him to tell "Mr. Perry Rose." When Cammack asked him about it, Rose said, "Doc, I don't know what you're talking about." Cammack called it "a malpractice suit avoided by Frontier Desert Justice, Texas Style."[93] The story is a telling example of Las Vegas medicine until the 1980s. There were seemingly no rules, and the profitability margin was huge. But the lifestyle also took a toll on the doctors' personal lives. Sin City changed them. Dr. Leonard Kreisler referred to it as becoming "Vegasized."[94]

Many doctors were family men, well trained in their specialties. But the Las Vegas lifestyle—money, sex, and glamour—consumed them. Cammack divorced his first wife after establishing his practice and went on to marry four more times. When Dr. Elias Ghanem, a thirty-three-year-old Palestinian immigrant and doctor at the Los Angeles County Hospital, arrived in 1971, he made $3,600 a month directing the emergency room at Sunrise. Within five years, he was earning $300,000 a year in private practice, got divorced, drove a $32,000 Stutz Bearcat gifted to him by Elvis Presley, wore expensive jewelry, and had a mirrored canopy over his bed. "Fast cars and beautiful women are my hobbies," he reportedly told *People* magazine in 1976.[95]

The Teamsters ultimately helped Sunrise become the largest proprietary hospital west of the Mississippi. The hospital underwent a five-story expansion in 1966, with 325 beds and an intensive care and coronary unit. Following Hoffa's imprisonment in 1967, the era of the Teamsters abruptly ended, and Philadelphia-based American Medicorp (AMC) purchased the hospital in 1969. The acquisition marked a major change in local medicine, ushering in the expansion of corporately owned, for-profit hospitals to address the needs of the growing population. Similar to corporations taking over the Strip, the shift in management also introduced new forms of business administration. Without the Teamsters requiring its members to use the hospital, Sunrise's new management team reconfigured its marketing strategy, embarking on a very aggressive advertising campaign. One program offered a revolving charge courtesy card to entice patients on the weekend, providing a 5.25 percent rebate for Friday and Saturday admittance. Another scheme entered patients into a lottery that gave away a Mediterranean cruise if they scheduled surgeries on Monday but checked in on Saturday. Since managed care did not exist yet, there was very little oversight. Dr. Otto Ravenholt described Sunrise during the 1970s as, "[It was] like getting customers into your casino who had a credit card that you could charge everything to—and they did!" The programs were nevertheless controversial, garnering national attention for attracting patients. Eventually, advertising became a staple in American medicine, increasing in popularity during the 1980s and 1990s.[96]

Besides Sunrise, in-house and on-call physicians supported the occupational health regime, treating employees and guests on site. The concept of establishing in-house medical treatment on the Strip gained popularity during the 1960s, and became a staple during corporatization. Similar to industrial workplaces, the resorts hired company doctors trained in internal medicine as permanent members of the staff. The doctors maintained on-site offices, providing immediate medical treatment to workers and guests during daytime hours. A full-time, medical professional on-site benefited the resorts twofold. The doctors could monitor and treat employee injuries immediately, ensuring a healthy workforce. As an added luxury, they also provided premier and immediate care to entertainers and guests. Dr. Thomas Newman, the Las Vegas Hilton company doctor, earned the nickname "Flash" because he seemingly appeared instantly to supply headliners with drugs. Dr. Joseph L. Fink, the Caesars Palace company doctor, treated employees and guests in a medical suite built exclusively for him. When Fink, an internist and diagnostician, noticed that most of his house calls were on the Strip, he moved his entire practice onto its property in 1972. He practiced there for more than three decades.[97]

The resorts retained on-call doctors as well, a service reserved for guests and entertainers. On call at nine resorts, Elias Ghanem famously treated headliners Elvis Presley, Robert Goulet, Liberace, Tom Jones, and Johnny Cash. When asked about his practice on the Strip, he said, "A lot of people come here and they gamble two or three days straight. They want something to make them sleep. They have heart attacks, sometimes while they are at a show. And there is hysteria. One girl at Elvis' show was so hysterical we had to hold her down. . . . I think it is the personal touch that [the headliners] like [from on-call treatment]. They call at 2 o'clock in the morning and I go."[98]

Besides on-call services, Ghanem augmented the occupational health regime by innovating a preferred provider organization (PPO)–style of medical services, establishing the first of many outpatient clinics, Las Vegas Medical Centers, in 1977. After the opening of the MGM Grand, more employees moved to Las Vegas and, once again, local hospitals could not accommodate the influx of patients. Ghanem provided a solution, opening a clinic behind the Hilton that contracted with the resorts to provide health care to guests and employees. His style of quick, clinic-style care became a staple in Las Vegas medicine, expanding throughout the valley during the 1990s. From 1991 to 1998, Ghanem's clinics offered complimentary medical care to 550 Frontier employees on strike, delivering more than one hundred babies for free. During his fourteen-year tenure with the Nevada Athletic Commission, he also protected the health and safety of the Strip's prize fighters, instituting important safety measures; mandating HIV, Hepatitis B, and Hepatitis C testing; and enhancing protection in the boxing rings. When reports surfaced that Evander Holyfield had a hole in his heart, Ghanem refused to let him fight until further testing. "I have to wear hats because I am on the commission and we generally want fights," he explained, but "I am also a doctor."[99]

With corporations assuming ownership of the resorts and the continued expansion of occupational health regime, the Strip appeared to be a safe, postindustrial workplace. The institution of OSHA and NIOSH also extended protection to all private sector employees, researching and implementing improved methods for health and safety. After the passage of the federal OSH Act, states followed suit. Before 1970, every state had passed an assortment of workers' compensation, and health and safety laws, but most lacked an administrative agency completely devoted to occupational health. Nevada passed its first Nevada OSH Act in 1955, but it was largely ineffective. In 1973 it redrafted its act and became one of twenty-seven states approving a statewide agency, the Nevada OSHA. Operating under the NIC, its federal counterpart OSHA provided up to 50 percent of its operating costs. After becoming operational, Nevada OSHA tried to establish a presence in Nevada industries, outlining a program to eliminate known hazards that could cause serious injury or death. It distributed handbooks on accident prevention, began conducting inspections, and published a pamphlet, "Occupational Safety and Health Standards." On the Strip, it set new requirements for management to hire an employee or department entirely devoted to health and safety, and establish programs based on four components: employee education, self-inspection, accident investigation, and recordkeeping.[100]

The resorts were initially resistant to the suggestions. In comparison to industrial workplaces marred by mechanical and chemical dangers, the newly built Strip seemed like a refuge from occupational diseases and hazards. Moreover, the financial cost of establishing departments devoted to safety seemed excessive and unneeded.

Nevada OSHA eventually rescinded its costlier requests, compromising with the resorts to enhance existing programs, and devoted increased energy to education about the importance of workplace safety.[101]

OSHA and NIOSH concentrated their efforts on curtailing the risk of radiation, chemicals, lead, vinyl chloride, and industrial hazards throughout the 1970s, but tragedies continued across the nation, including the Love Canal neighborhood pollution disaster and partial nuclear meltdown at the Three Mile Island Nuclear Generating Station. A new risk also loomed in the postindustrial realm. Prior to the 1970s, resorts on the Strip resembled beachfront hotels, built low and sprawling. As the structures increased in size, so did the hazards, increasing the rate of construction-related injuries. Taylor Construction Company was the most prominent construction contractor in Las Vegas, building Caesars Palace, the Riviera, the International, and the MGM Grand. The latter two were the largest megaresorts in the world, with 1,512 rooms at the thirty-story International and 2,200 rooms at the twenty-six-story MGM Grand. During construction, construction workers faced similar hazards to past jobs, but on a grander scale. Electrocutions and falls were common, as well as injuries from heavy equipment and inhalation of dust or other toxic particles. Kerkorian also put immense pressure on the crew to finish both resorts in record time. Coupled with inadequate risk perception, accidents increased tenfold.[102]

The size of the megaresort increased construction hazards, but the real threat involved building code deficiencies, a problem horribly evident during the MGM Grand and Las Vegas Hilton (formally the International) fires in 1980 and 1981. Fires regularly occurred on the Strip, but were usually small and quickly contained. The first major fire occurred at the El Rancho on June 16, 1960; a kitchen fire ignited the resort's trademark fifty-foot windmill, engulfing it in flames. After the roof collapsed, the windmill dramatically crashed into the casino. Structural damage closed the resort permanently, but there was only one reported injury, a fireman with a cut hand. The sprawling, low design of the resort helped minimize damages, allowing employees and guests to easily locate exits. Most guests were also sleeping in cottages 150 feet away, and not affected by the smoke and flames. In another incident in the early 1960s, a welder accidently lit the Sahara's rooftop on fire during an air-conditioning install, resulting in $1 million in damages. Similar to the El Rancho, the hotel portion of the resort was not connected to the casino. The *Las Vegas Sun* reported that "life went on as usual at the swimming pool [as] swimmers splashed and floated on their backs while firemen scampered along the roof fighting the flames." Several people were adversely affected by the smoke, including hotel executive Herb McDonald, an employee, and a few firemen, but there were no casualties. Small fires continued to occur throughout the decade. In 1969 a blaze at the Stardust injured seventeen people. One died during the incident from a heart attack. Several years later, a Holiday Inn manager died from smoke inhalation after falling asleep while smoking in a bed at the resort.[103]

Since the resorts were built horizontally, fatalities were few. Vertical construction changed everything. The MGM Grand fire and deadly outcome was directly related to deficiencies overlooked in the new megaresort design. During its construction from 1970 to 1973, Taylor Construction Company followed the Uniform Building Code (UBC) Standard, 1970 edition. But the resort met only minimum code requirements that were intended for much smaller structures. There was also little oversight evaluating its construction, because OSHA was just established and Nevada OSHA did not yet exist. The job rested on Clark County fire marshal Carl Lowe, who inspected the construction site but did not have the authority to enforce safety precautions. Lowe suggested installing a comprehensive sprinkler system throughout the property, but the resort put sprinklers only in the basement, showrooms, and a twenty-sixth-floor high-roller casino converted into meeting rooms. He also recommended following the UBC Standard that all materials be made of fire resistant or noncombustible materials. The resort ignored the suggestion, and installed highly flammable cellulose acoustical ceiling tiles and adhesives throughout the resort. In the early 1970s there was ample evidence that adhesives were a fire-spread substance; the state of Connecticut had already banned their use. In terms of décor, the resort also approved use of carpets and slot machines containing harmful plastics. During the fire, the materials fueled the flames, creating a deadly combination of toxins.

Moreover, the new construction design turned the stairwells and HVAC system into chimneys, spreading smoke throughout the casino and upper floors. The fire system amplifier failed, delaying notification to employees and guests, the exits were unclearly marked, and emergency doors and exit routes locked. The resort had not installed a paging system or automatic smoke detection system, and did not have a fire control room. The gigantic resort also had failed to outline evacuation instructions.[104]

In the early morning of November 21, 1980, an electrical fire in the MGM Grand ignited a pie display case in the Deli restaurant and it smoldered for several hours. An employee discovered the fire and opened the door, after which the flames quickly spread to the ceiling. The flammable ceiling tiles, carpet plastics, wallpaper, PVC piping, and adhesives fed the fire, forming a massive fireball multiplying nineteen feet per second that burst through the front entrance, engulfing valet attendants, guests, and parked cars with flames. As the casino turned into an inferno, oblivious players continued to gamble. Firefighters removed most of them without sustaining significant injuries, but guests sleeping in the tower were not as lucky. The smoke raced up the stairwells and elevator shafts, cultivating lethal conditions from the eighteenth floor up. Faulty smoke dampers also circulated the fumes throughout the HVAC system, accelerating the toxicity. No alarm sounded, leaving the guests completely unaware of the advancing fire. A National Fire Protection Association study later revealed guests did not exhibit panic behavior, and rationally attempted to save their lives. After smelling the smoke, most guests banded together, knocking on doors, offering refuge, putting towels around the doors, and opening balcony doors or breaking windows to disseminate the smoke. Several groups attempted to escape, one of the most tragic stories of the MGM Grand Fire. Reminiscent of the 1911 Triangle Shirtwaist Company fire in New York, the doors locked behind them after they entered the stairways. Trapped, the majority succumbed to carbon monoxide poisoning. Others fought the conditions and reached the roof. The most fatalities occurred on the twentieth and twenty-third floors, with fourteen deaths each.[105]

At 8:00 A.M., Dr. Otto Ravenholt, director of the Clark County Emergency Medical Services (EMS) system and coroner, heard the Strip had an all-alarm fire. He arrived to a shocking and "chaotic sight. . . . One didn't need details to know that this was a major disaster in progress. . . . Dark plumes of smoke" rose from the resort as firefighters and victims scrambled around equipment pieces. Since five thousand guests and employees occupied the resort, Clark County firefighters enlisted the help of Nellis Air Force Base helicopters to contain the blaze and rescue victims. Dr. Kirk V. Cammack Jr. recalled that "the helicopter did help some of the critically ill persons who were on the roof get treatment." However, the hospitals were "heavily loaded with surgeons and we didn't need surgeons in this situation" because it was a medical disaster. Only three people needed surgical treatment. Two-thirds had been evacuated when Ravenholt arrived. Most guests wore pajamas and no shoes. All of them were in a state of shock.[106]

At 9:00 A.M. Ravenholt entered the resort to help the evacuation effort. The first thing that surprised him was that supposedly noncombustible materials fueled the fire. He remembered seeing sculptures not considered flammable burning because the temperatures were so high. According to Ravenholt, the rescue mission was physically demanding. The twenty-six-story resort had no working elevators and rescuers climbed the stairs looking for survivors. Worried about the media coverage, Ravenholt instructed firefighters to move the deceased to a side room instead of to the front of the hotel. Physically moving the dead also competed with saving victims that were still alive. Ravenholt described the evacuation process as a "very dramatic business." Firemen extended ladders to rescue victims on the first ten floors, and helicopters evacuated floors 11 to 26. Employees and guests leaned "out of the windows with black soot coming from their nostrils or towels over their faces" while the firefighters tied ropes around them and pulled them to safety. The rescuers evacuated more than seven hundred people. Still, there were many casualties. Ravenholt found a bell captain looking out an open window in a tipped back chair. He was "sitting on the chair with his toes sticking up, dead," which "was the case with ten to twenty people." They died "completely unsuspecting in their rooms" or while waiting for the emergency to pass. Even survivors were "essentially walking wounded"; while not brought out on stretchers, they were exposed to high levels of poisonous gas and lacked oxygen.[107]

Ravenholt eventually retreated for the temporary fire department headquarters at the Barbary Coast, tasked with the job of determining the number of deceased. The figure started at twenty. At 10:30 A.M., he raised it to seventy. The number was difficult to determine. Ravenholt explained: "Only the bodies in the casino had been burned. A half dozen were severely charred, having been near the registration area when the fire swept across the top of the casino. There had [also] been several earlier Air Force helicopter transports of bodies from the roof to the morgue." Ravenholt initially determined eighty-three people died. Two days later, a female employee was found in a service elevator on the twenty-sixth floor. An eighty-fifth victim died several weeks later. Fatalities in the tower were attributed to asphyxiation secondary to carbon monoxide poisoning, with levels ranging from 25 to 66 percent saturation. The rest succumbed to smoke, burns, and myocarditis.[108] "One woman," Cammack recalled, "who was very overweight, tried to climb down a construction rope and fell to her death." More than six hundred people suffered major fire-related injuries, most of them due to smoke inhalation.[109]

The fire was devastating for the Strip, calling into question major concerns about the safety of the megaresort design. Governor Robert List appointed a panel chaired by Kenny Guinn and Thalia Dondero to recommend reforms to prevent it from happening again. But the effort stalled; at the urging of several state senators and resort management, the panel recommended against installing and retrofitting the hotels with room sprinklers due to cost concerns. It took another tragedy, the Las Vegas Hilton fire, to force change. After the MGM Grand fire, tensions ran high on the Strip. Two arson attempts occurred at the Royal American and Dunes. In both cases, an arsonist ignited drapes and bedspreads, but employees were able to extinguish the flames. On February 10, 1981, Philip Bruce Cline, a busboy at the Las Vegas Hilton, claimed he dropped a cigarette while engaging in sex. It torched nearby drapes, burst out the window, and dramatically climbed up the side of the thirty-story resort. Small fires also started in a storage room and service elevator on the second and third floors, and somebody stuffed a hose with combustible material on the ninth floor. The smaller fires discredited Cline's story, clearly pointing to arson. Like MGM Grand, the Las Vegas Hilton had no sprinklers, smoke detectors, or public warning systems. It had a manual pull alarm, but it malfunctioned. Unlike the previous fire, mass panic ensued. Many guests broke their windows, scaling the tower on ropes of sheets, or rushed stairwells to escape the suffocating smoke. There were 242 reported injuries. Eight people died. One person jumped or fell to his death onto the tennis courts, and the others succumbed to smoke inhalation.[110]

During the months following the fires, there was panic on the Strip. Another arson attempt occurred at Caesars Palace, but employees confined the flames to one hotel room. During Cline's trial, copycat arsonists set dozens of small fires to buildings on and adjacent to the Strip. In one weekend, the fire department reported sixteen separate fires at two resorts and an apartment building. Acts of violence also threatened other postindustrial sites, including the bombing at Harvey's Wagon Wheel at Lake Tahoe in August 1980. The event put the resorts on high alert after receiving several threats. In 1984 management refused to expand employee health insurance coverage, prompting a violent strike involving seventeen thousand workers. "It was an interesting time, but a difficult one," remembered Senator Richard Bryan. "It was protracted, and it was ugly. Las Vegas received a lot of negative publicity." On April 12, 1984, an explosive detonated in the MGM Grand swimming pool, causing minor damage and no injuries. When police investigated bomb threats at the other resorts, they discovered a small bomb between two slot machines at the Tropicana.[111]

As the resorts increased security, the occupational health regimes united to make the Strip safe again. The MGM Grand and Las Vegas Hilton fires revealed that the new megaresort design required a massive reevaluation of safety protocol. The UBC Standard, used at both resorts, contained codes dating back to the 1940s. Most importantly, it did not deal with the dangers of high-rise buildings. The megaresort was a different kind of postindustrial space, with high-rise towers, shopping malls, atriums, and the widespread use of harmful plastic materials. Moreover, the MGM Grand and Las Vegas Hilton were not the only resorts needing fire protection; the entire Strip was at risk. A Clark County manager report named eleven resorts that lacked comprehensive sprinkler systems. Five months after the MGM Grand fire, the Nevada state legislature passed the strictest fire protection standards in the nation, mandating comprehensive sprinkler systems in buildings more than fifty-five feet high. Even before the new standards, the MGM Grand voluntarily installed a $5 million fire and safety system. Although it had been a "long trying time," President Bernard Rothkopf promised employees that their workplace would bounce back as the "most luxurious" and "one of the safest hotels in the world." It marked the first-time management emphasized safety to their employees, rhetoric that became a key feature of employment on the Strip thereafter.[112]

The MGM Grand and Las Vegas Hilton fires also inspired an unprecedented industry-wide response to raise fire protection standards across the nation. Both resorts were newly built and code compliant, debunking the misconception that fires were only a concern in old buildings and postindustrial workplaces were completely safe. In 1981 the National Fire Protection Association published a detailed overview of the MGM Grand fire, exposing the widespread threat throughout the hospitality industry, and issuing a set of code compliance and safety requirements. Slowly, hotels and motels across the nation began to install or retrofit existing sprinkler systems. In 1980 only one out of nine hotel and motel fires in the United States had sprinkler systems. Detectors existed in one-fourth. In 1997 two-thirds of high-rise buildings had installed sprinkler systems and three-fourths had fire detectors. The new level of protection helped dramatically lower the number of hospitality fires as well as fire-related deaths. After 1983 there have been only two hotel fires in the United States that killed ten people or more. The influence of Nevada's strict fire standards spread globally as well. Hilton and other multinational corporations voluntarily retrofitted sprinklers in their international hotels, and other countries began mandating the use of sprinkler systems in high-rise buildings.[113]

Besides inspiring fire protection standards, the MGM Grand fire had profound legal ramifications, helping further prioritize health and safety in postindustrial spaces, and establishing important legal precedent for mass disaster litigation and retroactive insurance policies. The restitution trial, *In re MGM Grand*, had two thousand plaintiffs and more than one hundred defendants, including the resort and its construction contractors, architects, engineers, and suppliers. The claims consolidated into 1,327 lawsuits against 118 companies. Special Master Michael A. Cherry supervised the scheduling and handling of more than 4 million documents and fourteen hundred depositions, with Judge Louis C. Bechtle of the U.S. District Court for the Eastern District of Pennsylvania presiding. MGM Grand executives knew that their existing $30 million insurance policy would not cover the claims, so they acquired a retroactive insurance policy for an additional $170 million. Backdated to November 1, 1980, this type of supplementary insurance was unprecedented; it involved approximately thirty insurance carriers in four different insurance layers. The companies authorized the deal based on the assumption that it would be a long settlement process. In the meantime, money could be made in other investments. However, Kerkorian had other plans. He wanted to settle the lawsuit quickly, because it was bad for business. In 1983 he took matters into his own hands, directly settling all wrongful deaths, personal injuries, and property damage and business lost claims. The global settlement included most of the defendants, totaling $134 million. The MGM Grand alone settled its claims for $30 million, agreeing on $75 million for the remainder. Not one defendant admitted negligence.[114]

After the settlement, the retroactive insurance carriers refused to reimburse Kerkorian, so he assembled his corporate counsel and hired attorney Bill Shernoff, a specialist in insurance bad faith litigation. Headed by Patricia Glaser, Kerkorian's counsel sought full reimbursement and punitive damages. But with so many insurance companies involved in the case, no courtroom existed in Las Vegas to accommodate them all. Nevada District Court Judge Paul Goldman ordered a novel solution, requiring the companies to hire local counsel and pay $5,000 each, totaling $150,000, to build an eleven-thousand-square-foot courtroom next to the Thomas and Mack basketball arena at the University of Nevada, Las Vegas. Due to the sheer number of lawyers and parties involved, it was to be the largest trial in history. To keep order, Judge Goldman ran a strict courtroom, fining attorneys thousands of dollars for frivolous motions, and for not properly marking and identifying documents. According to Shernoff, "It was [Judge Goldman's] strict handling of the matter that created the climate for settlement." Beginning in the spring of 1985, the case was expected to last eight to ten months, costing approximately $345,000 a day. However, after jury selection the parties approved an $87.5 million out-of-court settlement in less than a month. It was reportedly a festive affair. Shernoff recalled that "the settlement itself was quite an occasion. There was a big signing ceremony, after which [Judge Goldman] brought in a band for a celebration." "Champagne, rock music, and laughter filled the special courtroom," and the judge received a gift, a shirt inscribed in Latin from the lawyers that said, "You can never have too much insurance."[115]

The restitution trial and retroactive insurance suit were both landmark cases in American legal history. *In re MGM Grand* established legal precedent in mass tort litigation, cases in which hundreds of plaintiffs sue multiple defendants for negligence. Michael Cherry, who later became a chief justice for the Nevada Supreme Court, observed that "the things we learned from [MGM Grand] paved the way for how we conduct today's massive consumer trials." Over the following decades, mass tort litigation involving toxic substances, catastrophic events, or faulty pharmaceutical products and medical devices—radioactive fallout, chemical plant pollution or explosions, breast implants, tobacco products, and airplane crashes—were all cited *In re MGM Grand*. The retroactive insurance case was also the first and last of its kind. According to Shernoff, retroactive insurance was bad policy because it made insurers insensitive to quick settlements. Insurance carriers never sold retroactive insurance again. Fortunately for Kerkorian, he also had interruption insurance, which helped him renovate the resort and reopen it in August 1981.[116]

After the MGM Grand and Las Vegas Hilton fires, health and safety emerged as a top priority on the Strip, fostering a dramatically safer postindustrial workplace. There were close calls, but no major disasters. Small fires, originating from electrical malfunctions, kitchen grease, cigarettes, and arson continued in isolated cases. In 1986 a jury convicted Thomas Edward Little Owl of several cases of arson, including one at the Sands. During the 1990s the under-construction Stratosphere caught fire and another Las Vegas Hilton blaze forced the evacuation of six floors and reported $1 million in damages. In 2003 a lit cigarette ignited a laundry chute, with six people treated for smoke inhalation. In 2008 the roof of the Monte Carlo, another Kerkorian-owned hotel, caught fire. As the most significant event on the Strip since the MGM Grand and Las Vegas Hilton fires, it revealed the improvements made in fire safety since 1981. While constructing a bridge on the roof, welders accidently ignited a fire that spread to the architectural façade. Since there were no detectors on the roof, the fire alarm did not sound. When president of the Monte Carlo Anton Nikodemus noticed the fire, he manually triggered the alert system and ordered an evacuation. The resort evacuated five thousand guests and nine-hundred and fifty employees. Security guards and engineers entered more than three thousand rooms to ensure every guest evacuated. The fire itself was brief, burning for only seventy-four minutes thanks to the quick response of the Clark County Fire Department. Following the incident, Fire Chief Steven Smith remarked that the MGM Fire dramatically changed fire protection and protocol on the Strip: "We have the best fire safety in the world in the resort corridor of Las Vegas." The Monte Carlo fire ultimately produced no life-threatening injuries, with only five guests and eight employees treated for smoke inhalation. Still, the hotel remained closed for several weeks due to water damage sustained from the sprinkler system on all thirty-two floors.[117]

Besides improved fire protection, the Strip's occupational health regime continued to adjust and evolve throughout the 1980s in respect to workers' compensation and employee-funded health care options. Beginning in the 1970s, critics scrutinized the effectiveness of the NIC's state-funded workers' compensation. Both employees and employers alike voiced frustration. Employees complained of incompetence regarding the evaluation of injuries, hearing delays, and approval of surgical procedures. Frustrated with skyrocketing costs and bureaucratic hurdles, employers urged the state to allow businesses to purchase three-way coverage: the state fund, self-insurance, or private insurance. In the early 1980s reform measures began to address both parties' grievances.[118] The legislature voted to allow qualified employers to purchase self-insurance, abolishing the NIC and replacing it with the State Industrial Insurance System (SIIS), a public corporation providing workers' compensation, and safety and rehabilitation services. However, the new system had disappointing results, and failed to address core issues. Medical and indemnity benefits costs continued to increase. The average SIIS premiums, per $100 of payroll, rose from $2.47 in 1988 to $3.31 in 1991. In 1999 legislatures authorized the privatization of SIIS, renaming it the Employers Insurance Company of Nevada (EICON), and allowed private companies to enter the market. With privatization, Nevada adopted a two-way workers' compensation model composed of private carriers and self-insured employers, ending the state monopoly of injury compensation that began in 1913. But while the deregulation of the workers' compensation market seemed to stabilize rates and benefits, employees continued to cite problems, including poor communication, frequent changes in claim adjusters and coverage, and delays in reimbursements.[119]

The Strip's employee-funded health insurance also received a major overhaul, reflecting national trends. In the beginning, the resorts purchased fully insured plans for employees, essentially hiring insurance carriers to assume the financial risk. The plans reduced liability but were very expensive. In the 1970s the American health-care system reached a crisis point. With no mechanisms to control prices, medical inflation increased the cost of care, hospital construction, physician salaries, pharmaceuticals, and thus, fully insured plans. President Richard Nixon attempted to fix the problem in 1973, approving the Health Maintenance Organization Act to institutionalize health maintenance organizations (HMOs). The organizations departed from their predecessors, requiring businesses with more than twenty-five employees to offer federally backed, managed care plans. Modeled after the Kaiser Permanente Medical Care Program and similar plans, HMOs established guidelines for doctors and limited the treatment available. In the 1980s costs continued to rise, prompting the Reagan administration to encourage HMOs to engage in private capital sources, and signed the Preferred Provider Healthcare Act in 1985, which eased restrictions for PPOs. PPOs enlisted providers to agree to offer services at a discounted rate and pay a higher percentage of the costs when subscribers used in-network providers. However, unlike HMOs, PPOs also allowed subscribers to seek health care outside the plan at a higher rate.[120]

In the 1980s the Strip felt the financial burden of providing employees with fully insured benefits. Tensions reached a boiling point in 1984 after management refused to negotiate improved health insurance coverage and wages. A subsequent strike turned violent, prompting hundreds of arrests, bomb threats, and assaults. The violence had serious economic repercussion for the resorts, prompting them to reach a compromise several months later. Employees received most of their demands, resulting in an expansion of the Culinary Health Fund, a multi-employer, Taft-Hartley labor management trust fund. Members of Culinary Union Workers Union 226 received coverage for themselves, their spouse, and children, paying nothing out of their paychecks. The union also sponsored a program in which employees could purchase supplemental life, disability, and critical illness insurance.[121]

The Las Vegas medical community was initially resistant to the idea of managed care because it threatened their incomes. But as the number of organizations increased, the doctors became active participants for the guaranteed pay. Dr. Elias Ghanem in particular suggested a solution for the Strip's health insurance woes, founding his own PPO-style organization, Prime Health. In 1984 Ghanem and his associates proposed to Circus Circus Enterprises to enroll employees in a self-insured plan, a plan in which employers assumed the financial risk. The self-insured market had grown substantially since the Employee Retirement Income Security Act of 1974, reorganizing the plans and exempting them from most state-mandated benefits. Circus Circus management accepted and the program was a success, reportedly saving the resort $1 million in its first year. A year later, the Culinary Union entered a multimillion-dollar contract with Ghanem to provide health care to more than thirty thousand union members and their families. In the 1990s managed care programs like Prime Health steadily increased in popularity, but it was not a permanent solution. The plans initially helped decrease costs, but the cost of health care premiums increased 98 percent from 2000 to 2007. In 2010 President Barack Obama signed into law the Patient Protection and Affordable Care Act (ACA), intending to reduce the number of Americans without health insurance. But rates continued to increase 20 percent in most states; Nevada had an average premium increase of more than 80 percent during the act's first year. The insurance companies blamed the increase on the fact that new customers were more ill than they had expected.[122]

As health-care costs soared, the Strip began integrating employee wellness programs into the occupational health regime to promote healthy living, and thereby decreasing the probability of illnesses or injuries. The employee wellness program at MGM sought to create a culture of health, articulating that Chairman Jim Murren was personally dedicated to a healthy lifestyle for himself, his employees, and their families. Management stressed its commitment ran deeper than typical employers, outlining a Healthy Living Wellness Program that fostered employee emotional and physical well-being through financial incentives. Each property provided Jim's Plate in the employee dining room, healthy options for employees to eat a balanced meal, and developed a mobile app, Healthy Eating Healthy You, on iTunes for employees to cook recipes at home. It also built a wellness center with a fun room of treadmills and computers, and contracted with Life Time Fitness to provide full-scale fitness amenities and health coaching. Employees had access to an on-call nurse that offered medical advice, and assisted in finding a physician and triage. Health professionals also provided free health screenings, such as monograms, dental care, and blood pressure checks, and a confidential Employee Assistance Program covered substance abuse, gambling addiction, grief, and weight and stress management.[123]

Harrah's Entertainment (later Caesars Entertainment) also took a proactive approach to increase employee wellness. Management developed a two-pronged plan, offering employees better health services that also cut costs for the employer. The result was Harrah's

Health and Wellness Center (later Caesars Entertainment Health & Wellness Center), a $2.5 million venture operated by Whole Health Management, Inc. Opening in 2007, the nineteen-thousand-square-foot health center had a fitness complex and medical clinic. Clinical staff diagnosed and treated chronic conditions, provided vaccinations, filled prescriptions, and offered nutrition education, counseling, and physical therapy. Employees also had access to treadmills, weightlifting equipment, and yoga classes. According to Chairman Gary Loveman, the corporation wanted to provide an accessible and affordable health and wellness service directly to employees. Likewise, Boyd Gaming established a wellness program; its Healthy Rewards plan offered financial incentives to employees who lowered their blood pressure and cholesterol, and who lost weight if they had been overweight. Bob Berglund, Boyd's vice president of benefits, said management wanted to facilitate not only a culture of health, but also a culture of healthy behavior. Its main purpose was reducing healthcare costs, but the culture of health had an added benefit. Along with advances in medicine, it helped increase life expectancy. In Nevada life expectancy rose from seventy-one years to almost seventy-nine years from 1980 to 2010. In 2013 the average for Clark County women was eighty-one years and eight months, and for Clark County men, seventy-six years and four months. The only problem was the longer people lived, the more health costs continued to expand.[124]

By the mid-2000s the Strip had successfully altered its regime, reinventing itself in size and amenities, as well as prioritizing health and safety in a postindustrial space. Occupational health in southern Nevada had evolved significantly from early-twentieth-century regimes. Employees no longer risked their lives for a paycheck; most perceived that the danger of working in a hazardous environment outweighed the threat of not working at all. They also held the notion that accidents were not a part of a job, and their employer was obligated to inform and protect them from harm. However, there were also similarities between the regimes that existed throughout the century. After receiving bad publicity and statistical analysis concerning hazards, productivity, and profits, employers began to embrace health and safety during the early twentieth century. Employers and employees realized it was a mutually beneficial cause, combining their interests to respond to the risks. This concept continued in subsequent regimes. Moreover, late-twentieth-century employers repurposed the idea of integrating employee wellness programs to promote healthy living, and thereby decreasing the probability of illnesses or injuries. The programs were reminiscent of Los Angeles and Salt Lake Railroad (LA&SL) models, a mixture of on-site medical care and health screenings, and recreational activities to support healthy bodies and minds. The railroad expected it to help facilitate an efficient workforce, and to reduce workman's compensation and medical costs. The Strip's goals were parallel, employing the same techniques, only expanded.

But similar to the early twentieth century, old problems resurfaced in a neglected part of the regime. The new set of megaresorts rose during the 2000s at the expense of the workers who built them. Twelve fatalities occurred in eighteen months during the construction of the CityCenter, Cosmopolitan, Trump, Fontainebleau, Palazzo, and Echelon, revealing serious gaps in the occupational health regime. The congested, frenzied, twenty-four-hour construction sites led to the deaths, but the contractors were not the only ones that failed workers. For an occupational health regime to function correctly, multiple groups need to reinforce health and safety. Nevada unions did not demand change. A leader of the Ironworkers Union Local 433 told the *Las Vegas Sun* that the contractors performed "in workmanship-like manner," and the deaths were "just the sheer number of man-hours" and the unfortunate results of human error.[125]

The union local also did not attend informal conferences between Nevada OSHA and the contractors to discuss each incident, missing an important opening to better conditions. Moreover, OSHA and Nevada OSHA disappointed the workers, a reflection of both agencies' ongoing struggle to protect every workplace in the United States. Federal and state OSHA plans had only 1,938 inspectors in 2013—873 federal and 1,065 state—to inspect more than 8 million workplaces. With one inspector per 66,776 workers, it would take approximately 131 years to inspect every work site in the United States. When the Strip construction deaths occurred, twenty-five budgeted inspector positions existed in Las Vegas. Five were unfilled. The number of positions also did not increase from 2001 to 2007, even though all occupations increased from 200,000 to 927,000 workers.[126]

Still, the megaresort construction boom kept inspectors busy. Behind Oregon, Nevada OSHA performed the second-most statewide inspections in the nation. From 2006 to 2007, Perini Building Company, a division of one of largest general contractors in the United States, Tutor Perini Corporation, received twenty-five inspections on its largest Strip projects, with the state agency issuing it thirty-eight violations. But in each case, Nevada OSHA reduced or withdrew the fines, a trend occurring throughout the nation. OSHA civil and criminal penalties simply did not deter employer violations. Congress had not increased civil penalties in decades and the Inflation Adjustment Act exempted the OSH Act. Criminal misdemeanors were rarely prosecuted as well.[127]

After Harold Billingsley's death, Nevada OSHA concluded that Perini subcontractor SME Steel Contractors violated several safety laws, and issued three citations totaling $13,500. Later, SME met with the state agency in a private, informal conference with no family members and withdrew the citation. This scenario occurred repeatedly, essentially determining the worker was at fault. OSHA also weakened safety requirements that could have prevented the deaths altogether. After 1971 the federal agency issued compliance directives that taught field officers how to implement the laws. But OSHA's construction standards division started applying broader understandings in the 2000s, instructing employers in new ways to avoid violations. The modified use of directives dramatically changed construction safety protocol. It also could have prevented Billingsley's death. In 2002 OSHA eliminated the requirement to install temporary decking or netting if other safety measures failed. The federal agency determined that workers did not need decking if they wore safety harnesses. Of course, Billingsley's harness was not fastened. After establishing the new directive, the International Association of Ironworkers reported that fatalities tripled among its members, from approximately five to fifteen deaths every year. In 2008 there were eleven fatalities in the first four months alone.[128]

In response to the Strip construction deaths, the Nevada Legislature passed two measures to strengthen workplace safety, requiring educational standards for construction workers and providing support to family members after fatal construction accidents. The state law expected regular and supervisory workers to complete courses in construction safety, and hazard identification and prevention, entitled OSHA-10 and OSHA-30. Attendees needed a completion card to gain employment. In the end, the history of occupational health on the Strip revealed several important lessons. First, the OSH Act had not eliminated the risk of working in the United States, but it certainly bettered conditions, saving approximately 472,000 lives over forty years. Employee deaths, injuries, and illnesses also decreased in a workforce that doubled in size. Still, improvement was needed.[129]

Another important lesson was that workplaces were constantly evolving, and new dangers could emerge. Building dense megaresorts on the Strip significantly changed the nature of construction work. Although environmental and public health laws underwent considerable amendments since the 1960s, the OSH Act remained unchanged for the most part. Megaresort construction created unforeseen complexities that were unimaginable in 1970, necessitating a reevaluation of the act. The Strip construction deaths also demonstrated that even with the lessons learned over the past century, Americans needed to revive their dedication to occupational health.[130]

Notes

1. Barth, George, and Hill, *Environmental Health and Safety*, 6.
2. Markowitz and Rosner, *Deceit and Denial*, 159.
3. Division of Occupational Health, "Protecting the Health of Eighty Million Americans: A National Goal for Occupation Health," Special Report to the Surgeon General of the United States PHS, Washington, DC, 1965 (incl. all quotes); Benjamin W. Mintz, *OSHA: History, Law, and Policy* (Washington, DC: Bureau of National Affairs, 1984); Frederic B. Siskind, "Twenty Years of OSHA Federal Enforcement Data: A Review and Explanation of the Major Trends," DOL/Office of the Assistant Secretary for Policy, Washington, DC (Jan. 1993); Corn, *Response*, 18–23, 42–46. See also HWC, 91st Cong., Box 30, Folder 376, UNLV SC.
4. Barth, George, and Hill, *Environmental Health and Safety*, 6.
5. Markowitz and Rosner, *Deceit and Denial*, 156–57.
6. Barth, George, and Hill, *Environmental Health and Safety*, 6.
7. For example, the word "feasible" has been controversial with regard to workplace noise. Adopted two years after the passage of the act, the standard required

employers to use "feasible administrative or engineering controls" to limit noise. By the early 1980s, OSHA allowed the use of personal protective equipment (PPE), such as ear plugs and ear muffs, if the cost was less than administrative and engineering controls. In 2010 OSHA petitioned to reinterpret the standard, citing that the definition of "feasible" was "capable of being done." This meant that employers had to apply engineering and administrative controls before using PPE. The petition received a considerable amount of backlash and OSHA withdrew it a few months later. The agency cited that it was sensitive to the "possible costs." See OSHA, "Interpretation of OSHA's Provision for Feasible Administrative or Engineering Controls of Occupational Noise," Standard Number 1910 and 1926 (Oct. 19, 2010) (incl. "capable of being done" and "feasible administrative"); OSHA Trade News Release, "U.S. Department of Labor's OSHA withdraws proposed interpretation on occupational noise: Agency examines other approaches to prevent work-related hearing loss," DOL, OSHA, Office of Communications (Jan. 19, 2011) (incl. "possible costs"); Corn, *Response*, 18–21, 43.

8. The OSH Act covered all private sector employees working in manufacturing, construction, longshoring, agriculture, law, medicine, charity, and disaster relief, and religious groups with secular workers. It did not include the self-employed, immediate members of farm families, mine workers, certain transportation workers, and atomic energy employees covered by other federal agencies, and public employees in state and local governments. Markowitz and Rosner, *Deceit and Denial*, 164.

9. David Bell, *The Coming of the Post-Industrial Society: A Venture in Social Forecasting* (New York: Basic Books, 1973). See DOL, *Report on the American Workforce* (Washington, DC: DOL, 2001); Robert J. Samuelson, "Myths of Post-Industrial America," *The Washington Post*, Apr. 7, 2013; Nina Brown, "Postindustrial Workforce," in *Work in America: An Encyclopedia of History, Policy, and Society*, ed. Carl E. Van Horn and Herbert A. Schaffner (Santa Barbara, CA: ABC-CLIO, 2003). For more on the transition to postindustrial society, see Bell, *Coming of the Post-Industrial Society*; Barry Bluestone and Bennett Harrison, *The Deindustrialization of America: Plant Closings, Community Abandonment, and the Dismantling of Basic Industry* (New York: Basic Books, 1982); Katherine S. Newman, *Falling from Grace: Downward Mobility in the Age of Affluence* (Berkeley: University of California Press, 1999); Robert K. Reich, *The Work of Nations: Preparing Ourselves for Twenty-First Century Capitalism* (New York: Alfred A. Knopf, 1991); Jeremy Rifkin, *The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era* (New York: G. P. Putnam's Sons, 1995).

10. See Clayton W. Burrows and Robert H. Bosselman, *Hospitality Management Education* (Binghamton, NY: Haworth Hospitality Press, 1999), 21–28, for further description of the hospitality industry.

11. Gaming had been common among the state's mining camps during the nineteenth century, and in 1868 the state legalized it and provided for its regulation. At the turn of the century, antivice movements gained momentum across the nation, prompting the legislature to pass a bill prohibiting all forms of gambling in 1909. By 1915 public protest prompted the state to add an amendment allowing card games and slot machines. But the law was unevenly enforced, leading to a rise in illegal gambling establishments. By the 1930s unemployment crippled Nevada, and the legislature began entertaining a controversial option to generate revenue. Passing in March 1931, the legalization of gaming allowed the state to capitalize on tax and economic benefits, and promote tourism. See Shannon Bybee, "History, Development, and Legislation of Las Vegas Casino Gambling," in *Legalized Casino Gaming in the United States:*

The Economic and Social Impact, ed. Cathy H. C. Hsu, 3–22 (Binghamton, NY: Haworth Hospitality Press, 1999), for the development of gaming in Nevada. For a history of gambling, see David G. Schwartz, *Roll the Bones: The History of Gambling* (New York: Gotham Books, 2006).

12. The El Rancho was an Old West–themed hotel that offered gaming, a restaurant, a swimming pool, and entertainment. Thanks to wartime business from defense workers, the resort prospered at first. But management issues led to labor turnover, prompting Hull to sell the resort in 1942. Over the following decades, it changed ownership several times and closed for good in 1960. See Moehring, *Resort City*, 45–46.

13. Eventually, the unincorporated township of Paradise split into two. Paradise A was founded in April 1951, followed by Paradise B in January 1952. In 1953 Paradise A became Winchester and Paradise B became Paradise. The resorts on the Strip were in both Winchester and Paradise. By the time of the 2000 census, Paradise was the largest unincorporated community in the United States. See Rothman, *Nevada*, 106–18; Moehring, *Resort City*, 43–45, 47, 49, 50, 55, 65, 108, 112, 116–17, 124; Moehring and Green, *Las Vegas*, 111–12; Bybee, "History, Development," 7–10.

14. For further discussion on American perceptions of the gambling industry and its emergence as the gaming industry, a legitimate form of recreation tourism, see Hal K. Rothman, *Devil's Bargains: Tourism in the Twentieth-Century American West* (Lawrence: University Press of Kansas, 1998), 287–337; Rothman, *Nevada*, 101–24; Hal K. Rothman, *Neon Metropolis: How Las Vegas Started the Twenty-First Century* (New York: Routledge, 2003).

15. The mob era on the Strip is covered extensively by popular literature. See esp. Ed Reid and Ovid Demaris, *The Green Felt Jungle* (New York: Pocket Books, 1964); Sally Denton and Roger Moore, *The Money and the Power: The Making of Las Vegas and Its Hold on America* (New York: Vintage Books, 2001).

16. During the postwar period, the economy boomed because banks and bond issues provided loans to support the nation's growth. But most financial institutions did not fund the vice industry. Only in rare cases did regional banks fund casinos because the stigma was far too great. Consequently, capital was the biggest obstacle that faced creating the Strip.

17. See "Las Vegas Hedges Its Bets," *Business Week* (Aug. 11, 1956), 157–58, for an overview of Las Vegas's economic downturn during the mid-1950s.

18. For the difficult job of regulating gaming in Nevada, see U.S. Senate, Hearings Before the Permanent Subcommittee on Investigations, Gambling and Organized Crime, Part 1 and 2 (Washington, DC: GPO, 1961).

19. See Jack Sheehan, *Quiet Kingmaker: E. Parry Thomas* (Las Vegas: Stephens Press, 2009), for details on the Bank of Las Vegas's (Valley Bank) relationship with Jimmy Hoffa, and the building of the Strip resorts during the 1950s and 1960s.

20. Rothman, *Nevada*, 115–18, 127, 131, 133, 136, 137, 149; Moehring, *Resort City*, 86–87, 117, 119, 243; Steven Brill, *The Teamsters* (New York: Pocket Books, 1978), 213–19; Reid and Demaris, *Green Felt Jungle*, 85–88.

21. See "News of Reality: Las Vegas Sale," *New York Times*, Aug. 15, 1967; "Hughes Sinks Another $55 million in Vegas," *LA Times*, Aug. 27, 1969.

22. Technically, Nevada never prohibited publicly traded companies from owning casinos. From 1955 to 1969 the Gaming Commission performed background investigations of each casino stockholder, a practice that discouraged corporate ownership. However, Kerkorian found a solution to the problem. Unlike a traditional

corporation, he was the sole stockholder of the International Leisure Corporation. As the lone stockholder, he was the only person required to pass the gaming inspection. After the Flamingo flourished under his legitimate management, the Securities and Exchange Commission permitted the sale of 17 percent of his stock to the public. Offered at $5 a share, the stock jumped 600 percent in three days. See "Kerkorian Unit's Stock Jumps 600% in 3 Days," *LA Times*, Feb. 18, 1969.

23. See Rothman, *Nevada*, 125–46; Rothman, *Devil's Bargains*, 287–88 (incl. "the most," 287); John Wilen, "LV Historians Compile Top Gambling Event," *Las Vegas Sun*, June 10, 1999; Moehring, *Resort City*, 118–22. See also "Las Vegas Is Getting a Huge Hotel," *New York Times*, Oct. 27, 1968; "Largest Resort Hotel Under Construction," *LA Times*, Feb. 18, 1968; "Las Vegas Rivalry Escalates," *LA Times*, June 30, 1969.

24. A megaresort is the ultimate manifestation of the hospitality industry. It is a huge hotel that offers rooms, gambling, entertainment, shopping, fine dining, and other amenities on one property. Megaresorts also typically adopt fantastic or mythical themes.

25. U.S. Census Bureau, "Population Change and Distribution, 1990 to 2000," Census 2000 Brief, Issued Apr. 2001, CZKBR/01-2. The U.S. Census Bureau's July 1, 2018, population estimate of Clark County was 2,231,647. See also Brian Haynes, "The Face of Nevada," *Review-Journal*, Feb. 25, 2011.

26. The UNLV Center for Gaming Research also reported that the Las Vegas Strip employed 97,018 people in 2018, distributing an annual payroll of $5,510,123.448. The revenues marked twenty-nine years of "tremendous growth" on the Las Vegas Strip. See David G. Schwartz and Alexis Rajnoor, *Las Vegas Strip Casino Employment: Productivity, Revenues, and Payrolls, a Statistical Study, 1990–2018* (Las Vegas: Center for Gaming Research, University Libraries, UNLV, 2019) (incl. "absolute terms"). See also James P. Kraft, *Vegas at Odds: Labor Conflict in a Leisure Economy, 1960–1985* (Baltimore: Johns Hopkins Press, 2010), 34; *Las Vegas Report, 1965, A Compendium of Statistical Commercial and Social Facets of Las Vegas for Year 1964, Complete Though Dec. 31, 1964* (Las Vegas: Research & Statistical Bureau, Las Vegas Chamber of Commerce, 1965); David G. Schwartz, *Las Vegas Strip Casino Employment: Productivity, Revenues, and Payrolls, A Statistical Study, 1990–2009* (Las Vegas: Center for Gaming Research, University Libraries, UNLV, 2010), 3; Hsu, *Legalized Casino Gaming*, 17.

27. The tipping term "tokes" is short for "tokens of appreciation."

28. Rothman, *Devil's Bargains*, 314–16 (incl. "Last Detroit"); Marshall Allen, "It's a Myth, Now Park It," *Las Vegas Sun*, Aug. 27, 2006.

29. Douglas McGregor, *The Human Side of Enterprise* (New York: McGraw Hill, 1960).

30. Kraft, *Vegas at Odds*, 34–35. For information on the various jobs and departments at the resorts, see documents in UNLV SC, esp. the Department Series, Boxes 21 and 23, and Miscellaneous Series, Box 155; Stardust Collection; Employee Records, Box 27, Folders 3–20, Box 28, Folders 3–17, Box 29, Folder 7, Sands Collection; Series 2, Employees, Box 4, Dunes Collection.

31. The pattern of financing, ownership, and management became institutionalized at the Desert Inn in 1950. Wilbur Clark, part owner of the El Rancho, bought land on the Strip in 1945. Envisioning a luxury resort that rivaled the Flamingo, he ran out of money during construction and turned to a group of Cleveland businessmen. Led by Morris "Moe" Daliz, they invested $1 million in the Desert Inn in return for 74 percent ownership. Clark became the front man of the Desert Inn, a locally respected businessman and owner of the resort. But in reality, he had limited control.

32. Kraft, *Vegas at Odds*, 16–17; Michael Green, "Las Vegas Mob," *Online Nevada Encyclopedia*, May 19, 2011, www.onlinenevada.org/.

33. Kraft, *Vegas at Odds*, 16–17, 29–31 (incl. "involved in," 29).

34. Although the term "human resources management" did not garner widespread use until the 1960s, personnel management had existed since the late nineteenth century. During the 1950s the term designated the expansion of personnel management to include modern psychology. Behaviorists determined that employees could not be regarded as replaceable; they needed job security, self-expression, communication, and recognition. Nurturing an employee's psyche thus would create a more stable and productive workforce. See Rudiger Pieper, *Human Resource Management: An International Comparison* (Berlin: Walter de Gruyter, 1990), 42–43.

35. See Frederick Herzberg, Bernard Mausner, and Barbara Bloch Snyderman, *The Motivation to Work* (New York: John Wiley and Sons, 1959).

36. For the resorts' human resource management programs, see Jill Heintz to All Department Heads, memorandum, Nov. 5, 1991; Definitions of Hiring Standards and Interviewing Manual; Jim Hippler to Distribution, memorandum, Mar. 2, 1992; Jim Hippler to Employees Covered Under The Boyd Group Employee Benefit Plan (PERCS), memorandum, Oct. 5, 1992; all in Box 21, Stardust Collection, UNLV SC. See also Housekeeping Retreat Material, Box 23; Emergency Procedures to All Departments, May 5, 1988; Emergency Recall Roster to All Departments, Mar. 23, 1987; both in Miscellaneous Series, Box 155, Stardust Collection, UNLV SC; Kraft, *Vegas at Odds*, 31 (incl. "Objective and philosophy," "the secret," and "positive personal").

37. See Tom Lutz, *Do Nothing: A History of Loafers, Loungers, Slackers, and Bums in America* (New York: Farrar, Straus and Giroux, 2006), 272–74; U.S. Department of Health, Education, and Welfare, Work in America: Report of a Special Task Force to the U.S. Department of Health, Education, and Welfare (Cambridge, MA: MIT Press, 1973); Daniel Yankelovich and John Immerwahr, "Putting the Work Ethic Back to Work: A Public Agenda Report on Restoring America's Competitive Vitality" (New York: Public Agenda Foundation, 1983).

38. See Alan Balboni, *Beyond the Mafia: Italian Americans and the Development of Las Vegas* (Reno: University of Nevada Press, 2006), for a good source on networking in the casinos.

39. Rothman, *Devil's Bargains*, 314–16.

40. MGM Resorts International, Careers, https://www.mgmresorts.com/en/company/careers.html (retrieved Dec. 12, 2019) (incl. "become one" and "one exciting); "Chapter V: Selection of Employees," *Housekeepers' Guide to Selecting and Training Employees*, 50–55, El Rancho Collection, NSMA (incl. "likely to," 50; "accidents, harming," 50–51).

41. "Chapter V: Selection of Employees" (incl. "wholesome"); Employee Orientation Program (incl. "regardless of position"), Stardust Collection, Box 155, UNLV SC; *General Procedures: All Employees and You and Your Job*, Harrah's Entertainment Collection, UNLV SC.

42. Betty Friedan, *The Feminine Mystique* (New York: W.W. Norton, 1963). See also Joanne L. Goodwin, *Changing the Game: Women and Work in Las Vegas, 1940–1990* (Reno: University of Nevada Press, 2014), for oral histories on the female postwar employment experience in Las Vegas.

43. "Vital Showgirl Statistics Stagger Vegas Showgoers," Box 9, Folder 16, Information for Publicity Releases, Box 9, Folder 8, Dunes Collection, UNLV SC (incl.

"harmonizes with," "imported," and "America"). For sample showgirl contracts, see Folders 2, 4, and 5 in the Virginia James Collection, UNLV SC. See also Goodwin, *Changing the Game*, for oral histories on the female postwar employment experience in Las Vegas.

44. Alexandra Berzon, Chris Kirkham, Elizabeth Bernstein, and Kate O'Keeffe, "Dozens of People Recount Pattern of Sexual Misconduct by Las Vegas Mogul Steve Wynn," *The Wall Street Journal*, Jan. 27, 2018.

45. The 1964 Civil Rights Act prohibited discrimination on the basis of race, sex, and national origin in employment. The Act created the Equal Employment Opportunity Commission and assigned enforcement to the U.S. Justice Department. See Nancy MacLean, *Freedom Is Not Enough: The Opening of the American Workplace* (Cambridge, MA: Harvard University Press, 2006), for a discussion on the changes in the American workplace because of racial and sexual equality.

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103. "Fire Destroys Plush Casino in Las Vegas," *Chicago Daily Tribune*, June 18, 1960; "Million Dollar Fire Belts Hotel Sahara," *Las Vegas Sun*, Aug. 26, 1964 (incl. "life went on"); Mary Manning, "Deadly Casino Fires Helped Rewrite Safety Standards," *Las Vegas Sun*, Jan. 25, 2008.

104. See Leland E. Backus to Alan Case, Sept. 2, 1982; Uniform Building Code (1970 ed.); Universal Mechanical Code (1970 ed.); MGM Fire Litigation Materials, esp. Vol. 1 Deli Furnishings and Restaurant Core; vol. 2 Casino Furnishings; all in MGM Grand Fire Litigation Collection, UNLV SC. See also Ed Koch and Mary Manning, "MGM Fire Altered Safety Standards," *Las Vegas Sun*, Nov. 18, 2000; Jeffery S. Tubbs and Brian J. Meacham, *Egress Design Solutions* (Hoboken, NJ: John Wiley and Sons, 2007), 74; Chris Woodward, "MGM Nixed Improved Sprinkler System in '73," *Las Vegas Sun*, Nov. 23, 1980.

105. For employee, guest, and firefighter accounts of the disaster, see Vol. 1 in the MGM Grand Fire Litigation Collection, esp. the testimonies of Victoria Bernliner-Harris, Linda Allen, Patricia Jo Allsbrook, Alton Anderson, Emmett Barnes, Wayne Bonine, Gordon Carey, James Corbett, Peter Dobbs, Helmut Herbrectsmeir, Louis Miranti, Rex Schnleehagen, and Joseph Charles Westably, UNLV SC. See also Richard Best and David Demers, *Investigation Report on the MGM Grand Hotel Fire* (Quincey, MA: National Fire Protection Association, rev. Jan. 15, 1982).

106. Otto Ravenholt, “Eyewitness to Disaster: The Worst Fire in the City’s History,” in Blachley, *Pestilence* (incl. “chaotic sight”), 105–6; Charles A. Buerk, John W. Batdorf, Kirk V. Cammack, and Otto Ravenholt, “The MGM Grand Hotel Fire: Lessons Learned from a Major Disaster,” *Archives of Surgery*, vol. 117(5), (Chicago, Illinois: May 1982), 641–4 (incl. “the helicopter” and “heavy loaded,” 644).

107. Ravenholt, “Eyewitness to Disaster” (incl. all quotes, 106–7); “Otto Ravenholt,” *The First 100*, 269–70 (incl. “bell captain,” 269); Best, “Investigation Report.”

108. Myocarditis is an inflammation of the heart muscle. It is the principal cause of heart disease and sudden cardiac death and is often caused by infection from a coxsackie virus. Most people recover from viral myocarditis with no ill effects, but a small number develop autoimmune myocarditis. The body’s own immune system attacks the heart muscle, which eventually leads to heart failure. Panic most likely triggered this form of death during the MGM Grand fire.

109. Peggy Leen to Taylor, “Testimony Summary of Dr. Sheldon Green,” Oct. 12, 1982; Alan Case to MGM Grand Litigation Team, “Deposition of Dr. Thorne Butler,” MGM Grand Fire Litigation Collection, UNLV SC; Ravenholt, “Eyewitness to Disaster” (incl. “Only the bodies,” 107); Best, “Investigation Report.” See also MGM Grand Fire File, in HWC, 97th Cong., Box 30, Folder 430, UNLV SC; Buerk, Batdorf, Cammack, and Ravenholt, “The MGM Grand Hotel Fire” (incl. “one woman,” 644).

110. “Around the Nation: Las Vegas Busboy Gets Life in Fatal Fire,” *New York Times*, Feb. 18, 1982; Margot Hornblower, “Eight Die in Blaze: Busboy Arrested in Las Vegas Hotel Arson,” *Washington Post*, Feb. 12, 1981; “Around the Nation: Big Holes in Busboy Story of Las Vegas Fire Reported,” *New York Times*, Feb. 15, 1981.

111. “Ex-Busboy Convicted of Murder and Arson in Las Vegas Hotel Fire,” *New York Times*, Jan. 16, 1982; Kraft, *Vegas at Odds*, 180–85; Jeff Simpson, “Strike Zone,” *Review-Journal*, May 12, 2002 (incl. “It was an interesting”).

112. See Highlights of the Biennium, Office of the Governor, State Fire Marshal Division, in Governor’s Office of Planning Coordination, *Biennial Report of Nevada State Agencies*, 60th Sess. (1980 ed.). See also Bernard J. Rothkopf to MGM Grand Employee, Mar. 24, 1981 (incl. “long trying time,” “most luxurious,” and “one of the”) Howard W. Cannon to the Senate Floor; “Tax Incentives for Hotel Retrofit,” Washington Report from Senator Cannon (Apr. 1981); Cannon Hails MGM Grand Reopening, July 10, 1981, Press Release; The Congressional Record on MGM Grand Hotel, July 21, 1981; Alvin Benedict to Howard W. Cannon, June 29, 1981; Multimillion Dollar Life-Safety System Being Installed at Grand-Las Vegas, MGM Grand Report (Apr. 1981); all in HWC, 97th Cong., Box 30, Folder 430, UNLV SC.

113. Arthur E. Cote, *Organizing for Fire and Rescue Services* (Quincy, MA: National Fire Protection Agency), 26.

114. In re MGM Grand Hotel Fire Litigation, 570 F. Supp. 913 (1983); Koch and Manning, “MGM Grand Fire”; Jane Ann Morrison, “In Depth: MGM Grand Hotel Fire: 25 Years Later,” *Review-Journal*, Nov. 25, 2005; “Getting Insured the Morning After,” *Business Week* (Aug. 17, 1981); Matt W. Holley, “The Fortuity Doctrine: Misapplying the Known Loss Rule to Liability Insurance Policies,” *Texas Tech Law Review*, 41 Tex. Tech L. Rev. 529 (Winter 2009).

115. For documents on the fire litigation, see MGM Grand Fire Litigation Collection, UNLV SC, which outlines testimonies and other materials pertinent to the case, especially American Protection Insurance Company v. MGM Grand Hotel Inc., Nos. CIV-LV-82–26, HEC CIV-LV-82–96, HEC (1983); American Excess Insurance Company v. MGM Grand Hotels Inc., 102 Nev. 601, 729 P.2d 1352 (1986). See also

William M. Shernoff, "The Cases We Remember: MGM Grand 'Retroactive' Insurance Case" (Mar. 1, 2000), shernoff.com/articles (incl. "the settlement"); "MGM Grand to Battle Its Insurers: Case Expected to Last 8 to 10 Months, Cost $342,000 a Day to Try," *LA Times*, Mar. 18, 1985; David Kelley, "Settlement in MGM Grand Hotel Fire," *UPI*, Apr. 1, 1985; "Settlement Reached in Complex MGM Hotel Fire Insurance Case," AP, Mar. 31, 1985.

116. In re MGM Grand Hotel Fire Litigation; Koch and Manning, "MGM Grand Fire Altered" (incl. "the things we learned"); Jane Ann Morrison, "In Depth: MGM Grand Hotel Fire: 25 years Later," *Review-Journal*, Oct. 13, 2012; Holley "Fortuity Doctrine."

117. One-alarm, two-alarm, and three-alarm fires were categories that articulated the level of response by local authorities. The higher the alarm, the more fire stations needed. See Mary Manning, "Deadly Casino Fires Helped Rewrite Safety Standards," *Las Vegas Sun*, Jan. 25, 2008; Mark Whittington, "Unclear When Fire-Damaged Monte Carlo Can Be Reopened," *Las Vegas Sun*, Jan. 25, 2008 (incl. "We have the best"); Tom Gorman, "From the Inside: How They Coped," *Las Vegas Sun*, Jan. 26, 2008.

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122. Morrison, "Ghanem Succumbs"; "Nevada Boxing Official"; "Hundreds Bid Farewell"; Niles, *Basics*, 83–184; Pierce, "Understanding Managed Care," 115; "Insurance Premiums Increase Under New Law," *Review-Journal*, June 28, 2014; Margot-Sanger-Katz, "Is the Affordable Care Act Working?," *New York Times*, Oct. 26, 2014; Robert

Pear, "Health Insurance Companies Seek Big Rate Increases for 2016," *New York Times*, July 3, 2015.

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