BEYOND LUDLOW: PROBLEMS AND OPPORTUNITIES IN WESTERN COAL-MINING HISTORY

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FOR EIGHT DECADES the memory of the Ludlow Massacre, the April, 1914, gunbattle between Colorado militiamen and striking miners, has been a dominant image in the history of coal-mining in the West. But, important as the stories of Ludlow and other labor conflicts are, they only begin to reveal the rich and complex history of the western coal industry and its people. The problem of industrial safety, for example, illustrates the broad range of problems and opportunities for new scholarship beyond Ludlow.

Western coal-miners lived and worked in a complex industrial and social environment structured, in part, by traditional conceptions of their work, and by social and economic relationships with other workers, supervisors, and employers. These factors of tradition and relationships defined the workplace. They also, too often, led to death.

By the end of the 19th century, every coal-producing state and territory in the United States had enacted laws to improve safety in the coal mines. These laws failed, especially in the West.[1]

More than 8,200 miners have died in the coal mines of the Rocky Mountain West since the 1880s. The vast majority (6,800) died in the years before 1934, in the pick-mining and hand-loading era, before machines replaced human skills. Annual rates of seven or eight deaths per thousand employed--far above national averages--were common.

No single, compelling factor explains why the West's coal-mines were more dangerous than those elsewhere. Aridity and the low-moisture content of most of the coals increased the risk of dust explosions (to say nothing of respiratory ailments). In many of the West's coalfields the upthrust of the Rocky Mountains fractured the overburden above the coal, making it unstable and liable to collapse on the men working beneath it.

However, climate and geology did not figure prominently in contemporary explanations of accidents and death in the mines. During the pick-mining era, and ever since, miners, labor leaders, and historians blamed rapacious coal barons and railroad magnates for callously throwing away miners' lives in the single-minded pursuit of profits. At the same time, industry and many government officials blamed careless, incompetent miners for causing their own deaths. Such easy, blanket explanations really only tell us about the ideological leanings of their adherents, and little of the realities of work and death in the mines.

In the pick-mining era, coal-mining laws tended to focus on preventing the most spectacular cause of death, explosions of gas and dust which sometimes took hundreds of lives. Two hundred miners died in the Winter Quarters disaster in Utah in 1900. In Colorado, in 1910, 210 died in three major explosions. Three years later, 263 men perished at Dawson, New Mexico, in the West's worst coal-mining catastrophe. Coal-mine explosions not only destroyed life, but property. Thus, it is no surprise that legislators, sensitive to public opinion and to the financial interests of powerful coal-mine owners, would focus their attention on that issue. Coal-mining laws typically required better ventilation and control of ignition sources, including regulation of the use of explosives. However, ineffective enforcement, exemption of many mines from their provisions, and failure by companies and miners to obey requirements limited the statutes' effectiveness.

Obviously, the coal-mining laws failed to achieve their main purpose as miners continued to die in large numbers after their enactment. But, there was an even more fundamental failure.

Coal mine explosions were not the leading cause of death in the industry in the years down through 1933. Falls of roof and coal killed the largest number of miners (42%), followed by explosions (35%), and other

causes including accidents involving haulage, machinery, and electricity (23%)[2]. The same pattern prevailed in the industry nationally. Even when they specifically addressed them, the coal-mining laws, in practice, did not effectively reach the causes of two-thirds of the West's coal-mining fatalities. The question, of course, is why?

The coal-mine owners' power and financial interests often were formidable, but they only partly accounted for this fundamental flaw. The nature of the coal-miner's work, his relationships with others, and a web of legal and social opinion on the issue of industrial safety were far more important in structuring the law and in making the mines very dangerous places in which to work.

Coal-miners traditionally viewed themselves as skilled tradesmen. Usually working in two-man teams, they were responsible for performing all of the basic tasks of producing coal. They undercut the coal seam, drilled holes for explosives, charged the holes with powder, and, after the coal was shot down, loaded it into cars for transport to the surface.

The cycle of undercutting, drilling, shooting, and loading coal was by no means all there was to the miners' work, for they also had to maintain their work rooms. This involved a number of jobs that the miners called "deadwork". Deadwork included "sounding" roofs and taking down loose rock and coal, or setting timbers to hold up material that could not be taken down safely; "brushing" the sides and floor to advance the room as coal was removed; and laying track so that coal cars could be pushed up close to the face. For all this work, the miners received a contract, or tonnage, rate.

The tonnage rate lay at the core of the economic and social relationships that structured the miner's working life. It was the key to his work, his earnings, and, ultimately, to his safety.

The tonnage rate created an incentive for coal-miners to risk their lives, especially by avoiding such deadwork as taking down bad roof and setting timbers. The miners understood this fact of their working lives. "All the deadwork you done, you done on your own," one old-timer recalled. "If you didn't get the tonnage out, you didn't get anything." Another man said of timbering that "you put them up on your own time and there was lots of times a fellow was...in a hurry to load that car, see, get that loaded and get another one and that's the reason so many men was hurt." Miners constantly complained that the tonnage rate did not pay them fully for the amount of deadwork they had to do.[3]

In addition to the pick-miners, a whole complement of "day men"--so called because they received daily wages instead of tonnage rates--also worked in the mines. Some drove tunnels and laid track; mule drivers and haulage operators gathered the loaded coal cars for transport to the surface; weighbosses weighed the coal; blacksmiths kept tools in order. When any of these day men did not do their jobs properly, or honestly, they made it more difficult for the miners to load their coal and draw their pay.

Superintendents and mine bosses could also affect working conditions and safety. Mine bosses were especially important because they could hire and fire, assign workplaces, required extra deadwork, and were responsible for supplying the miners with timber and track. Most of them did their jobs well. But, sometimes they were incompetent; sometimes they demanded bribes; sometimes they had it in for a man. Even honest, well-intentioned mine bosses sometimes pushed the miners to get the coal out, even if it meant delaying safety work.

Coal-mine owners and executives, of course were also interested in productivity. But, as one company official put it, they were neither brutes nor fools. They did not deliberately set out to kill and maim miners. By the early 20th century, most large operators, established safety programs and departments. However, whether as a matter of conviction or convenience, operators saw the miners in very much the same light as the men viewed themselves, as skilled tradesmen. To them, too, the tonnage rate defined the miners' work. Because of that, they refused to distinguish between deadwork and the other tasks of mining coal. In their view, the tonnage rate rewarded the miners for all of their work. John C. Osgood, who founded the Colorado Fuel and Iron Company and later owned another major western coal company, Victor-American Fuel, maintained that "the coal miner is a contractor, he is given a certain place in the mine, he is paid for the result of his labor. It is simply a quibble to say that he does a lot of work that isn't paid for."[4]

That is not to say that employers and supervisors did not understand the relationship between tonnage rates, deadwork, and death. Mark Danford, a superintendent for the Wootton Land and Fuel Company, in southern Colorado, complained that miners frequently neglected their timbering chores because of "their eagerness to load more coal." But that was not the operators' responsibility. To most operators, the majority of accidents were the result of the miners' own carelessness. Osgood complained that operators faced "a great difficulty" in contending with "that inherent spirit there is in human nature to gamble and take chances and run the risk of receiving injury that is entirely unnecessary." Such wanton recklessness, he believed, was akin to that of "a small boy that runs out in front of an automobile in the street to see how close he can come to it."[5]

State coal-mine inspectors sometimes criticized operators for lax attention to safety matters. But, they

also tended to agree that the miners' carelessness was the major cause of death in the mines. Said Colorado's John McNeil in 1886: "I am inclined to think that disobedience, incompetence and negligence fully explain the cause of as many accidents, if not more, than are due to the hazardous character of coal-mining itself." New Mexico's John Fleming blamed the majority of accidents involving roof and coal falls on "the overanxious miner trying to get out as much coal per day as possible without regard for his own safety."[6]

Coal mine officials and government mine inspectors became even more convinced that miners carelessly caused their own deaths as the composition of the workforce changed. Between about 1880 and 1914, thousands of European, Mexican, and Asian immigrants found their way to the West's coal camps, eventually displacing the first generation of English- and Welsh-stock miners. Some were recruited as strike-breakers; others came on their own, pursuing the promise of opportunity. Few had any experience in mining.

The industry and state mine inspectors quickly linked rising accident rates to the influx of immigrants. John McNeil in 1888 blamed "Italians and other inexperienced miners" for accidents in Colorado. Two decades later, another Colorado mine inspector complained about accident-prone foreigners "taking up coal-mining...without previous training."[7]

Few in industry or government took note of their own responsibility for sending untrained men into the mines. By custom and by law, workers assumed the risks of their employment, regardless of whether they were fit for the job. If they died as a result of their own inexperience, carelessness, or incompetence, well, it was their own fault.

The traditional definition of the miner as a skilled tradesman, the tonnage rate, the miners' vulnerability to the power of other employees and of supervisors, ethnicity, and a body of custom and law that held the miner to be primarily responsible for his own safety were some of the important underlying causes of death in the mines. Because they did not reach these underlying causes, the coal-mining laws did not reflect the reality of the miners' working environment.

By the time the coal-mining laws began, after the mid-1930s, to deal effectively with the causes of most deaths--expecially falls of roof and coal--unions and mechanization already were transforming the nature of work and work relations in the mines. Union contracts included provisions limiting deadwork and governing miners' relations with other workers and bosses. Ultimately, it was mechanization that was most important in creating safer working conditions. Even though machines brought with them their own unique hazards, they ultimately replaced the skilled pick-miner and, in so doing, also eventually did away with the tonnage rate. In mechanized mines, miners earned day wages. And, though they lost all remaining control over their work, miners no longer faced a daily Hobson's Choice between safety and earnings.

Telling the story of industrial safety in the Rocky Mountain coal industry involved much more than simply identifying the causes of death, counting the bodies, examining coal-mining laws, and pointing fingers at the bad guys. Instead, I had to weave together strands of labor, industrial, political, legal, and social history. And, in trying to make sense of the underlying causes of death in the mines, I came to appreciate not only what has been done, but how much remains to be done in telling fully the story of the western coal-miners.

For example, business histories have focused mainly on the large operators like CF&I and the railroad-owned mines. Among the best are H. Lee Scamehorn's two-volume history of the Colorado Fuel and Iron Company, and William S. Bryan's study of the role of railroads in coal-mining in the northern plains. But, scores of smaller operators also played an important part in the coal industry, and they had their own, very different business and labor problems.[8]

Only a couple of recent books have attempted state or regional surveys of the western coal-industry. A. Dudley Gardner and Verla Flores' *Forgotten Frontier* (1989) is a fine survey of the industry in Wyoming. Similar studies are needed for the other Rocky Mountain states. Priscilla Long's *Where the Sun Never Shines* (1989) attempts both a national and regional study, but focuses on the 1913-1914 strike in Colorado and uses 1920 as its terminal date. The economic, labor, and social environment of coal-mining in the West has changed, and changed again, in the ensuing seven decades.[9]

It is well-settled, now, that the history of the western coal-miners' labor movement does not begin and end at Ludlow. Recent work by Allan Kent Powell and others has broadened our knowledge in that area. But, most of the research has been on labor and labor upheaval in Colorado and Utah. Intriguing stories in the other Rocky Mountain states remain to be told fully. In addition to state and regional labor studies, other topics need to be explored. For example, a recent article on the 1927-1928 strike in Colorado found no significant social differences between strikers and scabs. What does this mean, especially in terms of "new" labor history's search for an American working class? How did work and labor relations affect life above ground? Marilyn D. Rhinehart's look at life and work in Thurber, Texas demonstrates the potential for community studies of the many coal camps and towns of the Rocky Mountain region. Howard Gitelman's study of the Rockefeller Plan, the company union set up by the Colorado Fuel

and Iron Company following the 1913-1914 Colorado coalfield war, shows the workings of corporate paternalism from the perspective of the executive suite; and John Thomas Hogle's detailed examination of the plan's operation at both the corporate and the camp levels provides useful insights into the differences between coal miners' and steelworkers' responses to the company union. However, we have, as yet, no good recent study of the Plan's impact on the daily lives and work of CF&I employees, or of its influence on other western industries.[10]

Compared to the labor movement, we know little about the lives of women and children in the coal camps. How did comporate power and paternalism, labor upheaval, and the ever-present danger of injury and death affect family life? Sarah Deutsch's *No Separate Refuge* (1987) touches briefly on some of these questions. And, Priscilla Long, in *Where the Sun Never Shines,* notes that wives were often more militant and active in labor upheavals than striking miners.[11]

The coal camps were important ethnic meeting grounds. Zeese Papanikolas's biography of Louis Tikas, a leader of the 1913-1914 Colorado strike, is the best recent book-length look at the "new" immigrant's encounter with industrializing America in the context of coal-mining and labor upheaval in the West. We know what groups came and in what numbers, but more needs to be done on how ethnicity influenced social conditions and labor relations. And, studies of migration in and out of the coal camps of the various Rocky Mountain states could tell us much about the peopling of the West.[12]

Since the 1920s, strip-mining has had tremendous social and environmental impacts in the Rocky Mountain and northern plains regions. So far, though, this topic has been dominated by political scientists and sociologists. Historians could bring much to it and learn much from it. Robert W. Righter's *The Making of a Town: Wright, Wyoming* (1985) points the way.[13]

The problems and opportunities for scholarship in the history of western coal-mining are many and varied. As the study of industrial safety demonstrates, their exploration will demand diligence and enthusiasm from enterprising scholars willing to gather and weave together diverse strands of subject matter and methodology. To the traditional approaches of business, labor, and political history must be added the newer methods of social, cultural, and environmental history.

The "new" western history often stresses the themes of industrialization, social transformation, and environmental change. Nowhere do these themes appear and converge more clearly than in the coal camps of the Rocky Mountain West, whose history bridges both the 19th and 20th centuries. Whether we view it in terms of "conquest," "settlement," or "growth," the history of coal-mining in the West is an important window to the region's past and present.

ENDNOTES

[1]James Whiteside, *Regulating Danger: The Struggle for Mine Safety in the Rocky Mountain Coal Industry* (Lincoln: University of Nebraska Press, 1990). Also on industrial safety and regulation, see Daniel J. Curran, Dead Laws for Dead Men: The Politics of Federal Coal Mine Health and Safety Legislation (Pittsburgh: University of Pittsburgh Press, 1993).

[2]Coal-Mining Fatalities in the Rocky Mountain West Through 1933:

	Total	Rock & Coal Falls	Explosions	Other
Colorado	3020	1444	864	712
New Mexico	1021	352	502	167
Utah	965	321	431	213
Wyoming	1430	566	549	315
Montana	401	227	26	148
TOTAL	6837	2910	2372	1555
		42.56%	34.69%	22.74%

Above data derived from state and territorial coal-mine inspectors' reports; U.S. Geological Survey, *Mineral Resources of the United States*; U.S. Bureau of Mines, *Minerals Yearbook*; and *Bulletins*.

[3]University of Colorado at Boulder, Institute of Behavioral Science, Western Coal Project, "The Life of the Western Coal Miners, Part I, Toil and Rage in a New Land: (videotape, 1982): University of Colorado at Boulder, Western History Collections, Coal Creek Interviews, Victor "Tooley" Calmette, p. 7.

[4]Frank E. Gove, letter to editors, 27 September 1913, in Colorado, Division of State Archives and Public Records, Governor Elias M. Annoms, Corres. re. Miners Strike, "A-O," 1913-1915; *Pueblo Star-Journal*, 16 November 1913, p. 7.

[5]U.S. House, Committee on Mines and Mining, *Investigation of Conditions in the Coal Mines of Colorado* (63d Cong, 2d Sess., 1914), vol. I, p. 1029; U.S. Commission on Industrial Relations, *Final Report and Testimony* (Sen. Doc. 415, 64th Cong, Ist Sess., 1916), vol. vii, pp. 6454-6455.

[6]Colorado, State Inspector of Coal Mines, *Second Biennial Report,* 1885-1886, p. 28; U.S. Mine Inspector, New Mexico (territory), *Annual Report, 1895,* p. 699.

[7]Colorado, State Inspector of Coal Mines, *Third Biennial Report, 1887-1888,* p. 24; *Twelfth Biennial Report, 1905-1906,* p. 5.

[8]H. Lee Scamehorn, *Pioneer Steelmaker in the West: The Colorado Fuel and Iron Company* (Boulder, CO.: Pruett Publishing Co., 1976) and *Mine and Mill: The CF&I in the Twentieth Century* (Lincoln: University of Nebraska Press, 1992); William S. Bryans, "A History of Transcontinental Railroads and Coal-Mining on the Northern Plains to 1920: (Ph.D. dissertation, University of Wyoming, 1987). Useful studies of small operators include Glen Barrett, "P. J. Quealy: Wyoming's Coal Man and Town Builder," *Annals of Wyoming,* vol. 47 (Spring, 1975) and Dolores Plested, "Where Coal Was Once King," *Colorado Heritage*, 1987 (Issue 2).

[9]A. Dudley Gardner and Verla R. Flores, *Forgotten Frontier: A History of Wyoming Coal Mining* (Boulder,CO.: Westview Press, 1989). Priscilla Long, *Where the Sun Never Shines: A History of America's Bloody Coal Industry* (New York: Paragon House, 1989).

[10]Allan Kent Powell, *The Next Time We Strike: Labor in Utah's Coal Fields, 1900-1933* (Logan, Utah: Utah State University Press, 1985) and "Labor's Fight for Recognition in the Western Coalfields," *Journal of the West,* vol. 25, no. 2 (April, 1986); Priscilla Long, *Where the Sun Never Shines: A History of America's Bloody Coal Industry* (1989); Bobbalee Shuler, "Scab Labor in the Col-

orado Coal Fields: A Statistical Study of Replacement Workers During the Columbine Strike of 1927-1928," *Essays and Monographs in Colorado History*, Essays No. 8 (1988); John Thomas Hogle, "The Rockefeller Plan: Workers, Managers and the Struggle Over Unionism in Colorado Fuel and Iron, 1915-1942," (Ph.D. dissertation, University of Colorado at Boulder, 1992).

[11]Sarah Deutsch, *No Separate Refuge: Culture, Class, and Gender on an Anglo-Hispanic Frontier in the American Southwest, 1880-1940* (New York: Oxford University Press, 1987); Priscilla Long, *Where the Sun Never Shines* (1989).

[12]Zeese Papanikolas, *Buried Unsung: Louis Tikas and the Ludlow Massacre* (Lincoln: University of Nebraska Press, 1991). Two recent articles on immigrants in the Montana coal camps are Anna Zellick, "Fire in the Hole: Slovenians, Croatians, and Coal-Mining on the-Mussel shell," and Erika Kuhlman, "Greetings from the Coalvillage: Finnish Immigrants of Red Lodge," both in *Montana, The Magazine of Western History*, vol. 40, no. 2 (Spring, 1990), pp. 16-31, 32-45.

[13]Robert W. Righter, *The Making of a Town: Wright, Wyoming* (Boulder, CO.: Roberts Rinehart, 1985).

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