

MINING HEALTH AND SAFETY REFORM IN ARIZONA, 1901-1921

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IN JUNE OF 1902 Herbert Hoover, then a mining engineer in China, wrote that "the disregard for human life [here] permits cheap mining by economy in timber, and the aggrieved relatives are simply compensated by the regular payment of \$30 per man lost." Although Hoover was writing about turn-of-the-century China, he could have been talking about the United States of a generation before.²

Fortunately, the situation in the U.S. had begun to change. By 1890 the rudiments of mine safety legislation had appeared in several states, but it was between 1900 and 1910 that a widespread mine health and safety reform movement began. The movement in Arizona, an area dependent on mining for its prosperity, coincided with that national movement.

This paper will examine worker health and safety legislation enacted in Arizona in the period from 1901 to 1921. In one way Arizona's experience was unusual. Because Arizona became a state during the Progressive Era, its citizens had an excellent opportunity to bring contemporary reform ideas into force; these included ideas about worker health and safety.

While it might seem that among the tasks required to establish a state, concerns about workers' health and safety would be a low priority, that was not the case in Arizona for two reasons. One reason was that the movement to codify mine safety regulations was already underway. The second reason was that a coalition of the Democratic Party and the territory's labor organizations was able to create a state constitution containing two articles mandating specific legal and institutional reforms advantageous to labor in general, and the state's miners in particular.

New health and safety reforms were among the laws required by Articles XVIII and XIX of the state constitution. This alone suggests the issue was a serious one to representatives at the constitutional convention.

The actions of those in the new state legislature also suggest that, for the first few years at least, mine safety was one of their priorities as well.

The effectiveness of Arizona's reformers was the result of the fortunate combination of several factors. Statehood required the writing of a constitution and the enactment of laws; reformers would be given a golden opportunity to examine and amend. This would take place in a territory heavily dependent upon the mining and smelting industries, which were already the objects of reform legislation in other states. Because of the size of the labor force in those industries, relative to the population as a whole, the territory also featured a labor faction able, at least at that most opportune moment, to gain enough popular support to exert substantial pressure upon the constitutional and legislative processes.

Passing laws is one thing, producing the results which the laws were enacted to achieve in that era of industrial lawlessness was another. This paper will discuss the enforcement of the new laws as carried out by the state mine inspector. The paper will also compare the health and safety legislation of Arizona in that era with that of several other states. The final object of this paper will be to use the examination of Arizona's health and safety reform campaign to make some observations about where the movement fits into our understanding of industrial relations in the Progressive Era.

Laws regulating mines and mining were nearly as old as Arizona Territory, of course, but they had nothing to do with worker health and safety. Nationally,

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coal mine safety had become an issue in the 1870s. Coal mines often retained gasses or dust which could, and did, cause catastrophic explosions, creating both headlines and demands for safety reforms. In March of 1891 Congress passed a law requiring that the President appoint a mine inspector for each territory which had coal mines with a total annual output of 1000 tons per annum. The mine inspector was charged with enforcing various coal mine safety provisions which were contained in the same act.³

This act did not apply in Arizona Territory, however, since it had no coal mining. Some of the act might be liberally construed to apply to all mines, but without the inspector enforcement would come to nothing. The lack of coal mines in the territory is one reason why Arizona had no provisions for health and safety in its own code prior to the turn-of-the-century.⁴

The movement for health and safety legislation in Arizona Territory began in the first legislature of the new century. A number of bills on health and safety questions were introduced into the Twenty-first Legislative Assembly of the Territory of Arizona (1901), including a mine safety act, and acts to create an office of mine inspection, employers' liability, and limits to the hours of employment in mines, smelters, reduction works, and for hoisting engineers. None of these measures were passed. The hours and mine inspection acts both passed the House, but died in the Council.⁵

Reformers met with more success at the following session of the legislature, in 1903. Although another mine inspection bill failed (and would again in 1905), the legislature passed an act establishing the eight-hour day in all underground mines and workings. The original House bill, passed unanimously, had mandated the eight-hour day for underground miners only. The new law was resisted by some mine owners; their failure to heed the act when it took effect led to a major strike at Morenci.⁶

The 1907 session of the territorial legislature passed an act establishing a uniform code of bell signals for the mines of the territory, probably modeled on the bell code passed in Oregon several years before.⁷ The bell code and the hours law for miners, along with an hours law for hoisting engineers and furnace men enacted in 1909, were the extent of mine safety legislation in Arizona up to statehood, but there was a movement underway to change the situation.

In March of 1909 the Territorial Legislature passed "An Act to Create a Commission to Prepare and Draft a Complete and Comprehensive Code of Laws Regulating Metalliferous Mining, and to Provide for Effective Mine Inspection...." The health and safety issue was the foundation of the movement to establish this comprehensive mining code.

The preamble to the bill noted the significance of

mining to the economy of the territory and the hazardous nature of the occupation, and then asserted that "it is the duty of the law-making power to enact such laws as will properly safeguard the life and health of such employees while engaged in such pursuit." That statement was a considerable departure from the attitude of the previous generation about government's proper role in the workplace. The preamble also stated that the object of the act was to put a complete code into force rather than have "fragmentary and ineffective laws" on the books. The bill passed twenty-to-two in the House and unanimously in the Council, and was signed into law by Governor Joseph H. Kibbey on 12 March 1909.

The new law directed the governor to appoint a commission consisting of two miners, two mine owners or operators, and an attorney. This commission was charged with the responsibility of holding public hearings and then submitting a report, including a comprehensive code, to the governor. Governor Kibbey wasted no time making the appointments; all of the commissioners had taken their oaths within a month.

The chairman of the Mining Code Commission was forty-three year-old Will Lee Clark, the assistant general manager of the United Verde Copper Company in Jerome (and no relation to William Andrews Clark, who owned the United Verde). The other mine operator was W. F. Staunton, who had managed the Congress Mine north of Wickenburg and mining properties in Tombstone. The secretary of the Commission was lawyer Thomas Armstrong, Jr., of the firm of Armstrong and Lewis in Phoenix. The two miners were Peter J. Hipple and Charles J. Kimbell.⁹

While the Mining Code Commission was going about its business, Arizona's statehood drive was coming to an end. On 20 June 1910, after a long campaign, President Taft signed the federal legislation which permitted Arizonans to draw up a state constitution, to be submitted to the Congress and the President for adoption.

Within a month after President Taft signed the enabling act and the date for the elections to the constitutional convention had been announced, organized labor in the territory mobilized to secure a constitution favorable to its interests. The mobilization began with a call from the Bisbee Miners' Union, an affiliate of the Western Federation of Miners, for representatives of all bodies of organized labor in the territory to meet in convention, to be held at Phoenix starting 11 July. When the convention met it included representatives from the miners, machinists, printers, and building trades unions, among others.

Once in convention, the unions voted down a motion to support regular party candidates sympathetic to labor, adopted a platform for a new labor party, and wrote a labor platform for the proposed constitution.

Historian Philip Foner called their platform, which contained twenty-seven demands, "the most advanced platform of the entire Progressive movement." The platform sought such direct democracy measures as universal suffrage, the initiative, referendum, and recall, two-year terms for all elected officials, the secret ballot, the direct primary, the direct election of U. S. senators, and the prohibition of any electoral fee system or poll tax.¹⁰

Items dealing more directly with labor issues included demands for an anti-injunction law, an employers' liability law, child and female labor restrictions, a provision against private detectives, a state industrial commission with industrial inspectors, and a prohibition on convict labor. Members of the labor convention would have the gratification of seeing many of these ideas adopted at the constitutional convention or during the early days of statehood.

The idea for a separate labor party was less enthusiastically received. Many in organized labor wanted to operate within the two-party system, believing in Samuel Gompers' strategy of rewarding the party most sympathetic to labor. The major reason for the eventual abandonment of the third-party idea, however, was the fear, particularly among loyal Democrats, that such independent political action by labor would split the labor vote and throw the election and the constitutional convention to the Republican Party. To preclude that possibility, leaders of organized labor and the Democratic Party met and agreed to a coalition uniting the Democratic political organization with labor's constitutional platform.

On 12 September 1910 the Democrats, with labor on board, won the election for the constitutional convention decisively, gaining forty-one of fifty-two seats. With that sort of majority the Democrats and their allies were able to write the constitution they desired. It should be remembered, however, that not all Democrats were enthusiastic supporters of labor's agenda or of a progressive constitution, and that there was more to the triumph of the Democrats than their alliance with labor.

The Democrats were able to win the majority they did because of widespread discontent over Republican Party obstruction of the statehood drive, and a simmering resentment of the extensive influence which large, outside corporations had in the territory. These factors permitted some alliances which might not have otherwise existed. While there was no farmer-labor coalition at the constitutional convention, the two groups were generally able to unite because of their mutual antagonism to large corporations.

The constitution which resulted from this mixture of national and local influences was, according to Foner, "extremely progressive and especially friendly to labor." It included the initiative, referendum and recall,

as well as many of the measures demanded by the labor convention. Labor issues were addressed in Articles XVII and XIX of the new constitution.¹¹

Article XVII contained ten sections. It included provisions mandating an eight-hour day for state employees, greatly restricting the employment of children under sixteen years of age, and prohibiting the exchange of labor blacklists and the use of alien labor on state projects.

Sections Three through Eight of Article XVIII mandated the protection of employees through employers' liability and workmen's compensation, prohibiting contracts in which employees waived employers' liability in cases of negligence, abrogating the common law fellow-servant doctrine and limiting the common law doctrines of assumption of risk and contributory negligence to questions of fact, to be determined by juries. Article XVIII also declared that the right of an employee to recover damages by lawsuit would be neither abrogated nor subject to statutory limitation.

Section Seven of Article XVIII required establishment of an employers' liability law for "hazardous occupations," which included mining and smelting, to cover all cases in which the employee's death or injury had not been due to his own negligence. Section Eight went beyond employers' liability to establish Workmen's Compulsory Compensation "in such employments as the Legislature may determine to be especially dangerous."

Article XIX established the office of Mine Inspector for the expressed purpose of "provid[ing] for the health and safety of [mine] workers." The mine inspector was to be popularly elected for a two-year term. Article XIX passed only after a section stipulating minimum qualifications for the office was removed. The legislature would be entrusted with establishing the qualifications for holding the office.¹²

Labor's victories at the convention were neither universal nor uncontested. Some sections of Article XVIII passed without much contention, but other ideas, such as provisions against the use of injunctions against labor and against the use of alien labor failed to pass. An attempt to require the creation of a department of labor, though recommended by the Committee on Labor (four of the five members of which were union men) lacked sufficient support to pass the whole.¹³

The reformist nature of the constitution produced by the convention was much to the consternation of the proponents of "statehood first," who believed that a constitution which was too progressive would be rejected by Congress and President Taft. To indicate their displeasure, ten of the eleven Republican delegates refused to sign the document, and several conservative Democrats were said to have signed only to preserve party unity. Statehood was, in fact, obstructed briefly by

President Taft over the issue of recall of judges, but once that provision was removed, Arizona gained Taft's signature, and statehood, on 11 February 1912.¹⁴

The first state legislature, which met in the spring of 1912, was thus presented with a constitution mandating the establishment of a state office of mine inspection and "laws so regulating the operation and equipment of all mines in the State as to provide for the health and safety of workers therein."¹⁵ Five weeks after statehood the Mining Code Commission submitted its proposed draft legislation.¹⁶

The legislature, which met in regular and special sessions in 1912 and 1913, considered over a dozen bills related to mine inspection and safety, and several other dealing with employers' liability and workmen's compensation. Some of these failed of passage, including acts to create a state home for miners crippled or suffering from occupational diseases, to prescribe a minimum wage for work in hazardous mining operations, to set qualifications of underground workers, and to establish, via referendum, a six-hour day in places where the temperature was more than 125 degrees underground and 110 degrees above ground.¹⁷

Two comprehensive bills concerning industrial health and safety did pass the regular session of the first state legislature, however. One was Senate Bill 79, introduced by A.A. Worsley of Pima County. This measure declared "employment in all underground mines, underground workings, open cut workings, open pit workings in or about and in connection with, the operation of smelters, reduction works, stamp mills, concentrating mills, chlorinating processes, cyanide processes, cement works, rolling mills, rod mills, and coke ovens and blast furnaces, to be injurious to health and dangerous to life and limb...." This designation automatically required the eight-hour day, employers' liability, and workmen's compensation in all of the above cases. It passed the Senate eighteen votes to one and the House thirty votes to none, and was signed by the governor on 11 May 1912.

The second measure, House bill 46, was introduced by Perry Hall, chairman of the House Committee on Mines and Mining. He was a representative from McCabe, and the former head of Local 118 of the Western Federation of Miners there. This measure, "An Act Regulating Metalliferous Mining and Providing for Mine Inspection," was eventually passed (after amendment by the Senate) thirty-one to three by the House, and unanimously by the Senate. It was signed into law by the governor on 13 May 1912. This bill was essentially the draft code submitted to the legislature by the Mining Code Commission.

The Arizona code was similar to codes enacted by other states. The chief mine inspector and his deputies were required to have been residents of the state for at

least two years, and to have a minimum of seven years of experience in underground mining. As stipulated in the constitution, the chief mine inspector was to be elected to a two-year term. He and his deputies were charged with the duty of visiting, at least quarterly, every mine in the state employing more than fifty men, and visiting every smaller mine at least annually. He was charged with serving notice in cases of violations of the code, and could receive complaints, anonymously if desired, on conditions or possible violations within mines. It was the duty of mine owners to report accidents, which the inspector was required to investigate. It was also the duty of the inspector's office to keep records of inspections and submit an annual report to the governor.

The safety regulations for the mines were complex. They included provisions concerning first aid equipment, the mapping of underground workings, explosives, ventilation, escape shafts, fire and flood safety, and prohibitions of child labor and alcohol consumption.

Large tracts of the draft code were adopted verbatim; relatively little was changed. What is interesting about a comparison of the two documents (given the tendency of lawmakers to water down legislation in order to secure passage) is that in most of the places where the bill was changed it was strengthened. As examples, the legislature amended the draft code to grant powers to the mine inspector which had been held by the courts, lowered the number of miners necessary to file a complaint demanding an inspection from three to one, and raised the minimum age for work in a mine from sixteen to eighteen years.

Specific safety provisions strengthened in the legislation included lowering the amount of explosive allowed underground from four days' supply to one, requiring the constant attendance of a hoisting engineer when men were underground, adding safety gates and catches to specific types of hoisting equipment where none had been required, changing the wording to require escape ladders in every shaft instead of every mine, and making more stringent requirements for rescue parties and first aid and fire-fighting equipment. The legislature also struck out a paragraph granting exemptions to the requirement for escape shafts and added sections regulating the impounding of water underground and the height of trolley wires.

The only significant weakening of the recommended health and safety regulations in the new law was the deletion of a provision for dust abatement sprayers on powered drills. In conference committee the section of the draft code requiring all power drills to be equipped with water sprayers within three months was amended to require spraying only where necessary; necessity, presumably, being a judgement of the mine inspector. This weakened provision, contained within a section on

ventilation, became law in May of 1912, but at the special session of February 1913 Perry Hall introduced and gained the passage of an amendment to the code which required spraying whenever drills were used on dry rock. Thus, the one significant defeat suffered by the proponents of health and safety legislation for miners was largely recouped within a year, and an early effort at silicosis prevention became law.¹⁸

It was one thing to have health and safety laws passed by the legislature, something else to see them enforced by the executive and sustained by the judiciary. One historian has observed that in several states mine inspection laws were essentially meaningless. That problem seems to have been avoided in Arizona. Chief Inspector G. H. Bolin and his deputies, on the job two days after the law was signed, apparently carried out their charge vigorously. In his first report, covering the last seven months of 1912, Bolin indicated that many companies were not in compliance with the code, owing to the fact that it had been passed so recently. He noted that "in many of the larger mines, and some of the smaller ones, we found the ventilation very poor."¹⁹

In the report on specific mines which followed his general comments, Inspector Bolin gave a brief description of each mine inspected and noted any violation. In the first seven months of operation the inspectors examined seventy-three different mines, thirty-four of them twice, and reported thirty-six of them (49%) in violation of some part of the new code. The campaign to bring the mines into compliance seems to have been successful. In 1913 the office conducted 266 inspections upon eighty-four different mines and only noted twelve violations (14%). Bolin wrote in his report for that year that "more attention is given to the safety of employees at present than ever before. 'Safety First' departments are organized by all the large companies. Regular meetings are held and the men in charge of operations exchange ideas in order to install devices which will prevent the occurrence of accidents, or to prevent an accident of similar nature occurring again."²⁰

It would be nice to report that the immediate effect of the "safety first" campaign was to lower the accident rate, but that was not the case. The death rate for the last seven months of 1912 (calculated on a per annum basis) was 4.23 per 1000 employed. The following year it rose to 4.74, and it peaked in 1914 at 6.58. There were about the same number of deaths in 1914 as the previous year, but due to decreased demand for copper there were far fewer men employed. After 1914, however, the death rate began to fall. It was 3.60 in 1915, and was over four per 1000 again for only one year during the war. The death rate fell below three per 1000 in the mid 1920s. It did so then less, one suspects, because of the rigors of mine inspection, than because of such technological changes as electrically-fired explo-

sives and the introduction of safer open-pit operations.²¹

One problem for Inspector Bolin and others interested in mine safety was that many of the casualties were inflicted by hazards not easily regulated. Of the twenty-nine dead suffered in the period from 15 May to 30 November 1912, eleven died from rock falls, by far the most common cause of death, another seven from falling themselves. One can sense Bolin's unhappiness with this state of affairs. In his 1914 report, he lauded the cooperation of management and labor in the safety campaign, but also claimed that most accidents resulted from carelessness and were preventable. He specifically mentioned the importance of covering openings and barring down loose rock. The inspector's frustration notwithstanding, Arizona's fatality rates were in line with the national average in the period from 1910 to 1925.²²

The new health and safety laws also had the support of the Arizona Supreme Court. In two cases decided in 1921, the court ruled that the owner of a mine had "the duty to protect [the employees of a contractor] from dangers on the premises..." and that the owner had a "nondelegable personal duty" to provide safe equipment to a contractor working in his mine.²³

After the enactment of the comprehensive mining code, new legislation on the subjects of mining and industrial safety passed less frequently. Repeated attempts were made to establish state boiler inspection and a home for disabled miners, but these, along with various industrial safety bills, failed of passage. Only two other significant laws bearing upon health and safety in mines and mills were passed in the period before the Great Depression.

The first of these was the creation by the legislature of the Arizona State Bureau of Mines in 1915. This body was primarily concerned with education and the promotion of the state's mineral resources, but one of its duties was to maintain the state mine rescue car, a railroad car fitted with special equipment to respond to mine disasters.

The other important enactment was the creation of the Arizona Industrial Commission in 1921. This was a significant act, certainly, but both the progressive Governor George W. P. Hunt and the conservative Governor Thomas Campbell had requested this measure for several years.²⁴

The Industrial Commission satisfied several objectives at once. It consolidated overlapping jurisdictions in various agencies, including the Health Department, the Department of Education, and the Office of Mine Inspection, under one agency. The new law permitted industrial regulation by administrative act, rather than through the more cumbersome process of legislation. It

also permitted old health and safety reforms to be carried into new fields more effectively by such officials as the factory inspector, whose duties had previously been performed by law enforcement officials, as time permitted.

First among its numerous duties, the Industrial Commission, of which the Office of Mine Inspection was made a part, had the authority and duty "to administer and enforce all laws for the protection of life, health, safety and welfare of employees in every case and under every law, where such duty is not now specifically delegated to any board or officer, and in such latter cases, to counsel and advise and assist in the administration and enforcement of all such laws." The Commission was also charged with the missions of promoting voluntary arbitration in labor disputes, collecting statistics, and making investigations into unsafe conditions.²⁵

Arizona's attempts to regulate mine safety were concurrent with similar activities in other states. The author examined the health and safety enactments of seven other states. These seven states were Nevada and Colorado, neighboring states with significant metal mining activity; Montana and Michigan, which, like Arizona, had extensive copper industries; Oklahoma and New Mexico, which entered the Union at about the same time as Arizona; and Oregon, which was a leading state in the progressive reform movement.²⁶

From histories of these seven states, a pattern of legislation and organization emerges for the period from 1880 to 1920. This pattern, which generally fits the course of actions in Arizona, usually began with a few rudimentary safety laws, perhaps hour rules or a bell code. Normally, mine inspection and a comprehensive mine safety code would follow. The code would either be adopted at the same time as inspection or shortly thereafter.

The office of chief mine inspector was filled either through election or appointment. In Arizona, Nevada, and Oklahoma the office was gained via statewide election, while in Michigan the office was a county position first filled by appointment and then, after 1911, by election. In Colorado, New Mexico, and Montana the inspector was appointed by the governor or the industrial commissioner.²⁷

Another difference of opinion among the states concerned the problem of whether to create a complex and detailed mining code, or to keep the code simple and permit the mine inspector to exercise his judgment. In Michigan, the mine inspectors were given considerable latitude, and in Oregon, specific safety regulations for mines were nearly non-existent. In 1920 the Oregon Legislature empowered the industrial commission (Oregon did not have a mine inspector) to

prohibit "unsafe places of employment," to prescribe safety standards, and to order "repairs, improvements, or changes in places of employment."

In contrast to this, the New Mexico mine safety act, passed in June of 1912, covered twenty points, with fifteen additional acts declared to be illegal in a mine. When Oklahoma came into the Union in 1907, its lawmakers passed a comprehensive safety code, dealing mostly with coal mining, which ran to eleven pages of extremely detailed safety regulations, and was much more comprehensive than most metal mining safety acts. The State of Arizona began with an extensive code, then moved toward regulation by administration.

In the states with an extensive code, the code was often substantially revised in later years. Coal mine inspection usually preceded metal mine inspection, the exception to this being Michigan. Though the codes generally dealt mostly with mine safety, some also contained the rudiments of health regulations. The Arizona code contained the dust abatement regulation previously discussed. In 1911 Michigan passed the Occupational Diseases Act, which required reporting of occupational diseases to the state health department, and prescribed the duties and powers of the health department in relation to occupational diseases. In 1887 New Mexico Territory had even gone so far as to require smelter corporations to provide employees "rendered unfit for labor" by lead poisoning with "proper medical attendance, medicines, and sustenance during such disability, at the expense of said corporation," but this act was considerably ahead of its time.

The next step in the process of mine safety regulation, usually taken within a few years of inspection, was the creation of a state bureau of mines. This agency was generally devoted to education, data-gathering and research, rather than to regulation, but usually one of its areas of research was mine health and safety. Factory inspection usually came next. This would be carried out by a factory board or commission. Often, but not always, this system would include specific factory safety regulations.

The last link in the chain was normally a consolidation of the functions of the mine, factory and other inspectors, as well as boards of arbitration and compensation, under a department of labor or industry. In the three states which entered the Union during the Progressive Era, many of these items appeared simultaneously and as constitutional provisions, compelling the legislature to transform them into law. Arizona's progress on industrial health and safety issues conformed to the general pattern of the other states examined, albeit in a compressed period of time.

It is easy enough to establish that there was an industrial health and safety reform movement in Ari-

zona at the time of statehood, and shortly thereafter. The evidence also indicated that while Arizona's place within progressive reform was generally advanced, her place within the health and safety campaign was more typical than unusual.

The question remains: Who backed the health and safety reform movement in Arizona, and why? To argue that these reforms were produced by middle-class reformers one would have to dismiss the contributions of organized labor to the process of creating the new code. While they did not dominate the process, members of organized labor and their allies made their contribution to reform. The delegation to the constitutional convention, while abounding with middle-class professionals such as lawyers, bankers, merchants, ministers and doctors, also contained a substantial labor presence. There was a railroad engineer and a switchman, a miner, a plumber, and a butcher. The Committee on Labor was dominated by union men, and Thomas Feeney, the leader of the floor fight for Articles XVIII and XIX, was a machinist from the mining town of Bisbee. After statehood a union miner was chairman of the House Committee on Mines and Mining. Another union miner was a member of the Mining Code Commission.²⁸

These men did not form a majority, nor was labor proportionately represented, but men such as Feeney, Hall and Hipple were able to exert influence at critical points in the process of making the constitution and the new state's laws. The establishment of the mine inspector as an elective office, for example, permitted organized labor to use its numbers at the ballot box. While it did not get everything it wanted in the laws, labor did make the Democratic Party honor its demands in an effective alliance at the constitutional convention and briefly afterwards. The middle class did not dictate terms.²⁹

Neither did the large corporations. If they meant to impose a legal hegemony, using the power of the state under the cover of "reform," to "rationalize" the system to their advantage, large corporations failed to do so in Arizona. An example of this failure was an attempt by delegate E. E. Ellinwood, to limit employers' liability through the inclusion of uniform workman's compensation in the state's constitution.³⁰

Ellinwood, a conservative Democrat and lawyer from Bisbee, introduced the workman's compensation provision, he announced, to reduce the time and costs for all concerned, and to eliminate the arbitrary power of the courts. He also favored no-fault compensation. If he intended to protect corporations by limiting their liability, however, Ellinwood was foiled by the supporters of labor. They outflanked him by adding an amendment to his measure reading "that it shall be optional with said employee to settle for such compensation, or retain the right to sue said employer as provided by this

Constitution." The section, thus amended, passed by a large majority. Whatever their intentions, representatives of large corporations did not have a free hand to write the Arizona Constitution, or the new state's laws.³¹

An interesting variation of the corporate hegemony argument is that the larger corporations favored regulation because they could use it to drive up the costs of small competitors and force them out of business. In this conception government inspectors and administrators became the sometimes unwitting and sometimes brazen tools of the big companies. Again, in Arizona that seems not to have happened. In his address of 3 February 1913 to the third session of the first state legislature, Governor Hunt remarked of mine inspection that "this office, demanded by the people generally, and necessary to the health and physical safety of a very large class of the State's population--the men who work in the mines--has proved exceedingly satisfactory. The Inspector and three deputies are almost constantly in the field, examining mining properties, offering suggestions for the betterment of conditions and requiring compliance with the law."³²

The state mine inspector was no desk-bound cheerleader for the large corporations, nor did he wink at their violations of the new laws. He was an elected official, responsible to his constituency. In the first period for which he issued a report, ending 30 November 1912, the mine inspector noted violations in thirty-six of the seventy-three mines he inspected, 49.3% of the total. What is interesting is that large mining operations were cited more often than either medium-sized or small operations. The inspector found violations in nine of seventeen of the big concerns (52%); whereas nine of nineteen medium-sized (47%), and eighteen of thirty-seven small operations (49%) were in violation. While these sample sizes and percentage differences are too small to prove anything, they do suggest that large mining companies would not invite regulation because they could stand the scrutiny better than smaller operations.³³

Nor is it easy to see Arizona's health and safety movement as the replacement of organized labor fraternalism with corporate or state paternalism, a progression postulated by Alan Derickson in his book *Workers' Health, Workers' Democracy: The Western Miners' Struggle, 1891-1925*. There was certainly corporate paternalism, but if union fraternalism was replaced by state paternalism, it was a self-inflicted state paternalism. The miners' unions had been pursuing health and safety rules through legislation since the 1870s.

"Welfare capitalism" did not replace "union traditions of self-help" by subterfuge; state legislatures replaced labor unions as the instruments of health and safety reform because the unions were inadequate to the task.

Union men recognized this; that is why they had sought health and safety legislation in the first place. They understood that the modest compensations for injuries or death offered by the local unions were not satisfactory, and that their power to even raise wages, let alone produce industrial health and safety reform, was severely limited.

Thus, while dismissing the contribution of organized labor would distort our understanding of industrial health and safety reform in Arizona, it is also important not to overestimate the strength of organized labor in the process. It is not possible in the case of Arizona to support Derickson's contention that "whereas middle-class Progressives played a critical role in effecting reform in other regions, western miners had relatively few supporters among the professional and technical stratum. The absence of Progressive allies in the mining states necessitated workers' self-reliance." Labor's self-reliance should not be overstated. The working class was out-manned at the Arizona constitutional convention by forty-four to eight; without allies, organized labor would have achieved nothing.³⁴

Foremost among the allies of labor in Arizona was George W. P. Hunt, merchant and politician from Globe, president of the constitutional convention, and the first governor of the state. Although he had done a little mining when young, by the time of the constitutional convention Hunt was a well-to-do business executive. It was he who evidently arranged the Democratic-labor coalition. It was he who, as president of the constitutional convention, used his influence in support of organized labor's interests. Later, as governor, Hunt advocated a home for disabled miners and the industrial commission, used his influence in support of the miners during a nineteen-week strike at Clifton, Morenci and Metcalf in 1915, and scalded the "conscienceless mob of copper company thugs" for the Bisbee deportation of 1917. In Arizona organized labor did not fight the health and safety campaign alone.³⁵

Another reason to avoid overestimating the strength of labor is the divisions which existed within organized labor itself. There was considerable dissension within the leadership of organized labor on the merits of state intervention between labor and management. During the period in question, the Western Federation of Miners was in the midst of tearing itself apart over the question of whether it was better to pursue its goals through the existing political system or use more radical economic confrontation to transform that system.

The evidence presented here indicates that mine safety reform in Arizona was not a middle-class or corporate hegemony, nor was it the product of organized labor. In Arizona the movement seems to have been part humanitarian social reform, part special inter-

est legislation and political self-interest, with a dash of the efficiency movement thrown in.

That carnage was being inflicted upon workers in the industrial enterprises of turn-of-the-century America is beyond question. It is not naive to suggest that various individuals or groups of people were disturbed by that fact, and sought to remedy the situation through law. To that noble purpose, of course, must be added less altruistic motives such as resentment against corporations, and political opportunism, but that does not alter the original condition; there was a problem in the economic and social system which reformers sought to correct. The legislation which was enacted usually passed by substantial majorities, suggesting a general recognition of the need for these reforms.

The argument for safety as efficiency was how reformers sold their ideas to the corporations of Arizona. In his first annual report State Mine Inspector Bolin took the opportunity to "impress upon the minds of the managers" that proper ventilation was a sure way to reduce the costs of production. "To obtain the best results," he believed, "the interest of the employer and employee must be interdependent." He also reported that mine managers told him that with proper ventilation and heat reduction in mines "the miners can do more work and [managers] can get experienced and steady miners when operating under these conditions." His opinion was supported in other states by safety associations and the "safety first" movement, which sought to convince employers that industrial safety created efficiency, hence profit.³⁶

Bolin's contentions were sustained seventy years later by a historian of Arizona mining, who believed that unsafe working conditions, specifically silicosis, led to more transience among miners, which in turn produced more, and more violent, labor agitation. In the name of reduced unrest and greater efficiency mine owners could accept the modest intrusions of a state mine inspector upon their prerogative.³⁷

The Progressive Era movement for health and safety legislation in Arizona was successful, so far as it went, in part because it articulated what seemed to many people to be reasonable demands, in part because of like movements going on at the same time in other states, and in part because of an alliance between Democrats and organized labor, whose goals and interests permitted at least temporary cooperation to sustain a majority coalition.

The reform period in Arizona ended in 1921 because some basic problems had been solved, but also because of a shift away from regulation by legislation to regulation by administration. The Arizona Industrial Commission, created that year, was given broad powers "to administer and enforce" the health and safety laws, to conduct investigations, and to collect and publish

statistics. The commission's orders were to be considered "reasonable and lawful until they are found otherwise." By the end of the Progressive Era the regulation of industrial health and safety in Arizona, as in many other places, had moved from the chambers of the legislature to the offices and meeting rooms of the industrial commission.

ENDNOTES

¹Located at base of initial page.

²Joan H. Wilson, *Herbert Hoover: Forgotten Progressive* (Boston: Little, Brown, 1975), 32.

³For a discussion of the evolution of coal mine safety regulations in the eastern coal fields see David Rosner and Gerald Markowitz, eds., *Dying for Work: Workers' Safety and Health in Twentieth-Century America* (Bloomington: Indiana University Press, 1987), which contains "Protective Legislation for Coal Miners, 1870-1900: Response to Safety and Health Hazards," by Jacqueline Corn, 67-81. For an examination of the period after the turn-of-the-century see William Graebner, *Coal-Mining Safety in the Progressive Period: The Political Economy of Reform* (Lexington: University of Kentucky Press, 1976). For a discussion of the situation in the western United States see James Whiteside, *Regulating Danger: The Struggle for Mine Safety in the Rocky Mountain Coal Industry* (Lincoln: University of Nebraska Press, 1990).

⁴In the town square at Jerome, Arizona is a sign describing how the coking coal used in the camp's smelter in 1882 was imported from Wales, via Cape Horn, to San Francisco. From there it was moved overland by rail to Ash Fork, Arizona, fifty miles west of Flagstaff. From Ash Fork the coal was hauled by freight wagon over sixty miles of mountain roads into Jerome. All that effort to produce 8,000 pounds of copper a day. Coal mining in Arizona is confined to the area of Black Mesa, which was not developed until the late 1950s.

⁵For the evolution of mining legislation in the territorial period see: Territory of Arizona, *Arizona Territorial Laws Prior to 1875*; *Ibid.*, *Revised Statutes of Arizona, 1887*; *Ibid.*, *Revised Statutes of Arizona, 1901*; and *Ibid.*, *Session Laws of Arizona, (Phoenix and Tucson: various publishers, 1891-1909)*. For legislation which failed to pass, as well as the progression of legislation which did, see: *Journals of the Legislative Assembly of the Territory of Arizona, 1891-1909* (Phoenix: various publishers). For a concise summary of the legislation of the entire period considered in this article see W.J. Galbraith, comp., *Galbraith's Arizona Mining Laws: Revised to 31 December 1922* (Phoenix: Chas. F. Willis, 1923).

⁶Alan Derickson, *Workers' Health, Workers' Democracy: The Western Miners' Struggle, 1891-1925* (Ithaca: Cornell University Press, 1988), 161. The Morenci strike is also discussed by Vernon H. Jensen in *Heritage of Conflict: Labor Relations in the Nonferrous Metals Industry up to 1930* (New York: Greenwood, 1968) (1950).

⁷Though the two bell codes themselves are different, the instructions for use of the code, hoisting regulations, etc., are quite similar, even identical in many places. William P. Lark and Richard W. Montague, *Lord's Oregon Laws, 1909* (Salem: State Printer, 1910).

⁸Territory of Arizona, *Session Laws of Arizona, 1909*, Chapter 36.

⁹For a biography of Will L. Clark, see Herbert V. Young, *Ghosts of Cleopatra Hill: Men and Legends of old Jerome* (Jerome: Jerome Historical Society, 1964), 105-9. For a very brief mention of W.F. Staunton see Charles H. Dunning, *Rock to Riches* (Phoenix: Southwest, 1959), 143-4, 187. The information on Thomas Armstrong, Jr. was obtained from the *Arizona Business Directory, 1909-1910*, vol. 3, (n.p.: Gazetteer, 1910), 383. In *Workers' Health, Workers' Demo-*

cracy, p. 165, Alan Derickson identified one of the miners as "Peter Whipple of the Globe Miners' Union." This man's name appears on his notarized oath of office, sworn 2 April 1909, as "Peter J. Hipple" (State of Arizona, Department of Archives and Public Records, Secretary of the Territory, Box 47, File 679, Mining Code Commission, 1909). I have no doubt that Hipple and Whipple were the same individual.

¹⁰Alan V. Johnson, "Governor George W. P. Hunt and Organized Labor," MA thesis, University of Arizona, 1964, True A. McGinnis, "The Influence of Organized Labor on the Making of the Arizona Constitution," MA thesis, University of Arizona, 1930, Donald R. Van Petter, *The Constitution and Government of Arizona* (Phoenix: Tyler, 1952 (1960), and Philip S. Foner, *History of the Labor Movement in the United States* (New York: International, 1980), vol. 5, 51.

¹¹Territory of Arizona, "Arizona Constitution as adopted 9 December 1910," (Phoenix: Department of Library and Archives, 1951). Foner, vol. 5, p. 52.

¹²McGinnis, "Influence of Organized Labor," 77.

¹³*Ibid.*, 84. Foner, vol. 5, 52.

¹⁴McGinnis, "Influence of Organized Labor," 88.

¹⁵Article XIX, Constitution, State of Arizona.

¹⁶Territory of Arizona, Mining Code Commission, "An Act Regulating Metalliferous Mining and Providing for Mine Inspections, Report to the Governor, and Letter of Transmittal from the Governor to the Legislature," Arizona State Department of Library, Archives and Public Records, Phoenix.

¹⁷For the laws and law making in the period from statehood into the 1920s, see Samuel L. Pattee, comp., *Revised Statutes of Arizona, 1913* (Phoenix: McNeil, 1913); *State of Arizona, Revised Code of Arizona, 1928* (Phoenix: Manufacturing Stationers, 1930), and State of Arizona, *Journals of the Legislature of the State of Arizona, 1912-1925* (Phoenix: various publishers).

¹⁸Derickson, in *Workers' Health, Workers' Democracy*, 165, argues that this revised legislation was a significant defeat for the mine workers.

¹⁹Mark Wyman, *Hard Rock Epic: Western Miners and the Industrial Revolution, 1860-1910* (Berkeley: University of California Press, 1979), 190-95. Colorado passed a bill establishing an office of mine inspection for the state's metal mines in 1889, but failed to fund the office until 1892. Idaho's office, established in 1893, was notorious for being a booster organization for the state's mining industry, rather than an instrument for the oversight of mine safety. "Annual Report of the State Mine Inspector of Arizona for the Year Ending November 30, 1912."

²⁰Annual Report of the State Mine Inspector of Arizona for the Year Ending November 30, 1913.

²¹In 1980 the inspector reported five fatalities among 22,820 workers, for a rate of 0.22. Only one of the five deaths was suffered underground. State of Arizona, "Annual Report of the State Mine Inspector," 1980.

²²Derickson, *Workers' Health*, 201, gives national fatality rates of 4.0 from 1911-15, 3.7 from 1916-20, and 3.2 from 1921-25. Arizona's rates, computed from the Mine Inspector's Reports, were 4.74 in 1913, 6.58 in 1914, 3.60 in 1915, 3.18 in 1916, 3.57 in 1917, 4.5 in 1918, 3.94 in 1919, 3.97 in 1920, and 2.86 in 1925.

²³Arizona State Supreme Court, "Digest of Decisions of the Supreme Court of Arizona" (v. 1-25), (San Francisco: Bancroft-Whitney, 1912-25); *Jerome Verde Copper Co. v. Riley*, (1921), 521; and *Arizona Binghamton Copper Co. v. Dickinson*, (1921), 521.

²⁴Hunt first called for the industrial commission in his annual message of 1915, Campbell in his inaugural address of 1919. H.S. McCluskey, comp., "Compiled Messages of G. W. P. Hunt and Thomas E. Campbell, Governors of Arizona, from 1912 to 1923, inclusive, vols. I and 2" (Phoenix: s.n., 1912-28).

²⁵State of Arizona, *Session of Laws of Arizona*, 194.

²⁶Legislation for the states considered may be consulted as follows: Territory and State of Colorado, *Session Laws of Colorado* (Denver: various publishers, 1872-1923), State of Michigan, *Michigan Statutes Annotated*, vols. 11b and 12a (Deerfield, IL: Callaghan, 1988), State of Montana, *Laws of Montana* (Helena: State, 1895-1921), Territory and State of New Mexico, *Laws of New Mexico* (Albuquerque and Santa Fe: various publishers, 1899-1921), State of Nevada, *Statutes of Nevada* (Carson City: State Printing Office, 1866-1921), State of Oregon, *Oregon Code Annotated, 1930*, vol. 3 (Indianapolis: Bobbs-Merrill, 1930), *Lord's Oregon Laws, 1909*, Henry G. Snyder, comp., *Compiled Laws of Oklahoma, 1909* (Kansas City, MO: Pipes-Reed, 1909). For an excellent general discussion of labor legislation in the Progressive Era see: John R. Commons and John B. Andrews, *Principles of Labor Legislation* (New York: Harper & Brothers, 1920).

²⁷Mining in Michigan was confined to Upper Peninsula. In Act 213 of 1887, the Michigan Legislature empowered the boards of supervisors of those counties to choose the mine inspector and determining his salary. On the subject of whether to elect or appoint the mine inspector, Governor George W. P. Hunt, a man sympathetic to organized labor, was one who believed that the office of mine inspector "is one office which should not be elective. The duties of the Mine Inspector are largely of a technical nature and few men are qualified to perform them. The man who does so satisfactorily must be thoroughly equipped by education and experience, and I believe that personal selection, following a rigid examination--examination of a character that is out of the public's reach--is the only way to reach the desired end." Hunt went on to recommend that the Arizona Constitution be changed to make the office appointive, "with such requirements as will insure the end being striven for--the health and safety of mine employees." "Message to the First Legislature of the State of Arizona," p. 33, in *Compiled Messages*. There was a considerable debate then, which has continued, as to which method of acquiring a mine inspector was more effective; that is, which was least subject to political corruption.

The presence of laboring men at the constitutional convention was thanks largely to the voters of Cochise County in southeast Arizona. This county, which contained the mining camp of Bisbee and the smelter town of Douglas, elected seven of the eight working-class representatives who attended the convention. Seven of the ten representatives from Cochise County were laboring men; the other three were lawyers. Gila County, which contained the Globe-Miami District, had a five-member delegation and sent the only other working-class representative. McGinnis, "Influence of Organized Labor," 37-8.

²⁸*Ibid.*, 21b. McGinnis provided 1910 census figures showing that wage-earning miners numbered 16,917, outnumbering even farm owners and laborers with 12,527, and cattlemen, with 6,042. Add to the miners another 5,043 railroad workers and 13,626 laborers and

artisans, and one has a bloc of 46% of the 77,236 males in all occupations in the state. Many of the laborers did not vote, of course, for lack of citizenship or other reasons, but even if only 10% of the miners voted they could still outvote the state's 1,177 mining operators and salaried employees.

²⁹Radical historian Gabriel Kolko was not alone in arguing that Progressive Era reforms such as these were engineered more by and for big business than for labor. Carl Gersuny, in *Work Hazards and Industrial Conflict* (Hanover, NH: University Press of New England, 1981) argued that social insurance legislation, such as workmen's compensation and health insurance, was an attempt by big business to rationalize the system. In *Coal-Mining Safety in the Progressive Period*, William Graebner maintained that the U.S. Bureau of Mines was established at the behest of big business.

³⁰McGinnis, "Influence of Organized Labor," 72-3.

³¹George W. P. Hunt, "Message to the First State Legislature, Third Session," p. 30, in *Compiled Messages*.

³²I have defined a large mine as one employing over 100 men and with an output of over 10,000 tons a month. A medium-sized mine employs 50-99 men and moves 2,500 to 9,999 tons of rock a month. A small operation employs fewer than fifty men and moves under 2,500 tons of rock.

³³Derickson, *Workers' Health*, 155. In *Labor and the Progressive Movement in New York State, 1897-1916* (Ithaca: Cornell University Press, 1965), 21, Irwin Yellowitz writes that "during the Progressive era the American labor movement was not a powerful, well established institution with a sizable membership, an adequate income, and a secure place within American society. Organized labor was a growing movement seeking the offensive, but cognizant of its handicaps. To make it a Goliath, when it was barely a David, is to misinterpret its character entirely." For an example of the celebration of the heroic contributions of organized labor and the working class to reform in the Progressive Era, see Foner, *History of the Labor Movement in the United States*, (vol. V and VI). It is important to realize that the Western Federation of Miners, which Foner credits with being the power behind organized labor's strong presence at the Arizona constitutional convention, never represented even twenty percent of western metal miners.

³⁴McGinnis, "Influence of Organized Labor," 44. Foner, *History of the Labor Movement in the United States*, vol. 6, 13-24. George W. P. Hunt, "Message to the Special Session of the Third State Legislature, Phoenix," *Compiled Messages*, p. 8. See also George W. P. Hunt, "Labor Day: Address of Governor G. W. P. Hunt, 6 September 1915 at Miami, Arizona," (Phoenix: s.n., 1915).

³⁵Annual Report of the State Mine Inspector, 1912," 4. Graebner, *Coal-Mining Safety*, 157.

³⁶James C. Foster, "Western Miners and Silicosis: The Scourge of the Underground Toiler, 1890-1943," *Industrial and Labor Relations Review*, 37(3): 371-85, 1984, p. 383.