

MASCULINITY, MEDICINE AND MECHANIZATION:
THE CONSTRUCTION OF OCCUPATIONAL HEALTH IN NORTHERN
ONTARIO 1890-1925

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ABSTRACT

This dissertation examines workplace issues and events that shaped men's health, and the healthcare services in support of them, in northern Ontario's resource extraction industries. Between 1890 and 1925 there were important transformations in the hardrock mining sector including: technological innovations and refinements of the materials and devices used to extract ores; the healthcare mandated and legislatively prescribed but challenging to deliver to frontier workspaces; and how the complex interactions of the men, their work, their communities, wartime demands and collective bargaining combined to construct new definitions of masculinity.

Using quantitative data from the Ontario Bureau of Mines on the numbers of annual accidents and fatalities, a clearer understanding emerges that reveals how workingmen's bodies were understood over time. Together with newspaper accounts, the reports of coroners' juries, personal papers, doctors' memoirs and popular histories, the role of work and workplace conditions clarifies how health was managed or how it suffered as the exploitation of the provinces natural resources began in earnest. The impact of World War One caused a wholesale change in the scale and importance of the mines and the men that worked them. This was seen in their solidarity, strength and successful strike immediately after the war and in fewer accidents and fatalities. The pace of change however faded in the post-war era. The gains that were made were kept and men's health and safety never again saw the alarming losses as those enumerated here.

This dissertation is dedicated to my family
who lovingly supported and encouraged this project from
the moment it was conceived. I love them dearly and

thank them gratefully:

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helpful to a fault. To date, all the archivists I have met have been wonderfully helpful. I applaud them all. They are deservedly proud of the histories they record. I must also thank the hundreds of miners who contributed to our history with their lives. Mining statuary dots the landscape of the north and they are testimony to the sacrifices made for this industry and the country.

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Chapter One

Introduction*The Peasant and the Worker¹*

*And now let your thought go,
And let them see the sights
Of the underground, where in holes stir.*

*Like worms through tunnels they crawl
And heavy rocks pull to the daily sun.
During their life they dig their grave
Passing their entire life in darkness.*

*No one cares for the poor people,
Especially when they are miners.
Only when someone loses his life
The newspapers make a little noise.*

*But everything subsides, and so does this lament,
As does anything human pertaining to the poor,
And when crying widows
Count the bodies lifted from the dark caverns.
For this no one's head aches
And the world sleeps quietly as before.*

S. Mahovlich (1922)

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In September 1892, at the Blezard mine in Northern Ontario, five miners were killed instantly when a ten-ton rock spontaneously released from overhead and crushed them. Two others working nearby were injured. Even in an industry acknowledged to be dangerous, the accident was shocking. Ontario's Bureau of Mines director, Archibald Blue,

¹ Jaworsky, B. *Lamps Forever Lit: A Memorial to Kirkland Lake Area Miners*. Calgary. Cambria Publishing. 2001. p. 57. This source is a popular history featuring a compilation of mining deaths and the circumstances surrounding them. It focuses on Kirkland Lake, and nearby mines, between 1900 and 1996. The poem is by a Croatian miner about the death of a fellow Croat. There is, however, no additional information provided about the author.

and the area's Mine Inspector, Alan Slaght², attended at the site and conducted an investigation. A coroner's jury was convened and found the cause of the deaths to be both unknown and unknowable.³ Consequently, no blame was assigned. In the absence of competing evidence or testimony, the matter and the men were laid quietly to rest. This incident, among many others, moved me to question the nature and experience of work among men along Ontario's resource extraction frontier. I wanted to understand the people, locations, hazards and rewards, the gendering of workspaces, legislative sensitivities and the response of workers, companies and medical professionals to the work environment, and finally, how changes were negotiated over time.

This dissertation explores the work and health of men principally employed in northern Ontario's hardrock mining industry, between 1890 and 1925. It employs three principal axes of analysis in order to examine how working men's health and identity were shaped by a complex interplay of the following: definitions of masculinity (crafted by working men of diverse ethnic backgrounds, the provincial government, frontier physicians and upper-class mine owners); notions of appropriate occupational healthcare (demanded by workmen, managed by companies, delivered by doctors and imagined by the Ontario government); and of technological changes in the workplace (many of which made work conditions more dangerous). This dissertation investigates these three dynamic and evolving influences as they intersected to define the daily work and experiences of labouring men. The study begins in 1890 when the provincial government reorganized its Mining Act and in the process empowered mining inspectors in new ways. The study ends

² Slaght was a retired Baptist minister with no previous experience, education or training in mining. The character of his work was general and he adapted to mining as needed, as did most other bureaucrats of the time. Smith, P. *Harvest from the Rock, A History of Mining in Ontario*. Toronto. Macmillan of Canada. 1986. p. 93.

³ *Second Report of the Bureau of Mines 1892*. Toronto. Warwick and Sons. 1893. pp.255-257.

in 1925 just before mining revenues began to waver and prior to the collapse of the stock market in 1929. I point to two significant turning points, one in 1905 when technologies transformed mine processes and materially changed the underground work environment and the other in 1915 at the confluence of World War One's outbreak and the introduction of new worker compensation legislation. Although this study centres on mining and mining records, I have, where and when possible, tried to include parallel situations in lumber camps and railroad construction communities as they were also a part of Ontario's resource frontier.

My dissertation seeks to understand how technological changes in mining work, and the occupational risks that accompanied them, helped shape definitions of masculinity and healthcare in Northern Ontario mining communities after 1890. My work explores the attitudes of government and bureaucrats to masculinity, healthcare and technology within a dynamic legislative and regulatory framework; the position of employers to these same issues but through the needs of profit-oriented private enterprises; the involvement of contract physicians who were contractually bound to the companies but practically focused on the health of the workers; and the miners who engaged the circumstances and challenges of their work. The ways in which these interests competed or cooperated over time are examined.

The foundational literature for this dissertation begins with Ian Radforth's *Bushworkers and Bosses: a Social History of the Northern Ontario Logging Industry, 1900-1980*.⁴ He examines the work and workers associated with timber limits, one of the richest natural resources of the province. He looks at the men who worked at the many

⁴ Radforth, I. *Bushworkers and Bosses: a Social History of the Northern Ontario Logging Industry, 1900-1980*. Toronto. University of Toronto Press. 1987.

winter camps and the types and styles of technologies that developed over an eighty-year span. My work agrees with and expands on Radforth's but my research antedates his study and adds legislative, regulatory and quantitative data about the dangers of mining work and the ruggedness of the men who undertook it. Unlike logging, mining was not seasonal. Its permanent workforce – comprised of both immigrants and English-speakers – negotiated frontier work conditions through all four seasons and miners managed their health and healthcare within their northern communities.

The prominent paternalistic role of Ontario's mining legislation marks a key difference from Radforth's but confirms the arguments of H.V. Nelles in *The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1849-1941*.⁵ According to the stipulations of the *British North America Act* the provinces were responsible for, and the stewards of, both the labour and natural resources under their aegis. Consequently, the development of these areas was politicized and Nelles addresses the implications on Queen's Park. The other side of the equation, however, was the effect of the government's attitudes, policies, and regulations on the men working underground. My study looks at how the government, arguably the principal animator of the resource economy, used the *Mine Act* to interpret and enforce its wants and responsibilities on the workers and what can be known directly and indirectly from the data contained in its voluminous *Annual Reports*. I interrogate the numbers and the values behind their data to suss out how their interests affected the identity, health and masculinity of the men. In doing this I extend Paul Craven's focused analysis of the Canadian government, an

⁵ H.V. Nelles in *The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1849-1941*. Toronto. University of Toronto Press. 1974.

“impartial umpire”, in the decade immediately prior to World War One.⁶ Like Nelles, Craven’s work emphasizes the gross economic impact rather than the health and safety of the workmen, where the heavy lifting was taking place.

To further understand the role and presence of government in Ontario’s resources I include Brian Palmer’s data, which help profile not only how resource work was legislatively gendered but also how government agencies monitored the value of materials.⁷ My study confirms that much of the demanding physical work was considered either undesirable or unsuitable for the dominant British ethnicity: white British males. The type and style of work and labour prompted the immigration of an array of European ethnicities. Donald Avery documents the roles of “dangerous foreigners” and how immigrants (long term and short term) contributed to the resource economy and labour activism.⁸ Avery’s work covers almost the same period as mine but I concentrate on the north and on the changing identities and health of miners rather than on labour radicalism. This difference situates miners beyond labour movements and so a new image of the worker is created. As Bryan Hogan’s book title *Cobalt, the Year of the Strike 1919*, suggests, it is situated in one northern mining community immediately after World War One as he captures the struggles of newly organized mine workers.⁹ Although valuable in many ways, I had to expand Hogan’s work, both before and after 1919, to question the ideas and attitudes that compelled the men to successfully challenge the working and living conditions in the north.

⁶ Craven, P. *Industrial Relations and the Canadian State, 1900-1911*. Toronto, University of Toronto Press. 1980.

⁷ Palmer, B. “Use of Census Manuscript Data for Historical Research.” *Histoire Sociale/Social History*. XXVIII. 56. November 1995.

⁸ Avery, D. “*Dangerous Foreigners*” *European Immigrant Workers and Labour Radicalism in Canada 1896-1932*. Toronto. McClelland and Stewart. 1979.

⁹ *Cobalt: The Year of the Strike*. Cobalt. Highway Book Shop. 1978. For a similar comparison in pre-Confederation British Columbia see also Perry, A. *On the Edge of Empire; Gender, Race and the Making of British Columbia, 1849-1871*. Toronto. University of Toronto Press. 2001.

Beginning with Harold Innis' "staples theory" and including observations from Donald Creighton, Arthur Lower, Albert Tucker among others, the Canadian resource economy has attracted the attention of historians for a long time. These earlier studies paid little attention to occupational health. Subsequent scholarship has been more attentive. Nonetheless, the literature on occupational health is sparse. Studies of events in British Columbia, like the Frank Slide or disasters in the coal mines of the Crow's Nest Pass, have been captured and interrogated by Jeremy Mouat's *Roaring Days*¹⁰ and Karen Buckley's, *Danger, Death and Disaster in the Crow's Nest Pass*.¹¹ Nova Scotia's coal mining industry has been studied extensively by Robert MacIntosh, Donald McLeod, Steven Penfold, and others.¹² These studies focus largely on social backgrounds and reactions to mining disasters rather than the day-to-day occupational dangers that I address. I wanted to understand why the fatalities among Ontario's hardrock miners increased annually despite greater provincial governance, increasingly detailed regulations, and ever-newer extraction technologies.

To do this I engaged the studies of Fudge and Tucker in *Labour Before the Law; The Regulation of Workers' Collective Action in Canada 1900-1948*¹³ as well as *Work on*

¹⁰ Mouat, J. *Roaring Days, Rossland Mines and this History of British Columbia*. Vancouver. UBC Press. 1995.

¹¹ Buckley, K. *Danger, Death and Disaster in the Crowsnest Pass Mines, 1902-1928*. Calgary. University of Calgary Press. 2004.

¹² See McIntosh, R. "The Boys in the Nova Scotian Coal Mines 1873-1923." *Acadiensis*. Vol. 16. Issue 2. 1987. pp. 35-50. Macleod, D. "Colliers, colliery safety and workplace control: the Nova Scotian experience, 1873 to 1910." *CHA Hist. papers*, 1983: 226-53; Penfold, S. "Have You no Manhood in You?": Gender and Class in the Cape Breton Coal Towns, 1920-1926." *Acadiensis XXIII*. 2 (1994) pp.21-44; Frank, D. "Organized Labour and the Making of Public Policy in Twentieth-Century New Brunswick", *Journal of New Brunswick Studies/Revue d'études sur le Nouveau-Brunswick*, Issue 2 (2011) McKay, I. "The Realm of Uncertainty: The Experience of Work in the Cumberland Coal Mines, 1873-1927." *Acadiensis* 16. 1986.

¹³ Fudge, J. and Tucker, E. *Labour Before the Law, The Regulation of Workers' Collective Action in Canada 1900-1948*. Don Mills. Oxford University Press. 2001.

Trial; Canadian Labour Law Struggles.¹⁴ Both of these texts see workers contesting the conditions and safety of work in addition to securing the right to collective action, although in those studies mining received only cursory attention. Eric Tucker's independent work *Administering Danger in the Workplace: The Law and Politics of Occupational Health and Safety Regulation in Ontario, 1850-1914* offers a more sustained discussion of miners.¹⁵ He used a legal framework to understand what constituted "dangerous" work, which mining was axiomatically acknowledged to be. Beginning with the principle of "assumed risk" – a nineteenth century baseline for accident and labour-related jurisprudence – I investigate how and why this legal precedent was eventually replaced in the mines. I add to his analysis by auditing the attitudes behind the laws, and assessing the implementation of regulations that guided the province's mine inspectors who were in charge of protecting and promoting miners' health.

This dissertation also extends our scholarly knowledge by focusing on occupational health in Ontario's north. The idea has been included tangentially, not directly, by Jayne Elliott in her look at the chain of Red Cross hospitals from the post-World War One period to 1984. Her dissertation "Keep the Flag Flying" *Medical Outposts and the Red Cross in Northern Ontario 1922-1984* begins as this one concludes.¹⁶ Her examination of the "... shifting responsibilities for health care ... as hospitals transformed from largely privately supported facilities into institutions increasingly funded and controlled by government" does not engage the dynamic relationships among the bureaucrats in the field although

¹⁴ Fudge, J. and Tucker, E. *Work on Trial, Canadian Labour Law Struggles*. Toronto. The Osgoode Society. 2010.

¹⁵ Tucker, E. *Administering Danger in the Workplace: The Law and Politics of Occupational Health and Safety Regulation in Ontario, 1850-1914*. Toronto. University of Toronto Press. 1990.

¹⁶ Elliott, J. "Keep the Flag Flying" *Medical Outposts and the Red Cross in Northern Ontario 1922-1984*. Ph.D. Thesis, Queen's University. 2004. The Introduction is the section that applies most directly to this dissertation but it focuses on women and nursing more than on men and workspaces.

Elliott's understanding of the need for "outpost" hospitals is valuable. There was little coordination among competing provincial departments, so miners continued to organize to try to gain some benefits or improvements in their workplaces and the company-owned boarding houses. Moreover, the facilities Elliott considered were not necessarily dedicated to men or situated in the camps. Although, the bulk of my work predates Elliott's, I confirm the paucity and remarkably nuanced nature of medical care in remote Ontario communities.

In the same vein, scholars have not yet produced any specific studies of "contract physicians" who, as the phrase indicates, were legally bound to render all necessary medical services to company workers whether the result of illness or accident. Jacalyn Duffin's consideration of Dr. Langstaff's medical practice remains one of the few that documents the life of a rural physician in nineteenth century Ontario.¹⁷ My work accords with Duffin's but complicates it because I distinguish the resource frontier from rural (agricultural) communities. Although are both non-urban, the isolation of the resource camps posed significantly more problems, vis-à-vis health, than the even the poorest of road systems in farming communities. Langstaff's emphasis on travel and access was exacerbated dramatically in the northern wilderness; this is seen in Dr. Clifford Smylie's autobiography, *Northern Doctor*.¹⁸ Sasha Mullaly's *Unpacking the Black Bag*¹⁹ comes closer to the remote frontier experiences of the mines of Northern Ontario. She demonstrates, as I do, that often physicians were valourized more for their efforts to get to a patient than for their technical expertise once they arrived. Mullaly studies how

¹⁷ I am familiar with John Norris's article on country doctors in British Columbia and some of his findings accord closely with mine. Although he does comment on doctors as coroners he relies almost exclusively on complex statistical analyses. Norris, J. "The Country Doctor in British Columbia 1887-1975. An Historical Profile." *BC Studies*. No. 49. Spring 1981. pp.15-39.

¹⁸ Smylie, C.H. *Northern Doctor: Memoirs of Clifford Hugh Smylie, M.D.* Cobalt. The Highway Book Shop. 2002.

¹⁹ Mullally, S. *Unpacking the Black Bag: Country Doctors and the Social Transformation of Rural Medicine 1900-1950*. Toronto. University of Toronto Press. 2009

practitioners lived and worked in the Maritime provinces and focuses more on the physician than the patients. This dissertation therefore builds on Ontario's medical history by evaluating the presence and impact of physicians on the occupational health of workers. I wanted to know how doctors mediated the complex middle ground populated by workers, mine owners, government legislators, technologies, and geographic isolation.

As I interrogate aspects of occupational health and occupational medicine I am equally interested in a third axis of analysis – the role of masculinity. I look at the various perceptions of the men doing the work and how their identities were generated; sometimes in the public imagination, sometimes from legislation, sometimes by management, and sometimes by the men themselves. Nancy Forestell's article "Bachelors Boarding Houses and Blind Pigs" and her doctoral thesis "All that Glitters is Not Gold" confirm the rugged masculinity that was popular in the public mind.²⁰ Using the Timmins/Porcupine area over a ten year span - 1909 to 1920 - she looks at the social masculinities of labourers outside of work, not on-the-job. Her work reflects the broader sense of rugged masculinity described in Gail Bederman's *Manliness and Civilization*²¹ and in Ava Baron's "On Looking at Men, Masculinity and the Making of a Gendered Work Class History".²² My study interrogates the competing strains of masculinities found in and around resource extraction communities as I analyze how these masculinities changed over time. Valerie Burton's "The Myth of Bachelor Jack"²³, contributes to this by encouraging the deconstruction of

²⁰ "Bachelors, Boarding-Houses, and Blind Pigs: Gender Construction in a Multi-Ethnic Mining Camp, 1909 – 1920" in *A Nation of Immigrants*. Ed. Iacovetta et al. Toronto. University of Toronto Press. 2002.

²¹ Bederman, G. *Manliness and Civilization; A Cultural History of Gender and Race in the United States 1880-1917*. Chicago. University of Chicago Press. 1995.

²² Baron, A. "On Looking at Men: Masculinity and the Making of a Gendered Working-Class History," in Ann-Louise Shapiro, ed., *Feminists Revision History* (New Brunswick 1994).

²³ Burton, V. "The Myth of Bachelor Jack: Masculinity, Patriarchy and Seafaring Labour" in *Jack Tar in History: Essays in the History of Maritime Life and Labour*. Edited by Colin Howell and Richard J. Twomey. Fredericton, 1991. pp. 179-198.

stereotypical myths – in my case about miners – and other resource workers. Many of these men have been characterized or constructed solely by a normative muscular, Paul Bunyanesque, masculinity rather than by quieter, more nuanced masculinities that interacted with and reacted to various ethnicized and job-related male behaviours. Craig Heron’s “Boys Will be Boys”²⁴ looks at this in Hamilton and how it was manifested socially - in the company of women - whereas my study concentrates on miners in evolving homosocial-to-heterosocial communities in the resource extraction sector. In part I do this by acknowledging Joy Parr’s breadwinner masculinity and the very elastic “contact zones” shared by blocs of ethnic workers, government administrators, physicians and business owners.²⁵ Then I expand Parr’s evaluation of “breadwinner” masculinity, notwithstanding the fact that her study is situated in two urban, industrialized towns while mine is spread over a much broader range of remote, frontier camps.²⁶ Nonetheless, there was a point at which miners, like the craftsmen of the Knechtel furniture factory, became breadwinners. This challenges the muscular masculinity stereotype of the late nineteenth century.²⁷

²⁴ Heron, C. “Boys Will Be Boys”: Working-Class Masculinities in the Age of Mass Production. *International Labour and Working Class History*. Vol. 69. 2006. pp. 6-34.

²⁵ Parr, J. *The Gender of Breadwinners; Women, Men and Change in Two Industrial Towns, 1880-1950*. Toronto. University of Toronto Press. 1990. Pratt, M.L. “Arts of the Contact Zone”. *Profession*. Modern Language Association. 1991. pp. 33-40.

²⁶ Parr, J. *The Gender of Breadwinners*. Parr compares women working in the Penman textile plant in Paris, Ontario to the men in the Knechtel plant in Hanover, Ontario in the nineteenth century.

²⁷ Bederman, G. *Manliness and Civilization, a Cultural History of Gender and Race in the United States 1880-1917*. Chicago. University of Chicago Press. 1995. Bederman uses Theodore Roosevelt’s example to highlight the muscularity of manliness near the turn of the century: “Men needed to take up the strenuous life and strive to advance civilization ... [by fighting].” (171) The work of Ava Baron in “Masculinity, the Embodied Male Worker, and The Historian’s Gaze” *International Labour and Working Class History*. Cambridge University Press. (2006), 69: 143-160 offers helpful analytical threads on worker masculinity including risk-taking behaviours and physical dynamism that overrode ethnic, cultural and class differences. In her earlier work she sees apprenticeship as a way of linking manly work with family responsibilities and this idea supports my findings also. “Acquiring Manly Competence: The Demise of Apprenticeship and the Remasculinization of Printers’ Work” in *Meanings for Manhood Constructions of Masculinity in Victorian America*. Ed. Carnes, M.C. and Griffen, C. Chicago. University of Chicago Press. 1990. Craig Heron’s *Working in Steel; the Early Years in Canada, 1883-1935*. Toronto. McClelland & Stewart. 1991. paralleled my research in that steel factories were, in a sense, an extension of mine production: smelting and milling operations were the final processes. Heron concludes, as I do, that as equipment became

My research indicates that the role of breadwinning masculinity in northern Ontario mining communities has been under-reported, overshadowed by a more exciting profile of manly ruggedness. Notwithstanding the all male composition of the workforce, many miners supported families living far away and breadwinner masculinity grew as mining camps and communities matured. These men lived quietly and modestly and sent a portion of their earnings back to wives and family members.²⁸ Moreover, my study locates masculinity in the work itself as a form of *occupational masculinity* that is not limited to class or ethnicity but rather to the place and styles of work performed.

Then, building on Robert Connell's ideas²⁹, I see alternative masculinities in physicians, business owners, family men, and expressly in a new, patriotic, warrior masculinity that appeared during World War One. Jonathan Vance's *Death So Noble* points to the significance of patriotic masculinity.³⁰ This is revealed in the memorials and statuary dedicated to the Great War soldiers of which miners were an important part.

Technology was another element that challenged the characteristics of traditional mine work. Particular jobs reflected particular masculine traits. All miners – regardless of ethnicity – were expected to behave in manly ways: *occupational masculinity* is the term I have adopted for this. All miners needed to be unafraid of darkness, loud noises, heavy work and privation. And hardrock mining skills were particularly valuable in the trench warfare of World War One. I use the work of Jonathan Vance and Desmond Morris to compare war-work with mine-work and draw parallels between the two.³¹ Miners *qua*

more sophisticated the skill sets of the workers became more valuable but these changes affected the rugged nature of masculinity for working miners.

²⁸ Fitzpatrick, A.

²⁹ Connell, R.W. *Masculinities. 2nd Edition*. Cambridge. Polity Press. 2005.

³⁰ Vance, J. *Death So Noble; Memory, Meaning and the First World War*. Vancouver. UBC Press. 1997.

³¹ Vance, J. *Death So Noble*. Morris, D. *When Your Number's Up: The Canadian Soldier in the First World War*. Toronto. Random House. 1993. See chapter four "Doing Your Bit." Morris notes the influence of

patriots became extensions of the soldiers in the trenches, as men, and – more importantly – as Canadians.³² I argue that this change altered the perceptions of Mine Inspectors who began to use language that interpreted miners more benignly.³³

By animating my study with three key questions in three discrete periods, I explain how the relationships among workers, government, and doctors intersected and how perceptions changed. This study reveals points of convergence and divergence that grew, matured and coalesced around World War One. To interrogate these ideas, however, the importance of the mining economy of that time needs to be understood.

A Brief History of Mining in Ontario

Historians acknowledge that Ontario's natural resources have played significant roles in the development of the province economically, geographically and demographically. Among the riches of the forests, waterways and metals, mining attracted substantial attention from investors, bureaucrats and legislators, but no academic study has yet charted the industry's early years. Popular histories and industry data do confirm that extracting precious metals presented unique challenges in the years between 1890 and 1925. Unlike the rich coal seams in Nova Scotia, Saskatchewan and British Columbia, the ores of gold, silver, cobalt, copper and nickel were locked in Ontario's pre-Cambrian granite and had to be extracted using "hardrock" or "metalliferous" techniques and

mining magnates on the enlistment of miners from Ontario. "Montreal mining promoters recruited Borden's Armoured Battery from Cobalt and Haileybury." P.50.

³² The communities around the Mond or Garson mines donated both money and machine guns to the army in defense of "liberty and humanity". *The Northern Miner*, September 11. 1915. p.7.

³³ The Accident Reports during the war years (1915-1919) offer less harsh understandings of dead and injured miners. They are found to be complicit in their own accident far less often.

technologies. And these were undertaken enthusiastically and profitably across the frontier landscape of New Ontario.

The financial value of mining production grew dramatically during the thirty-five year span of this study. The aggregate total of the metal ores in 1904 was \$5 million; by 1908 it was \$17 million; it jumped to \$34 million in 1912; and it peaked at \$80 million in 1918 when World War One came to a close. In the post-war period, production remained steady but prices fell back to pre-war levels so revenue in 1924 was still a healthy \$52 million.³⁴ The size, spread and importance of the mining economy was integral to the prosperity of the province. Mining offered new revenue streams and opened up new geographical areas and developed jobs at sites which matured into settled communities. The western boundary of Ontario had been reset in 1885, and with it the “new North” was cast. The southern boundary of this “New Ontario” was imprecise but was generally understood to be a casual, meandering line from Ottawa through Sudbury to Sault Ste. Marie. The provincial boundaries were formally set in 1912. By 1925 northern Ontario was home to railroads, communities, and a vibrant resource economy. Mining played a key role in this geographic expansion though, in the first decade of the twentieth century, the total population of the northern region made up less than 7% of the province’s total population of just over two million.³⁵

The process for opening a hardrock mine was long-established. Locating the ore bodies was usually the work of individual prospectors who ranged widely across the wilderness of New Ontario. The hardscrabble men who took on this lifestyle looked for

³⁴ All figures are taken from the *Annual Reports* of the Bureau of Mines for the years cited.

³⁵ Figures are approximate because the boundary for “northern Ontario” was elastic. The estimate is taken from Canada Census figures from 1901 and 1911. <http://automatedgenealogy.com/census/> and <http://automatedgenealogy.com/census11/>.

rock features and outcroppings that bore rich veins worth staking a claim on. The individual prospector walked, camped, canoed and snow-shoed across untamed and unexplored acres anywhere from Rat Portage to Cobalt. Access was treacherous and it challenged the bodies, emotions and finances of those who attempted it. The geography was as raw and dangerous as the weather. The remoteness and isolation of the sites were harsh and enduring. The early prospectors lived transient lifestyles alone, surviving on what could be carried or gleaned from the land. The chances of striking it rich were small but ever-alluring for the fortune hunters whose only assets “were usually his initiative and his willingness to brave the hazards and hardships of the trail.”³⁶ The term “grubstake” grew out of prospecting. The legendary Noah Timmins – a store owner from Mattawa, Ontario who eventually made a fortune in northern Ontario mining -- was famous for agreeing to provide certain prospectors with enough food (grub) and supplies in exchange for a share (stake) of the claims they filed.³⁷

In some cases, successful prospectors struck gold and then formed syndicates for penny mining stocks that drew quick attention and caused “rushes” at those sites. The spectacular successes of prospectors like Fred LaRose³⁸ and Benny Hollinger were the exception rather than the rule but their stories fueled the dreams of hundreds of others.

LaRose was a blacksmith on the Temiskaming & Northern Ontario railroad, (T.& N.O.)³⁹; he sharpened drills and saws for the construction and survey crews and prospected in his spare time. He was illiterate but had a great deal of prospecting experience, energy

³⁶ Smith, P. *Harvest from the Rock*. p.88

³⁷ See Barnes, M. *Fortunes in the Ground; Cobalt, Porcupine and Kirkland Lake*. Toronto. Boston Mills Press. 1993. Chapter Five “The Mine Finders” pp. 89-98.

³⁸ The story of LaRose throwing an axe at a curious fox and discovering a rich vein of silver ore, though likely apocryphal, persists in common mining lore.

³⁹ Temiskaming and Northern Ontario Railroad.

and ambition. In September 1903 he found some pink rock which he melted down in his forge. He could not identify the metallic residue but believed it to be valuable; it was confirmed to be silver and he promptly sold portions of his claims to financiers like William Trewethey and Noah Timmins.⁴⁰

Benny Hollinger was also a tool-sharpener working at the Copper Cliff mines in Sudbury until he went to investigate the commotion around Cobalt in 1905. He prospected near an old pit and found a vein of gold. As Phillip Smith's popular history recounts of Hollinger's initial claim: "The quartz stood up about three feet out of the ground and was about six feet wide, with gold splattered over it for about sixty feet along the vein."⁴¹ Within months, Hollinger sold an option to the Timmins brothers and M.J. O'Brien for \$165,000.00. The Hollinger mine has continued to yield millions of dollars in gold ever since.

Beyond the fortunes of the individual prospector and private companies, the Ontario Bureau of Mines also got involved in searching out ore bodies to be exploited and Larder Lake – sometimes called Canada's forgotten gold rush – is one of the best examples of this. In 1904 the Bureau hired a University of Toronto geologist named Dr. W. Parks to evaluate and survey a previously unexplored area near the Quebec border. His findings were published in 1905 and 1906.⁴² When they appeared, there was a rush to strike it rich. By the end of 1907 more than 4000 claims were filed in this small area but the province controlled registrations and growth to avoid the chaos that had been experienced elsewhere. This kind

⁴⁰ The LaRose story appears in many places but this account is taken from Smith, P. *Harvest from the Rock*. pp.170-172. A similar version of the LaRose story appears in Barnes, M. *Fortunes in the Ground*. Toronto. Boston Mills Press. 1993. pp.16-25.

⁴¹ Smith, P. *Harvest from the Rock*. p.171. See also Barnes, M. *Fortunes in the Ground*. p.164.

⁴² *Ontario Bureau of Mines Report for 1905*. Archives of Ontario. Government Docs M. Microfiche. 1905. pp.185-206 and *Ontario Bureau of Mines Report for 1906*. Archives of Ontario. Government Docs M. Microfiche. 1906. p.117.

of prospecting continued until the late 1920s and early 1930s at which time geologists and aerial surveys brought professional knowledge and new scientific techniques to bear. These new and sophisticated methods ostensibly ended the individual experience – and luck – that had characterized earlier prospecting generations.

Mining companies had been present in northern Ontario since the 1860s and by the 1920s were familiar with the landscape and how to negotiate it. Investment was both local and foreign. For example, M. J. O'Brien was an investor from the Ottawa Valley whose railroad building ventures brought him into the mining business of Cobalt. International investors joined with Canadian ones. The 1888 Ontario commission into the "Mineral Resources of [Ontario] and the Measures for their Development ... led to the conclusion that more than one-half of the capital invested in mining operations in Ontario is American".⁴³ Moreover, British interests in Cobalt area mines (Coniagas, Trewethey, King Edward and Cobalt Silver Queen) motivated the 1916 *Royal Commission to Inquire into and Report on the Unrest in the Mining Industry at Cobalt*.⁴⁴ Shareholders wanted to make sure that ore supplies would not be interrupted during World War One.

Men and machinery had to locate to the ore bodies and that meant erratic and sporadic growth over an expanse of more than 250 million acres. The northern part of Ontario was opened up by the sea-to-sea rail network that was part of the federal government's National Policy. From the east-west orientation of the transnational CNR and CPR lines grew a web of north-south rail spurs that serviced mining and logging camps. Engineers and surveyors scoured the landscape for routes through remote, isolated areas. In the process they found ores that prompted further investigation and sometimes important

⁴³ Smith, P. *Harvest from the Rock*. pp. 75-78.

⁴⁴ Royal Commission Appointed to Investigate Unrest in the Mining Industry in the Cobalt District. 1916. Published in *Labour Gazette XVI*. October 1916.

financial investment. Place names like Calamity Gulch, Ragged Chute, Stoney Lonesome and Silver Centre reveal something about the character of early finds.⁴⁵ Hundreds of potential sites sprang to life but quickly and quietly faded away. In the Temiskaming area alone almost two hundred places disappeared or were subsumed by other settlements. They were, however, evidence of the presence and pursuit of the seemingly limitless natural resources as train cars transported raw materials to smelters for processing, then returned with stores for the workmen.

Sustaining mine camps grew into settlements, which matured – often haltingly -- into towns and established municipalities with families and schools and elected officials. Sudbury, Timmins, Cobalt, Haileybury, New Liskeard and many others began as “camps” which, by 1925 were permanent communities. They were usually towns of single industry, and while local stores or the lumber mills situated near the mines provided some employment, it was mining that drove the economies of these settlements.

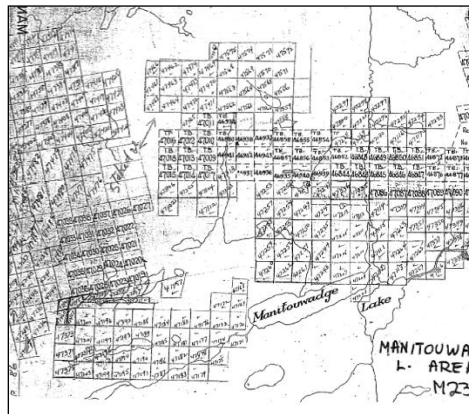


Figure 1.1 Mapping of claims (Manitouwadge)⁴⁶

Figure 1.1 reveals the density of the claims staked over one small area. As they were excavated and assayed, camp populations grew rapidly. The men who worked the

⁴⁵ Taylor. B. *Place Names of Temiskaming*. New Liskeard. White Mountain Productions. 2000.

⁴⁶ http://www.geologyontario.mndmf.gov.on.ca/website/historic_claim_maps/M/Manitouwadge%20Lake.pdf

mines used techniques and technologies that, in 1890, were about to undergo dramatic changes. Until late in the nineteenth century, it was still the custom for two men to operate a manual hand drill; one twisted the bit while the other struck it repeatedly with a heavy sledge hammer; they exchanged positions every five minutes or so. The holes they bored were filled with “black powder” (later dynamite or gelignite), which was tamped into place with a long wooden dowel (to avoid sparks), then secured by (usually paper or cotton) wadding. A fuse was inserted into the charge and that fuse was joined to a network of charges that were all connected to a main fuse. After the men retreated a safe distance, the main fuse was lit and the blasts occurred in a prescribed sequence so as to release the largest volume of ore from the vein.

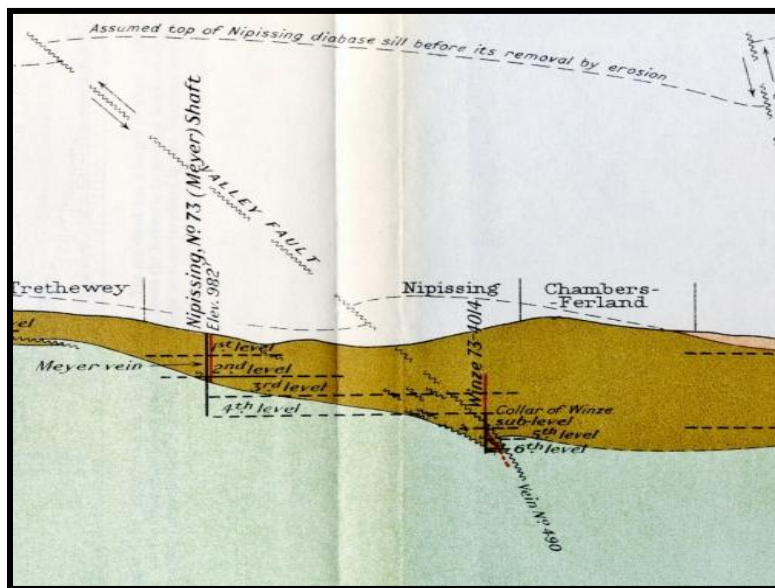


Figure 1.2 Cross-section of a hardrock mine⁴⁷

This illustration of an early twentieth century silver mine shows how, over a small section of land, hardrock ore bodies were explored using vertical shafts and horizontal cuts.

After the shaft was vented of toxic gases, the men returned and raked through the rock debris called “muck.” These rocks were further reduced using hand sledges in order

⁴⁷ <http://uwaterloo.ca/earth-sciences-museum/museum-exhibits/discovery-mine/geological-history-cobalt>

for it to be shoveled onto a tram which rolled to a pit where the contents were dumped. A windlass or elevator raised the muck to the surface where it was sorted and stamped (crushed) and then the ore was loaded onto a train car for transport to the nearest smelter. Back in the mine, the walls and roof of the stope (rock face being worked) were “scaled”. This meant making the worksite safe using long metal bars to tap and probe for pockets of gas or loose rocks. This was designed to reduce incidents of spontaneous releases or falls of rocks called “rockbursts”.⁴⁸ Once completed the cycle began anew.

At the dawn of the twentieth century new power sources led to the introduction of new devices and techniques which increased production, noise and dust levels. Electricity improved the lighting systems above ground as well as in the main mine shaft. Electricity also powered bellows to vent the toxic gases (black or white “damps”) that built up following a blast. Electric water pumps exhausted the ever-present pools of water that seeped in from aquifers. At the same time, pneumatic tools drilled more holes, deeper and faster. New explosives – especially Dynamite – dramatically accelerated the release of ores and production. However, these innovations also increased rates of accident and death, in part because protections for miners lagged behind the new devices surrounding them. Miners working deep underground continued to use candle-light well into the first decade of the twentieth century. Head protectors – euphemistically called helmets – were constructed by laminating layers of cardboard that quickly softened when wet. Gloves, boots, jackets and eye-wear were all the responsibility of the individual; nothing required

⁴⁸ Early on, the presence of heavy dust was largely ignored until water hoses, called “dust allayers” appeared in the mines shortly before World War One. The hoses not only quieted the dust, they helped reveal weak areas that had to be brought down before work could resume. Unfortunately, these devices also soaked the miners’ clothing and put out their candles, which was why they were objected to.

them to buy or wear protective gear until the 1908 revisions to the *Mine Act* but enforcement of the regulations was discretionary and inexact.

The Cast of Characters at the Resource Frontier

The records of the Bureau of Mines reported that the number of men employed in mining grew steadily from the outset. Between 1900 and 1915 the ranks doubled from about 10,000 to 20,500. The ethnic composition of the workforce was widely mixed overall. There were, however, dense concentrations of specific ethnicities at some sites. Ian Radforth looks at the Finnish population that worked in and around Fort William and Port Arthur.⁴⁹ The town of Espanola, just west of Sudbury, was named for the heavy population of Spanish resource workers in that area. It seems there were far more foreigners engaged in mining than in logging.⁵⁰ Government records reveal that while the largest bloc of miners was English-speaking - the marker used to identify ethnicity - they did not comprise an overall majority. Anglophones represented forty to forty-five percent of the mining population; the rest were from a broad assortment of countries: Germany, Austria, France, Finland, Norway, Sweden, Italy, Poland, Russia, Galicia and more. Most were alone and dubbed “sojourners”: they came to work for a short time, save and return home. Some, not many, brought their wives and children with them; others had their families join them after getting established here.

⁴⁹ Radforth, I. *Bushworkers and Bosses*. 1985.

⁵⁰ The Bureau of Mines *Annual Reports* record the ethnicities of miners in particular instances and it is through tabulations of these annual records that I can assert the ongoing presence of a broad diversity of ethnicities in mining communities. See the 1908 report which says in part “... the class of labour employed in the Sudbury mines ... [is] largely men of foreign origin” P. 43.

Very few of the workers I look at were functionally or occupationally literate.⁵¹ The inability to read was a matter of significance as were the conflicting and competing language skills. There was no *lingua franca*. Gesturing and shouting were the primary methods of communication. The workplace and the province were governed in English, which was inaccessible or only vaguely useful to the majority. This complicated what was already dangerous work. Communicating with co-workers was essential to the health and well-being of all those working around explosives. Mine inspectors recognized this early, as did social reformers like Alfred Fitzpatrick. He founded the Ontario Reading Camps Association which evolved into Frontier College.

Working men were joined at the resource frontier by agents of the provincial government who worked for the Ontario Bureau of Mines, a division of the Ministry of Natural Resources. Despite the growing number of statutes on the books, the industry remained one of the most dangerous. A report from the Charlton Commission in 1890 noted:

The [Ontario Mine] Act contains no provision for the health and safety of miners, and although no law can ensure workmen against the occurrence of accidents or the effect of foul air, it is none the less necessary that every possible precaution for their health and safety should be taken.⁵²

Despite its prophetic nature, the observation was not acted on for a decade.

Following an egregious jump in fatalities, the Bureau of Mines initiated a comprehensive study of accidents in 1908. Chief Mines Inspector E.T. Corkill called for a re-visioning of safety in the industry. This galvanized mine owners to seek collective protections in a new, government operated compensation agency. It resulted in the creation

⁵¹ Wilde, T. "Literacy at the Resource Frontier; A Matter of Life and Death." *Historical Studies in Education Journal*. 2012.

⁵² Smith, P. *Harvest from the Rock*. p.89.

and implementation of the *Workers' Compensation Act* of January 1, 1915. The *Act* contributed significantly to reshaping how miners were perceived.⁵³ Early jurisdictional disputes and conflicts of interest among government officials were largely overcome with the onset of World War One.

Contract physicians – members of the medical profession who lived at the frontier and hired to supply and administer healthcare to mining and lumber camps - play a key role in this study. Doctors bid on contracts that were tendered by mining companies. These were prized sources of income because they were paid monthly in cash. It was an early system of socialized medicine but the subscribers – the miners - were excluded from the administrative apparatus. I examine the doctors' relationships to the camps, the men and the local townspeople.

Like the men they served, doctors spent a lot of time traveling. Their comments suggest that accessing a camp – particularly in winter – was sometimes significantly more difficult than the treatments rendered.⁵⁴

Dr. Jones he had it hard going back up here 30 and 40 miles to those camps in rough winter weather with a team [of horses] and then he [also] had, I don't know what you call it, on four wheels, and the [mining] company gave him permission to use the rails you see. They gave him permission to use that in the track. Your feet made it go, until they got a motor on it and that worked better.⁵⁵

The masculinity of a contract physician was therefore, more a product of his risk-taking than his technical, surgical or pharmacological skills. As urban doctors were celebrated for

⁵³ Offenders were issued fines by the inspectors – in the same way a parking ticket is issued today – and it had to be paid to the Bureau or contested before a Bureau panel.

⁵⁴ See Dr. Herman Bryan's article on "Snowshoe Medicine" Nipigon Museum, Ontario. Copy on file with the author. Dr. Bryan's diary has not been published but pages of it still reside in exhibits in the Nipigon Museum.

⁵⁵ Charles Young's autobiographical notes from 1900 comment on his time in the Algoma Mills (halfway between Sault Ste. Marie and Sudbury). Espanola Public Library. Copies in the author's possession. No publication details available.

their educational backgrounds and public associations so frontier doctors were heralded for their hazardous exploits.⁵⁶

In the early twentieth century the Ontario Medical Association began lobbying for more autonomy. They did not want their contract members beholden to corporate interests. They wanted to be independent of their commercial paymasters. In sparsely populated towns the doctors supplemented their incomes with municipal and provincial appointments, acting as Health Officers or working in health-related positions.⁵⁷ They dealt with epidemics of cholera, diphtheria and smallpox. Doctors *qua* health officers were important elements in the forging of new municipalities. Camps, settlements, hamlets and other marginal populations had to adopt policies and procedures before they could be recognized and thereafter benefit from provincial support. Medical services in each community were necessary but sometimes hard to come by. The vicissitudes of frontier health care frequently paralleled the fortunes of the mines.

Using newspaper accounts, the *Canadian Medical Association Journal* and the *Journal of the Canadian Medical Association* I examine how legislation, economics and World War One factor into how doctors related to miners and their families.⁵⁸ Over time,

⁵⁶ Special thanks to the archivists at the Sault Ste. Marie Museum who generously prepared a CD containing images of local physicians from their past. See also excerpts from "Ask the Grey Sisters" Sault Ste. Marie and the General Hospital, 1898 – 1998. Toronto. Dundurn Press. 1998. Some biographical notes on memorable physician reference the large areas they serviced and the distances travelled. Copy in the author's possession. See also Jack, D. *Rogues, Rebels and Geniuses, The Story of Canadian Medicine*. Toronto. Doubleday Canada. 1981.

⁵⁷ "The District Officers were appointed under the Public Health Act of 1912 which provides that the Province may be divided into ten districts to each of which a legally qualified medical practitioner may be appointed. ... The work done by the District Officers has been ably supplemented by the various Medical Officers of Health, who to the number of some 750 or more, service usually for small remuneration the townships, villages, towns and cities of the province. It is regrettable that the good work done by the Medical Officers of Health in smaller communities is so little appreciated and poorly paid." *Special Report on the Work of the District Officers of Health for the Year 1912 – 1913*. Archives of Ontario. RG62, B-2-a. District Officers of Health Reports.

⁵⁸ "The Canadian Medical Profession and the War." *The Canadian Medical Association Journal*. December 1915.

the relationship changed and the various reasons for those changes are measured against the importance of the resource economy, the healthcare of the workforce and developments in medical technologies.⁵⁹

In the same years that the Ontario Medical Association began agitating for greater professional autonomy, so did labour unions seek to organize mining in Ontario's north. Serviced towns with families and children, schools, libraries, neighbourhoods and recreational facilities promoted organized collective action.

The Western Federation of Miners (WFM), a militant American union, first appeared in Ontario circa 1905. Brian Hogan's thesis is helpful in describing the failed Cobalt strike of 1907 and the twelve intervening years before the successful strike in 1919. His work reveals the united voice of the men. Union representation began to give miners more a self-generated, "bottom up identity", rather than one imposed on them from the "top down." In this regard, the research Larry Lankton provided was insightful and my conclusions confirm his in key areas.⁶⁰

⁵⁹ Smylie, C. *Northern Doctor*. 2002. and "Robert J. Manion: Member of Parliament for Fort William, 1917-1935" by R.H. Piovesana. Thunder Bay Museum and Historical Society. (undated) For an additional fee miners could add wives, parents, siblings and children to their medical coverage. This was true in Cobalt, Haileybury, Port Arthur and other sites. The amount varied from mine to mine and depended on the number of dependents and proximity to the nearest hospital. See Jayne Elliott's "*Keep the Flag Flying*" *Medical Outposts and the Red Cross in Northern Ontario 1922-1984*. Ph.D. Thesis, Queen's University. 2004. Although her study begins in the post-war period the practice of covering additional family members coincided with the new *Workers' Compensation Act* (1915) because the *Act* provided compensation not only for the victim but also for family members according to a prescribed formula. Details of the structure of these amounts appear in chapter three.

⁶⁰ *Cradle to Grave, Life Work and Death at the Lake Superior Copper Mines* (1991) as well as *Beyond the Boundaries: Life and Landscape at the Lake Superior Copper Mines* (1997). New York. Oxford University Press. Lankton's work is American and focuses on the southern shores of Lake Superior. The mines he looks at were never as remote as those on the northern shores of Superior. He does however contribute a great deal of information about the rise of towns and serviced municipalities from mining camps. Rex Lucas's previously mentioned sociological study in *Minetown, Milltown, Railtown* delivered important insights into the roles of physicians in resource-based communities of single-industry. For more on the Western Miners' Union see Alan Derickson's *Workers' Health, Workers' Democracy, the Western Miners' Struggle 1891 - 1925*. Ithaca. Cornell University Press. 1988.

With the advent of unions, miner resistance changed. “High-grading” – stealing nuggets of pure (high grade) silver and gold – was a common practice among individual miners. It was one form of resistance to the conditions of work and pay. High-grading was widely reported because the companies were ardent about publicizing every prosecution. Some mine owners used “gold squads” to protect their interests.⁶¹

Site Research

In order to understand and interpret some of the assumptions and values behind the primary and secondary sources, it was important to visit various mine sites across Northern Ontario. Although hundreds of them have disappeared, a few remain, mostly as tourist attractions. Many of the exhibits have been sanitized by being brought into line with current building, fire and safety codes. However, once underground, the drifts, shafts, stopes and winzes are largely unchanged. They remain examples of what frontier work conditions were really like. The scarred walls, low roofs, cold temperatures, penetrating dampness, distance to work stations and disorienting sounds continue to be unaffected by time. Below ground today there are extensive lighting grids, improved ventilation systems, emergency safety areas, and communication devices that provide a sense of confidence, most of which were unavailable a century ago. Today, there are no opportunities to traverse the areas wearing a laminated cardboard “helmet” sporting a candle to light the way. There are no one or two-tap drills or sledgehammers to wield in confined spaces. But the sense of what was physically required remains intense.

⁶¹ Smith, L.N. *Schumacher, Voices in the Gold Fields*. Burnstown. General Store Publishing House. 2002.
Barnes, M. *Fortunes in the Ground*. Erin. Boston Mills Press. 1986.

The time I spent underground fueled my historical imagination and inspired new questions about the walls and roofs that still bear the original drill and pick marks. Ceilings are quite low; walking erect is awkward and dangerous. Temperatures are cold, just a couple of degrees above freezing. Standing pools of water are still commonplace as seepage from walls and ceilings was constant in the places I visited. The dampness is numbing after hours of being hunched-over in chambers that were by turns either cacophonous or tomb-like. Darkness underground is palpable, at times suffocating and disorienting. Sounds echoed randomly, making their sources indistinct and unreliable. Sharp edges along rock-faces snagged clothing and bruised shoulders. Partially buried or submerged rails compounded problems moving along corridors. The starkness of the work environment was a revelation. Above ground, original on-site accommodations for miners have long since disappeared; victims of weather and the casual construction techniques of the late nineteenth century. And while efforts to construct replicas of historic mining towns – such as in Timmins – are inevitably shaped by contemporary concerns like building codes, existing historic sites nonetheless convey the hardships that early twentieth century miners endured.

Getting to Ontario's mines is still a demanding process despite manifold improvements. Today's highways parallel original train lines and confederation roads but do not reflect any of the rigor demanded of resource workers in the nineteenth century. One hundred kilometers by car now takes sixty minutes – or less – along smooth, paved roads. The same distance was at least a three day walk during summer in frontier times and often took a week or more in winter. Notwithstanding the benefits of progress, I was still able to sense the struggles that must have challenged those who traversed narrow trails on foot,

while laden with a tump-line⁶² containing all of one's possessions. The remoteness and isolation of mine, lumber and rail camps, was daunting. These were not occupations for the faint of heart or the physically infirm.

I also found a surprising number of small, mine-related museums across the north. The Thelma Miles Historical Museum in Matheson, the Northern Ontario Mining Museum in Cobalt, and the Bruce Mines Museum in Bruce Mines (to name but a few) proudly feature important pieces of their history. The curators and managers of these facilities enthusiastically encourage investigation in their areas. Many neighbourhood cemeteries provided further testimony to the dangers that confronted workers every day. And memorials like those in Kirkland Lake and Reesor Siding pay homage to the lives that were lost in the resource sector.⁶³ Collections in small repositories make no claim to comprehensiveness but do contain ephemeral data that invite specific, if limited historical analysis. In places, then, I turn to the tools of microhistory to learn how a small, perhaps isolated, incident can reveal new conclusions or challenge old ones.

Archival materials

Archival materials found in local repositories, along with materials held in the Archives of Ontario, formed the basis of the research for this study. I used unpublished letters, memoirs and writings, as well as published autobiographies. Archival collections of

⁶² A tump-line secured a back pack with a strap that was held in place around the forehead rather than the shoulders.

⁶³ Bernie Jaworsky, whom I spent a day with at his home in Dobie, Ontario catalogued the deaths of miners in the Kirkland Lake area from the earliest days through to 1999, though there were no accidental deaths recorded in 1997, 1998 or 1999. There is today a Kirkland Lake Miners' Memorial styled after a typical mine headframe used in the late nineteenth century. See Jaworsky, B. *Lamps Forever Lit*. There is some similar information related to western coal miners (not the subject of this study) in Karen Buckley's *Danger Death and Disaster in the Crowsnest Pass*. and in Jeremy Mouat's *Roaring Days*.

miners and doctors provide rare glimpses into the attitudes of men working at remote northern sites.

I also read local newspapers like *The Temiskaming Herald/Speaker*, *The Sudbury Star*, *The North Bay Nugget*, *The Port Arthur News*, *The Sault Star* to understand the activities of camp men both on and off the job. These reports offered insights into business dealings, community events, sporting activities and occasionally some criminal activities.

Organizational records, like those of the *Canadian Medical Association Journal* and the *Journal of the Canadian Medical Association*, located physicians and healthcare practices in the communities I was studying. The insights and comments of doctors on how they practiced and whom they practiced on, revealed a great deal about the isolation of the sites and the limitations surrounding contract doctors.

Access to primary research materials for this dissertation was, in some instances, limited. The files of the WCB are not yet open to researchers so their contents remain unknown. Similarly, union files addressing matters of miner health and safety are not open or accessible. Low literacy rates among workers meant there was little preserved of their first-person accounts. Fortunately, however, a couple of frontier physicians recorded their experiences and through them we can know the conditions of work and the nature of injuries and accidents that had to be treated. I have therefore used some alternative primary sources to analyze the thematic focus of this study. Some of the most revealing evidence comes from the verdicts and recommendations of coroners' juries, which were empanelled to investigate mining-related deaths. I have used them to reveal the voices and concerns of co-workers at the mines. They offer unique insights into the conditions of work and the responsibilities that attached to workers and management as well as to how changes took

place over time. I also found reports like that of the Meredith Commission (1912) helpful in hearing the voice of miners testifying before a Royal Commission. Brian Hogan's examination of the 1919 strike in Cobalt concentrated on the strike but there were no significant sources that detailed complaints related to workplace conditions in the camps at the end of World War One.

While union records for the area are sparse before 1919, *The Northern Miner* was a valuable resource. It advocated for the industry and, over time it began to champion the causes of health and safety for the men.

The corporate records of mining companies gave up little information about the workforce. The archival materials I examined focused largely on financial concerns and ore content. There was a disappointing lack of data on the men and their health.

The Ontario Reading Camps Association, later Frontier College, was a surprisingly fruitful archive. Their teachers worked among the men throughout the day and afterwards as well. Their contents gave me insights into the conditions of work, attitudes of the men to work, how they spent their off-hours, and what they did with their money.

Every spring the Bureau tabled its *Annual Report* at Queen's Park.⁶⁴ These reports detail a wealth of qualitative and quantitative data and include photographs, maps, graphs, charts, production rates, dollar values, fatality summaries, and the findings of coroners' juries. The government reified and classified how each "accident" or "incident" was considered and relied on their own inspectors to make the determinations. My analysis of

⁶⁴ These reports begin with the results of 1891 and proceed in an unbroken line thereafter. As the industry changed so did the nature and focus of the reports. In this study, I used them up to and including 1926 and occasionally make reference to later years. I have also relied on the *Health Act (1899)* "Regulations for the Sanitary Control of Lumber, Mining and other Camps, Sawmills and other Industries situated in Unorganized Districts" to see how the two government bureaus negotiated their relative responsibilities between themselves and the workers they were responsible for.

the ever-changing legislation reveals how it informed the conditions of work, the occupational safety of the men, the mechanization of the mines, and concepts of occupational masculinity. Using notes, poems and correspondence of miners, doctors, companies and newspapers, I offer alternative interpretations of these homosocial work environments, especially as they evolved from transient camps into established communities.⁶⁵

As research on this project progressed, it became clear that the extensive records maintained by the Ontario government would anchor much of this research. Voluminous reports from the Bureau of Health (1880) and the Bureau/Department of Mines (1891) provided a wealth of technical, financial, geological and ideological data.

The thousands and thousands of pages that government records occupy required close study to see how they manifested underlying attitudes and philosophies as well as the ways the government managed the ever-evolving workplace. Although cumbersome, these tomes revealed a great deal about changes in workplace operations, normative masculine behaviours for miners and, how the range of ethnicities involved in mining were perceived by politicians at Queen's Park. I have tabulated figures from these reports into tables and charts to better represent the totals and facilitate comparisons over time. The province collected and published data that are used to explain how and why the identities of miners

⁶⁵ "Angus Bell's Memoirs of Railroading" Lakehead University General Archive. 123-126D. "William Bell Frue's Correspondence when [he was] Superintendent of the Silver Islet Mine". Thunder Bay Historical Museum Society. B 25 Silver Islet Mining Company fonds. Copy in the author's possession. The Canadian Pacific Railway Company correspondence and fee schedules for contract physicians. Archives of Ontario. MV7170, MV7169, CPR-Surgical fees Schedule 1905 and 1912, 1913. *Rhymes of the Miner; An Anthology of Canadian Mining Verse*. Ed. E.L. Chicanot. Gardenvale, P.Q. Federal Publications Limited. 1937. Byrne, J.J. *Autobiography of J.J. Byrne*. Toronto. T.H. Best Printing. 1971.

were initially envisioned, later reconstructed and ultimately changed over four and a half decades.

Information for the *Annual Reports of the Bureau of Mines* was accumulated by the Bureau's Inspectors during the January to December calendar year, commencing in 1891. The facts and figures were reviewed then shaped to address political and ideological concerns, before being published the following spring. The size and focus of each report reflected changes in activities, growth and government perceptions.⁶⁶ The underlying architecture of these records, singly and collectively, contributed to the public's understanding of the industry and of the men who worked in it. Bruce Curtis captured this type of governance in his analysis of census materials:

... the most consistently executed census of population depends on a particular imaginary of human beings in virtual time and space. It disciplines empirical social relations in order to capture them in the confines of its grid.⁶⁷

For the purposes of this study, the mining data of the province are seen as constituting an annual "census" of one sector, resource extraction industries. Ultimately, the archives reveal that bureaucratic perceptions of the men who toiled in the mines informed the "empirical social relations" of the work sites as well as popular understandings.

The Bureau's records are candid in places. Government inspectors created and sustained public perceptions of miners as careless, reckless and witless. This is not offered as criticism but as a recognition of the effects of copying verbatim, British legislation

⁶⁶ The first *Annual Report* from 1892 (referencing 1891) was a modest 272 pages. By 1897 it was almost 500 pages; in 1905 it was 938 pages and in 1927 it was 1100 pages. The sizes of the reports reflected not only growth in mining but also the kinds of data the province wanted collected.

⁶⁷ Curtis, B. *The Politics of Population: State Formation, Statistics and the Census of Canada, 1840-1875*. Toronto. University of Toronto Press. 2000. p.14. The results of the state's assumptions as they related to specific segments of the population was also seen in health matters as revealed in the works of Michael Bliss in *Plague, A Story of Smallpox in Montreal*. Toronto. Harper Collins. 1991 and Geoffrey Bilson's *A Darkened House, Cholera in Nineteenth Century Canada, 1832-1871*. Toronto. University of Toronto Press. 1980. In these cases the governments supported claims that cholera and smallpox victims likely led immoral or dissipated lives and that their afflictions were divinely inspired retribution.

concerning coal mining and coal miners. An example from October 30, 1900 illustrates this.

A miner, named John Bishop, suffered a broken leg below the knee. The accident was investigated, reviewed and analyzed by an Inspector as follows:

The injury was caused while working in the pit of [the Helen Iron Mine]. A lump of ore, which his companions above were dislodging, [rolled] down the side of the pit and [struck Bishop] in the leg.... The men shouted a warning to Bishop, but he ran the wrong way and towards instead of away from the rock. He had full knowledge of what was being done in the pit ... and paid too little heed when the cry came, so that no one was to blame but himself.⁶⁸

This commentary discloses a prevailing bias against the worker. Remarks like this were commonplace and the ensuing “verdicts” all but inevitable. The presumptions behind the language were meaningful. They suggested that blame could not be assigned because the circumstances were *prima facie* “accidental.” Add to that the legal precedent of “assumed risk” and miners were all but guaranteed to be found⁶⁹ complicit in, whatever circumstances they met. The conditions of the mines were rarely challenged because “risk” was immanent. Therefore the disorientation of sounds – and alarms more broadly – in mine environments was not taken into Bishop’s account. (Did his co-workers speak the same language? Why would he run in the direction he did? None of these questions was asked.) Declaring that “no one was to blame but himself” assigned exclusive liability, and all of the

⁶⁸ *Report of the Bureau of Mines 1901*. Toronto. L.K. Cameron. 1901. p.47.

⁶⁹ Although miners are the focus of this study, the concept of “assumed risk” applied to labour generally. Judicial decisions citing assumed risk on the part of workers are evident in manufacturing and transportation record also. See Fudge, J. and Tucker, E. *Labour Before the Law. The Regulation of Workers’ Collective Action in Canada 1900-1948*. Don Mills. Oxford University Press. 2001. Chapter two: “Courts and Conciliation” pp. 16 – 50.

attendant financial problems, to Bishop. That, in turn, absolved the employer of any obligation to provide redress or support.⁷⁰

What the statistical record failed to reveal, however, was why the government opted to include some categories while omitting others. The ethnicity or nationality of each miner killed on the job was determined by native language. This classification was made despite the fact that English-speakers were the only bloc that died in greater-than-average numbers. There appears to be an intention to make ethnicity important in death tolls regardless of the predominance of fatalities among English speakers. Similarly, the Bureau distinguished statistically between deaths occasioned “above ground” and “below ground”. It is speculated that deaths at the surface were understood to be “industrial accidents” whereas those underground were more properly “mining accidents.” The *Annual Reports* never identify any causal factors or distinctions for separating them in this fashion.

On January 1, 1914, the newly created WCB took responsibility for investigating and recording a broad range of workplace accidents and fatalities. The case files of these incidents and the findings of Bureau staff were not available during my research although their *Annual Reports* were. The contents of the reports contain accounts of sometimes gruesome, accidents and fatalities as well as statistical summaries. While that information provides a great source for historians to study in order to determine the range of perils workers faced, the summaries were not exclusive to mining. More importantly, for the purposes of my analyses, the WCB did not configure its findings in ways that accorded with those previously established by the Bureau of Mines inspectors. Therefore, I decided not to use their summaries here. To do so would have complicated and confused the

⁷⁰ In the 1890s there was little or no consideration given to chronic health conditions. The legislation and regulations were focused on singular, acute incidents, not health matters related to long term exposures to toxins or accumulations of airborne particulates like those now associated with “miner’s lung”.

analysis I was making. When these data become available more appropriate comparisons will be possible.

The records of the Meredith Commission (1912) provided a background for the enactment of workmen's compensation legislation that took effect January 1, 1915. The Commission – dedicated to revising Ontario's mechanism for addressing workplace injuries and deaths – held a hearing in Cobalt in December 1911, to hear about issues of miners' health and safety. The Commission acknowledged mining to be a "hazardous occupation" which prompted a suggestion that it might need separate consideration from all other Ontario industries.⁷¹ Occupationally specific health conditions were also a deep concern made complex by questioning how to adjudicate responsibility for the source of chronic health problems.⁷² Of the twenty-seven sittings of the Meredith Commission, only three were held outside of Toronto: the fact that one of these was held in the north signified the importance of health and healthcare that surrounded the mining industry. The Bureau of Mines Reports and the Meredith Commission provide a window on the persistent dangers miners faced and the impact of new technology on mine safety.

As I began research for this dissertation I hoped that the archives would yield first-hand accounts of miners. This was, unfortunately, never realized to any significant degree. Only an occasional letter or anecdote⁷³ offered insights into the thoughts of the workmen.

⁷¹ Workmen's Compensation Commission. *Minutes of Evidence*; third sitting, Cobalt Miners, Dec. 14: 1911. p.179.

⁷² Workmen's Compensation Commission. *Minutes of Evidence*; third sitting, Cobalt Miners, Dec. 14: 1911. p.195-196. The argument was that it was too hard to determine at which facility a transient miner might have contracted a work-related disease if the "... man works two months and then leaves and works somewhere else for a month."

⁷³ *We Lived a Life and then Some; The Life, Death and Life of a Mining Town* by Charlie Angus and Britt Griffin. Toronto. Between the Lines. 1997 is the type of source that cites miners' perspectives but no extensive private diaries or detailed accounts of men who lived and worked in Ontario's mining communities came to light. The authors tell readers: "Only through the stories and local lore can one address the intangible dimensions of what makes a community endure." (p.2.)

Their lack of literacy, coupled with long hours and lack of access to writing instruments and postal services explain why little documentary evidence survives.⁷⁴ A further constraint involved heavy ethnic concentrations at specific sites. I found that the diverse ethnic backgrounds of the men working at resource extraction meant that personal records in English were seldom a priority. Arthur Lower observed: “While naturally [frontier workers] are rough and scarcely more than literate, they are by no means stupid or dull.”⁷⁵ The paucity of first-hand accounts meant by resource workers meant that I had to rely primarily on newspaper accounts, published poems and popular songs to hear the men’s voices. As Lower suggested:

... there are many degrees of "hardness" and if a man can make a living in the southern Canadian Shield, there is no reason why he should deteriorate to any very great extent, for the country is an extremely healthy one and the climate is not particularly harsh. A severe environment may have merely the result of limiting numbers.⁷⁶

This is the proverbial silver lining of the hardrock miners’ environment.

⁷⁴ Lack of access refers to postal services which had to be negotiated and paid for by the members of each camp. It often proved to be contentious as workers did not want to take a day of their time to walk to a town to mail a letter or pickup something.

⁷⁵ *Settlement & the Forest Frontier in Eastern Canada* - A.R.M. Lower. MacMillan Company of Canada at St. Martin's House. Toronto. 1936. p.172

⁷⁶ *Canadian Frontiers of Settlement*. “Settlement & the Forest Frontier in Eastern Canada (Lower) and Settlement and the Mining Frontier (Innis).” W.A. Mackintosh (ed.) Toronto. MacMillan Company of Canada. 1936. p.71.

Chapter Two:

**Early Mining Strategies:
Thawing Dynamite and Blasting Ahead**

(1890 – 1904)

Introduction

Between 1890 and 1904, Ontario's northern resource frontier developed dramatically, as mining and lumbering companies sought to explore the region's abundant natural wealth. One source of such wealth came from metalliferous or hardrock mining of precious metals and minerals.¹ This term is used throughout this dissertation to distinguish the mining of precious metals and minerals from hardrock the coal-mining practices that were common in British Columbia, Nova Scotia, South Africa, England and Spain. This chapter examines the mining economy of the late nineteenth and early twentieth centuries in order to understand the workplace dangers miners faced, the medical services available, and the nature of occupational masculinity that emerged in the early years of Ontario mining. To explore these themes, the chapter first explores the evolution of the mining industry between 1890 and 1904 and the legislation that governed it.

Mining in Ontario's Resource Frontier

After Confederation, Ontario's politicians and civil servants focused on attracting capital and the business interests of Anglo-Canadians and Americans to exploit the natural resources of the northern region, which included all the land west to Keewatin and north to

¹The most valuable metals were gold and silver but there was also a great deal of copper, cobalt, iron, nickel, molybdenum being mined. Minerals like corundum, magnetite, calcite, labradorite, analcite, mica, and hornblende, among a host of others, were also taken from the ground but for more limited applications than the heavier metals.

James and Hudson Bays.² The 1885 Boundary Dispute substantially increased the geographic area that comprised Ontario's north. Businessmen assembled the money, the men and the materials to harvest lumber, metals and minerals as well as to construct the (road, rail and water) transportation routes that were coincident with these interests.³ From corporate headquarters – usually in Toronto – companies introduced methodologies and technologies that delivered profits as quickly and as cheaply as possible.⁴ Business owners realized that government legislation facilitated the exploitation of raw materials as the CPR noted in its 1899 promotional pamphlet, *The Goldfields of New Ontario*:

The [Ontario] Mining Laws are remarkably liberal and give every opportunity for the development of legitimate mining enterprises, being favorable both to the small operator and the capitalist and any amendments likely to be made to [the laws] are sure to be in the direction of greater liberality. Any person may explore for minerals on any Crown lands and previously staked out or marked or otherwise occupied and not withdrawn by Order-in-Council.⁵

The young government, overseer of a seemingly unlimited repository of ores, enacted legislation, licensed prospectors, certified corporations, prescribed minimum operating standards and levied taxes in an attempt to develop and expand the industry further. Legislation governing mining in Upper Canada/Canada West began with *The Gold Mine Act* of 1864 and it went through various incarnations and permutations each year until the *General Mining Act of 1869* was passed to encompass all mining activities in the

² H.V. Nelles has captured the spirit of province's efforts to administrate the natural resources as well as their relationship to business interests in *The Politics of Development; Forests, Mines and Hydro-Electric Power in Ontario 1849-1941*. Toronto. Macmillan of Canada. 1974. Chapter one: "The Frontier of Monarchy" is particularly helpful in understanding how mining interests were addressed and accommodated by early provincial governments. See pp.1-47.

³ The *Annual Report of the Bureau of Mines* for 1900 begins with a comparison of the capitalization of Joint Stock Companies since Confederation. For the first twenty-five years (1868-1893) the combined capitalization of all these enterprises totalled about \$47 million. In 1899 alone it almost reached \$97million. *Report of the Bureau of Mines 1900*. p.5.

⁴ The 1895 *Annual Report of the Bureau of Mines* legislated the introduction of diamond drills in order to accelerate the recovery of ores that were being located in ever-deeper veins.. See pages 172 – 174 *passim*.

⁵ *The Gold fields of New Ontario* [microform] comprising the Lake of the Woods, Rainy Lake, Seine River, the Manitou and Michipicoten districts: reached only by the Canadian Pacific Railway (1899). Canadian Pacific Railway. March 1899.

province rather than separate pieces of legislation for individual precious metals. By this point the Bureau of Mines was located within the Department of Crown Lands.⁶ The laws, regulations and rules that were enacted in these years were largely copied from long-practiced, legally tested and codified, British mining legislation.⁷ As the *Second Annual Report of the Ontario Bureau of Mines* admitted:

The fourth part of the [Ontario Mines] Act [1892] is chiefly designed to provide for the health and well-being of miners through a proper and careful observance of regulations for the working and management of mines; but as these follow pretty closely the British Mining Regulations any enumeration of their features would be superfluous here.⁸

Despite high-minded intentions, government officials did not anticipate the need for overseeing the companies in detail.⁹ The 1892 *Bureau of Mines Report* concluded

The [Chief Mines] Inspector, whose duty it is to look after their enforcement, finds that owners and officers of mines are with rare exceptions desirous of doing liberally all that the regulations require, and it does not appear that the employed classes have a grievance under them for which legislation could effect a cure.¹⁰

Indeed it was often easy for the government to ignore labour conflict in hardrock mining because with no miners' union to represent them until late in 1905, unhappy workers voted with their feet. Complaints were individual rather than collective.¹¹

⁶ See Smith, P. *Harvest from the Rock*. p.92. "The bureau [of mines] was made part of the Department of Crown Lands, and its director was responsible to the Commissioner of that department." (fn. reveals that the term "commissioner" was later changed to "Minister".)

⁷ Britain had copious amounts of legislation and regulations that Ontario's government borrowed from extensively. Britain's mining laws dated from the eighteenth century but for the purposes of this dissertation see: MacSwinney, R.F. *The Law of Mines, Quarries and Minerals. Second Edition*. London. Sweet and Maxwell. 1897. This is a compilation of the various statutes enacted by the British Parliament over time to deal with mines, mining and the miners working within them. *The Metalliferous Mines Regulation Acts of 1872 and 1875* (35 & 36 Vict. C77) pp.706 – 731 reveal how closely Ontario patterned its laws and attitudes toward miners after Britain's, instead of developing legislation that reflected the nuances of the peoples, conditions and ores across the Ontario frontier. A comparison of specific sections indicates the convenience of mimicking English laws rather than formulating legislation amenable to Ontario's distinct circumstances.

⁸ *Second Report of the Bureau of Mines 1892*. p.229.

⁹ Initially, Ontario's first comprehensive *Mine Act* provided for only four mine inspectors based in Toronto and their mandate was vague.

¹⁰ *Second Report of the Bureau of Mines 1892*. p.229.

¹¹ See the "Introduction" to *Labouring Lives, Work and Workers in Nineteenth Century Ontario*. ed. Paul Craven. Toronto. University of Toronto Press. 1995. Craven acknowledges that labour was alienated from the means of production. (p.5.) but it was more than that. Because of the remoteness of the mines, the hours of work, and the numbers of immigrants in the industry, early miners were also disenfranchised. They did not

With government and businesses both eager to develop the resource base, metalliferous mines dotted the landscape of frontier Ontario by 1904. For the most part, they were situated in out-of-the-way locations: they were difficult to access, had minimal services, and offered austere living conditions. For example, the map below depicts the Harold Lake Gold Mine west of Fort William/Port Arthur (present day Thunder Bay).

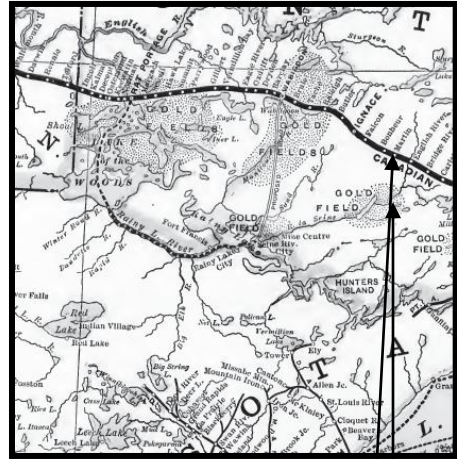


Figure 2.2. An 1899 map of New Ontario¹²

Bonheur Station
Harold Lake

It was typical of where a precious metal mine was found at the time. To get to Harold Lake a miner had to travel from the Lakehead of Lake Superior (a trial to reach on its own) to Bonheur Station,¹³ about one hundred fifty kilometers by rail. This leg was direct and uneventful, especially in summertime. There were, however, no tracks running south from Bonheur, and the Harold Lake camp was still a challenging, fifty kilometers distant.

have a voice in the government. Similarly, *Germinal*, the novel by Emile Zola, describes the tensions between mine workers and owners in Europe.

¹² *The Gold fields of New Ontario* [microform] comprising the Lake of the Woods, Rainy Lake, Seine River, the Manitou and Michipicoten districts: reached only by the Canadian Pacific Railway (1899). Canadian Pacific Railway. March 1899. Library and Archives Canada. RG299.

¹³ Bonheur Station no longer exists. It was about twenty kilometers east of present day Ignace, midway between Thunder Bay and Kenora, then called Fort William/Port Arthur and Rat Portage respectively.

Insects, heavy bush, bogs, hills, crags and waterways had to be negotiated and, depending on the season, the trek could take between three and five days on foot.

Mines established at Rat Portage (present day Kenora) and Rainy River were especially remote. This was equally true of myriad other mine sites that were set up in long-forgotten places like New Klondike, Scotty Springs, Whitewood Grove, Heaslip and Judge, to name but a few.¹⁴ Figure 2.1 reveals the frequency and regularity of “whistle-stops” along the CPR line. Each station maintained a tenuous connection, directly or indirectly, to resource exploitation. They processed ore samples, handled supplies, provisioned men, and offered respite. In addition to the claim at Harold Lake, which was of comparatively modest proportions, three other, significantly larger “Gold Fields” are identified: Wabigoon, Rainy River, and Rat Portage. Other maps reveal similar findings across the eastern portions of what was called “New Ontario.” Dobie, Boston Creek, Larder Lake, South Lorraine, Bessemer, Silver Islet, and dozens of others, featured the same types of seclusion and inaccessibility.¹⁵ Until and unless a mine became profitable on a sustaining basis, there were few families, amenities, or comforts available. Sudbury and Timmins were exceptions to the rule. Production at these camps and others, like Kirkland Lake, Cobalt and Elliot Lake, eventually brought about municipal incorporation and thereafter access to federal, provincial and municipal representation and services.

The absence of Confederation roads, corduroy roads,¹⁶ or rail spurs meant that all equipment and supplies had to be dragged in on sleds, suspended on tump-lines or carried on back-packs. Materials (drills, explosives, construction items etc.) and food supplies were

¹⁴ Taylor, B. *Place Names of Temiskaming*. New Liskeard. White Mountain Publications. 2000.

¹⁵ For a detailed look at mining sites in late nineteenth century Ontario see Gentilcore, R.L. *Ontario's History in Maps*. Toronto. University of Toronto Press. 1984. *passim*.

¹⁶ Corduroy roads were usually little more than trails that used a foundation of logs fixed transversely in place. They had a characteristic rib and swale profile which earned them the “corduroy” moniker.

heavy and awkward, and added additional days to the trip. The men employed by fledgling companies were usually paid for the time it took them to walk in (three days maximum unless otherwise agreed) but not for their time to walk out if they quit.¹⁷

Weather conditions complicated matters. It is not enough to simply identify mine locations on old maps to understand their isolation. Indeed, during heavy snowfalls and spring flooding, remote mines were completely cut-off; there was no chance of getting in or out regardless of the emergency.

Northern Ontario camps, whether for mining, lumbering, canalling or railway construction, shared common characteristics: small populations¹⁸; geographic settings that were removed from major transportation arteries; a fluid workforce; limited or no political organization or representation; usually a single industry that was controlled by outside interests; and a community of mixed racial and ethnic backgrounds. While it was common for particular camps to be dominated by one ethnic group – Russians, Poles, Spaniards, Italians – none comprised an overall majority in the mining industry.¹⁹

Health, Illness and Injury in Northern Hardrock Mining

The early years of exploration and the rapid expansion of Northern Ontario's hardrock mining industry meant that working men faced a range of health risks and injuries. The harsh physical environment posed physical risks for men simply trying to get to the mine sites. Travelling through the remote districts of Northern Ontario, the men were

¹⁷ Business prospectuses and advertising listed labour rates at \$1.75 to \$2.25 and board per day for miners; labourers \$1.75 and wood-choppers ninety cents to \$1.10. *The Harold Lake Gold Mines Company Limited Prospectus*. 1897. Developments. p. 7. Thunder Bay Museum and Historical Society.

¹⁸ The 1881 census identified only 690 people living in Fort William, present day Thunder Bay. A camp in the nearby community of Oliver totalled only 151 inhabitants. See PAC and *Census of Canada 1881*. Algoma District. Reel C – 13282.

¹⁹ For more on frontier settlements and their compositions see Tronrud, T.J. "Frontier Social Structure: The Canadian Lakehead, 1871 and 1881." *Ontario History*. Vol. LXXIX. Number 2. June 1987. pp.145 – 165.

challenged by a range of often dangerous conditions: freezing, getting lost, being attacked by wildlife or other men, fatal falls, insect bites, poisonous plants, giardia, broken bones, drowning and lacerations.²⁰ Documenting the frequency with which men died or were seriously injured by these factors is difficult. None of the government's annual reports referred to lost or missing men, though there is little doubt that getting to mine sites posed serious health risks: the landscape was as immense as it was disorienting. Mining and logging companies were sometimes alerted to unexplained disappearances when wives inquired after the whereabouts of missing spouses. For example, in May of 1890 Mrs. Jos. Boivine wrote to the Gillies Brothers work camp saying: "Last week I received the sum of \$8.00 only. But my husband told me that I was to get \$10.00 a month. Where is he? Will you kindly let me know about his pay for I can't do with any less than \$10.00 each month."²¹ Later that season Mrs. Jess Shane wrote the company with a similar request: "i now rite to let you no that i received your twenty dollars on my husbent's account on the twenty 5 of July and he is not come here i remain your frind mrs Jessey Shane."²²

There was in fact little information for company officials, or the fledgling Bureau of Mines, to evaluate to determine if a missing man had walked off the job of his own volition, died of natural causes in the wilderness, was murdered by a co-worker, or got lost and perished accidentally.²³ As late as 1911, the coroner's office was reporting on such accidents. When Donald McCrae died returning to camp:

²⁰ See "The Jam on Gerry's Rock" a lumberjack song. It is reproduced in Maude Groom's *The Melted Years*. Temiskaming Printing Company. New Liskeard. 1971. Although folkloric it accurately indicates how common such fatalities were. In this instance "six fine youths" and their foreman were swept away when a logjam suddenly released.

²¹ Archives of Ontario F150-12-1-11

²² Archives of Ontario F150-12-1-11

²³ From the records of Robert Moore M.D. and Associate Coroner for the Rainy River District. Archives of Ontario. Accession #RG4-32 File 1912 #40

... McCrae's dead body was found ... some 5 mi North of Tug Point on Rainy Lake on the morning of Dec. 27th, 1911. McCrae in company with two other men had started for a logging camp north of Rainy Lake. Reaching the Cherry Island stopping place some 16 mi N. of H. F. the two decided to remain while McCrae kept right on, saying that he could reach the Cascades stopping place that night. He traveled only some 5 mi farther when apparently he became exhausted. An empty whisky(sic) bottle was the only belonging found. He was quite insufficiently clothed. There were no marks of violence and the Conclusion upon view is that he died from exposure while asleep during the night of December 26th. (The body was not entirely stiff when found on A.M. of Dec. 27th so he had not been dead long before he was found.) No jury was convened.”

Once miners arrived at the work site they faced primitive living conditions.

Housing at mine sites always began with tents, then shanties, then rough cabins.

Eventually, if the mine was profitable, rail cars, wooden dwellings, or an amalgam of any or all of these kinds of shelter were introduced. By 1905, only Sudbury and Timmins were constituted as significant municipalities in the north with basic services and building and health codes. Almost all other mine sites were basically “sleep camps”. They provided the barest creature comforts needed to attract or retain a workforce. Angus Bell, who worked in mining and logging camps during the late nineteenth century, described the methods by which rudimentary accommodations were built. He explained that at the outset, the men lived in tents while trees were felled and logs were hewed. The craftsmanship was rarely expert.

[In January 1900, near Rainy River] I was sent along with Billy Jack to build a fire outside to heat water and mix up clay to plaster the chinks between the rows of logs that formed the walls of the camps and [a] lot of this clay promptly froze and crumbled off. But no one worried much about that.²⁴

At these sites the accommodations were cold, crowded, and smelly. The bunks of miners and shantymen were referred to as “muzzle-loaders” because the men slept perpendicular to the walls.²⁵ This style of construction gave rise to uncorroborated stories

²⁴ Bell, A. “Angus Bell’s Memoirs of Railroading”. Unpublished. Lakehead University. General Archive Series. 123-126D. D69. p. 4.

²⁵ Radforth, I. *Bushworkers and Bosses, A Social History of the Northern Ontario Logging Industry 1900-1980*. pp. 180-182.

of men's hair, or socks, being frozen fast to log walls on frigid winter mornings.²⁶ Living conditions were hard. Doug Baldwin's study of silver miners notes "... lodgers were sometimes forced to sleep in eight hour shifts"²⁷ or else they might not find any sleeping accommodations at all. Miners often slept in their clothes, which were dirty and sweaty, on mattresses that were rarely, if ever, laundered. Pine bough mattresses, of the kind found in lumber camps, were likely to be infested with insects. Shanties and cambooses – which featured unreliable doors and open roofs – were shared with rodents like chipmunks, squirrels, mice, voles, and rats.²⁸

Decent hygiene was also difficult to find, despite the men's best efforts. Angus Bell recalled building outhouses near their camp but admitted that:

... no one ever spent much time [in] it. For one thing in summer the flies took unfair advantage of one and in the winter it was too cold. In that case [when there was no "small building"] you just took off into the bush on any one of several main trails, then branched off on your own. The distance you went before you branched off depended on the urgency of the trip.²⁹

Hygiene was not limited to toileting facilities or to living conditions. The men shared freshwater supplies with animals and with other men. If located downstream from another camp then contamination of water supplies from bacteria like gardia was possible, perhaps likely. Given these realities outside and inside miners' housing, it was not surprising that infectious diseases were hard to contain. Outbreaks of diphtheria, smallpox and tuberculosis (commonly referred to as phthisis) spread quickly. Crowded living conditions, like those shown in the image, facilitated the contagions more than the worksites, which were not nearly so densely populated.

²⁶ Radforth, I. *Bushworkers and Bosses*. Chapter five "In the Camps" details the living conditions of the men early in the twentieth century. Section III examines the sleeping accommodations.

²⁷ Baldwin, D. "A Study in Social Control: The life of the Silver Miner in Northern Ontario" in *Labour/Le Travailleur* Vol. 2, 1977. p.82.

²⁸ Radforth, I. *Bushworkers and Bosses*. p. 181

²⁹ Bell, A. "Angus Bell's Memoirs of Railroading." p.3.

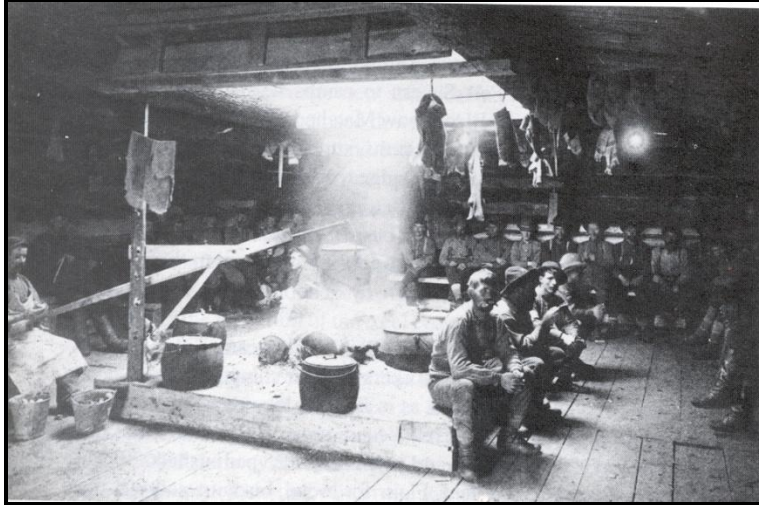


Figure 3.2 This unidentified cambouse is typical of an early work camp with an open roof, crowded seating and a large fire at the centre.³⁰

Nonetheless, it is difficult to know if miners contracted these diseases more frequently than workers living elsewhere in Ontario. When the miners did get sick, however, they lacked the attendance of family, friends or even paid attendants to care for them. If a miner fell ill, everyone else went off to work. Thus recovering from even common infectious diseases was made more difficult.³¹ At the first appearance of smallpox, for example, men fled the

³⁰

<https://www.google.ca/search?q=shantymen&source=lnms&tbn=isch&sa=X&ei=0sKxUuTmDaLN2AXyglFA&ved=0CAcQAUoAQ&biw=930&bih=614#q=ontario+lumberjacks+shanty&tbn=isch&facrc=&imgdi=i=ZisBwt2jXQHmSM%3A%3BJ5EJPDgyMAMnnM%3BZisBwt2jXQHmSM%3A&imgrc=ZisBwt2jXQHmSM%3A%3BK5UrvGd7FVoiM%3Bhttp%253A%252F%252Fphotos1.blogger.com%252Fblogger%252F5465%252F1400%252F1600%252Fboothcampaylenlake1880.jpg%3Bhttp%253A%252F%252Fflumberkings.blogspot.com%252F%3B1024%3B768>

³¹ *First Annual Report, Provincial Board of Health* (1882) contains the following letter to local doctors:

Dear Doctor, -

The Board has directed me to send you a copy of a circular about to be addressed to the Clerks of Municipalities and to request you to use your influence to obtain a prompt and careful consideration of its contents, and such action upon it as you think may be secured.

The Board counts largely upon the cooperation of medical men in advocating, and interesting the people in such sanitary reforms and systematic action as will tend to lessen the death and sickness rates, and as a consequence, the misery and poverty in the Province.

Trusting that you will oblige the Board by a hearty response,

I have the honour to be,

Yours truly,

Peter H. Bryce, Secretary

The Board of Health focused its attention on urban areas and recruited doctors to act as Health Inspectors when circumstances required. It was not until about 1905 that Health Inspectors were credentialed separately.

sites without warning but unknowingly took the infection with them and spread the disease among others. Due to the remoteness of the camps quarantines were next to impossible to police effectively. The Provincial Board of Health had been appointing local health inspectors since 1882, but these officials focused on urban areas far more than remote rural work sites.

For miners living in camps, poor nutrition did not seem to be a particular problem. Good food in abundant quantities was integral to keeping a remote workforce intact.³² Angus Bell deals with cooking and dietary information on page one of his unpublished memoirs. He remembers the pancakes, oatmeal porridge, toast, soups, roasts of beef, vegetables and “evaporated apple pie” even before he deals with the location and names of the companies or any of his co-workers.³³ Alcohol, though, might jeopardize a miner’s health. Despite legislation to the contrary, there were always a large number of illegal drinking establishments at or near the camps. They were called “blind pigs” and offered homemade alcoholic drinks.³⁴ While drink clearly offered psychological relief – and was often used for medicinal purposes – alcohol was also responsible or present when violent altercations erupted. For men living in remote regions of the north, drink sometimes provoked tragedy in innocent circumstances. “On July 22, 1894 Rory McDonald of Vankleek Hill, Ontario died on the CAR line, two miles east of Maxville (north of Ottawa). His body was strewn along the tracks. He and a friend had been imbibing freely ... and

³² Bell, A. “Angus Bell’s Memoirs of Railroading”. Unpublished. Lakehead University. General Archive Series. 123-126D. D69. pp. 1-3. See also Ian Radforth’s *Bushworkers and Bosses* for a detailed examination of camp diets including the number of calories consumed and burned in a day. Chapter Five “In the Camps”. Section v. pp.191-203.

³³ Bell, A. “Angus Bell’s Memoirs of Railroading.” pp.1-2.

³⁴ Nancy Forestell’s “Bachelors, Boarding-Houses, and Blind Pigs: Gender Construction in a Multi-Ethnic Mining Camp, 1909 – 1920” in *A Nation of Immigrants*. Ed. Iacovetta et al. Toronto. University of Toronto Press. 2002.

stretched out beside the tracks for a nap. It was believed that while sleeping, McDonald rolled onto the rails. He left a widow and four children.”³⁵

But it was the work itself that posed the greatest risks to men’s health. Some of these occupational health problems manifested in relatively minor strains, and soreness. For example when the camp doctor arrived at a camp near Sudbury a passel of patients with a litany of complaints assembled quickly:

As soon as a working gang saw the doctor’s rig coming, down went axe, pick and shovel and all made a bee-line for the doctor; their needs were numerous and urgent. Belladonna plasters were most popular; they were always in demand for [a] sore back, sore side or sore chest. They stuck them on like undervests. The plasters were grateful and comforting in cold weather..³⁶

At other times the injuries were significantly more severe and led to death or debilitation.

Table 2 presents data compiled from the Ontario Bureau of Mines “Annual Reports”.

³⁵ Trinnell, J.R. *J.R. Booth: The Life and Times of an Ottawa Lumberking*. Whitney. TreeHouse Publishing. 0998. p.28.

³⁶ Howey, F. *Sudbury Minus One* (part of a series called *Pioneering on the C.P.R.*). 1938. pp.29-30.

Table 2.1: Schedule of Ontario Mining Accidents & Deaths 1892 – 1904³⁷

Year	Accidents Slight/Serious	Annual Deaths	Cumulative Totals
1892	--	5	5
1893	13	3	8
1894	7	7	15
1895	14	2	17
1896	2	3	20
1897	21	1	21
1898	10	5	26
1899	11	14	40
1900	14	17	57
1901	30	13	70
1902	12	10	80
1903	16	7	87
1904	4	7	94

Slight/Serious 154

The chart indicates that it was not until 1899 that the annual death toll reached double digits. Statistically, over the first thirteen years the *Mine Act* was in place, deaths averaged out to about seven per year: approximately one every two months. Miners were usually killed singly or in pairs; it was rare for one accident to claim multiple lives. Whenever such an event did occur, it was considered alarming.³⁸ Statistical evidence of specific injuries suggest under-reporting because the Bureau of Mines was not always clear as to what was included. Nonetheless, the qualitative evidence presented in the annual Bureau of Mines reports reveals that miners faced five kinds of life-threatening workplace hazards.

³⁷ The figures for Table 2.1 have been compiled from data in the Annual Reports of the Bureau of Mines from 1892 to 1904 inclusive.

Note: Part IV of *The Mines Act 1892* did not require mines that employed six or fewer employees underground to report accidents or fatalities. It is likely therefore that some early accidents and deaths are missing from the results. In addition to the limitation of a six employee minimum, other accidents at mining sites were sometimes not characterized as “mining accidents”. This was changed in 1896 when Section 53 of *The Mines Act 1892* was repealed.

³⁸ See Arthur Slaght’s “Special Report on the Accident at the Blezard Mine” which was appended to the *Annual Report* of 1892. It was a special three-page investigation of a spontaneous rock fall that claimed five lives and injured two others. At the time, it was one of the largest single disasters to take place in an Ontario mine.

The first related to general conditions inside the mines. It was dark, wet, cold, dangerous, cramped, and noisy. For example, at the Shakespeare Mine in August 1904: "... six men lost their lives ... by asphyxiation or poisoning or both, from inhaling the "smoke" or gases, in the underground workings, resulting from a previous blast of dynamite."³⁹ In mid-March, 1898 a veteran miner named John Dunphy fell forty-five feet down the main shaft at the Mikado mine. He was left in complete darkness following a blast and had no matches with him. The fall kept him off work for six weeks.⁴⁰ At the same mine, on July 12, 1900, the Bureau of Mines noted that John McGuire:

"... was seriously hurt ... in the act of driving in a spike, about 18 inches from the mouth of the winze leading to the next level below, his foot slipped and he fell down some 50 feet in the winze, breaking his arm and sustaining a compound fracture of the leg."⁴¹

McGuire was off work for months. And at the Foley gold mine in May of 1896 August Johnson suffered severe injuries after falling seventy-five feet, off a ladder, at the Foley mine shaft. "His skull was fractured, his head otherwise badly cut and his left leg broken just below the hip joint."⁴² The myriad risks that attended mining environments were ever-present.

Mine lighting, as previously mentioned, was by candles which were affixed to workers' hats or set on small ledges in the rock walls using a piece of clay, or held by bent wire-holders with sharp hooks at the end.⁴³ Lighting was shadowy at best and if the candle went out the miner was stranded in a palpable, unremitting and impenetrable darkness.

³⁹ *Ontario Bureau of Mines Report for 1905*. p.26

⁴⁰ *Ontario Bureau of Mines Report for 1899*. p.24

⁴¹ *Ontario Bureau of Mines Report for 1901*. p.44

⁴² *Ontario Bureau of Mines Report for 1898*. p.31

See chapter one, "Machinery on Route to the Mines" in Mark Wyman's book, *Hard Rock Epic* pp. 3-31 for a discussion of how frontier miners used candles and, later, electrical lighting underground. Wyman, M. *Hard Rock Epic: Western Miners and the Industrial Revolution, 1860-1910*. University of California Press. 1989.



Figure 2.4 Helmet with Candle circa 1895.⁴⁴

The “helmet” pictured above offered little protection for a miner’s head. This particular version was several layers of canvas laminated together and covered with a heavy paint or tar, though others were made of cardboard or leather. The hats quickly softened through heat or sweat and they regularly caught fire. Although candles had proven inadequate and unsafe in mining operations, and despite the acknowledgement of mine inspectors in 1894, of a pressing need for efficient mine lighting, hand and hat-held candles persisted. The

Bureau of Mines reported:

The problem of illuminating [by electric lighting] underground workings on a large scale, either by a fixed light or temporarily for purposes of making [scaling] examinations has not yet come to the front in this province, for the reason that operations at any considerable depth are few in number. It would offer some difficulties, among which would be the smoke caused by blasting nearly always present in the atmosphere below ground when workings are continuously carried on; but if the development of the industry makes the progress which is hoped and looked for, mining companies and proprietors may find it necessary to give this matter their serious attention.⁴⁵

Horse-operated windlasses and bellows-styled pumping systems remained common, less expensive, alternatives but they were also far less efficient than electrical devices.

⁴⁴ With permission, photo taken by the author at the Colbalt Mining Museum.

⁴⁵ *Ontario Bureau of Mines Report for 1894*. p.208.

In mine shafts, stopes, and drifts sounds are exaggerated. They echo off walls in ways that distort and disorient them from their source. Seeing or hearing something clearly beyond a couple of feet was difficult, sometimes impossible. Tools and machinery were raised and lowered by cables and pulleys that were scabbled together according to the talents of the men and the materials at hand. Warning systems, if used at all, consisted of the most elementary call-and-response techniques – depending on the depth of the shaft – or by attaching bells to whatever was being moved. Rudimentary warning systems often failed:

at the Evans mine on the 26th of April [1892] which resulted in serious injury to Andrew Sorin an employe[sic] of the Canadian Copper Company. According to the statements of two fellow-workmen [Sorin] was engaged as a machine helper in sending machinery down the shaft being at the time on the fourth level and having heedlessly stepped out into the shaft the cage came down upon him. It was found that he was badly injured in the spine and upon the advice of his medical attendant he was sent to the hospital at Toronto for treatment. According to the statements of the men at work with him every necessary precaution was taken to prevent accident, and the usual necessary signals were given before the cage was lowered.⁴⁶

Entering and exiting a mine shaft took place via ladderways that were usually cobbled together from lumber felled at or near the camps. The quality of the conveyance relied entirely on the craftsmanship of the workers. There was no standard for constructing a ladder, nor was there any maintenance stipulated for them afterwards.⁴⁷ Ladderways were invariably wet, muddy and, in winter the rungs near the surface would be covered with ice. Suspended by ropes; they were not necessarily secured to the shaft's walls in order that they could be raised during blasting. Although the regulations prohibited underground

⁴⁶ *Ontario Bureau of Mines Report for 1892*. Prepared by Arthur Slaght. Archives of Ontario. Government Doc's M. Microfiche. 1892. Following this incident Sorin's name did not reappear in the sources so his ultimate disposition is unknown.

⁴⁷ Ladderways were not part of the legislated or continuing maintenance required by the *Mines Act of Ontario* until 1908. They were however regularly referred to in the "Mining Accidents" segment of the annual reports, especially when men avoided ladderways in favour of riding up and down the shaft in the bucket.

workers from ascending or descending the shaft by any other means, ladders could prove treacherous after a twelve-hour shift. For Axel Carlson, these conditions proved fatal:

Axel Carlson, night foreman of the Sultana⁴⁸ gold mine lost his life on 21 April, 1896. It was his practice to descend into the mine ahead of the gang of men of whom he was in charge, [to check for the presence of gases] and on this occasion when the latter climbed down the ladders at midnight to resume work they found Carlson lying at the bottom of the shaft with his neck broken and quite dead. No one was with him when the accident took place and there were no witnesses of the occurrence, but it is presumed that by a regrettable slip or mischance he missed his footing at some point in the last thirty feet of the ladderway and was precipitated to the bottom.⁴⁹



Figure 2.5 Photograph from Cobalt Mining Museum reproduced with permission.

About six weeks later, on June 5th, 1896, at the same mine, Charles Westman also died as a result of a fall down the same shaft, allegedly for the same reason. After some negotiating, a coroner's jury was convened,

...which viewed the body and adjourned to the Sultana mine where the shaft was inspected and the evidence of the men taken who were present at the time the fatality occurred. The verdict of the jury was that Westman met his death through an accident caused by his own carelessness and that the management of the mine was in no way responsible.⁵⁰

⁴⁸ The Sultana Gold Mine was west of Kenora in the Lake of the Woods district.

⁴⁹ *Ontario Bureau of Mines Report for 1896*. pp 66-67.

⁵⁰ *Ontario Bureau of Mines Report for 1896*. p 67.

Given these risks, some miners preferred to hitch a ride in the bucket – also called the skip – rather than risk injury or death by falling from the ladder to the bottom of the shaft.

Workers often learned, though, that riding in buckets was not always a safe alternative.

James Teppet died on October 28th, 1898 after hitching a ride on the skip. Inspector Bow investigated the death on February 1, 1899.

Golden Star Mine, October 28th, 1898: ... scene of a fatal accident: which befel(sic) a miner named James Teppet in consequence of his recklessness and disregard of the rules. [Teppet and two others tried to ascend from the bottom using the ore bucket rather than the ladderway.] Teppet was standing on the rim of the bucket which stopped on its way up and wishing to give the signal to proceed he released his hold, lost his footing and falling to the bottom met an instantaneous death. It affords another proof of the adage that "familiarity breeds contempt." In some occupations the constant presence of danger seems to lead to a foolhardiness and disregard of all precaution which men in less dangerous callings rarely show.⁵¹

It was something of a dilemma for the miners: they risked falling to their deaths trying to scale ladders and they faced similar fates in the buckets.

Snow, heat, humidity, wind and rain did not directly affect daily production below ground; conditions there were always cold and wet. The air temperature at the surface did not have any appreciable effects beyond the first eighty or one hundred feet of depth. The temperature underground was a constant 38°F to 40°F, marginally above the freezing point.⁵² Water seeped in continuously from the ceilings and walls making puddles unavoidable. The 1897 report of the Harold Lake Gold Mine noted: "Owing to the inadequate pumping machinery, several of [the] shafts have become filled with water; but no trouble is anticipated in keeping them clear, once [a] proper pumping plant is in

⁵¹ *Ontario Bureau of Mines Report for 1899*. p.26.

⁵² The temperature underground does not begin to rise until the shaft is about one thousand feet deep. At that point the temperature rises approximately 1°F for every 100 feet of depth. For the 1880 – 1900 period under discussion in this chapter, Ontario's hardrock mines rarely, if ever, exceeded 500 feet and so the working conditions were unremittingly cold and damp. Clement, W. *Hardrock Mining; Industrial Relations and Technological Changes at Inco*. Toronto. McClelland and Stewart Limited. 1981. p.99

place.”⁵³ This reconfirms the wet, working conditions and the trouble entailed in getting the necessary and sufficient amounts of technology into places where ores were present in quantity.⁵⁴ In the absence of good pumps, miners worked in puddled and water-soaked drifts. This practice contributed to chronic disorders and ill-health as physicians attributed conditions like phthisis (tuberculosis), black-lung, and weak constitutions to prolonged exposure to this kind of work environment.⁵⁵

The clothing of the men offered only marginal protection from the damp and the cold. To stay warm, constant physical exertion was required. Bodily protection was the responsibility of each miner; no protective gear was provided by the company although items could be purchased through the company “store” on site. Candles, gloves, boots, jackets, and eyewear were all paid for by the miners.

⁵³ *The Harold Lake Gold Mines Company Limited Prospectus*. 1897. Developments, p. 7. Thunder Bay Museum and Historical Society.

⁵⁴ The famous Silver Islet mine in Lake Superior was, perhaps, the best example of men working in a mine that was continuously flooding. At times they had to work in water that was up to their chests. In order to keep the pumps working coal had to be imported but when shipments were late, all the wood on the island (including cabin quarters) were burned. The mine shut down in early 1884 and has never been successfully reopened since. For more on the extraordinary Silver Islet mine see Smith, P. *Harvest from the Rock*. Chapter three “A New Eldorado – and the Island of Silver.” Pp.29-56.

⁵⁵ Sources from the period refer to diseases and conditions using archaic terms like “phthisis” which has been used here for accuracy.

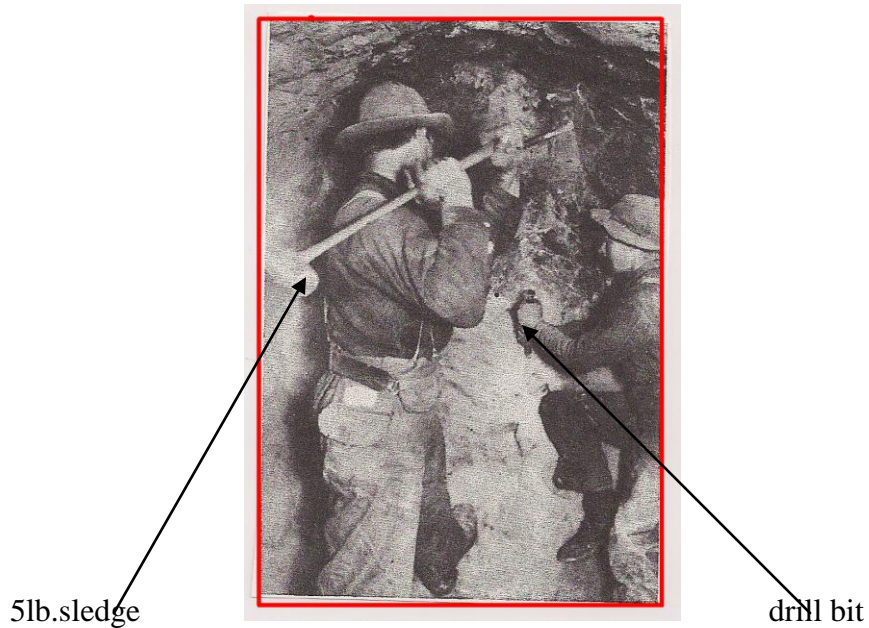


Figure 2.6 This illustrates the physical limitations faced by miners using the hand-drilling technique underground. <http://www.goldplacer.com/hardrockgold.htm>

The drill twisters wore heavy leather gloves, if they were available, but crushed fingers and broken bones were common because the lighting was poor and accurate drill strikes tenuous. The work itself was “backbreaking.” The shifts were long; each one lasted between ten and twelve hours, six days per week.

In these conditions miners faced a second more specific kind of occupational hazard: working with dangerous explosives. Prior to the 1890s, “black powder” was used to blast rock and debris. In 1880 when Dynamite⁵⁶ was first introduced it was commonly known as “giant powder,” Cheddite 65%, Driftite 70%, Forcite 75% or CIL-gel 85% represented a few of the other brand names used around Ontario.⁵⁷ Most manufacturers relied on *trinitrotoluene* (TNT) as the active ingredient until gelignite appeared in the early twentieth century. Explosives’ manufacturers were not required to meet any independent or

⁵⁶ Although Dynamite is the brand name of E.I. Dupont Nemours and Company, it is used throughout this study as a generic term for the explosives used in mining.

⁵⁷ The percentage indicated after each name reveals the amount of active ingredient in each cartridge.

uniform industry or government standard; so the quality, strength, stability and reliability of the various explosives and fuses remained individual and unpredictable. The 1912 explosion at the Energite Explosives Company in Haileybury reminded everyone of the dangers explosions continued to pose.⁵⁸



Figure 2.7 A commercial dynamite thawer. Cartridges were inserted into the opening and warm water circulated around them.

At mining sites, preparing explosives for use presented significant dangers. Although there were commercial dynamite thawers available, like the one shown above, in Ontario’s mines many deaths, blindings, and disfigurements results from thawing explosives. Miners’ bodies became tools – they were the thawing mechanisms as men frequently tucked sticks of dynamite into their armpits or put frozen cartridges inside their clothing, down the front of their pants, along their belts and in their pockets. Even when such methods ‘worked’ miners experienced dreadful headaches that occurred when trace

⁵⁸ The Energite Explosives Company in Haileybury blew up in 1912. The explosion killed seven workers and injured many citizens living near the factory. There was a great loss of personal property but “no conclusive evidence was found to pinpoint the exact cause of the explosion ...” and the company quietly moved away. See Temiskaming Abitibi Heritage Association. *Early Temiskaming Stories of Survival; “Root, Hog, or Die!”* Mississauga. Gateway Reproductions Ltd. 1998. p.18.

amounts of the active ingredient were absorbed into the body dermally.⁵⁹ It was also common for miners to put the wax-coated cartridges into pots of warm water and monitor the temperature by immersing their hands in the receptacle to test for “blood warmth” or temperature.⁶⁰ The practice required the miner’s body to act as a temperature gauge. If the water was not hot enough the sticks took too long to thaw. If, however, the water got too hot, a spontaneous explosion would kill or maim the miner. Fred Dela Fosse lost a friend to this practice.

He invited me to spend the evening with him in his shack in the hills beyond Silver Current. I was unable to go and it was just as well. Some nitro-glycerine which he was thawing out at the stove exploded and sent him and his shack into widely scattered portions of the adjoining townships.⁶¹

Similarly on January 1, 1900 at the Sultana mine there was a spontaneous explosion of dynamite:

... John Olson and Charles Tonstron were killed. They were engaged in thawing powder ... where the powder box for that level was kept. By the sudden explosion of the dynamite they were instantly blown to pieces.⁶²

On July 21, 1900 at the Sultana mine, a premature explosion claimed the life of Adolph Hedlund. His co-worker, Anton Johnston, who suffered a few minor injuries

... knew nothing about dynamite or thawing cans, but Hedlund did; however, the can appeared to be clean, Hedlund making some remark to that effect, and he had cut all but about two inches when on the stroke of the hammer the nitro-glycerine exploded and broke

⁵⁹ See *Dermatotoxicology, Seventh Edition*. Edited by Hongo Zhai, Kaus-Peter Whlhelm, Howard I. Maibach. CRC Press. Boca Raton. 2008. This text notes that system toxicity can occur through the skin when exposed to dynamite and its active ingredients: ethylene glycol and/or trinitrotoluene. P.183.

⁶⁰ The term “blood temperature” was widely and commonly used. It meant that the wax-covered cartridges had to be brought up to the same temperature as human blood. This was, however, determined individually by each thawer. If overheated, the product spontaneously exploded. The man would be literally “blown to bits” and afterward blamed for acting carelessly. Those nearby could also be killed or injured. There is no evidence that the government ever questioned the manufacturers about defective packaging or faulty products. The convenience of identifying the victim of authoring his fate seems to have been consistent with the government’s understanding of a miner’s intrinsic “nature”.

⁶¹ Dela Fosse, F. *Reminiscences of a Vagabond*. Thunder Bay Historical Society, Annual Reports 1908 – 1928, 18th and 19th Annual Reports. p.74.

⁶² *Ontario Bureau of Mines Report for 1901*. p.42.

the tin into fragments, one of which entered Hedlund's neck severing the jugular vein and causing him to bleed to death in a few minutes.⁶³

And even in camp, as men prepared for work by thawing sufficient explosives for a shift, there were dangerous consequences to thawing the cartridges.

On January 15, [1897] four men [Durahme, Potreau, Duchon and Drainville] working ... at Sawbill lake⁶⁴(sic) ... were injured by an explosion of dynamite The men were preparing to thaw out some frozen dynamite in a can or thawer which had been used for the purpose before. It is thought that some nitro-glycerine(sic) had run out of the dynamite [and] into the sawdust at the bottom of the can when previously used, and when the supposedly empty vessel was placed on the fire to melt some ice which was adhering to the bottom, an explosion took place. Drainville and Durahme had each one leg broken while the other two were badly shaken up, cut and bruised. They were ... placed in the hospital at Port Arthur.⁶⁵

They were lucky to have escaped relatively unscathed. Twelve years later, accidents of a similar nature were still populating the government's reports and they were still considered "novel" rather than predictable and avoidable.⁶⁶

Once thawed, dynamite remained dangerous. On October 19, 1895 at the Copper Cliff mine:

A drill-runner named James Gilchrist ... drilled a hole in the stope ... in which he placed nine sticks of dynamite. In the top stick he inserted the exploder and was stooping over the hole when a spark of fire, it is surmised from the miner's lamp which was in his cap, dropped into the hole, which had not been tamped. ... the explosion resulted seriously for Gilchrist. His head was badly cut by flying pieces of rock, his left arm broken above the elbow, two fingers of his left hand mangled, and his right arm dislocated.⁶⁷

On April 2, 1898 at a gold mine near Rainy River three miners were injured as a result of some unexploded dynamite in a hole spontaneously firing:

... having broken a drill in a hole they charged the latter with dynamite for the purpose of throwing out the broken steel. This they succeeded in doing without blasting the rock. Then

⁶³ *Ontario Bureau of Mines Report for 1901*. p.42-43

⁶⁴ Sawbill Lake is located west of present day Thunder Bay near Atikokan, Ontario.

⁶⁵ *Ontario Bureau of Mines Report for 1897*. p.30.

⁶⁶ In 1900 the government's *Manual of Explosives* included the following regulation at Appendix C, "Regulations for the Storage and Handling of Explosives in Ontario": 8. "A proper apparatus, approved by the Inspector, shall be provided for use in every mine for thawing explosives, and shall be employed under the direction of the mine foreman or of careful and experienced workmen." DeKalb, C. *Manual of Explosives*. Toronto. Ontario Bureau of Mines. 1900. p.117.

⁶⁷ *Ontario Bureau of Mines Report for 1896*. p.68.

they resumed drilling in the same hole ... twenty minutes [later] an explosion occurred, the force of which took effect upon Smith⁶⁸

In this instance Smith's hand had to be amputated and two nearby co-workers suffered cuts and lacerations that required medical attention. In the Big Master Mine, near Dryden, a March 1902 accident involved loose bits of unexploded material scattered among the muck. Two miners (Archibald and St. Armand) and a couple of helpers nearby were beginning to sort and remove some exploded rock and ore.

While thus engaged Archibald's pick struck and exploded some loose dynamite; the resulting injuries being: to Archibald, leg broken, two fingers blown off, face and eyes cut, and eyesight destroyed; to St. Armand, jaw broken, face and eyes injured; to Spear, face and one eye cut and bruised; to Robinson, hand and face bruised and cut but not seriously. How the loose dynamite came to be in the bottom of the shaft could not be ascertained.⁶⁹

Working with dynamite was challenging even for experienced miners. The Bureau of Mines investigations of incidents and fatalities involving explosives revealed an understanding that it was miner carelessness or risk-taking that compromised their health. In 1901 at the John Sykes gold mine, Joe Greenwood and Frank Potvin were killed and there were no witnesses. From "circumstantial" evidence, it was found that "... the only inference possible is that they were drilling in the bottom of an old hole ... and that the drilling set [the charge] off."⁷⁰

Falls of rock constituted a third cause of workplace injuries and fatalities. Without warning, slabs of rock would spontaneously release from a shaft wall or ceiling and claim an unsuspecting worker or more. On October 29, 1896 David McGregor died after "... a piece of rock fell upon him without warning, striking him in the back and killing him at once."⁷¹ At the Radnor mine on the 29th of April, 1901, Peter Larmond died after "a mass

⁶⁸ *Ontario Bureau of Mines Report for 1899*. p.23.

⁶⁹ *Ontario Bureau of Mines Report for 1903*. p.46

⁷⁰ *Ontario Bureau of Mines Report for 1903* p.43

⁷¹ *Ontario Bureau of Mines Report for 1897*. p.68

of rock ... tumbled down the [entrance] slope. His injuries were very severe, both legs being broken and internal injuries inflicted, and they resulted in his death ... 32 hours after the accident.”⁷² At the Blezard Mine in 1892 fatalities were deemed to be both unpredictable and unpredictable. The fact that the area had been “scaled” shortly before did not bring scaling practices into question.

The place where the accident occurred was in the open daylight and from all the evidence obtained no one of the mining men who were working around spoke of it as a place of danger. The general manager of the company, Mr. Cameron, in company with Mr. McBride, the captain of the mine, spent some time in the open workings of the mine and in full view of the projecting work but a short time before the accident; they were there for the special purpose of looking over every part of the work, and were discussing plans for future operations.... They did not regard the place as dangerous and indeed were congratulating themselves upon the safe appearance of the mine.⁷³

The Mine Inspector’s determination was that this was an unknowable event, utterly beyond the responsibilities of management. The investigation concluded:

In the evidence taken it was shown that when any projecting rock had the appearance of danger a man was lowered from the surface to test or remove the rock. This had been done repeatedly. After the [fatal] fall of the rock it could be seen that a seam or defect existed behind it, but it is by no means certain that it could have been discovered before. The presumption is that it could not have been seen, and that the defect was inherent.⁷⁴

The conclusion was that it was simple bad luck for the dead men, two of whom had young families. The government did not recognize the arbitrary nature and assignment of scaling. While the loss of life was serious enough to require a special investigation and to generate a “special report,” the conclusions simply acknowledged that mining was dangerous and that the dead men had accepted that understanding when they agreed to work there.

Employing a *de jure* and *de facto* binary of this sort vitiated any consideration of

⁷² *Ontario Bureau of Mines Report for 1902*. p.47.

⁷³ *Special Report on the Accident at Blezard Mine*. Ontario Bureau of Mines. 1892. Archives of Ontario. Government Doc’s M. Microfiche. 1892. p.257

⁷⁴ *Special Report on the Accident at Blezard Mine*. Ontario Bureau of Mines. 1892. Archives of Ontario. Government Doc’s M. Microfiche. 1892. p.257

alternatives. Ultimately, it condemned miners to continue sustaining injuries and dying in numbers.

Scaling was the term used for “sounding” (probing and testing) mine walls and ceilings for loose materials that might suddenly collapse on workers.⁷⁵ It was supposed to be performed after every blast to insure the integrity of the surroundings. It was done with a heavy, eight-foot-long metal pole or pry bar which was thrust vigorously against the rock face. The sounds produced were distinctive, indicating if the rock was “solid” or “hollow”. Any hollowness needed to be probed further to expose and relieve potential threats. Nonetheless it was impossible to know the size or depth of a weakness in advance. Experienced miners could usually identify a problem and would attempt to correct it. However, scaling was regularly assigned to new men whose abilities were incommensurate with the importance of the task. The results could be tragic. The idiosyncratic nature of scalers’ techniques, and their varying degrees of thoroughness could translate into dire consequences for co-workers.

Scaling the walls and ceilings was supposed to take care of the danger, yet it was not always effective. As the following stanzas indicate, the work of a scaler, though critically important to health and safety, was one of the least liked jobs underground. Again, there was no standardized training and the efficacy of the scaler relied on the experience of the individual performing the task.

The Scaler⁷⁶

⁷⁵ Today these events are called “rockbursts”. They are officially defined as: “... a seismic event which causes injury to persons or damage to underground workings. The general and essential feature of rockbursts is their sudden violent nature. Consequently all rockbursts are seismic events, but not all seismic events are rockbursts.” A study of this phenomenon can be found in D.G.F. Hedley’s *Rockburst Handbook for Ontario Hardrock Mines*. Mining Research Laboratories. Minister of Supply and Services Canada. Ottawa. 1992.

⁷⁶ Ed. E.L. Chicanot. *Rhymes of the Miner; An Anthology of Canadian Mining Verse*. Gardenvale. Federal Publications Limited. 1937. pp.141-142. Wilson H. Thompson was an Englishman who worked at the

For I've been a scaler, I've been thro' the mill,
 And the job I have many times curst,
 I've had some punk jobs in the mining game, still
 I'm positive scaling's the worst.

Try making thing's safe when you're two shifts behind,
 With sour looks on Safety First's dial
 And know that no matter how safe the roof sounds
 It will loosen up after a while.

The work of a scaler is never complete,
 The shiftboss makes sure of the fact,
 Because he's a scaler, it don't mean a thing,
 For often he's told to clean track.

When captains are finished, they know they are done,
 As a job I would say it was fine,
 But if you are asked you can tell them the truth
 That scaling is the worst in the mine.

W.H. Thomson

Holding the worst job in the mine meant that scalers had to be particularly vigilant about the danger of falling rock.

In addition to the dangers presented by wet, dark, and damp conditions, explosions, and rock falls, miners had to exercise caution around the moving parts of mining equipment. For example, in 1898 James Shortreed was killed when the loose clothing he wore was snagged by a spinning shaft. He had just repaired the machine's main drive belt but when he jumped down; his shirt sleeve got caught in the drive shaft. Shortreed could not survive the fractures of his legs, his right arm and massive internal injuries. He died a week later.⁷⁷ Railcars moving ore and equipment also proved dangerous. In 1898 Alexander McKinnon was injured when struck by a "jimmy" ore car that weighed five tons. He was off work for three weeks.⁷⁸ In 1900 at the Canadian Copper Mines, James

McIntyre, Porcupine [Gold] Mines in various positions including a scaler, mucker, machine operator and shift boss.

⁷⁷ Bureau of Mines 1898. P. 23-24

⁷⁸ Bureau of Mines. 1899. P. 25

Beatty was killed when a railcar he was working on ran over his back. He and a co-worker were performing a relatively simple repair on the underside of a railcar when it was jolted by another which ran over him. He died twenty minutes later.⁷⁹ At the Belmont mine in 1902 four miners were involved in a fatal accident while riding to the surface in the ore bucket. As was their custom at the end of a shift, they used ladderways to climb from the 400 foot level to the 300 foot level at which point they hitched a ride to the surface. During their ascent "... something went wrong with the hoist and the skip dropped ...” Three of the men were thrown down the shaft, and one died.⁸⁰

Beyond the immediate physical injuries described above, miners were also exposed to chronic health problems that included silicosis and phthisis.⁸¹ Education superintendent J. B. Macdougall, who travelled widely across the north at the turn of the century noted:

In the dust-filled air human forms are outlined against the rock wall ahead - grim, grizzled warriors of the underground, their faces streaked with honest sweat. They have given themselves as hostages to fate for the fine silica-dust finds a lodgement in the recesses of their lungs and they are doomed to an early grave.⁸²

Physical constitutions were eroded by the everyday conditions, stresses and demands of the work. It is likely that impaired hearing and vision also contributed to the high mortality rates among miners. When miners could not see or hear the danger, they suffered injuries. Overall the circumstances of mine work were hard and the very nature of mine work was deleterious to the health of the men in the industry.

⁷⁹ Bureau of Mines. 1901. P. 45

⁸⁰ Bureau of Mines 1904. P. 40

⁸¹ Alan Derickson estimates that for every fatality or disabling injury recorded by mines' inspectors, there were twenty-five additional victims of various pulmonary impairments caused by dust. See chapter two "Occupational Hazards" in Derickson, A. *Workers' Health, Workers' Democracy; The Western Miners' Struggle 1891 – 1925*. Ithaca, Cornell University Press. 1988. pp.28-59.

⁸² Macdougall, J.B. . *Two Thousand Miles of Gold, from Val D'Or to Yellowknife*. Toronto. McClelland and Stewart. 1946. p.148. Rosner, D. and Markowitz, G. *Deadly Dust: Silicosis and the On-Going Struggle to Protect Workers' Health (Conversations in Medicine and Society)*. University of Michigan Press. 2006.

Regulations, Health and Safety

Clearly, then, mining in northern Ontario between 1890 and 1904 was a dangerous occupation. How did the newly constituted Bureau of Mines respond to the occupational hazards facing the mining workforce? The first *Annual Report* (1890) of the Mines Inspector specified that all mines employing more than six underground workers had to submit an annual statement summarizing the activities of the mine, including the number and ages of workers. The multi-fatality accident at the Blezard Mine in 1892 prompted the Bureau of Mines to conduct a special inquiry. Mining inspector, Arthur Slaght, provided a detailed description of the accident and deaths; it was published as a Special Report of the Bureau the same year. By 1895, the *Annual Reports* included tables listing the accidents and deaths, accompanied by textual descriptions of these events at each of the province's mines. This data comprised part of a comprehensive statistical analysis of the industry, including the quantity and quality of skilled miners.⁸³

The data gathered focused the Bureau's attention on the undesirable numbers of accidents and fatalities in the industry. As the 1901 *Annual Report* acknowledged: "The list of mining accidents occurring year by year continues to be longer than it ought to be in view of the number of working miners in the Province."⁸⁴ Tracking mining accidents was not always easy. The 1895 report acknowledged this when it explained that the legislation

⁸³ The *Mines Act 1892* said the annual reports were designed "... to furnish information on the mineral resources of the Province, the progress of mining and metallurgical operations, the conditions of mines as regards the health and safety of miners, and the observance of regulations for the employment of labor." *Ontario Bureau of Mines Report for 1902*. p.225

⁸⁴ *Bureau of Mines Report for 1901*. p 48

and regulations did not apply to operations employing fewer than six men underground thus many accidents went unrecorded in the official statistics.⁸⁵

In gathering data, inspectors relied on local managers to record and report all accidents. The *Mines Act (1892)* required mine managers – those who worked at the mines as opposed to owners or administrators who lived “outside” in an urban setting – to file workplace accident reports. It was a mine inspector’s responsibility to coordinate a fatality inquiry, which included the following: viewing the body, interviewing witnesses, determining the cause of death, and assessing blame as he saw fit. The inspectors developed a taxonomy that fixed mining accidents into one of three categories: Fatal, Serious and Slight.⁸⁶ It fell to the inspectors, individually, to judge which of the latter two categories was the most appropriate in any given situation. Thus lacerations, contusions, concussions, burns, falls, broken legs and arms, losses of limbs or digits, deafness, and blindness could be determined to be either ‘Serious’ or ‘Slight’. Blindness in both eyes was usually Serious, while blindness in one eye was, depending on the Inspector and circumstances, sometimes considered Slight. Once an injury was classified it was not upgraded or downgraded at any future time. For example, a broken leg, or crushed toes, might be categorized as “Slight” at the time the report was prepared: The subsequent appearance of infection, like gangrene, and a later amputation – secondary problems which

⁸⁵ *Bureau of Mines Report for 1895*, p.240.

In the section of the 1899 report titled “The Condition of Ontario Mines” Inspector DeKalb writes: “The regulations of the Bureau of Mines might advantageously be revised in so far as they related to explosives.” Some of the regulations were changed in 1901. *Ontario Bureau of Mines Report for 1899*, p.29 After the report was tabled in the provincial legislature, revisions and additions were made.

⁸⁶ Most of the inspectors’ reports concentrated on deaths but sometimes there were other miners injured during the same incident and so accident reports were generated at the same time. There were few if any accident reports noted independently of fatalities until much later. It was not until 1912 that revisions to the *Mine Act* provided a fixed understanding and methodology for classifying injuries, which became the responsibility of the attending physician rather than the mines inspectors. The injury had to result in the victim being unable to work for a minimum of seven days for it to be classified as “Serious.” *The Mining Act of Ontario (1908) with Amendments to 1912*. Section 168. (1) and (2).

often accompanied bad bone injuries – did not alter the original finding and there is no record of cases being re-adjudicated and upgraded in the 1890-1904 years. The broad discretion of the inspectors led to great variances in interpreting both the severity of the accidents as well as their causes.

Inspectors were asked to categorize “Causes of Accidents” which were reified into three broad headings. The first was “Unavoidable accidents that are inherent in the nature of the work.” The second was “Accidents due to carelessness, negligence or incompetence on the part of the management.” The third was “Accidents due to carelessness, negligence or incompetence on the part of the workmen.”⁸⁷ These categories were used explicitly beginning in 1896, and they structured the inspector’s reports until 1908.

A further complication inspectors faced was that they relied on mine managers to report injuries and deaths and to provide much of the evidence about accidents. What some managers considered an “accident” others ignored completely. Inspectors’ reports from the period reveal that few, if any managers, reported bumps, scrapes, bruises, burns, cuts, or muscle strains. As Eric Tucker’s analysis of employer liability has shown, the “*assumption of risk*” philosophy was widely believed to mean that the discomforts from bruises, strains, general aches, and even some broken bones were just “part of the job” and not accidents *per se*.⁸⁸ Early in the period, even fatalities were interpreted in a discretionary manner. If, for instance, a miner was killed aboveground by a falling tree, a spontaneous explosion, or being run over, it might not have been reported to the Bureau because it was not deemed to

⁸⁷ *Ontario Bureau of Mines Report for 1896*. p.235.

⁸⁸ Eric Tucker has done excellent work in this area. See his article: “The Law of Employers’ Liability in Ontario 1861-1900: The Search for a Theory.” *Osgoode Hall Law Journal* Vol. 22, No. 2, pp. 213-280, 1984. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1892297 See section C “The Problem of Voluntary Assumption of Risk. P.236 and “Contributory Negligence” p.246.

be an accident immediately associated with “mining” operations. The 1895 Annual Report says:

A case of this sort was reported in the Toronto papers by which one Brearton lost his life and one McCarthy was seriously injured through a premature explosion of dynamite in a mining prospect just east of the town of Rat Portage [in November 1894].⁸⁹

In this instance, the deceased was deemed to be culpable in his own death saying, “... if blame was due to any one(sic) it was doubtless the unfortunate man who paid the penalty for his carelessness – if careless he were – with his life.”⁹⁰

As the Rat Portage example reveals, whether inspectors were called in or not, the Bureau of Mines often concluded that workers were responsible for their injuries. Management was rarely held accountable for leaving winzes and shafts unprotected and workmen vulnerable. The Bureau rarely blamed the conditions of work or management for these incidents. It was usually the inexperience, carelessness, or defiance of the workers that was identified as causal. Indeed, in 1899 Inspector Bow wrote: “In some occupations [like mining] the constant presence of danger seems to lead to a foolhardiness and disregard of all precaution, which men in less dangerous callings rarely show.”⁹¹ The Bureau regularly commented that no blame could be assigned or that the company was not to blame: “... the ladders were in no way defective, and that there was no blame to be attached to the owner of the mine or to those in charge of it”⁹²

Examples of this can be seen in how responsibility was assigned in some of the accidents previously cited. In the case of James Shortreed - killed when his clothing got caught up in the machine he was repairing - the mine inspector concluded:

⁸⁹ *Ontario Bureau of Mines Report for 1895*. Archives of Ontario. Government Doc’s M. Microfiche. 1899.p.240.

⁹⁰ *Ontario Bureau of Mines Report for 1895*.p.240

⁹¹ *Ontario Bureau of Mines Report for 1899*. p. 26.

⁹² This comment was made after investigating the 1896 death of Axel Carlson. *Ontario Bureau of Mines Report for 1897*. pp.66-67.

There is little room to doubt that Shortreed's own carelessness brought about his death. [...] the loose sleeves of the unfortunate workman's jacket were just what was needed to bring about an accident of this particular class, which is always severe and frequently fatal.⁹³

James Beatty – run over by a railcar he was repairing – was found to be the author of his own death for failing to use the “greatest caution” when undertaking such work.⁹⁴ At the Belmont mine – where one died and three were injured when they fell from the bucket they were riding on – the victims were admonished for disobeying the rules and regulations, notwithstanding that it had been the custom and daily practice at the mine for some time.⁹⁵

The regulatory system began as one that anticipated deaths, but, in practice often concluded it was the employees who authored their misfortunes. The inevitable result was that most often the miners were found to be complicit in their deaths and injuries. In the introduction to the Mining Accidents report of 1901, the Chief Inspector wrote: “...how all safeguards are being enforced as strictly as possible so that in cases of accident the responsibility may rest elsewhere than on the management” and that it was time for the miners to “discard some of the carelessness” born of familiarity with danger.⁹⁶ Except in the most egregious circumstances, there was an unwillingness to look beyond the miners when assessing the causes and assigning responsibility for accidents and deaths.

The general ideas, public perceptions and prejudices that informed the judgements of mines inspectors reveal an ingrained bias against labour, in addition to clarifying how the province constructed the identity of miners. The common profile derived, at least in

⁹³ *Ontario Bureau of Mines Report for 1899*, pp. 23-24

⁹⁴ *Ontario Bureau of Mines Report for 1901*, p. 45

⁹⁵ *Ontario Bureau of Mines Report for 1904*, p. 40.

⁹⁶ *Ontario Bureau of Mines Report for 1901*, p.42.

part, from the “assumption of liability” doctrine that informed labour laws of the time.⁹⁷

Eric Tucker describes the effects of that legal philosophy as: “the people who suffer[ed] the harm [were] seen to be the authors of their own misfortune.” Because of their class, gender, and the type of work they performed, miners were constructed as careless, reckless and incorrigible. But this idea was not new or exclusive to Ontario. It was also found in other provinces and in American hardrock mines as well. As Larry Lankton discovered:

[American mine inspectors] seldom if ever condemned any part of a mine or demanded that companies alter their practices. The mine inspectors did, however, do a thorough job of recording fatal accidents. They reported what had happened and summarized the verdict of any coroner’s jury impaneled to rule on the accident. Also, the mine inspectors affixed fault when possible. When they could point to negligence they invariably pointed to the victim. Meanwhile, in their annual summaries, the mine inspectors often commended the local companies for their fine safety record[s].⁹⁸

This attitude reflected an even broader understanding of miners being prone to, and complicit in, their injuries and deaths. Arguments put before the 1889 *Royal Commission on the Relations of Labor and Capital in Canada*, contended that machines, in and of themselves, were not inherently dangerous. They only became so in the hands of careless operators.⁹⁹ In most cases, the zeitgeist in mining communities presumed corporate interests to be absent of responsibility with respect to the nature and frequency of fatalities and accidents.

⁹⁷ For a more detailed discussion of the legal aspects of this idea see Eric Tucker. *Administering Danger in the Workplace*. Chapter Two: “Paying the Butcher Bill and Chapter Three: “Courting Risk.” A more concise definition of assumed risk was offered in R.C.B. Risk’s work “This Nuisance of Litigation” which says: “When several workmen engage to serve a master in common work, they know or ought to know the risks to which they are exposing themselves including the risks of carelessness, against which their employer cannot secure them, and they must be supposed to contract with reference to such risks.” Risk. R.C.B. “‘This Nuisance of Litigation’ The Origins of Workers’ Compensation in Ontario.” *Essays in the History of Canadian Law*. Vol 11. Ed. D. Flaherty. Toronto. The Osgoode Society. p.421. Eric Tucker. *Administering Danger in the Workplace*. p.9.

⁹⁸ Lankton, L. *Cradle to Grave. Life, Work and Death at the Lake Superior Copper Mines*. New York. Oxford University Press. 1991. p.143.

⁹⁹ References to these ways of doing business are found in “Legal Rights of Workers”; “The Company Town”; and “A Coal Miner Testifies” in *The Workingman in the Nineteenth Century*. Michael Cross. Toronto. Oxford University Press. 1974. pp. 74-81. and in chapter three “The Workingman’s Welfare” *A Living Profit*. Michael Bliss. Toronto. McClelland and Stewart Limited. 1983. pp.55-73.

Health Care

Despite the tendency to understand workers as authors of their own injuries, the Ontario government enacted legislation requiring mining and resource companies to provide basic medical services to these isolated northern worksites.¹⁰⁰ The 1892 *Mining Act* mandated two elements of camp medicine. The first outlines the services camp doctors had to provide.

1. The physician covenants and agrees to: i) visit the camp or camps of the employer as often as may be necessary to give adequate medical and surgical care and treatment to every employee; ii) render medical and surgical care and treatment to every employee; iii) report in writing to the Minister of Health once a month all cases of sickness and non-industrial accidents suffered by employees during the previous month, and iv) notify the Minister of Health in writing of the name and address of any other medical practitioner engaged to perform any services under this contract other than consultant services.

The second outlines the financial relationships:

2. The employer [the company] covenants and agrees to deduct from the wages or earnings of each employee the sum of \$____ each month in respect of all employees who have worked during the month for the employers or his contractors or sub-contractors and to pay the total amount deducted without rebate or deduction to the physician within one month after the money is deducted, as provided for in the regulations.¹⁰¹

The contracts were negotiated between the companies and the doctors, but funded by the workmen through a payroll deduction system also legislated by the province.

Correspondence between Dr. C.A Duke and Gillies Brothers of eastern Ontario, illustrates how these negotiations were conducted with respect to lumber camps:

Gentlemen,

My plan is this, to have all your men working in the shanties here subscribe 25cts a month each and that I would take a trip to the shanties every month and give them all attendance

¹⁰⁰ See similar legislation in American mining communities on Lake Superior in Larry Lankton's: *Cradle to Grave* particularly chapter four, "Men at Work: Agents, Captains and Contract Miners" pp. 58-77 and chapter seven "The Cost of Copper: One Man Per Week." Pp. 110-125. Lankton's *Beyond the Boundaries; Life and Landscape at the Lake Superior Mines 1840 – 1875*. New York. Oxford University Press. 1997 is also helpful although it centers on the period prior to the focus of this dissertation.

¹⁰¹ *The Mining Act of Ontario (1892)*.

required and attend to all their sickness be it in the shanties or here in the Hospital without extra charge even if they should be sick for the whole month provided their 25cts is paid. I think this plan is very feasible(sic) as it is adopted by the C.P.R. and other Railway companies for their employees. I wrote to Mr. Branson & West and Klock and Co on the same subject and think that if you all agree to this plan the men won't do [sic]any objections.

Need not to be said that time of subscription will begin to run on the day of their arrival here and that a man who does not remain at least 15 days in the month will not be called to pay for that month.

Hoping you will take this plan into consideration and approve it.

I remain,

Yours truly,
C.A. Duke M.D.¹⁰²

This administrative system bound the doctors to the corporations rather than to the miners.

According to historian Brian Hogan, "...the whole method of paying for doctors and care on a compulsory check-off system, but without much choice of medical personnel or supervision of financial expenditures, was irritating to [the miners] paying for the service."¹⁰³ Despite payment of the fees by the men, it was management, and management alone, that prepared the contracts and hired the physicians.

Companies in the remote north had limited choices from the supply of physicians available. Prior to 1900 the definition of a physician in Ontario was fluid.¹⁰⁴ Over time Thomsonians, eclectic, homeopaths and allopaths had gradually united, trained, and been certified and licensed by the province.¹⁰⁵ And while physicians eventually came together as one body in the Ontario Medical Association in 1880 the quality and quantity of certified

¹⁰² Archives of Ontario. Gillies Brothers Fonds. Call number: F150 150-12-1-13.

¹⁰³ Hogan. B. *Cobalt, The Year of the Strike, 1919*. p.53.

¹⁰⁴ For a discussion of what these terms meant, how they were applied and how they were generally understood, see Charles Godfrey's *Medicine for Ontario, A History*. Toronto. Mika Publishing. 1979. pp.186-197.

¹⁰⁵ "The fine line between quackery and doctory was blurred as much medical treatment was on an empirical basis. One doctor presented his bill to a father, and in all fairness, deducted the sum of £6 for "killing your son". It seemed the physician brought smallpox along with his black bag." Godfrey, C.M. *Medicine for Ontario, A History*. Toronto. 1979. p. 22.

doctors remained uneven.¹⁰⁶ Compared to urban centres, there were precious few doctors living in northern Ontario.¹⁰⁷ Those who did had wide-ranging practices that covered miles and miles of back roads amid dense, almost impenetrable, forests. Contracts with mining companies constituted only part of their practices.

Dr. Edwin Gimby provides one example of how physicians were secured by mining companies. He was born in 1859 in Derby Township in Canada West (near present day Owen Sound). He passed a High School Entrance exam in 1878 and matriculated in 1886. He immediately registered at the University of Toronto Medical School and with the provincial Medical Council, which was the official licensing body. He graduated in 1889. At the time, the rules required four consecutive years of study before a candidate could receive his provincial license. Yet, Gimby, with a wink and a nod from Uxbridge council, began practicing without a license. As his autobiography explained:

I went to see the Registrar of the Medical Council. I tried to convince him that I should be allowed to write [my license exams], as I was registered before that regulation was passed. The only thing [the registrar] said he would do was to keep me from paying a fine. I thought that pretty good and thanked him. He told me to locate in some out-of-the-way place where I wouldn't interfere much with Licensed doctors. I went to a small village thirty-five miles from Toronto, in the sand hills of Uxbridge Township. There was no doctor there.¹⁰⁸

Gimby practiced for a year – eventually fined fifty dollars for practicing without a license despite the registrar's assurances – before receiving his designation and being admitted as a Member of the College of Physicians and Surgeons of Ontario (MCPSO). Gimby remained

¹⁰⁶ For more information on the Ontario Medical Association, its formation and structure see Glenn Sawyer's *The First 100 Years; A History of the Ontario Medical Association*. Toronto. Ontario Medical Association. 1981.

¹⁰⁷ See S.E.D. Shortt's article "Before the Age of Miracles" The Rise, Fall and Rebirth of General Practice in Canada 1890 – 1940" and W.B. Spaulding's "Smallpox Control in the Ontario Wilderness 1880 -1910." Both are found in *Health, Disease and Medicine; Essays in Canadian History*. Ed. Charles G. Roland. Toronto. The Hannah Institute for the History of Medicine. 1984. pp.123-151 and pp. 194 – 214 respectively. These authors identify the difference between urban and remote medical practices including distance, access to technology and collegial support.

¹⁰⁸ Gimby, W. *William Edwin Gimby's Autobiography*. (unpublished) p. 7.

an itinerant practitioner who continued to seek out remote and rural settings to practice in.

Before long:

I was on the Road again, heading for the north end of Lake Temiscaming where the Government and the Settlers offered a bonus to any doctor who would take [the] chance of being frozen or starved to death. I would be the only doctor in Ontario between North Bay and the North Pole. I thought that sounded good.¹⁰⁹

Once in the north, physicians had to cover a good deal of territory. As a result when companies contracted with a doctor it did not mean the same physician would personally attend to the needs of the men. Clifford Smylie while still at the University of Toronto had a similar experience:

... I heard of a doctor ... who wanted a man to look after his lumber camps for him. He wasn't sure yet how many camps there would be but he'd have a contract drawn up a little later.¹¹⁰

These arrangements sometimes caused heated local controversies because competing doctors, who often lived nearby, resented being replaced by an unlicensed student. Smylie recalled:

... one of the Parry Sound doctors had learned that I didn't have my license to practice, and reported me to the Ontario Medical Association. But when the O.M.A. found I had passed the Dominion Council Examinations, they apparently decided I was legally qualified to practice and chose to do nothing about it.¹¹¹

Even when approved by the OMA, contractual arrangements were not always stable or satisfactory. For example, Smylie recalled his first contract:

The doctor who had advertised [for a camp physician] thought I was just the man he was looking for.... He assured me I was quite qualified to fill the job [without a license] and that it would be perfectly ethical and proper for me to work under his direction and supervision. I was ready and anxious to believe everything he told me.... [After] I had been there a month, I was hoping he would give me my first pay cheque but he said the camps

¹⁰⁹ Gimby, W. *William Edwin Gimby's Autobiography*. p. 11.

¹¹⁰ Smylie, C.H. *Northern Doctor, Memoirs of Clifford Hugh Smylie. M.D.* Cbalt. Highway Book Shop. 2002. p. 80.

¹¹¹ Smylie, C.H. *Northern Doctor, Memoirs of Clifford Hugh Smylie. M.D.* p.2.

were just getting started and no money had come in yet. None ever came and I never saw or heard from him again.¹¹²

The use of unlicensed medical school students, who might be paid less than the face-value of the contract, meant that miners were sometimes cared for by practitioners with limited knowledge and experience. Dr. William Howey, who graduated from medical school in Toronto in 1878, moved north with his wife and subcontracted his services, through Dr. Girwood, to the CPR lines around Sudbury. Contract physicians were frequently stretched thin, and, when they were away their wives sometimes acted in their stead. Doctor Howey's wife (also known as 'madame le docteur') noted:

Many duties fell upon me, although I was not on the payroll. [When her husband was away visiting camps] ... I had to see that the patients got their doses of medicine at the proper time, and keep tab on their temperatures. There was always a supply of simple medicines put up for me to dispense in his absence, if necessary; and as there was no doctor within ninety miles of us I was obliged to administer anaesthetics and help with minor operations such as amputating frozen toes or mutilated fingers.¹¹³

Mrs. Howey was not medically qualified in any way yet her willingness to effect treatments, including amputations, was demanded by the circumstances.¹¹⁴ The reality of the medical services fell below the ideals charted in the legislation. There were few enforcement mechanisms because the mine inspectors were not in a position to judge the competence, efficacy or completeness of the care rendered.

The quality of healthcare varied widely and was often compromised by distance, weather and terrain. Indeed doctors' records from the period dwell far more on *how* they

¹¹² Smylie, C. *Northern Doctor, Memoirs of Clifford Hugh Smylie*. Cobalt. The Highway Book Shop. 2002. pp.80-82.

¹¹³ Howey, F. *Sudbury Minus One* (part of a series called *Pioneering on the C.P.R.*). 1938. p.60

¹¹⁴ Howey, F. *Sudbury Minus One*. Mrs. Howey's work was not unique. Dr. Smylie's wife, Belle, delivered babies when he was out on calls or if he was busy with an operation. She said: "got the maternity kit and went with [the patient's husband] ... I felt like a scared fool for I didn't know what to do. But when I arrived and found the baby ready to be born, I remembered all the things I'd heard [Dr. Smiley] say and next thing I knew we had a fine howling baby. I didn't have time to be scared..." Smylie, C.H. *Northern Doctor, Memoirs of Clifford Hugh Smylie. M.D.* Cobalt. Highway Book Shop. 2002. pp. 107-108.

accessed their patients than on *what* they actually did when they finally got to their destination.¹¹⁵ Doctors' travels commonly involved horseback or horse and wagon, canoes, railways, sleds, carriages, snowshoes, skates and foot. Motorized vehicles were just beginning to make an appearance but they were not of much use in the north where roads were of casual and very rough construction. The demands of weather further interfered with doctors' access to patients just as it did with miners' access to camps. Snow, floods, ice, fires and impassable trails regularly inhibited or denied treatment to the sick and injured. The Bureau of Mines *Annual Report* for 1899 notes that it took fourteen hours for Dr. Denmark to attend upon a miner who suffered a broken leg at Lower Manitou Lake, about 40 kilometers south of Dryden. The injury was not fatal but the remoteness of healthcare services was made apparent. The blast occurred at 5:30 p.m. on an October afternoon and two men were dispatched, by canoe, to get the physician. He arrived at 7:30 the next morning.¹¹⁶

Isolation could be a death sentence for minor problems if infection set in. In his memoir, former superintendent of schools for Northern Ontario, Macdougall recalled:

Doctors were miles away, 20, 50, 100 miles and [the] pockets [of workers] could not afford the call. Life and death cases were sure to arise and then it meant a frantic dash, mile upon mile, over the bush trail often in the night by the dim light of the lantern. Worse still was the ... return trip in paralyzing dread lest the advice of the remedy might prove too late....¹¹⁷

Bleeding to death from puncture wounds was a risk faced daily so the need for immediate, competent, remedial services was serious. In the case of a badly frozen man named Campbell, it took Dr. H. Bryan 21 days to travel 250 miles to reach his patient and “apply

¹¹⁵ See Duffin, J. *Langstaff: a nineteenth-century medical life*. Toronto. University of Toronto Press. 1993. Langstaff dwells on his journeys and notes the condition of the weather and roads with great frequency. Clifford Smiley does the same in his autobiography. *Northern Doctor*. Smiley goes into great detail about his horses, and some fascinating mechanical contraptions that ante-dated the modern snowmobile.

¹¹⁶ *Ontario Bureau of Mines Report for 1899*. pp.27-28

¹¹⁷ Macdougall, J.B. . *Two Thousand Miles of Gold*. p.197.

the proper dressings” then a further ten days to evacuate him to Nipigon and eventually to Toronto General Hospital.¹¹⁸

In general, medical care at the turn of the century was elementary. As medical historian Charles Godfrey explains: “Surgical techniques ... centered on amputation and tumour removal, with alcohol [consumed orally] to deaden the pain.”¹¹⁹ In the north, medical care was even simpler. The obituary for Dr. Edwin Gimby notes the primitive conditions and tools available at that time. He was remembered for travelling the frontier by horse, boat, and snowshoes and more poignantly for performing “a successful mastoid [operation] ... using a cold chisel and a heavy bolt.”¹²⁰

Camp hospitals were usually a separate tent or, at best, a lightly equipped boxcar that had been converted to house a couple of patients. When injured workers were taken to an off-site hospital, it was to the nearest one. They might then be moved to another facility if warranted. There was no standard as the diagnoses relied heavily on the attending physicians’ findings and recommendations. That decision was at the sole discretion of the doctor as he considered the type of injury suffered, the distance, the methods available to transport the patient, and the likelihood of recovery. Whereas the men wanted full value for their money, the doctors had a financial disincentive to render anything more than minimum care. The contracts the doctors agreed to required them to deliver a host of services at their own expense and that the range of treatments be sufficient to whatever was required in each instance. The vagueness of the wording left gaps in service, especially if a physician was not adequately qualified to perform what was called for.

¹¹⁸ Nipigon Museum and Archives. “Snow-Shoe Medicine”. June 28, 1973. from his 1904 diary.

¹¹⁹ Godfrey, C.M. *Medicine for Ontario, A History*. Toronto. 1979. p. 22

¹²⁰ *Canadian Medical Association Journal*. October 1950. Vol.63.p. 414,

The *Mine Act 1892* did not prevent contract doctors from acting as their own coroners on the same case, despite the obvious conflict of interest. It was changed in 1893 to deal with such circumstances:

It shall not be lawful for a coroner to conduct an inquest in any case ... where he may be employed as medical attendant by the owner or owners thereof, or by any agreement or understanding direct or indirect with the employés at or on such works.¹²¹

Notwithstanding the intention of the regulation, the paucity of doctors across the north still allowed for exceptions.¹²² Because of the contracts of doctors, the overlap of contract physicians *qua* coroners persisted into the twentieth century. As late as 1913 there were still conflicts of interest involving doctor/coroner responsibilities.¹²³

To some doctors, like Clifford Smylie, the practice of medicine was a privilege but one that made little money. He said his private practice bore little extra cash: “my charges were small and even then ... often more than people could afford or would pay.”¹²⁴ Therefore, additional opportunities to earn money were coveted.

In these small remote resource communities across northern Ontario, doctors were provided. There were, however, not that many and those who were available travelled long distances, often under difficult circumstances. There is no way to evaluate the skill levels of those in the camps against those of southern doctors but there were, categorically, fewer technological and treatment options available in the camps. The records of doctors who left behind memoirs speaks to the value they placed on their work and careers. Those who were more itinerant left nothing to evaluate because they had to work alone, with little

¹²¹ *Ontario Bureau of Mines Report for 1893*. pp.176-177.

¹²² Government of Ontario Archives. RG4 - 32 File 1913 #1628

¹²³ See the Attorney General’s report on the death of Gresha Michwick (Mishwick) whose leg amputations, death, and subsequent inquest were all handled by the same Dr. Patterson of Sudbury See RG 4-32 File 1910 # 88 and the office of the Attorney General wherein he comments: “it is an improper thing for anyone to act in a judicial position such as coroner when he is retained or employed by or under salary from a company or person who is seriously interested in the result of [an] inquest.”

¹²⁴ Smylie, C. *Northern Doctor*. p.86.

equipment, on men who were severely injured or sick. Because the doctors were paid by the company, but through deductions from men's wages, structurally, the doctors were positioned as having a direct financial relationship with the company and not with the men. This particularly mattered with respect to doctors' work as coroners. It speaks to why, during this period, doctors and coroners never seemed to find companies culpable in accidents and fatalities at the mine sites.

The consequence of these inter-locking and conflicting relationships among doctors, companies and the bureaucracy meant that, to all intents and purposes, doctors were co-opted by the province to the detriment of the workers. When investigating fatalities doctors were reluctant to issue findings against the same companies that signed their cheques. Furthermore, as government agents, doctors were loathe to dispute the province's assumptions or the final results of the mine inspectors: that miners were careless, reckless or foolhardy. When there were life-threatening injuries or deaths, the roles of the physicians were clearer; they had to be present. In other circumstances, the requirements were less distinct and open to interpretation and availability. Therefore, the early roles of Ontario's contract physicians developed in ways that were sometimes inimical to the well-being of the very miners they were supposed to be caring for. The evidence left by the doctors reveals why they aligned themselves with the companies (the source of the doctors' earnings) rather than with the men (the source of the doctors' expenses).

Masculinity and Health

The Bureau of Mines and contract doctors addressed issues of men's health using a particular understanding of masculinity to explain many of the accidents and fatalities. There was a unique type of hypermasculinity that informed interpretations of brawn, risk-taking, and foolhardiness versus what the miners themselves might have considered heroic, brave and skilled.

Echoing Great Britain's *Mines and Collieries Act of 1842*, which denied females any work underground – and limited the roles of children – Ontario's *Mine Act* also required all mine work to be done by men.

No boy or girl under the age of fourteen years shall be employed in or about any mine and no boy under the age of seventeen years shall be employed below ground in any mine.¹²⁵
and

Except as stenographer, book-keeper or in some similar capacity, no girl or woman, shall be employed at any mining work or allowed to be for the purpose of employment at mining work, in or about any mine.¹²⁶

I was not able to locate any primary sources from the period that reveal how miners felt about the risks they faced or how gender informed their workplace practices and experiences. The Bureau's accident investigations identified some lengthy tenures in the industry, indicating that mine workers were well-acquainted with the vagaries of the job. As "warriors of the underground" miners had to be unafraid of impenetrable darkness, confined spaces, damp and wet conditions, and, perhaps most importantly, the constant attendance of death.¹²⁷ Gail Bederman's study *Manliness and Civilization* examines how early twentieth century masculinity celebrated tough, fearless, and courageous manly

¹²⁵ *The Mining Act of Ontario (1892)*. Regulations. Section 157,

¹²⁶ *The Mining Act of Ontario (1892)*. Regulations. Section 158.

¹²⁷ Macdougall, J.B. . *Two Thousand Miles of Gold*.p.148.

behaviours. Men were expected to behave according to prescriptive ideals that applied to their particular life and work circumstances, which recognize occupationally specific masculinities as well.¹²⁸ These traits accorded with what Ava Baron identifies as class-based: "... a hegemonic masculinity ... that emphasized toughness, physical strength, aggressiveness, and risk taking."¹²⁹ In the mining communities of Northern Ontario we see a sense of shared danger among the men. It is what Karen Buckley call the "miners' code".¹³⁰ This was not a published or formal schedule of behaviours or attitudes but a tacit understanding of shared dangers, experiences, conditions and attitudes that bifurcated the workplace into "us" and "them". Buckley says "... the [miners'] code could serve as a basic understanding among men with different languages, cultures, training and experience: ... when a man gets hurt, all come to do what they can. It is an unwritten law"¹³¹ While Buckley's study does not tease out the gendered elements of the miners' code, hegemonic masculinity is clearly resident. Because women were disqualified from working underground, the essence of mining was thoroughly and unalterably masculine. Comparatively, Kathryn McPherson has articulated how femininity informed nursing: "The performative rituals that shaped nurses' occupational identity were re-enacted daily as working nurses sought to legitimate their presence in the world of work."¹³² The same rituals were true of miners. Their daily gatherings at the entrance, their descents underground, their shared privations and their unshakable responsibility for one another in the event of an accident were manifested in what was widely-known as the "miners'

¹²⁸ Bederman, G. *Manliness and Civilization*. See Chapter 1. "Remaking Manhood through Race and Civilization". Pp.1-44.

¹²⁹ Baron, A. "Masculinity, the Embodied Male Worker and The Historians' Gaze." *International Labor and Working-class History*. No. 6. 2006. P. 6.

¹³⁰ Buckley, K. *Danger Death and Disaster*. pp.29-30.

¹³¹ Buckley, K. *Danger Death and Disaster*. p.30

¹³² McPherson, K. "The Case of the Kissing Nurse." in *Home Work and Play: Situating Canadian Social History, 1840-1980*. edited by Opp and Walsh. Chapter Twelve. P.176.

code.”¹³³ For example, immigrants like Axel Carlson were valorized for acting courageously in the rescue of co-workers.

He bore the reputation of being a sober and industrious man and enjoyed the respect of his employer and fellow-miners. He was certainly a brave man, as his conduct showed in being the first to descend the Sultana shaft [in 1894] and begin the rescue of the almost suffocated miners ... imprisoned by the burning of the shaft house....¹³⁴

Although Carlson may have been motivated by other Swedish and Finnish miners working at the time, the only fatality was a man named Lagier from Grenoble, France.¹³⁵ Carlson’s workplace heroics were in response to workplace hazards but were also understood in terms of normative masculinity. He was respected for his sober, industrious, and courageous manner.

There is little documentary evidence from the miners themselves in this period to explain how they understood their own gender identities, and how such identities influenced their health. Evidence from the Ontario Reading Camps Association suggests that working men would not accept education from instructors with soft hands – a claim that reflected the gendered division between soft femininity and hard masculinity. And while the Bureau of Mines emphasized carelessness and risk-taking by the men in order to inculcate them in work-related accidents, miners themselves seem to have understood risk-taking as a necessary reality if they were to prevail over daily fears. In the wake of his brother-in-law’s death by premature explosion in 1893, George Tremblay admitted to being “afraid” of using dynamite to blast hot ore in the roast beds of the Canadian Copper Company. His co-worker, Albert Lucknow, disagreed, arguing that skill helped miners overcome any potential fear. He claimed: “The only way to break up the ore on the

¹³³ One mining song included the phrase: “Whenever a comrade struck bad luck, whatever his race or creed, His buddies were always ready to help him in his need.” Buckley, K. *Danger Death and Disaster*. p.29.

¹³⁴ *Ontario Bureau of Mines Report for 1896*. pp 66-67.

¹³⁵ *Ontario Bureau of Mines Report for 1895*. pp 237-238.

[roasting beds] is by blasting it. I do not regard blasting in hot ore as much more hazardous than in cold ore, provided due care is exercised.”¹³⁶ In 1900, at the Canadian Copper Company Mine, James McGregor was injured when he was struck in the back by a piece of flying rock. McGregor had refused to take shelter during an aboveground blast. He ignored a personal admonition by his boss only moments before the detonation. McGregor’s disregard for his personal safety may have been a mistake, or may have been a demonstration of fearlessness or hyper-masculinity in the face of a supervisor who did not really know the work, or possess the appropriate bravery.¹³⁷ Mining inspectors concluded that men’s unwillingness to take cover was rooted in bravado.¹³⁸ Flouting danger could be fatal, as seen in the death of Joseph Poulin. On December 3, 1901 at the Canadian Copper Company Mine. This thirteen year old rock-picker, died as a result of “dancing” on the picking table. These antics resulted in his clothing being caught up by a revolving shaft which drew him into the gears of the machine and crushed his back. While the records do not provide details on the social context of Poulin’s play, his bravado might well have been motivated by his desire to prove his manliness to his older peers.¹³⁹ Miners defended their bodies and their health by managing risk according to the dictates of their class and their masculinity. What is interesting about the available evidence for this period is that demonstrations of masculinity – bravery, loyalty, and fearlessness – drew less upon descriptions of physical strength and more on character and gender-specific personality traits.

¹³⁶ *Ontario Bureau of Mines Report for 1893*. pp.171-172.

¹³⁷ *Ontario Bureau of Mines Report for 1900*. p.44.

¹³⁸ *Ontario Bureau of Mines Report for 1903*. p.43.

¹³⁹ *Ontario Bureau of Mines Report for 1901*. p.52

Equally interesting is the lack of evidence about how sexuality – hetero-normative or otherwise – informed models of masculinity during this time. Very few miners lived with their wives and families in northern Ontario in these early years. There are occasional references to prostitutes working at northern Ontario mining communities. Sometimes referred to as “Boxcar Annie’s” because they arrived by train and conducted their business aboard furnished railcars at nearby sidings, sex workers were present in American mining towns and may have included northern Ontario towns on their circuit.¹⁴⁰ The jointly authored memoir of Angus and Griffin claims: “Some of the madams who moved into Cobalt had followed the trail of miners through Montana, Arizona and the Yukon Other women were recruited from circuits in Montreal and Toronto.”¹⁴¹ They also assert that some of the women were sexually exploited after their husbands were killed in mine accidents. With their husbands dead, no savings, hungry children to look after, and no ongoing church presence to coordinate charity or relief benefits, these women did what they had to in order to make ends meet, which Angus and Griffin infer included prostitution: “Those days were very hard. Some women who lost men in the mines had to do a lot of terrible things in order to feed their families.”¹⁴² These recollections are not corroborated by reliable sources from the period generated at the time. Newspapers, like Toronto’s dailies, occasionally reported on what they termed the debauchery of mining camps, but offered no specific detail of how sexuality factored in to that reputation.¹⁴³ The physicians’ records that I have seen from this time do not mention sexually transmitted

¹⁴⁰ Arthur Lower refers to a prostitute as “Boxcar Rosie”. See Robson, R. “Idle Hands on the Resource Frontier.” *Journal of American History*. [Volume 14, Issue 4](#), pages 11–21, Winter 1991.

¹⁴¹ Angus, C. & Griffin B. *We Lived a Life and Then Some; The Life, Death and Life of a Mining Town*. Toronto. Between the Lines. 1996. p.16.

¹⁴² Angus, C. & Griffin B. *We Lived a Life and Then Some*. p.16.

¹⁴³ The gold strike at Larder Lake, for example, was covered regularly by *The Globe*, and *The Toronto World*. Each featured a couple of front page stories about the find and opportunities for earning a fortune in a short time.

diseases specifically. On balance, then, between 1890 and 1904, prostitution did not factor significantly into life at these isolated and worksites. There were too few men, with too little money, working at too many small, scattered mines to make prostitution a profitable commercial venture.¹⁴⁴ There may have been conversations or boasts of sexual prowess but they have not survived in documentary form and so assumptions about how heterosexuality was used to construct masculinity remain speculative at best. Moreover, most sources from 1890-1904 are silent on same-sex physical or emotional relations. Adele Perry's work on mining camps in British Columbia documents a vibrant same-sex social life. James Hillis' study of an 1883 lumber camp offers similar evidence. No such reference exists or is available for northern Ontario's camps of the turn of the century. James Hillis noted that on some Saturday nights "... there was a good amateur violinist in the gang and the boys would put on a dance, half of them wearing hats to represent the opposite sex."¹⁴⁵

Although there was a common perception of mining being fundamentally about physical brawn, it was a practiced and learned skill that was not for the faint of heart.

A drilling contest [circa 1900] consisted of 15 minutes of strenuous and feverish activity by a two man team, one hammering and the other twisting and guiding the steel [drill]. The two would change positions at the end of each minute during which period the striker would deliver from 60-70 short chopping blows and when the minute was up the twister would grab his hammer and the other man would drop to his knees and twist. If the drill steel was free in the hole at the moment of the exchange, the team would deliver from 3 to 4 extra blows by double hitting before the partner dropped down to twist and if they had good luck in keeping a free running hole, these extra blows would sometimes mean a couple of extra inches at the finish.¹⁴⁶

¹⁴⁴ Robson, R. "Idle Hands on the Resource Frontier". Pp. 11-21.

¹⁴⁵ Hillis, J. "Life in the Lumber Camp: 1883." *Ontario History*. Ontario Historical Society. Vol. LIX. Number 3. September 1967. pp. 158.

¹⁴⁶ Byrne, J.J. *Autobiography of J.J. Byrne*. pp.154-155. While Byrne's account, and others like it, are representative of what hand drilling teams were capable of, the results were not nearly representative of the realities faced underground where lighting was poor, space was limited that the holes being drilled were often set at a difficult and awkward angles, including overhead. See also Zarnowski, F. "Working at Play; The Phenomenon of 19th Century Worker Competitions." *Journal of Leisure Research*. Vol. 36. Spring 2005. pp. 257-281. He says, "Hand drilling contests had ... standardized rules, teamwork, technique, endurance, speed and danger, especially if the striker inadvertently missed the tiny head of the steel drill and pulverized his partner's hand." p. 264.

In competitions experienced miners “could drill [through] as much as 35-40 inches [of granite per hour]”¹⁴⁷ although when they were underground they usually managed only about twenty inches per hour because the conditions were darker and more confined. The difficulties associated with this kind of work helps define the kind of men who undertook it.

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At Ontario’s mining frontier from 1890 to 1904, the primitive nature of resource extraction relied on the muscle power of the men who laboured in the industry. Although the work days were hard and physically demanding, the incidents of fatalities were low, less than ten a year. But industrial accelerations began to take hold, and new materials, equipment and techniques were put into place among men who were untrained, often illiterate and frequently unable to communicate clearly with co-workers. As a result mining became increasingly dangerous. Technologies, when combined with provincial legislation for remote worksites, for men who operated by a code of masculinity that sometimes challenged their own safety, and which was mediated by doctors and inspectors who were often co-opted by the government, spelled injury, dismemberment, and death among the workmen.

By contrast, Queen’s Park considered the first fifteen years of hardrock mining in Ontario respectable. There were few criticisms of the province, the doctors, or mine management. The next decade would, however, begin to challenge this record. Between 1905 and 1914 more was done to help miners than at any time in the preceding one hundred years.

¹⁴⁷ Byrne, J.J. *Autobiography of J.J. Byrne*. p.155.

Chapter Three:

Seismic Tremors:
Breadwinner Masculinity
in a
Time of Change
(1905 – 1915)

Introduction

The expansion of Ontario's mining frontier that occurred between 1890 and 1904 accelerated even more dramatically in the years leading up to World War One. New strikes of valuable ores continued to be found across the north and the largest of these brought about the consolidation of many operations and the growth of attendant towns and regulatory agencies. According to the Bureau of Mines reports from 1905 to 1915 Ontario's mining operations trebled in value from \$18,000,000 to \$54,000,000.¹ Additionally, the Bureau's records show that there were 11,151 miners employed in 1905 and they were paid wages of just over \$5,000,000.² By 1915 those numbers increased to 17,190 and \$12,000,000 respectively. Hundreds of small places that had promised great wealth quickly petered out and disappeared from maps.³ Profitable and productive mines, however, began settling into new rhythms and patterns. Fewer mines operated as

¹ These figures were taken from Bureau of Mines *Annual Reports* from 1905 to 1915 inclusive.

² In the Temiskaming area alone there were almost two hundred sites that disappeared or were subsumed by nearby settlements. Some of the names like Calamity Gulch, Ragged Chute, Stoney Lonesome and Silver Centre reveal something about the character of each place. Taylor. B. *Place Names of Temiskaming*. New Liskeard. White Mountain Productions. 2000.

³ In 1902 there were twenty producing gold mines in Ontario. By 1905 there were only thirteen, a decline of more than thirty-eight percent. Extraction quantities and ore values, however, rose consistently. *Ontario Bureau of Mines Annual Report*. Volume XV. Part 1. Toronto. L.K. Cameron. 1906. p.4.

consolidating similar operations became a business strategy.⁴ Centralized administrative functions exploited the economies of scale as well as the standardization of materials and techniques. As prospecting sites became permanent settlements, populations increased and diversified. Towns that did not exist at the time of the 1901 Census boasted populations of more than five thousand only ten years later. The volatility and mobility of resource worker settlements is recognized by Brian Hogan who says: “If anything these are modest figures indeed. If townships immediately adjacent to the town are taken into account, it is perhaps more accurate to accept a figure of between 10,000 and 15,000 for the Cobalt area during the peak years 1911-1912.”⁵ This chapter analyzes the effect of this economic expansion on the health of working men as well as the health services they received.

Health Risks

The expansion of mining across northern Ontario was tracked closely by the Bureau of Mines which continued to record injuries and fatalities at mine sites. While death and accidents increased, their frequency and inflated numbers were disproportionate to the growth of the industry. The following chart reveals the steadily increasing deaths and injuries sustained by miners in the north, as the risks to miners’ health over this period were exacerbated by change.

⁴ Hogan, B. *Cobalt: Year of the Strike, 1919*. Cobalt. Highway Book Shop. 1978. pp. 11-12.

⁵ Tabulated from the *Ontario Bureau of Mines Reports* for each of the designated years. Some of the annual totals are also listed in subsequent charts like that from the 1918 *Annual Report* in which all fatalities are listed from 1901 to 1917. See page 79.

Year	Non-fatal	Mining Deaths
	Accidents	
1905	9	9
1906	16	11
1907	19	22
1908	37	47
1909	46	49
1910	67	48
1911	111	49
1912	238	43
1913	353	64
1914	359	58
1915	424	22
Totals	1679	422

Table 3.1 ⁶

The ten-fold increase in accidents reflected, in part, the growth of the workforce. The numbers might also have been the result of better and more vigilant reporting to the Bureau of Mines. The five-fold increase in the number of deaths nonetheless far outstripped the fifty percent increase in the number of miners working there.⁷

A number of factors may have contributed to the rise in mining fatalities. Mine managers may have become increasingly careless, and willing to sacrifice safety for profits.

As late as 1914, Bureau of Mines inspectors asserted:

... investigations ... show a non-observance of the *Mining Act* by some operators and many employees, and emphasize forcibly the need of further Government supervision. The *Mining Act* is wide in its requirements, and penalties are provided for non-observance. Infringements have to be proven in court on information laid by the Inspector. The policy so far followed has been to take action only in flagrant cases where life has been endangered. Thus, it is only after an accident has happened that a prosecution follows. The result has been that, in several instances, mine operators have taken chances with dangerous

⁶ All figures are taken from the Annual Reports of the Bureau of Mines from 1905 to 1915 inclusive.

⁷ *Ontario Bureau of Mines Report for 1914*. Archives of Ontario. Government Docs M. Microfiche. 1914. p.58.

conditions, trusting that they could get through without an accident and have the work completed before an Inspector visited them.⁸

It is unlikely however that management negligence alone could account for the dramatic rise in the numbers of deaths. Indeed it would have been self-defeating for so many men to be killed and the circumstances of each incident audited and evaluated by the Bureau. Therefore it is more likely that the technological changes that were made during this time played a pivotal role in multiplying the fatality totals.

The process for removing valuable ore, which was established in the previous century, persisted through the years leading up to World War One. Technological innovations intensified the pace of production. Stronger pneumatic drills made boring holes into stopes faster, more uniform, and less physically demanding. Explosives became more powerful when new ingredients, like gelignite, were introduced in heavier concentrations and new cartridge formats.⁹ Electricity was present in all but the most remote of mines meaning that most of the underground workspaces were illuminated incandescently rather than by candles. Electrically powered hoists transporting materials up and down deeper shafts were conducted at faster speeds. Grouped together these new ways of mining meant there was a sustaining need, not only for physical strength and experience but also for proficiency with equipment which included: explosives, hydraulics, pneumatics and mechanical/electrical devices. At this point technologies began changing the physicality of the work. Miners still had to be strong and rugged for the underground environment was constant, but the improved tools delivered more materials faster than muscle power, over more sustained periods of time. Those who could handle a Leyner drill earned more

⁸ Gelignite, as its prefix suggests, appeared in a dense viscous and gelatinous form which could be molded in some circumstances.

⁹ *Ontario Bureau of Mines Report for 1911*, p.79.

because they could produce more. Operators of pneumatic loaders and hydraulic, or electrically driven, trams were also paid more than a common mucker or a manual trammer. Because workloads often overlapped in small mines, the description of a miner's job remained elastic; he did what he was told according to the requirements of the site.

The opposite side of technological benefits was the impact new tools had on miner health and safety. The Bureau of Mines *Annual Reports* continued to narrate the causes of deaths and injuries occurring at northern Ontario mining camps and the same root causes persisted.

Miners themselves continued to face the risks their counterparts had in earlier years. For example, the death of John Kinsey at the Ophir mine on September 21, 1910 saw the company successfully prosecuted by the Bureau for neglecting to make provision for protecting the sides of the shaft by means of a guard-rail.”¹⁰ Fatalities of this sort exposed the on-going workplace risks to miners' bodies and health. The 1912 death of Ernest Edward Burley at the Rochester Mine, the result of a premature dynamite explosion, promoted a call that: "... the Federal Government [should] enact a law compelling the inspection of all explosives, fuses and caps” because one of the devices Burley handled exploded prematurely.¹¹ The Bureau's successful prosecution of Beaver Consolidated Mines for two deaths in 1909 "... to the maximum provided by the Act”¹² confirmed the Bureau's focus on occupational safety. The deaths of Andrew Osman and John Aha

¹⁰ *Ontario Bureau of Mines Report for 1910*. p.73

¹¹ *Ontario Bureau of Mines Report for 1909*. p.59

¹² *Ontario Bureau of Mines Report for 1909*. p.59

revealed that management had not constructed or installed requisite ladderways "... thereby practically compelling their employees to break the law by riding the bucket"¹³

New technologies presented new occupational dangers as well. The pace of production increased to the benefit of owners but even moreso to the detriment of workmen who had to breathe rock dust and gases created by sophisticated new devices. The 1912 death of Albert Sullivan, who was asphyxiated by poisonous gases, saw the Temiskaming Mining Company fined one hundred dollars as there was no ladderway in place for him to exit indicating that riding on the skip was a condoned practice at that site.¹⁴ The shift boss, William Stephenson, was also fined fifty dollars.¹⁵ Poor lighting, deafening noise levels, marginal observances of safety regulations, tacit support of illegal practices, and dust-filled stopes, all combined to compromise the health of the men. Powerful new explosives killed whereas older, lighter, concentrations of black powder had usually maimed or injured. A failed miners' strike at Cobalt in 1907 saw no increase in wages but there were modest improvements in rules for bunkhouse and boarding house conditions as well mine safety and sanitation.¹⁶ There was still a generalized "Gospel of Discontent" about the wages and workplace dangers miners continued to deal with.¹⁷

Electricity in the workplace improved vision in and around mines, but also introduced new risks. The electrocution of A. Lefebvre on August 25th, 1910¹⁸ resulted in the censure of the Trewethey Mining Company for permitting their employees to work in

¹³ *Ontario Bureau of Mines Report for 1912*. pp.94. The jury also offered an opinion that "the accident would not have happened" if Sullivan had had a means of escape at hand.

¹⁴ *Ontario Bureau of Mines Report for 1912*. pp.94 -95.

¹⁵ Solski, M. and Smaller, J. *Mine Mill; The History of the International Union of Mine, Mill and Smelter Workers in Canada since 1895*. Ottawa. Steel Rail Publishing. 1984.. pp.57-58

¹⁶ Solski and Smaller. *Mine Mill*. p.59

¹⁷ This same death was recorded in the Workmen's Compensation Commission *Cobalt Minutes of Evidence* as being the death of a French man named "LePage". See Third Sitting, Dec. 14, 1911. p.188. The details of the fatality are virtually identical and the mistake in names is attributed to Mr. O'Connell.

¹⁸ *Ontario Bureau of Mines Report for 1911*. p.81.

close proximity to wires carrying ... 11,000 volts.”¹⁹ Lefebvre’s death was particularly gruesome because his body lay on live wires for twenty-five minutes before the power could be shut off and as a result the corpse was badly burned.

While the Meredith Commission and Bureau of Mines officials were well aware of the ongoing dangers and health risks directly related to mining – damaged spines, joints, backs, etc – they never spoke directly to any particular occupationally-related disease.²⁰ For example, at the Cobalt hearings, the Meredith Commissioners heard testimony from Mr. Whalen who – having represented miners on coroners’ juries in the past – acknowledged that there were “diseases peculiar to the [mining] industry” but he did not specify what kind of diseases they were. Rather, Whalen focused on the difficulty of allocating blame for occupational disease, saying: “I think it might occasion some trouble in fixing the liability on the parties responsible for [a] disease.”²¹

By contrast health officials were quite specific about communicable diseases present in both the camps and in towns that were being established nearby. As prospecting sites became permanent settlements, populations increased and diversified. Communities gradually included women and children, although it was still a minority of workmen who were able to have their families join them. As shown in Nancy Forestell’s and Kerry

¹⁹ It was not until 1926 that the Workmen’s Compensation Board added silicosis to its coverage of mining diseases. It was introduced into the regulations as silicosis but was also known as: phthisis, tuberculosis, scrofula, and consumption. *Labour Gazette*. November 1927. Pp: 1207-1208

²⁰ Workmen’s Compensation Commission. *Minutes of Evidence*; third sitting, Cobalt Miners, Dec. 14 1911. p.194-195.

²¹ Nancy Forestell’s work “Bachelors, Boarding-Houses and Blind Pigs: Gender Construction in a Multi-Ethnic Mining Camp 1909 – 1920” in *A Nation of Immigrants*, edited by Franca Iacovetta et al looks at how mining communities adapted to women in frontier Ontario. Guy Gaudeau’s *La Mobilité des Ouvriers-Mineurs du Nord Ontario et Québec 1900-1939*. Laurentian University. Sudbury. 1998. also confirms the nature and fluidity of mine camps and settlements during this period. Abel, K. *Changing Places: History, Community, and Identity in Northeastern Ontario*. Kingston. McGill-Queen’s University Press. 2006. Abel does not focus on the workplace exclusively. Her examination looks at the coming together of diverse ethnicities and how they adopted a common identity over time in a small area of north eastern Ontario only. Her work however does consider the transient nature of the work and the people who performed it as well as separating factors like language, religion, ethnic customs and competing definitions of masculinity.

Abel's²² studies, only long established camps accommodated families and supporting businesses. The settlement process was usually slow, but a "rush" could accelerate it dramatically.

The growth of some mining towns could be sudden and dramatic as the example of Larder Lake reveals. In 1904 the Bureau hired a University of Toronto geologist named Dr. W. Parks to evaluate and survey a previously unexplored area of Larder Lake near the Quebec border. His findings were not published until 1905 and 1906 and by the end of 1907 more than 4000 claims were filed in this small area.²³ When they appeared, there was a "rush" to strike it rich. The Bureau reported that 145 claims were being worked, over an area of five thousand acres, by approximately one hundred fourteen miners. The men were housed in thirty new structures. Newspapers spread the word and *The Toronto World* profiled the camp in 1907.

The town is called Larder City and presents today a very thrifty appearance. Over fifty [log] buildings have been erected. Larder City is the headquarters of over 400 people. There is a large general store, restaurant, black smith shop, drug store, photograph gallery, bakery, hotel and a saw mill nearly completed.²⁴

Despite these glowing reports, most mining towns struggled to sustain clean and healthy living conditions. Housing continued to be contentious as remote sites were constructed casually and only to the skills of the individual builders. The development of mine sites was seldom orderly:

²² Ontario Bureau of Mines Report for 1905. pp.185-206 and Ontario Bureau of Mines Report for 1906. p.117.

²³ Mosure, F.B. "Larder City Progressive and now a Thrift Town." *The Toronto World*. October 3, 1907. p.11.

²⁴ Tucker, A. *Steam into Wilderness*. Toronto. Fitzhenry & Whiteside. 1978. p.24. image 13. Rex Lucas examines the progressive stages of single industry towns, like mine camps, are constructed, populated and serviced. See chapters one to five of *Minetown, Milltown, Railtown, Life in Canadian Communities of Single Industry*. Toronto. University of Toronto Press. 1971. Lucas looks at how and why these communities were built in the ways they were, but as a sociologist, he was principally interested in the effects of industrial structures on social patterns.

Cobalt grew without planning, with little thought given to the nature of an urban community. The curved streets and crazy, haphazard construction of buildings testified that the town began and continued as a mining community.²⁵

Photographic evidence exposes the conditions of settlements with tree stumps left in and around buildings, a lack of organized street systems, and no sense of any uniform building standards or the enforcement of health and sanitary codes. Figure 3.1 is a photograph of a cluttered roadway in Cobalt and it reveals the conditions that people lived in.²⁶ Crowded accommodations for miners persisted. The 1905 Provincial Board of Health report noted only “60 or 70 houses, mostly shacks and as many tents” for the 600 residents of Cobalt in that year.



Figure 3.1 Cobalt camp circa 1904.²⁷

²⁵ *Twenty-Fourth Annual Report of the Provincial Board of Health of Ontario, Canada for the Year 1905.* Toronto. E.L. Cameron, 1905. pp.185-188.

²⁶ *Twenty-Fourth Annual Report of the Provincial Board of Health of Ontario.* pp.186.

²⁷ <http://www.museevirtuel-virtualmuseum.ca/sgc-cms/expositions-exhibitions/cobalt/en/actual-factual.php?id=n12>

Sanitation was poor. The Board of Health inspector R. W. Bell visited Cobalt in 1905 and found that “no sanitary precautions had been taken” in the neophyte community of less than 1,000.²⁸ All water had to be boiled before it could be consumed. In 1905, Cobalt’s water supply came from a spring well which was downhill from the settlement so that polluted runoff from the town contaminated the “domestic supply of water.”

For these reasons, concerns about epidemic disease remained. In 1910 the Ontario Provincial Board of Health was called to Cobalt because there had been over 1100 recorded cases of typhoid the previous year.²⁹

The water supply was bad – much of it taken from shallow, polluted wells; yards and streets were filthy; no proper system of sewage ... Your officials had over 1200 loads of garbage removed and seventy-four wells closed and the Municipal council passed several by-laws re: scavenging system, abolition of hogpens, control of bread and meat supplies [to provide] cleaner and healthier conditions.³⁰

The presence of livestock in and around homes posed more sanitary health risks as noted by Health Inspectors like George Young who complained:

I visited in July last, the foreign quarters at Coniston, outside of the Mond Nickel Company's property and found the usual conditions in those places, of filth, flies and animals running at large. Accompanied by Dr. George we again inspected this on October 1st., and found with a few exceptions that my orders had been neglected, consequently yesterday, I laid informations against seven of the worst offenders, before Magistrate Brodie of Sudbury.³¹

²⁸ *Twenty-Ninth Annual Report of the Provincial Board of Health of Ontario, Canada for the Year 1910*. Toronto. E.L. Cameron, 1911. pp.36-37.

²⁹ There are a few instances of Department of Health Inspectors attending at specific mining camps where conditions mimicked those found in town but on a smaller scale. *Twenty-Ninth Annual Report of the Provincial Board of Health of Ontario, Canada for the Year 1910*. Toronto. E.L. Cameron, 1911. p.36.

³⁰ An “information” was a formal, civil application for judicial intervention filed with a magistrate and usually acted upon within ten days. Young, George E. Provincial Health Inspector. Archives of Ontario. RG-62 Prov. Brd of Health. Series -2-b/c/d/e No. 462. Sent from North Bay. Heather MacDougall’s examination of public health between focuses principally on urban policies, practices and education. Although she mentions mine camps briefly it is of limited value as inspection reports concentrated on 1912-1916. They address food handling and preparation far more than living and working conditions. Macdougall, H. “Researching Public Health Services in Ontario, 1892-1930.” *Archivaria*. No. 10. 1980. pp. 157-172.

³¹ The province’s District Officers of Health were appointed under the authority of the 1912 *Public Health Act*. These men were full-time employees of the province. They were supposed to be “legally qualified medical practitioners.” For more on the introduction of Ontario’s District Health Officials, see the *Special Report on the Work of the District Officers of Health for the Year 1912 – 1913*. Toronto. L.K. Cameron and printed by William Briggs. 1914. [repetition]

Smallpox, which was no longer the scourge it was in the nineteenth century, could still flare up. In February 1913 provincial Health Inspector Young learned of an outbreak in the mixed logging and mining communities near Hearst.³² George Young was made Ontario's Sanitary Inspector in 1906. He promptly contacted the town Reeve and ordered the immediate and thorough disinfection of all homes and structures where the disease had been or might still reside.³³ Diphtheria and whooping cough also persisted. The 1905 Bureau of Health summary reported the following contagious diseases for the final three months of 1904:

Board of Health Results Comparison between 1903 and 1904³⁴

	1903	1903		1904	1904
	cases	deaths		cases	deaths
Smallpox	25	0		5	0
Scarlatina	739	38		550	33
Diphtheria	1491	202		992	144
Measles	---	7		138	9
Whooping cough	---	35		88	12
Typhoid	407	37		504	145
Tuberculosis	0	475		462	445
	2662	854		2739	788

Table 3.2

The Ministry had vaccination policies and procedures in place to contain or prevent the spread of confirmed cases but the remoteness of some of the sites of infection mitigated their effectiveness.

Some commentators believed that, in these undesirable conditions, miners were responsible for their own ill health. Ontario's Chief Health Officer J.S. McCullough said:

³² Young, G.E. Provincial Board of Health Reports for 1913. Archives of Ontario. Accession Number: RG62 Provincial Board of Health Series B2b, Series B2c, Series B2d, Series B2 No.462.2

³³ *Twenty-Fourth Annual Report of the Provincial Board of Health of Ontario, Canada for the Year 1905.* Toronto. E.L. Cameron, 1905. p8.

* Decaying or rotting tissue that is usually associated with dentistry.

It is hard for those who have not seen them to appreciate the depraved condition of these foreign people with regard to dirty houses and defective personal hygiene. Their bodies are dirty to the point of filthiness; while carious* teeth, nits in hair, body lice, enlarged tonsils, adenoids, and defective vision etc., are other evidences(sic) of their unsanitary life. The floors are black with dirt and in the spring and fall they are covered with mud. The men go into bed with their day-clothes and boots on. ...³⁵

Health Inspector Young found northern workers' lack of hygiene offensive and said so bluntly:

These foreigners are very numerous in Northern Ontario where work is very plentiful on railroad construction, colonization roads, mining and other camps, they find ready employment for say, eight months in the year at very remunerative wages such as any Canadian laborer or mechanic receives. It is common practice for these people [foreigners] to herd and overcrowd into boarding houses with frequently less than 200 cu.ft. per person being supplied with a dirty mattress and blanket with the privilege of cooking their own victuals all for a charge ranging from six to ten cents per day³⁶

Clifford Smylie's observations mimicked others. He too complained: "The part I disliked most [about the living conditions] were the bedbugs which [the bunkhouse at the Casey-Cobalt mine] never seemed to be rid of"³⁷ The fact that the many miners were foreign-born seemed further proof that miners lacked basic knowledge of hygiene. And yet such reports ignored the reality that even in mines themselves, tainted water was the cause of most infectious diseases. In 1909-10, provincial health inspectors reported: "Over 300 typhoid cases came from the mines, and no doubt were caused by the men drinking polluted water from the crevices in the drifts and tunnels."³⁸ The contamination was made worse by fact that miners were unlikely to climb ladders of up to 300 feet to answer calls of

³⁵ McCullough. J.S. Chief Officer, Ontario Board of Health. *Special Report on the Work of the District Officers of Health for the Year 1912 – 1913*. Ontario Government Archives. Government Doc. HE, Misc. Box 1, No. 16. Toronto. Printed and published by L.K. Cameron 1914 and printed by William Briggs..

³⁶ Young, G.E. RG62 Prov. Brd of Health. Series -2-b/c/d/e No. 462. October 1913

³⁷ Smylie, C. *Northern Doctor*. Cobalt. Highway Book Store. 2002. p.34.

³⁸ *Twenty-Ninth Annual Report of the Provincial Board of Health of Ontario, Canada for the Year 1910*. Toronto. E.L. Cameron, 1911. pp.36-37.

nature.³⁹ Inspector Bell said: "... we found in over 30 per cent of the mines that the workmen did not come to the surface to answer the call of nature, nor will they ... where they have to come several hundred yards through wet tunnels and climb ladders for from 100 to 300 or 400 feet nor in our cold winter weather."⁴⁰ This meant that raw sewage remained in the mines according to the habits of the men. Oftentimes empty dynamite boxes were used as waste receptacles that were later removed from the mine and disposed of. Thus while mine inspectors focused on injuries occurring at the workplace, the miners also had to cope with infectious diseases potentially acquired while at work.

Managing Miners' Health

In the years after 1905, concerns over the health of miners provoked a range of responses from mine managers, provincial authorities and miners themselves. These responses included the rise of (competing) bureaucratic agencies to administer both the spirit of progressivism-inspired rules and regulations; the growth of legislation to address the mounting number of deaths and injuries; worker resistance to the *status quo* through coroners' juries and unions; professional responses through organizations like the Ontario Medical Association (OMA); and, ultimately, the introduction of a new Workmen's Compensation Board (WCB) on January 1, 1915.

Until 1904, the Bureau of Mines inspectors were used to responding to reported accidents and injuries in the mines; they rarely acted in preventive capacities. Similarly, a Health Inspector would visit a mining community or camp after an infectious disease outbreak (especially smallpox) was reported. As mining communities grew in size, resident

³⁹ *Twenty-Ninth Annual Report of the Provincial Board of Health of Ontario, Canada for the Year 1910.* Toronto. E.L. Cameron, 1911. p.37.

⁴⁰ *Report of the Provincial Board of Health of Ontario 1910.* p.37.

bureaucracies were established. Provincial Health Inspectors expanded their agency's presence in northern towns; they educated new inspectors (most of whom were physicians); they oversaw sanitation and health matters generally; and they prosecuted violators. These new bureaucratic layers complemented – sometimes overlapped, and even competed with – the duties that had previously been the dominion of inspectors from the Bureau of Mines. At the same time, newly established municipalities appointed their own Sanitary Inspectors, such as Cobalt's George Caldbick, who was also the town's constable. By 1914 a complex array of provincial and municipal staff were working in mining communities -- private doctors, contract doctors, coroners, mine inspectors, provincial health inspectors, sanitary inspectors, district health liaison officers, municipal health inspectors and police. Additional bureaucratic layers added complexity. Sanitary inspectors were, for example, municipal appointees. Health inspectors acted for the province and their areas of interest included water supplies, which affected municipalities. Mine inspectors yielded to sanitary inspectors regarding boarding houses for miners and lumberjacks. Health inspectors stepped in when mining camps suffered smallpox or contagious outbreaks.⁴¹ The diversification and fragmentation of responsibilities related to health, labour, workplace safety, medicine and diseases continued into the twentieth century but because of jurisdictional nuances they sometimes interfered with improving the conditions of the men in the mines.

⁴¹ Dr. Smellie was the contract physician for the CPR in the Thunder Bay area and during one outbreak, acting as both physician and health inspector, was able to limit access to camps and trains. He also ordered quarantines and the disinfecting of buildings suspected of housing men with the condition. See William Spaulding's chapter "Smallpox Control in the Ontario Wilderness, 1880 – 1910." Roland. C. *Health, Disease and Medicine Essays in Canadian History*. Toronto. The Hannah Institute for the History of Medicine. 1984. pp.194-214. See Ontario Provincial Annual Health Reports 1905-1915 which document the outbreaks of contagious diseases and how they were treated. For public health responses to sickness see also Macdougall, H. "Researching Public Health Services in Ontario, 1892-1930." *Archivaria*. No. 10. 1980. pp. 157-172.

There was, at times, a tone of bonhomie among this corps which held public health to be a common goal despite remunerative deficiencies:

The work done by the District Officers has been ably supplemented by the various Medical Officers of Health, who to the number of some 750 or more service usually for small remuneration the townships, villages, towns and cities of the province. It is regrettable that the good work done by the Medical Officers of Health in smaller communities is so little appreciated and poorly paid.⁴²

There were other problems as well. The records of Ontario's Department of Health inspector George E. Young made it apparent that administrative boundaries could be problematic.

Enclosed you will find several camp reports. I accompanied Doctor [Egerton] George⁴³ and members of the Board of Health in Sudbury around town last Saturday and visited a number of foreign boarding houses [for miners], bakeries and one dairy of 101 cows. There is a good barn with modern appliances for cooling, sterilizing and bottling but the cows are not kept clean. The bakeshops were not clean either but we hope for better results on our next visit to them. The foreign boarding houses were filthy and overcrowded. Their sanitary inspector, who has not been alive to his duties will be put on the ground to see the cleaning [is] done and other provision[s] made for sleeping accomodation.(sic)⁴⁴

Here, the provincial health inspector collaborated with the city's medical official who was, in turn, contracted to the miners. Inspector Young pointed the finger of blame at the poor work being done by the third party. At Fort Francis, he met similar difficulties:

I beg to report having visited Fort Francis meeting several of their town officials. I found that the local Board of Health has not been very energetic. The main industry of the town is Shelvin [Shevelin?] & Clark's Mills which employs a large number of men among them the Mayor, Dr. McKenzie and the attention of matters of health around the works have been very slipshod.⁴⁵

⁴² *Report Ontario Department of Health 1906*. Annual Address. Toronto. Legislative Assembly of Ontario. 1907. p.3

⁴³ Dr. Egerton George's records reveal that, in the course of one year (1912-1913), he issued six hundred health citations and took more than forty cases to police court to insure compliance. Government of Ontario Archives. Govt Doc, He, Misc, Box 1, No. 16.

⁴⁴ Young, George E. Provincial Health Inspector. Archives of Ontario. RG-62 B-2-b File #6. Letter from Sudbury. 1913. See also Nancy Forestell's work on, "*Gender Construction in a Multi-Ethnic Mining Camp*." Forestell, however, locates her work around gender roles more than health but her observations of how camps changed as they grew into villages and towns bears out the reports of Inspector Young.

⁴⁵ Young, George E. Provincial Health Inspector. Archives of Ontario. RG-62 Prov. Brd of Health. Series -2-b/c/d/e No. 462. Sent from Fort William 1913.

This reveals a sometimes tenuous attention to detail by inspectors who served more than one master.

The eponymous town was of single-industry and the employer wielded enormous influence, apparently enough to compromise the integrity of the local health authorities. Inspector Young picked up that thread and suggested that the employer-employee relationship had mitigated the industriousness of the parties and undermined health-related duties. Young names the mayor and physician particularly, asserting that the way they discharged their health care obligations was “slipshod”. His note points up how, at still-distant sites, competing interests were unavoidable and that they negatively affected the observance of laws, rules and regulations designed to protect the health of local workers and inhabitants. From Young’s observations it is apparent that, in this instance, health and sanitation were being sacrificed in favour of corporate interests and personal earnings. It was the same in North Bay as Young reported:

On complaint of unsanitary conditions, I visited in July last, the foreign quarters at Coniston, outside of the Mond Nickel Company's property and found the usual conditions in those places, of filth, flies and animals running at large.

Accompanied by Dr. George we again inspected this on October 1st, and found with a few exceptions that my orders had been neglected, consequently yesterday, I laid informations⁴⁶ against seven of the worst offenders, before Magistrate Brodie of Sudbury.⁴⁷

The inspector lamented that his prior instructions to both the Sanitary Inspectors and the company’s officials were neglected, indicating – in this instance - a lack of cooperation among the integrated agencies. Earlier Young had visited the living quarters of the miners and cited their deficiencies in his report. He required them to be remedied. Upon his return, however, neither the mine managers nor the local inspector had made the corrections or

⁴⁶ An “information” was a formal, civil application for judicial intervention filed with a magistrate and usually acted upon within ten days.

⁴⁷ Young, George E. Provincial Health Inspector. Archives of Ontario. RG-62 Prov. Brd of Health. Series -2-b/c/d/e No. 462. Sent from North Bay.

taken any follow up actions. In the meantime, the mine had been allowed to continue operating and the miner workers continued living in “filth”.

In 1905 Department of Health inspector Bell encountered a recalcitrant manager at the Buffalo mine who:

... said he had no contract with a physician and would not make one, and if {the Department of Health} wished to prosecute him for refusal to obey the regulations we could “put on the screws as quick as we liked.” He took this ground because he had some grievance against a physician at a mine where he had been formerly employed.⁴⁸

The relationships of government bureaucrats to the primary employer gave pause for concern and criticism. In his report of the abovementioned incident inspector Bell wrote:

As the fee for medical attendance and medicine charged to each man is only fifty cents per month, it seemed almost incredible, that the contracting physicians would without further payment, provide on behalf of the *mine owners*, hospital accommodate and board, with trained nurses as was asserted.⁴⁹

His reaction to the contractual requirement suggests that it was ostensibly a sinecure and that little could be realistically accomplished to prevent, treat or restore miners suffering from injury or disease for such a nominal amount. The following year he said: “I fear in many cases the medical inspections and attention required for the camp is not furnished, and the physician is only paid a stated amount for each visit to the camp, as requested to be made by the employer.”⁵⁰

At the time progressivism was galvanizing social programs by informing them with scientific principles, formulae and measurable, quantifiable goals. The goals were many and recommended minimum, scientifically-based standards (cubic air volumes, square footages for living spaces, drinking water quality measurements and sanitation codes) for

⁴⁸ The legislation referred to was titled the *Act and Regulations for Sanitary Control of Unorganized Districts in Ontario*. The clauses cited in this instance were 2,4,8,12 detailing the need for medical services at resource extraction sites. *Twenty-Fourth Annual Report of the Provincial Board of Health of Ontario*, p.187.

⁴⁹ *Twenty-Fourth Annual Report of the Provincial Board of Health of Ontario*. p.187.

⁵⁰ *Twenty-Sixth Annual Report of the Provincial Board of Health of Ontario*. p.17

living and working environments.⁵¹ Notwithstanding the altruism behind its ideas, the increased legislation, departments and numbers of provincial and municipal officials failed to mitigate the adverse living and working conditions to which miners were subjected.

The federal government had little jurisdiction in these matters. It established rules for railway work, which was of the same type and style as mining, except for exposure to the elements. Ottawa was, however, frequently contacted by foreign embassies that wanted information regarding the deaths of foreign nationals on Canadian soil. In 1906 for example, after two Scandinavians were killed, the Commissioner of Immigration received an inquiry from a Swedish official named Hollinquist who wanted to know if,

... the Government of Canada [could] take some means, if possible, to investigate the cause of so many accidents ... Many of [dead] left widows and children to be more or less a burden on the public for a time; and the reports in the press that so many lives are lost and nothing done to investigate the cause or lessen the danger of further lives being lost will have a bad effect on immigration to Canada.⁵²

Ottawa knew what was happening but could not, and did not, attempt to improve the situation, despite cautions about possible adverse effects on immigration.

Correspondence between Ontario's Deputy Minister of Labour, F.A. Acland and Canada's Director of Public Health, Frederick Montizambert⁵³ indicated a sense of helplessness.

⁵¹ *The Mining Act of Ontario 1908*. See section 164, "Rules for the Protection of Miners" which feature finely detailed descriptions of how safety measures were to be conducted and maintained. For more literature on social movements and Progressivism in the early twentieth century see: Laugen, R.T. *The gospel of progressivism: moral reform and labor war in Colorado, 1900-1930*. Boulder. University of Colorado. 2010. For a more general understanding or the genesis of the progressive movement see: "The Progressive Era 1900-1917" in Boyer et al. *The Enduring Vision, A History of the American People*. Fifth Edition. New York. Houghton Mifflin Co. 2006. pp.435-460

⁵² Archives of Ontario. Ministry of the Attorney General. October 16, 1906.

⁵³ Frederick Montizambert was educated at Laval, Edinburgh (M.D. 1864), and at John Hopkins University, entered the Public Service of Canada in 1866 and became federal director of Public Health in 1899. National Archives of Canada.

[http://www.archivescanada.ca/english/search/ItemDisplay.asp?sessionKey=1251137684043_206_191_57_202&l=0&v=0&lv|=1&coll=1&rt=1&itm=183814&rsn=S_WWWaaaNPWKXF&all=1&dt=AW+"montizambert"&spi=-](http://www.archivescanada.ca/english/search/ItemDisplay.asp?sessionKey=1251137684043_206_191_57_202&l=0&v=0&lv|=1&coll=1&rt=1&itm=183814&rsn=S_WWWaaaNPWKXF&all=1&dt=AW+)

At the present advised, it does not seem to me that the prevention of the exposure of the men to undue risks in connection with blasting or other work comes within the jurisdiction of this Department. ... it appears to me that protection for these men, under the circumstances recited, would have to be sought under the Criminal Code and under Provincial Administration.⁵⁴

Indeed, coroners' juries began finding mine management culpable for some mining deaths.

The Bureau of Mines *Annual Reports* confirm that a growing number of these quasi-judicial bodies began criticizing management and making specific recommendations for change. These panels offered miners – who constituted the juries – a voice through which they could resist the conditions of work and protest the regulatory system's assumptions and omissions. The rubber-stamping of earlier verdicts with pat phrases that protected management from further scrutiny or prosecution slowed. Coroners' juries delivered suggestions, criticisms and even calls for the prosecution of individual managers and companies. In December 1908, for example, one jury called upon the Bureau's inspectors to intervene more vigorously after three men were killed at the Columbus Cobalt Silver Mine: "We, the jury, strongly recommend that the *Mining Act of Ontario* be rigidly enforced in the matter of mining operations. We find from evidence given that the Mining Act is being seriously disregarded."⁵⁵ Coroners' juries advanced their views to mine ownership, the medical community, and to the provincial government.

Once these panels began issuing recommendations beyond their immediate mandate, the "assumed risk" caveat weakened. A jury could – and did – comment on tangential matters in connection with their cases. While their ideas and suggestions did not change the facts of the incident they were interrogating, their recommendations affected later ones. At the Davis Silver Mine a jury investigating the 1909 death of Pete Peterson

⁵⁴ Library and Archives Canada: RG 29. Vol. 280 File 360-4-10 Vol.1 Letter dated November 12, 1908.

⁵⁵ *Ontario Bureau of Mines Report for 1909*. p.43.

said: "... for the safety of miners, greater care should be taken with whims⁵⁶ or other ways of hoisting when prospecting shafts are used, in the way of connecting the cable to such hoisting apparatus." In 1910, at the Crown Reserve Silver Mine, the coroner's jury examining the death of John Shannon said: "... that all mines in general and the Crown Reserve in particular, [need to] observe more closely in future the working conditions as presented by the *Mine Act*, especially as relating to reports of one shift boss to another in regard to missed holes."⁵⁷ The coroner's jury at the Canadian Copper Company inquest into the death of J. Foley suggested: "... that all guard rails, frogs and switches be properly protected by blocks."⁵⁸ And when Daniel Phillips and Felix Allard were killed at the James Mine, the jury demanded "... that a regulation be added to the *Mining Act* prohibiting the drilling in[to] an old hole."⁵⁹ In April 1909 another coroner's jury insisted that "... there be more stringent reports made by one shift boss to another and that fully experienced men be engaged as shift bosses and captains."⁶⁰ This was an issue in the death of George (Watson) Puckett, who was killed when he drilled into the bottom of an unexploded hole.

Information regarding that misfire was not relayed between shifts. Bosses always knew there were misfires from previous shifts, yet no one advised Puckett when he started work. The coroner's panel who investigated the death of Ernest Edward Burley at the Rochester Mine said: ... that the Federal Government [should] enact a law compelling the inspection

⁵⁶ A whim was a hoisting device that was usually powered by a horse walking a closed circuit. *Ontario Bureau of Mines Report for 1910*. p.66. This was included in the 1912 amendments to the *Mining Act*, Section 164. Subsections 33 to 38 inclusive.

⁵⁷ *Ontario Bureau of Mines Report for 1910*. Archives of Ontario. Government Docs M. Microfiche. 1910. p.65 New protocols for this were included in the 1912 amendments. See Section 164. Subsections 14 and 15.

⁵⁸ Frogs were devices used at the intersection of two tracks to permit the wheels on one track to cross over, or branch, from one to the other. *Ontario Bureau of Mines Report for 1910*. p.64

⁵⁹ *Ontario Bureau of Mines Report for 1910*. p.68. The regulations were amended in 1912, Section 164, Subsections 14 and 15.

⁶⁰ *Ontario Bureau of Mines Report for 1910*. p.69. The regulations were amended in 1912, Section 164, Subsections 14 and 15.

of all explosives, fuses and caps” because one of the devices Burley was handling exploded prematurely.⁶¹ By 1912 every one of these suggestions was incorporated in whole or in part, into *The Mine Act of Ontario with Amendments to 1912*.

The range of the juries’ findings and the assessment of responsibilities indicated a move toward mine safety that was motivated by a new awareness among miners. As will be seen in the Frederick Jefferies case, the doctrine of “assumed risk” was being challenged. Injured miners and their survivors could indeed receive financial redress for workplace accidents. Workers’ demands for improved health and safety were also promoted through the newly formed union.

Veterans from the Western Federation of Miners (WFM) first appeared in 1905 and they were instrumental in organizing the first miners’ union in Cobalt during that winter.⁶² Local 146 of the WFM held its first meeting late that March with 150 miners present asking for increased wages and a shorter working day. A nascent mine managers’ organization rigidly opposed collective bargaining and refused to recognize the union.

The fact that the Cobalt Miners Union was a local of the WFM and therefore associated with the Industrial Workers of the World, a union which supported a far too radical history for the comfort of the [Cobalt] managers, gave further cause for management opposition.⁶³

A strike involving 3,000 men and thirty Cobalt-area mines followed in 1907. While wages were the principal concern, the conditions of work and the length of shifts were also prominent in the schedule of demands. The strike fizzled and no distinct winner or loser was established but “... bunk and boarding house conditions and mine safety and sanitation

⁶¹ *Ontario Bureau of Mines Report for 1910*. p.73

⁶² Hogan, B. *Cobalt: Year of the Strike, 1919*. pp.13-15. See also Solski and Smaller J. *Mine Mill*. p.57.

⁶³ Hogan, B. *Cobalt: Year of the Strike, 1919*. Cobalt. Highway Book Shop. 1978. p.15-16.

rules were improved considerably.”⁶⁴ Committees were formed to continue looking into other areas that might benefit miners’ lives.

In the face of this new worker militancy, mine inspectors started pressuring individual companies to improve their health and safety records: “... mine owners and managers [should take to heart that] their respective spheres contribute to the causes leading up to so disastrous a waste human life, and by whose cooperation only can such waste be reduced”⁶⁵ The Bureau’s independent, and successful, prosecution of Beaver Consolidated Mines for two deaths in 1909 “to the maximum provided by the Act”⁶⁶ confirmed a renewed commitment to occupational safety. The deaths of Andrew Osman and John Aha revealed that management had not constructed or installed the requisite ladderways “... thereby practically compelling their employees to break the law by riding the bucket”⁶⁷ The Bureau’s prosecution established by example that “... direct negligence on the part of management” that resulted in serious injury or death was prosecutable and that government action could be taken in addition to any civil remedies that might be available to the victim or his survivors.⁶⁸ That same year, the Columbus Cobalt Silver Company was written up and criticized for its lack of attention to the *Mines Act* regarding the deaths of William Hamilton, Fred McNulty and Edward Martin. They fell out of a bucket and down 150 feet of the main shaft to their deaths. On December 3rd Inspector Corkill had warned the company to “forbid riding in the bucket.” Three weeks later, ignoring Corkill’s admonition, the on-going practice led to the men’s deaths.⁶⁹

⁶⁴ Solski, M. and Smaller, J. *Mine Mill: The History of the International Union of Mine, Mill and Smelter Workers in Canada Since 1895*. Ottawa. Mutual Press. 1984. p.57.

⁶⁵ *Ontario Bureau of Mines Report for 1909*. p.54

⁶⁶ *Ontario Bureau of Mines Report for 1909*. p.59

⁶⁷ *Ontario Bureau of Mines Report for 1909*. p.59

⁶⁸ *Ontario Bureau of Mines Report for 1909*. p.59

⁶⁹ *Ontario Bureau of Mines Report for 1909*. p.60.

Consequently, when summing up “Shaft Accidents” for the year, the province agreed with the coroners’ juries that insisted companies act with greater regard for worker safety and the laws. Corkill argued that managements’ excuses in cases related to deaths and injuries related to riding the skips were “... inadmissible and merely subterfuges to shirk responsibility”.⁷⁰ These actions by the government suggest a new way of understanding and protecting mine workers’ from preventable injuries.

In 1908, in response to the findings and recommendations of various coroners’ juries, Ontario’s chief mine’s inspector E.T. Corkill reevaluated miners’ health and workplace safety as he attempted to add a sense of gravitas to the extant legislation. Corkill authored a “special report” on mining accidents in Ontario. It began: “The prevention of accidents in mines has been the subject of much discussion both among mining men and by commissions appointed by the governments of various countries.”⁷¹ He reviewed Ontario’s record but mitigated fatalities statistically by measuring them against mining deaths in England, Spain, and South Africa. The raw numbers did not account for disparities between the types of mines being operated and the different technologies employed in them.⁷² His findings were, ultimately, favourable from the Ontario government’s point of view. For the first time however, the Chief Inspector included poignant criticisms of mine managements’ roles in occupational safety. Change was discernible in the ways the provincial government considered hardrock mining companies, the conditions of work and the miners’ putative complicity in accidents and fatalities. Corkill said that Ontario needed to assume responsibility for safety-related issues in its mines, metalliferous or otherwise. He wrote:

⁷⁰ *Ontario Bureau of Mines Report for 1909*. p.74.

⁷¹ *Ontario Bureau of Mines Report for 1909*. p.71.

⁷² Hardrock mining for precious metals was starkly different from the types of (open pit) coal mining conducted abroad where hundreds – even thousands – of men worked above and below ground using entirely different methodologies and explosive techniques.

In metalliferous [hardrock] mining an accident seldom occurs in which a considerable number of men are killed ... though in the course of a year they may [accumulate] to a large total. Public opinion is therefore not aroused; the management of the mine is not so much impressed with the importance of careful supervision; the miners are awakened for a few days and then forget and the same conditions prevail as before.⁷³

He sought to attenuate the rising number of deaths but seemed at a loss to overcome the perceived apathy of the workplace, because there were no calamities or catastrophic events that claimed dozens of lives at a time. The singularity of most mining deaths was local which usually minimized the attention they received.

Nonetheless, the steady increase in fatalities continued. Increased legislation, new layers of bureaucracy, advancing mining technologies and medical treatments did not slow the annual toll; deaths more than doubled between 1907 and 1908. The Bureau was stymied and said so:

It is not apparent what further aid can be rendered by legislation; the regulations embodied in the Mining Act, if carried out with strictness, probably being sufficient to eliminate nearly all causes of accident which can be foreseen or guarded against. A heavy responsibility rests upon managers, superintendents and foremen ... to insist upon the utmost possible care being taken by those under them.... Example is better than precept ... human life is precious and ... nothing should be left undone to rob the business of mining of as much of its hazard as possible.⁷⁴

This recognized the ongoing disconnect between the theory that legislation and regulations could ameliorate the situation and the fact that they did not on a practical basis. More than forty miners were killed annually so it became necessary to look for alternatives. Corkill's 1908 analysis was motivated in part by the belief that "An important part of the Inspector's duties is to see that proper precautions as required by law are taken to protect the lives and safety of mining employees"⁷⁵ The failure of the existing procedures was confirmed quantitatively and qualitatively.

⁷³ *Ontario Bureau of Mines Report for 1909*. p. 71.

⁷⁴ *Ontario Bureau of Mines Report for 1908*. p.43.

⁷⁵ *Ontario Bureau of Mines Report for 1908*. p.2.

Corkill reviewed the three classifications of mining accident causes in Ontario. They were: 1) dangers inherent in the nature of the work; 2) accidents caused by management; 3) accidents caused by workmen. It remained the role of the mine inspectors to determine which category applied to a given incident, and there was still no uniformity among the inspectors. Falls from ladders, for instance, could be blamed on the company or the miner. Accidents from riding on the skip - a practice that was tacitly sanctioned by most companies - might be blamed on the injured party or management. Each inspector acted autonomously. He used his discretion not a normative rule or guideline. Corkill compared Ontario's classifications to those in Germany, which had four: 1) dangers inherent in the nature of the work = 69.31% of injuries and fatalities; 2) defects in mine workings = 0.78% of injuries and fatalities; 3) fault of fellow workmen = 3.24% of injuries and fatalities; 4) fault of the injured person = 26.67% of injuries and fatalities. Corkill focused on the second one:

This table shows a most satisfactory state of affairs in the case of the German mines, since .78 per cent only of the accidents resulted from defects in the workings [of the mine]. It is a condition which might quite readily be attained in our mines in Ontario but only through the active co-operation of all the mine managers in the Province.⁷⁶

Corkill's comment suggested that the managers of Ontario's mines could, and should, realize a comparable level of safety to Germany's; owners and managers in Ontario needed to provide safer conditions for employees working above and below ground.

The rapidly increasing number of deaths in Ontario prompted a reassessment of the Bureau's accident and fatality taxonomies. The discretion used by a Mine Inspector for determining the seriousness of an injury changed almost overnight. New regulations stipulated that "“Serious personal injury” shall mean such an injury as *in the opinion of the*

⁷⁶ *Ontario Bureau of Mines Report for 1909*. p. 72.

attending physician [emphasis added] may result in the injured person being incapacitated for work for at least seven days.”⁷⁷ Any bone fracture or dislocation was deemed “serious” without further interpretation. The Bureau’s understanding of accidents was surrendered to the medical community. The contract doctor alone determined the classification of an injury. These responsibilities were in keeping with workplace practices in Europe and the western United States and, as will be shown in the following pages, began a subtle change in the relationship between the companies and the contracted physicians.⁷⁸ As a result of the new rules, the *Statistical Review* of 1909 revealed a revised assignment of blame for the forty-seven men killed that year.

⁷⁷ *The Mining Act of Ontario (1908) Section 168. Subsection (b).* (consolidated with amendments to 1912) Toronto. L.K. Cameron. 1912. p. 90.

⁷⁸ Langton. L. *Cradle to Grave, Life Work and Death at the Lake Superior Copper Mines.* New York. Oxford University Press. 1991 and also by the same author *Beyond the Boundaries: Life and Landscape at the Lake Superior Copper Mines.* 1997. New York. Oxford University Press. There is also some valuable information on organizing the Western Miners’ Union, in Phillip Mellinger’s *Race and Labor in Western Copper; the Fight for Equality 1896 – 1918.* Tucson. University of Arizona Press. 1995. Discussions of European standards appear in Frank Wegenast’s work on the reasons for new compensation laws. See *Workmen’s Compensation for Injuries. A Sketch of the Present Law in Ontario and a Comparison of the Systems of Some Other Countries.* Canadian Manufacturers Association. Toronto. 1911. Although it was published in 1911 Wegenast reviews the history of compensation legislation in North America and Europe over the preceding decade.

Causes of Mining Fatalities in Ontario, 1908⁷⁹

Cause of Fatality	Number of deaths	Percentage of Total
Unknown or inherent in the nature of the work	21	44.7%
Through the neglect or carelessness of the management	15	31.9%
Through the fault a fellow worker	4	8.5%
Through the fault of the injured miner only	7	14.9%

Table 3.3

The burden of blame shifted to the companies and mine managers and away from the men. The dead and injured, either directly or in combination with co-workers, were only held responsible for eleven deaths (23.4% of the total) while the companies were responsible for fifteen (31.9% of the time). Prior to this, the fixing of blame in fatalities was not reported in this these terms. The result of the reclassifications was that workplace conditions were seen as mutable rather than fixed or immanent.

The concluding paragraph of the 1908 report on Mining Accidents exhorted managers, superintendents and foremen "... to set an example of prudence and determination to avoid all risks or dangerous practices. Example is better than precept"⁸⁰ Instead of relying on old bromides about miners being careless and disposed to acting foolishly, Chief Inspector Corkill focused on management. He said:

When we consider that 32.6 per cent. of the accidents which resulted in fatalities in 1908 in Ontario, were caused by neglect, carelessness or incompetence of mine managers, we are presented with a condition of affairs obviously requiring radical improvement. A lack of

⁷⁹ All the data in this table are taken from the Special Report of 1908 see pages 38-44 inclusive. *Ontario Bureau of Mines Report for 1908*.

⁸⁰ *Ontario Bureau of Mines Report for 1908*. p. 43.

discipline and supervision, besides increasing the danger of the work, indicates a lack of mine efficiency and so influences detrimentally the cost of the output.⁸¹

By framing his comments in economic terms, Corkill argued that attention to occupational health and safety concerns was both responsible and profitable. He included the following admonition to the managers:

In a number of [accident] cases it is to be feared that shift bosses spend too much of their time inspecting a soft seat in the boiler house, or a warm spot alongside the pump, to properly supervise the work in a mine. It is not alleged that [Ontario's] mines do not have enough officials, as in some cases there are possibly too many and the work is shifted from one to the other until no one does it properly, but it is contended that the managers in a number of cases do not personally see that the mining work is properly looked after by their assistants.⁸²

This expression of dissatisfaction with management, rather than workers, signaled a shift in the analysis of miner health and safety. The assessment of responsibility would be broader than before and there would be new opportunities for prevention.

Workmen's Compensation Legislation

Concerns arising from the annual death totals in the mining sector - and industry generally - prompted a lobby for new worker compensation legislation. The likelihood of more and more litigation was manifestly troubling to business owners and managers. It was not a coincidence that the loudest call for change resided with them. As an ongoing cost of business - that would be shared with the men they employed - management sought universal compensation to defray whatever potential liabilities might occur over as broad a base as possible. England had already updated its legislation as had many other European

⁸¹ *Ontario Bureau of Mines Report for 1909*. p. 78.

⁸² *Ontario Bureau of Mines Report for 1909*. Prepared by E.T. Corkill. p.71. This quotation is taken from a special eight page *Statistical Review of Mine Accidents* and forms a part of its conclusion. While there were also pointed comments about the conduct of miners the abovenoted passage was one of the first times the Bureau served notice that management was indeed culpable and would be held to a higher standard of safety in the future.

countries.⁸³ The questions being asked by Ontario's miners had already been answered across most of Europe where "tacit moral obligation," requiring financial redress for workplace accidents, was already practiced. Indeed immigrants from Great Britain were aware that this legislation was in place and it is likely that they expected similar coverage in Ontario. Through the Western Miners' Union fairer compensation for dead and injured miners in America had been negotiated in the 1890s.⁸⁴ The protection of miners, and the equitable treatment of their survivors and caregivers, was at the heart of some of the earliest union negotiations across the border.⁸⁵ European legislation, however, was at the vanguard of change in compensation.

England passed its first workers' compensation legislation in 1880; it was called the *Employer's Liability Act*. Ontario copied large sections of it sequaciously and enacted it as *Lord Campbell's Act* in 1887. While it purported to provide compensation to injured workers, it followed the legal precedent of assumed risk. This has been researched and examined by scholars like Michael Piva, R.C.B. Risk and Eric Tucker. Their work reveals that worker protections were largely theoretical. To Ontario's miners the law stated:

(1) because a worker is free to refuse to work in hazardous conditions, an employee who continues to work alongside a negligent fellow servant is deemed to have contractually assumed the risk of injury resulting from such negligence; and (2) because workers are in a

⁸³ A summary of all of the comparatives is contained in the "Final Report on Laws Relating to the Liability of Employers; To Make Compensation for their Employees for Injuries received in the course of their employment which are in force in other countries." Sir W.R. Meredith. Toronto. L.K. Cameron. 1913.

⁸⁴ For a detailed history of the Western Miners' Union see Alan Derickson's *Workers' Health, Workers' Democracy, the Western Miners' Struggle 1891 – 1925*. Ithaca. Cornell University Press. 1988 and selected chapters of Lawrence Langton's works: *Cradle to Grave* as well as *Beyond the Boundaries: Life and Landscape at the Lake Superior Copper Mines* (1997). New York. Oxford University Press. There is also some valuable information on the earliest efforts to organize in Phillip Mellinger's work, *Race and Labor in Western Copper; the Fight for Equality 1896 – 1918*. Tucson. University of Arizona Press. 1995.

⁸⁵ For a fuller examination of Progressivism in the United States see Chapter 21 "The Progressives Confront Industrial Capitalism." Nash, Jeffrey et al. *The American People, Creating a Nation and a Society*. 3rd Edition. Don Mills. Longman Press. 2000. For more on the Western Miners' Union see Lankow, L. *From Cradle to Grave*. Progressivism in late nineteenth century America sparked a broad move toward improving the country's social conscience and workplace conditions broadly. Upton Sinclair's muckraking novel *The Jungle* (1906) serves as a popular example.

position as good as, or better than, the employer to detect negligence in their fellow servants, they are better able to protect themselves from the risk of injury by reporting the misconduct to the employer for appropriate action. There was also a general apprehension towards expanding liability “to an alarming extent”. Therefore the employee should bear the risk of injury.⁸⁶

This required the miners to know in advance that their co-worker(s) was/were careless or negligent. Accountability resided with the workers who were supposed to be better informed about the circumstances of their workplace than the corporations who hired them. This was particularly onerous on foreign-speaking immigrant workers.

In 1892, coincident with the passage of the first *Mine Act* of Ontario, the province revised its workplace legislation with *The Workmen’s Compensation for Injuries Act*. It was revised and updated again in 1897. The 1892 revisions applied new definitions that identified miners as labourers. A labourer was considered to be, “... a man who digs and does other work of that kind with his hands ... not requiring the exercise of any extraordinary skill”⁸⁷ Because the law forbade women and children from working in Ontario mining, the definition articulated *a priori* masculinity in the industry. Despite differences in the types of mines, the kinds of minerals being extracted and advances in technologies, the mimetic nature of the 1892 legislation held that Ontario’s miners did not evidence any specialization(s) in the discharge of their duties. Labourers were suppliers of muscle power.

Germany, England, Spain and Belgium developed programs that provided relief to miners in particular – and other workers generally – while saving companies harmless from

⁸⁶ Tucker. E. “The Law of Employer Liability in Ontario 1861-1900: The Search for Theory.” *Osgoode Hall Law Journal*. Vol.22. No.2. 1984. p.219. See also R.C.B. Risk’s article “‘This Nuisance of Litigation’: The Origins of Workers’ Compensation in Ontario.” in David H. Flaherty, ed., *Essays in the History of Canadian Law, Volume 2*. Toronto: University of Toronto Press 1981. pp. 18-91 and Michael Piva’s “Workers’ Compensation Law; A Documentary History”. <http://www.owtlibrary.on.ca/english/print/wcl.pdf>

⁸⁷ *The Workmen’s Compensation for Injuries Act, 1892*. Section 1. Subsection (f). Toronto. 1893. p.19.

financial penalties.⁸⁸ The principal corporate advantage was the “no fault” nature of the claims. Collectively they would all absorb small costs associated with injuries and fatalities according to predetermined government formulae. Circumstances similar to those in Ontario had already been analyzed and acted upon elsewhere. The answers formulated in Europe and America bore directly on how Ontario adjudicated the future claims of its workers.⁸⁹

Ontario’s mine managers were anxious to shield themselves from financial liabilities.⁹⁰

In Ontario no substantial change in the law has been made for nearly twenty-five years. A consideration of the systems of other countries should therefore not only prove suggestive, but should assist materially in avoiding their defects and in devising a measure for this Province which shall be economically sound as well as practicable.⁹¹

Hearings related to the establishment of a new compensation agency were handled by the Meredith Commission.⁹² There were twenty-seven sittings of the Commission beginning in October 1911.⁹³ Notably the third one was held in Cobalt and it was devoted exclusively to mining. Testimonies were taken from both managers and miners. The first was Mr. Ware representing local unions and they submitted a thirteen point proposal that sought, “The doctrine of negligence on the part of employees, or employer fellow servant or otherwise

⁸⁸ “Final Report on Laws Relating to the Liability of Employers.” Sir W.R. Meredith. Toronto. L.K. Cameron. 1913.

⁸⁹ By 1910 most of the other seven Canadian provinces had already adopted new worker compensation laws: British Columbia (1902); Alberta (1905); New Brunswick (1908); Manitoba (1910) and Saskatchewan (1911). All were based on the new “professional risk” philosophy which did away with guilt associated with assumed risk, contributory negligence and common employment.

⁹⁰ See Wegenast, F.W. *Workmen’s Compensation for Injuries. A Sketch of the Present Law in Ontario and a Comparison of the Systems of Some Other Countries*. Canadian Manufacturers Association. Toronto. 1911.

⁹¹ Wegenast, F.W. *Workmen’s Compensation for Injuries*. 1911. preface.

⁹² It was named after The Honourable Sir William Ralph Meredith CJ, CP. He was a former leader of the Ontario Conservative party and a former Chief Justice of Ontario. In 1910 he was appointed by Premier Whitney to investigate changes in worker compensation legislation.

http://www.biographi.ca/en/bio/meredith_william_ralph_15E.html

⁹³ Only four sittings of the Meredith Commission were held outside of Toronto. The other sites were Cobalt, London, Berlin (now Kitchener), and Hamilton.

shall have no place in the new [WCB] legislation.”⁹⁴ This focused attention on the health of the worker rather than the cause of the harm. Moreover, there were preliminary discussions of occupationally related conditions that affected men’s health.⁹⁵ This was well before mining diseases like silicosis became the *cause celebres* they were in the 1930s.⁹⁶ The concern of the Commission in 1911 however, was more about how to assign or apportion responsibility for a chronic illness than on how to effect physical and financial remedies.⁹⁷ The specific nature of mine-related diseases was not mentioned. The Meredith Commission eventually recommended that a new government operated agency be established which would oversee compensation claims for all of the province’s workers.⁹⁸

When the *Workmen’s Compensation Act* of Ontario took effect on January 1, 1915 it revealed a top-down understanding of miners and mining as well as of occupational health and safety.⁹⁹ The new Board did not act solely or specifically in the interests of miners; its mandate covered most workers in the province among a schedule of industries.¹⁰⁰ Instead of seeing miners as brutish and reckless, they were viewed with some measure of sensitivity.¹⁰¹ This is not meant to convey the idea that the profile of mining

⁹⁴ Minutes of Evidence, *Workmen’s Compensation Commission*, third sitting. Cobalt. Dec. 14, 1911. p.173,

⁹⁵ Second Interim Report of the Workmen’s Compensation Commission. April 1913. pp 50-51.

⁹⁶ See Rosner, D. and Markowitz, G. *Deadly Dust: Silicosis and the Politics of Occupational Disease in Twentieth-Century America*. University of Michigan Press. 2006. The authors explain the disease as it related to the mining industry but the focus of their work is on how and why silicosis came to the attention of the North American public during the Great Depression but was virtually forgotten by the 1950s.

⁹⁷ Third Sitting of the Meredith Commission. Cobalt. Dec. 1911. pp.194-196.

⁹⁸ There were some exceptions to this. Farmers, for instance, were not covered by WCB regulations and some other professions and the self-employed were also excluded.

⁹⁹ Sir W. Ralph Meredith’s final report of 1913 recommended four principles upon which worker compensation should be administrated: No fault assignment, payment security, independence of the operating agency, and collective liability. Piva, M. “Workers’ Compensation Law; A Documentary History”. <http://www.owtlibrary.on.ca/english/print/wcl.pdf>, p.2

¹⁰⁰ Agriculture was one of the largest segments of the labour force that was not protected by the legislation. Most farmers were deemed to be self-employed and therefore not technically, employees.

¹⁰¹ This is addressed by Fudge and Tucker in *Work on Trial, Canadian Labour Law Struggles*. Toronto. The Osgoode Society. 2010. See Part 1 “Constitutions and Institutions” and particularly the background to the Snider Case pp.15-24.

men was transformed overnight; rather it indicates when accidents and fatalities ceased being explained as intrinsic to a miner's nature. Mine conditions including noise, temperature, dampness, dust, lighting, the presence or absence of electricity, lengths of shifts and air quality were considered anew. Equipment, including drills, picks, shovels, trams, skips, hoists, explosives, timbering, wiring, alarm systems and training, boots, helmets and even ear protection, were also re-evaluated to address the efficacy and safety of the work. As a result, and coupled with the renewed enforcement of extant rules and regulations, fatalities began to decline. The highest number of fatalities recorded in a single year, during the time period under study, peaked at sixty-four in 1913.¹⁰²

The format by which mining deaths were reported also changed when the new WCB legislation took effect. For more than twenty years the province had consistently included a quarter or half page report – two to three paragraphs – on each incident. Mine inspectors noted the name, age, ethnicity, marital status and circumstance surrounding each fatality. Work conditions were written up alongside collateral details. Then the coroner's findings were added – if a coroner had been called – and blame located. Beginning in 1915 the annual reports quit that format in favour of charts. Whereas annual "Mining Accidents" had regularly occupied thirty to fifty pages – sometimes as many as seventy – it was immediately reduced to six or seven.¹⁰³ Full paragraphs were culled to only one line. New Chief Inspector of Mines, T. F. Sutherland, may have been responsible for the new presentation format.

¹⁰² In 1928 there were eighty-five men killed in Ontario's mines. This study, however, ends in 1925. In 1914 there were fifty-eight men killed but the numbers were consistently below forty otherwise. Fatalities did not fall below twenty deaths per year until after World War Two. See annual *Bulletins and Reports on the Mining Accidents in Ontario*. 1915-1950.

¹⁰³ In the 1912 *Annual Report*, Mining Accidents were found from pages 55 to 99. In 1914, they covered pages 53 – 109. For the year 1916 they only ran from pages 67 – 73 inclusive.

Contract Doctors

What roles did physicians occupy in this new approach to miners' health? There were frontier doctors before 1905 but little is known about them. Sources involving individual workers between 1905 and 1915 offer a few insights into their relationships with contract doctors. More by circumstance than design, physicians mediated the labour-management-government link. Mine doctors had to service their contracts as best they could, according to their abilities and the location of the sites. Dr. Herman Bryan, for example, continued to travel by dogsled to practice what he called "snowshoe medicine."¹⁰⁴

Dr. Bryan worked out of Nipigon for three years beginning in 1905. In his first year he logged a tremendous distance: "... over 4000 miles in a canoe and 1100 miles on show-shoes covering every canoe route of the North to the Trans-Continental Railway between Nipigon and Missinabie and then cross country in the winter time with dogs."¹⁰⁵ It remains clear that although sophisticated medical techniques were taking place in urban centres, like Toronto, they remained largely unavailable to mining communities across the north.¹⁰⁶ In his memoir Dr. Clifford Smylie recalled: "It was a great thrill to be on my own to practice 'medicine, surgery and midwifery' but more than a little terrifying at times to be so far from more experienced advice, and the facilities of a hospital."¹⁰⁷

¹⁰⁴ Dr. Bryan. "Snow-Shoe Medicine". Carson Piper Historical Collection. A20. Thunder Bay Museum and Historical Society. Unpublished.

¹⁰⁵ Dr. Bryan. "Experiences with the Indians: their Characteristics, language, traditions and legends of Thunder Bay". Carson Piper Historical Collection. A20. Thunder Bay Museum and Historical Society. Unpublished. Circa 1937.

¹⁰⁶ In his personal diary, Dr. Bryan recalled traveling 500 miles by snow-shoe and dog team over thirty-one days to treat a man suffering exposure after falling into a river. A photocopy of the transcribed diary resides with the author courtesy of the Nipigon Museum.

¹⁰⁷ Smylie, C. *Northern Doctor*. Cobalt. Highway Book Store. 2002. p.84.

The terms of doctors' contracts were extensive. Each doctor was required to attend at the mines "as often as necessary" and not less than one a month; he was required to deliver "adequate medical and surgical care"; and also to file detailed reports with the Minister of Health, and the Bureau of Mines, that related to deaths and diseases encountered through the contracting employer. Doctors were paid the gross amounts deducted from the employees' wages during the previous month.¹⁰⁸ "Adequate" was a subjective word that each doctor addressed in terms of his personal competencies. "As often as necessary" was equally vague and malleable. Notwithstanding the expansiveness of the regulations, the interpretations of them in the field were narrower and personal. For example, near Trenton, Dr. Robertson was asked to inspect several camps following complaints of sore throats. He said the camps were well-built, well-ventilated, and clean, and that the provisions were of the best kind, "both as to quantity, quality, everything necessary to a healthy diet being supplied as well as many of the luxuries."¹⁰⁹ There was no explanation or treatment for the sore throats, the matter ended with the doctor's exoneration of the facilities. It is possible that another doctor could have made another determination but Dr. Robertson worked only according to his expertise; no independent standard existed for him to adhere to.

The quality and administration of camp medicines did not change much between 1905 and 1915. Camp doctors, as noted by Dr. Bryan's example, continued to ply their services in much the same ways as they had earlier. Some doctors were valorized and constructed as heroic personalities, especially considering the efforts they made to attend

¹⁰⁸ Edwin Bradwin deals with these contracts in a general way in *The Bunkhouse Man*. The specific wording of the contracts can be found in Rex Lucas' *Minetown, Milltown, Railtown*. Toronto. University of Toronto Press. 1971. pp. 240-241.

¹⁰⁹ Long, G. *When Giants Fall*. Huntsville. Fox Meadow Creations. 2001. p.154.

upon a sick or injured patient under difficult, even dire, circumstances. Consequently, a doctor's masculinity derived in part from a willingness to take personal risks or endure hardships attending upon patients. Newspaper articles like that reported in the *Sault Star* said: "Dr. J.E. Gimby Made 100 Mile Trip to Batchewana ... to Attend Sick Guide; Perilous but Interesting Journey."¹¹⁰ News stories trumpeted the adventures of medical men. Significantly the doctors' reports offered minimal amounts of information about how they intervened. The treatment - the success or failure of the call - paled when compared to the seemingly superhuman efforts made by doctors to reach their destinations. A cult of heroism grew up around some physicians. Admiration was fuelled by accounts of selflessness and courage, rather than technical abilities, sophisticated diagnoses or complex interventions. Algoma physician Dr. H.M. Ross' ninety-fifth birthday was remembered in the community of Richard's Landing (outside present-day Thunder Bay) by recalling that he never refused to see a patient, regardless of how perilous the travel conditions.¹¹¹ By comparison, doctors who lived and worked in urban communities were lauded more for the depth and breadth of their educations, their medical accomplishments, and their professional associations. For example, Dr. R.J. Gibson of Sault Ste. Marie was posthumously remembered for being president of the Ontario Medical Council, his extensive practice, his community leadership and his church affiliations.¹¹² There were no legendary exploits to praise, so different qualities were valued in cities than in mining communities.

The nature of quotidian duties outlined in doctors' contracts justified the payments but the work did not require a lot of technical sophistication. Travel was the ever-present

¹¹⁰ *Sault Star*. March 30. 1926. p.171.

¹¹¹ *Sault Star*. Dr. Ross Celebrates his 95th Birthday. October 17. 1927. p.48.

¹¹² *Sault Star*. "Dr. R.J. Gibson Died Today from Heart Failure." August 6, 1919. p.37.

encumbrance. Seldom could eight or nine camp visits be accommodated in a single day.¹¹³ The distances between stops, the modes of transportation – rivers, bridges, corduroy roads, tote paths and confederation highways – breakdowns and unpredictable weather conditions in winter and summer, conspired to deny even the most diligent of practitioners a route that included more than three, perhaps four, sites in a day.

The corollary to this was that doctors believed “real miners” should not bother them with trifling complaints. Physicians did not want to be called out for what *they* regarded as minor conditions: an ache, a discomfort, or an irritation.¹¹⁴ If there was an emergency call, then the condition of the patient ought to be commensurate with the effort to reach him. Men were supposed to tolerate, and work stoically, through strains, aches, bruises, minor lacerations, discomforts and ailments that did not render them prostrate. These matters could be attended to on one of the doctor’s regularly scheduled camp visits; they certainly did not merit an emergency call. Dr. Clifford Smylie vividly recalled his reaction to a mid-winter, middle-of-the-night journey to a camp he was contracted to:

[messages] were often so vague ... I never knew what to expect so [I] always took plenty of equipment including maternity kit, an assortment of pills and medicine and a well stocked(sic) emergency kit and dental forceps. One cold night I don’t forget, we had one of these trips to a camp about fifteen miles away. Arriving about 2 a.m. half frozen, I was disgusted to find the patient sitting beside the stove nursing a toothache. I took the tooth out but was almost provoked enough to yank his whole head off, even though I realized a toothache can be painful. He was paying a dollar a month for medical care, so [the patient] could see no reason why he should make the trip to me on a cold night. After all, what else are doctors for[?]¹¹⁵

Dr. Smylie’s inclination to want to yank the patient’s “whole head off” indicated feeling ill-used on that call. Doctors took steps to deter malingerers; there are accounts of some who applied poultices with heavy adhesive tapes on hirsute men, then tore them off and

¹¹³ Smylie, C.H. *Northern Doctor*. p.151.

¹¹⁴ Although today dentistry is a separate discipline, contract medicine in the camps understood medicine to be anything related to health and usually included the dental work of the men.

¹¹⁵ Smylie, C.H. *Northern Doctor*. p.150.

reapplied them at each visit until the patient felt well again. It usually only took one treatment to distinguish the counterfeiter.¹¹⁶ There was a separation rather than an alignment of interests between doctors and patients. The type of medicine being contracted was little more than first aid. They associated minor complaints with shamming. Smylie's sarcastic comment about what doctors were for, privileged the physician's time rather than the patient's discomfort. He did not see himself as a paid employee in the same way that miners were. His remark reveals a distance between doctors and their charges. But one area of universal concern was contagious diseases.

In February 1913 provincial Health Inspector George Young¹¹⁷ learned of an outbreak of smallpox in the mixed logging and mining interests near Hearst. He promptly contacted the town Reeve and ordered the immediate and thorough disinfection of all homes and structures where the disease had been or might still reside. The source was "... an Italian and Spanish boarding house."¹¹⁸ The workforce – a combination of miners and loggers – was quarantined for fourteen days until the danger passed. The Provincial Board of Health also published and distributed a variety of pamphlets, photographs and papers on diseases like smallpox, diphtheria, scarlet fever, consumption and typhoid, not just schedules of regulations like the Bureau of Mines.¹¹⁹ Mine inspectors were ill-equipped to deal with health matters related to diseases, infections and sanitation beyond rudimentary

¹¹⁶ This refers to a specific incident when the doctor felt the patient was malingering. See Grout, J. *Tall Tales from the Tall Timbers: Many Memories, mostly from the Northern Ontario Life of Arthur J. Grout*, Sudbury. Alex Wilson Publications. 1968. p.147.

¹¹⁷ The province's District Officers of Health were appointed under the authority of the 1912 *Public Health Act*. These men were full-time employees of the province. They were supposed to be "legally qualified medical practitioners." For more on the introduction of Ontario's District Health Officials, see the *Special Report on the Work of the District Officers of Health for the Year 1912 – 1913*. Toronto. L.K. Cameron and printed by William Briggs. 1914.

¹¹⁸ Young, G.E. Provincial Board of Health Reports for 1913. Archives of Ontario. Accession Number: RG62 Provincial Board of Health Series B2b, Series B2c, Series B2d, Series B2 No.462.2

¹¹⁹ See Pamphlet #37 from 1905. "Smallpox." Published by the Ontario Provincial Board of Health. Prepared by Dr. Chas. A. Hodgetts, MD, LRCP. P.5.

stipulations in the *Mine Act*. The province adopted a bifurcated approach to monitoring mining environments: the Bureau of Health looked after diseases and sanitation in the camps, while the Bureau of Mines attended to work-related or occupational health. Doctors, however, were the link as they were often cross-appointed and filled multiple roles. Licensed physicians accepted contracts with the province as contract doctors, coroners and with municipalities as District Health Officers but they were not guardians of workplace safety.

Dr. Thos. S.T. Smellie¹²⁰ (1849 – 1925) maintained a diverse and widespread practice in Port Arthur/Fort William; he owned several drug stores and a newspaper in addition to his private patients and contracts with Canadian Pacific and local mines. He was the archetypal frontier physician; he was not only well-educated but a physical force:

... he stood six foot three in his stockings and weighed some two hundred and forty pounds. His ample arms were fashioned to wield a mighty pike or claymore. His massive neck and head ... bespoke a Viking inheritance.¹²¹

The reverential nature of this description is typical of the esteem some rural doctors claimed. Dr. Smellie's reputation grew because he selflessly contracted smallpox while treating infected miners. The doctor recovered and resumed his work with renewed vigor, encouraged by his resistance to future infections. When the disease returned to camps in the Lakehead area two years later, Smellie, as the District Health Officer, quarantined the camps but went to live among sufferers for more than a month. He did not return until the danger had completely passed. His actions were celebrated in a civic ceremony: "On his return to town ... he was given a public reception and presented with an address in

¹²⁰ His full name was Thomas Stuart Traill Smellie. He was born in Fergus, Ontario but descended from Rev. George Smellie and Margaret Logie of Kirkwall in the Orkney Islands.

¹²¹ Thunder Bay Historical Society. *Dr. Thos. S.T. Smellie*. Fort William. Time-Journal Presses. 1932. frontispiece.

appreciation of his services.”¹²² All of the attention was focused on his effort and courage rather than the success of his mission.

To miners and their families Dr. Smellie embodied everything a doctor was supposed to be: solicitous, considerate, indefatigable, knowledgeable and fearless. To him, the affected men were transparently in need of continuing medical intervention. His presence was not about minor lacerations, bruises or personal aches and discomforts but about saving lives. The men admired his example. He did not discriminate or comment on the ethnicities of smallpox victims. He made himself available day and night to all who were afflicted and this won him great approbation.

Doctors were a breed apart from trammers, muckers and the like. When physicians, like Dr. Smellie, voluntarily put themselves into harm’s way (like miners did also) either by subjecting themselves to the hazards of travel, the perils of weather, exposure to diseases or the elements of a disaster, the miners accepted them. Physicians who engaged in behaviours of commensurate risk, although not the same as those faced by miners, exemplified a sense of masculinity that testified to their manhood. In such circumstances doctors were perceived as being with the men, if not of the men.¹²³ Under those conditions doctors were not adversaries or corporate officers, they were viewed more paternally. Furthermore, the physicians who undertook dangerous missions demonstrated characteristics that mine owners and shareholders did not. Although a doctor’s comportment did not evidence the rugged muscular masculinity that informed the camps¹²⁴,

¹²² Thunder Bay Historical Society. *Dr. Thos. S.T. Smellie*. 1932.

¹²³ Miners considered men with “soft hands” less rugged and less masculine and therefore not equals. See Wilde, T. “Education at Work, Literacy at the Resource Frontier”. *Historical Studies in Education*. 2012. Special Issue. Pp.130-149.

¹²⁴ The Cobalt Song gives voice to the type of physical toughness needed in a mining camp.

You may talk about your cities
And all the towns you know

bravery and selflessness spoke volumes about their manliness. A doctor's bearing implied a level of caring that elevated them above their contracts or the need for a paycheque. The courage present in doctors' actions was valourous. This was what made the previously mentioned Dr. Smellie so heroic: he persistently ministered to smallpox patients even after being personally afflicted by the disease. Following his recovery he stayed with the men until the last case was dealt with. It was an extraordinary demonstration of courage.

Commensurate risk masculinity demonstrated a parallel level of masculine courage to a group of men identified by rugged masculinity. For example, an educated man with soft-hands – like a physician – who risked his personal safety by traversing a dangerous landscape or entering a life threatening environment, like a collapsed mine, would be understood benignly. Doctors were, of course, breadwinners for their families. They worked to provide the best lifestyles they could for their wives and children. It was, therefore, a doctor's willingness to leave his family in the middle of the night, in difficult

With trolley cars and pavements hard
 And theatres where you go,
 You have your little auto
 And carriages so fine
 But it's hobnail boots and a flannel shirt
 In Cobalt town for mine

We've got the only Lang Street
 There's blind pigs everywhere
 Old Cobalt Lake's a dirty place
 There's mud all over the square
 We've got the darndest railroad
 That never runs on time
 But it's hobnail boots and flannel shirt
 In Cobalt town for mine.

The song appears in many different publications usually without attribution. In his autobiography Dr. Clifford Smylie credits the words to "Steenman". See *Northern Doctor*. Cobalt. Highway Book Store. 2002. pp.38-39 There are other verses to this song but they all speak to the rough atmosphere that real mining men embraced. They tolerated, then overcame their hardships. In fact they celebrated their abilities to bear all manner of insects, cold, heat, mud, loneliness and isolation, poor food, low wages, adverse working conditions and much more.

weather, to preserve a miner's breadwinner status, which spoke to his masculinity. Being called out for a toothache in the dead of winter, as seen with Dr. Smylie, meant that the patient's masculinity failed to meet the doctor's threshold. Even more highly valued was a doctor's willingness to treat the members of a miner's family if present, even when not covered by the contract.¹²⁵ Deductions from paycheques were solely for the *employee's* medical and occupational health. Families were not included.

The policy was that the hospital was for the workers only – not for their wives or children. Accordingly, payment of dependents' medical expenses and securing medical and hospital care for them were burdens for the men alone. This meant that some very sick women and children ... were required to travel the five miles to Haileybury to secure hospital services.¹²⁶

Pregnant wives, sick and injured children fell beyond the purview of the contracts.

Sometimes, especially during crises and epidemics (like smallpox) family members were denied admittance by the companies, not the doctors.¹²⁷ They could not override the company when it came to deciding who would and would not be allowed access because it was a private facility. Mine owners claimed it was a business decision, not a medical or social one. Nonetheless, doctors were loathe to deny treatment to someone in need so it was common for them to quietly and privately see the patient at a different location. Miners valued doctors who extended these services, usually for foodstuffs or a prescribed amount

¹²⁵ Dr. Smylie recounts billing more than two hundred dollars in a month but he received only sixty-five dollars in cash and his young family suffered. He said he “didn’t have the nerve to ask them to [pay him]”. His wife said he would have made more money if he had continued working as a miner. This indicates that he provided treatments outside of the contracts he held, which meant family members. Smylie, C. *Northern Doctor*. p.110.

¹²⁶ Hogan, B. *Cobalt: The Year of the Strike, 1919*. pp. 54-55.

¹²⁷ This was a particularly common situation faced by hospitals that were subsidized and operated by more than one mining company. In such situations some employers might allow a miner's wife to be admitted for a routine birth but another company, using the same facility, would deny their miner's wife the same accommodations. These inconsistencies were a continuing source of annoyance to the men. Jayne Elliott's thesis “Keep the Flag Flying” focuses on the 1922 – 1984 period but draws out some background information on the need for hospital and maternity services for women in remote areas. See especially chapter three, “Development of the Outpost Program”. Chapter Seven of Edmund Bradwin's *The Bunkhouse Man* is titled “The Medical System on Frontier Works”. It also looks at medical care in remote mine, rail and lumber camps. Although his focus is not exclusive to Ontario or even to mining, he acknowledges the same conditions and problems as those outlined above. Bradwin, E. *The Bunkhouse Man*. pp. 140-154.

of labour.¹²⁸ Contract physicians found a quiet middle ground which companies might influence but not control. Under the umbrella of the Ontario Medical Association, contract doctors gradually began asserting some autonomy.

Notwithstanding the shared aspects of masculinity that have been described, there was no implied or practiced sense of equality between miners and physicians. Class kept them apart and mediated another form of masculinity. Doctors carved out social positions, never fully transcending their middle-class status but distinguishing themselves from mine owners. Across the industry, educated upper-class physicians were not expected to demonstrate physical, rugged, masculinity like working-class men. Masculinity was as stratified as the society in which it was found. Physicians in Toronto and legislators at Queen's Park were measured by educational, social or financial mores. To be deemed unskilled, and perceived only as muscle power, essentially meant being socially devalued. The all-male provincial legislature consistently supported a discrete philosophical and social separation from those who toiled; this was demonstrated by the lack of alarm, funding and prosecutions in the *Annual Reports* of the Bureau of Mines up to 1904. Northern physicians were evaluated more by their willingness, or readiness, to brave threatening environments. An example of this was the way similar behaviours were interpreted differently between social classes.

Miner illiteracy¹²⁹ continued to cause risk-laden actions to be characterized as careless, stupid or reckless.¹³⁰ Doctors were known to be educated and licensed. Therefore

¹²⁸ The practice of paying for doctors services with chickens and produce or by cultivating a garden or shoveling snow was so common that doctors complained they could not keep up their association fees or journal subscriptions. Clifford Smylie recounts "I had no schedule of fees to go by and couldn't get over the feeling that I was enjoying the privilege of being able to practice medicine. So my charges were small and even then there were often more than people could afford to pay." Smiley, C. *Northern Doctor*. p. 86

¹²⁹ Today, the term "illiterate" or "illiteracy" is fraught with nuance. In the context of this study I have used the word as it was applied by the Ontario Reading Camps Association and teachers from Frontier College.

it followed that a university-educated doctor knew enough to weigh the conditions, appreciate the dangers, and act in an intelligent manner. Consequently, doctors did not have to justify their decisions; their backgrounds testified to the worthiness of their choices. Second, that doctors acted in the service of others to save, protect and restore lives and health. The altruistic nature of their work meant that their decisions were born of compassion not recklessness. Doctors who exposed themselves to dangers, like Gimby and Bryan, were celebrated in local papers. Miners who worked with decrepit ladderways, dust-saturated workspaces and faulty explosive charges were their own worst enemies as evidenced by the comments of mine inspectors.

Urban practitioners were also exposed to perils related to contagions but they were able to operate as private, personal doctors in addition to holding contracts, like those for fraternal societies. Their opportunities were far broader than those across the frontier. City doctors, who often held social and political influence, were less a part of the nascent socialized medicine legislated in the camps. City doctors were individuated. They were obligated only to the patients who chose them voluntarily; there was no obligation to see a patient unless they were invited to and wanted to.¹³¹ Most urban physicians were not under the same kinds of blanket contracts to companies with rosters of anonymous (immigrant)

They used it to indicate a resource worker's inability to read and write in English. The individual might however, have been literate in another language. Their evidence in support of this is found in Alfred Fitzpatrick's *The University in Overalls; A Plea for Part-Time Study*. Toronto. The Hunter-Rose Company. 1920. See also "Camp Schools," In "Proceedings of the Forty-Second Annual Convention of the Ontario Educational Association," held in Toronto 14–16 April, 1903. Alpha-Omega Patterson.

¹³⁰ Wilde, T. "Literacy at the Resource Frontier, A Matter of Life and Death." *Historical Studies in Education*. Spring 2012. Illiteracy rates among resource workers as high as 80% are discussed in this article and the percentages calculated by the teaching staff of Frontier College, formerly the Ontario Reading Camps Association.

¹³¹ To compare the profiles of city doctors with those in mining communities see Chapter Three "The Hamilton Medical society 1899 – 1932" in R.M. Stott's book *Hamilton's Doctors 1863 – 1935, Guardians of the City's Health*. The subtitle, "Guardians of the City's Health" suggested a protective role rather than one predicated on a business contract. They were therefore more philanthropic than their counterparts in the north. By 1913 there were more than one hundred dues paying members of the Hamilton Medical Society.

employees. So although city doctors might have been equally heroic, they were not usually interpreted as valuably as those who worked in the shadow of mines. Essentially, private doctors were their own men and did not have to exert their independence or demonstrate their impartiality; it was a given.

Finally, as the mining industry lobbied for a blame-free compensation bureau, doctors slowly gained an independent voice. This meant that physicians could act impartially, favouring neither the company nor the miners. What emerged was a new, autonomous, medical perspective.

The new compensation legislation not only framed the relationship between masculinity, medicine and miners, it also structured a new understanding between miners and the local medical community. Physicians began to play more independent roles. This meant that the WCB Act could be as effective as the doctors' findings. There was enough room for interpretation that contract doctors could regard miners independently of the contracts that were signed with the companies. The new bureau provided a buffer between the three parties and allowed the circumstances to be tested rather than the miners.

Breadwinner Mentality among Miners

New camps were mostly populated by single men. They were either bachelors or married men whose families remained absent until the work and local services were well established.¹³² While there are widely held perceptions of raucous behaviours, the breadwinner mentality – though largely unarticulated and under-reported – seems to have

¹³² For a fuller look at the significance of single men in this environment see Nancy Forestell. "Bachelors, Boarding Houses and Blind Pigs." pp.251-290. Anthony Chan. "Bachelor Workers". *A Nation of Immigrants*. edited by Franca Iacovetta. Toronto. University of Toronto Press. 1998. pp. 231-250. Robert F. Harney. "Men Without Women: Italian Immigrants in Canada 1885-1930." *A Nation of Immigrants*. edited by Franca Iacovetta. Toronto. University of Toronto Press. 1998. pp.206 - 230

been common, if not pervasive. Newspaper stories of drunkenness and rough behaviours belie the quieter comportment of most miners. The following example is illustrative.

Frederick Jeffries was killed in a dynamite explosion on June 21, 1908. He was employed by the City of Fort William while working in the Loch Lomond tunnel; it was part of the new water supply system for the city. Technically, Jeffries was not a miner – he was not harvesting valuable ores – but a comparison of his lifestyle and workplace conditions to those of hardrock miners proves the two indistinguishable; the type and style of work and the equipment and materials used were identical, only the purpose differed. The Jeffries’ case provides a rich source of documents for analysis, including: correspondence between his widow and his employer; letters from opposing lawyers; insurance companies; and witnesses to the fatality.

Frederick Jeffries was born in England in 1874. At the time of his death, in 1908, he had a wife, Beatrice, and three children, ages ten, eight and six.¹³³ Jeffries was hired as a labourer by the City of Fort William in April 1908. Specifically he was a “helper”; the scope of his work was not at all specialized; he was muscle power. At 12:30 a.m. on Sunday, June 21st, Jeffries was working with Jim Crowley: a twenty-seven year old, single, machine operator and the shift supervisor, with William Jack, a forty-year-old trammer, married with two children¹³⁴ and with David Suter who filed the following eyewitness account of how the fatality occurred.

[William] Jack was picking [and] found a piece of dynamite about 1” sq.(one inch square) – [He] showed it to Jim Crowley who immediately stopped his machine – saying “You want to be very careful picking here” and proceeded to investigate with the pick (which he took from Jack) raking the rocks over to see if there was any more dynamite. At the second rake the explosion occurred – Jeffries [who] was standing by the machine – fell fd. dd [fell forward

¹³³ The names of the children are not present in any of the correspondence.

¹³⁴ In the explosion, William Jack lost both eyes and was maimed for life. The City recognized his injuries as being more severe – “his case is worse than yours” in their letter to Mrs. Jeffries dated November 24, 1908.

dead]. Jack stooped and was looking over [the] spot. Suter stepped behind [the] car out of Jim's way. Suter made his way out of tunnel in the smoke and darkness and aroused(sic) the camp.¹³⁵

The coroner empanelled a jury and investigated. The verdict was “that no blame could be attached to anyone.”¹³⁶ Nonetheless the widow Jeffries, still in England, asked what could be done for her and her three children; she could not work because she was being trained as a nurse/midwife, while looking after three children and her dependent, sixty-five year old mother.¹³⁷ The city demurred: “As you know [Mrs. Jeffries] blasting is always dangerous work, and any man who follows this work for a livelihood knows that there is always danger notwithstanding the exercise of the utmost care.”¹³⁸ Although it was formally relying on its legal position, the City of Fort William was, nonetheless, prepared to pay something to the surviving members of Jeffries' family. Mr. Hancock, the city's engineer and the man in charge of the case, asked after Mrs. Jeffries' circumstances on August 6th and hinted that some financial consideration might be forthcoming.

... the City of Fort William does not consider that it is legally responsible in the circumstances which unfortunately caused your husband's death, but they recognize that there was a moral obligation to do something for you ...¹³⁹

Nonetheless, her suggestion that £300 was the appropriate amount was derided. In related correspondence officials commented that “... [Mrs. Jeffries'] ideas are a bit large”.¹⁴⁰

Interestingly, the city used Mr. Jacks, who was permanently maimed and blinded in the

¹³⁵ Thunder Bay Historical Museum Society. City of Fort William fonds. Unmarked copy of David Suter's statement.

¹³⁶ Thunder Bay Historical Museum Society. City of Fort William fonds. Unmarked. Letter from City Engineer H.S. Hancock dated August 11, 1908. There was some contention about this as the coroner's jury allowed that Jas. Crowley did bear some of the responsibility as he was in charge of the shift.

¹³⁷ Thunder Bay Historical Museum Society. City of Fort William fonds. Unmarked. See letter of Beatrice Jeffries dated August 24, 1908.

¹³⁸ Thunder Bay Historical Museum Society. City of Fort William fonds. Unmarked. See letter from the City of Fort William to Beatrice Jeffries dated August 11, 1908.

¹³⁹ Thunder Bay Historical Museum Society. Excerpted from a letter to Mrs. Jeffries in late August or early September 1908.

¹⁴⁰ Thunder Bay Historical Museum Society. See letter from The Employers Liability Assurance Corporation to Beatrice Jeffries dated September 17, 1908.

incident, as the barometer of reasonableness. Mr. Jack's willingness to "...take a reasonable settlement and not go to law about it" was considered strong evidence against Mrs. Jeffries' position.¹⁴¹ She was reminded that Mr. Jack's case was worse than hers as his disabilities would make him a burden on his family for the rest of his life. The city presumed that the comparatively clean break brought about by Fred's instantaneous death would somehow be easier for her to bear, both emotionally and financially. And while this may have had some merit in emotional terms it utterly denied the sudden and unforeseen financial burden his loss imposed. Ostensibly Fred Jeffries had had five people relying on his income. Beatrice had no viable or sustaining source of revenue. Likely the City expected her to remarry. Although Fort William identified a "moral responsibility," Mrs. Jeffries was neither local, nor was she a voting citizen, so it did not feel a need to act expediently. There was no local uproar over her circumstances.

Over the following months however the City began to relent; in November it offered Mrs. Jeffries £100¹⁴² as "settlement in full for both yourself and your children".¹⁴³

Hancock acknowledged:

In England ... where a man is injured or killed under such circumstances, he or his widow is entitled to compensation as a matter of course according to a certain Schedule laid down by Law, but in this Country it is only where the Employer is [legally] to blame for the accident that he is obliged to pay for anything, the employee being obliged to run the ordinary risks of employment.¹⁴⁴

Mrs. Jeffries retained legal counsel.

¹⁴¹ Thunder Bay Historical Museum Society. Unmarked. See letter from the City of Fort William to Beatrice Jeffries dated November 24, 1908.

¹⁴² In 1908 one pound sterling was the equivalent of \$4.87 Canadian dollars; £100 equaled \$487.00. Figures confirmed by the Bank of Canada, November 27, 2007. See Chapter Five of *A History of the Canadian Dollar* by James Powell. Ottawa: Bank of Canada. 2005.

¹⁴³ Thunder Bay Historical Museum Society. City of Fort William fonds. Unmarked. See letter of City Engineer H.S. Hancock dated November 7, 1908.

¹⁴⁴ Thunder Bay Historical Museum Society. City of Fort William fonds. Unmarked. Excerpted from a letter to Mrs. Jeffries in late August or early September 1908.

During renewed negotiations the City forwarded the remaining personal effects of Mr. Jeffries together with a promise to send a photograph of his grave to comfort her. Additionally, townsfolk in Fort William contributed voluntarily to a “public subscription” fund for the accident victims’ families. It grew to about £60 which was split evenly between the Jeffries’ and the Jacks’ families.

On November 13, 1908 Beatrice Jeffries wrote to the City again. She said that she had received about £11.0.0 in outstanding wages that were owed to her husband on the day he was killed. She lamented the paucity of the sum and explained that Fred was “a good man”; he had regularly sent her £8.10s per month to support their family and pay for her training as a nurse/midwife. Notably then, Fred Jeffries’ monthly remittance to England was over and above his personal maintenance in Fort William. From these small references it becomes apparent that Jeffries in particular, but certainly many other immigrant miners as well, was responsible for maintaining the lifestyle and living conditions of his family “back home.”

Further evidence of the breadwinner ethic is found in the records of Frontier College. Using what they called a “Cross-Section of an “average” Canadian Camp”, eighty-one students, varying in ages from sixteen to fifty-seven, were asked if they saved portions of their wages. Only twenty-one percent (seventeen men) said they had no savings whatever. Almost eighty percent, (sixty-four men), said they saved between “some” and “very much”.¹⁴⁵ Although the categories were subjectively interpreted, the indication is that

¹⁴⁵ All three Poles, between ages 30 – 40, who had been in camp over a month had savings. Similarly all four Swedes, between ages 30 – 40, who had been in camp between three and four weeks, had savings too; two of them said they had saved “much”. Conversely, two teenaged Germans who had worked three months saved nothing. Mature foreigners - late twenties to early forties – seem to have overwhelmingly saved money. The younger men do not appear to have been as disciplined. Fitzpatrick, A. *The University in Overalls; A Plea for Part-Time Study*. Toronto. The Hunter-Rose Company. 1920. See Appendix B “Where the Frontier College Works”. pp. xxiv - xxvii

the majority of Frontier College students (miners and loggers) were building nest-eggs; they saved in order to send for their families or take the savings home to help buy a home or farm. The numbers and the mentality that informed these numbers also suggests that most married men indulged in few extravagances or great creature comforts while working in Ontario's Northland.

Most of these workers preferred to save their wages. Savings were a source of great pride. They symbolized how much a man cared for his family. Savings testified to the discipline and masculinity of miners and loggers. Fred Jeffries had a savings account with the Bank of Montreal in which he had accumulated £36:12:11. This money was conveyed to his family in November 1908. Mrs. Jeffries praised the caring nature of her husband and his diligence in support of their home: "... if my husband had lived, my children would not have wanted for food, now I have to screw and pinch to make the money last"¹⁴⁶ She then admonished the City of Fort William's apathy saying, "We don't treat people like that in England."¹⁴⁷

Her letters maintained an urgent tone and repeated that her kids faced imminent starvation if help was not quickly forthcoming: "... they are all delicate children."¹⁴⁸ She said the remaining members of Jeffries' family were on the verge of having to "apply to the gardiens [sic] of the parish"¹⁴⁹ for food and shelter. The loss of their breadwinner represented an intense hardship for the surviving family. This was true of immigrants and Canadians alike. The other victim, William Jack, remained totally dependent on his family for the rest of his life.

¹⁴⁶ Thunder Bay Historical Museum Society. See letter of Beatrice Jeffries dated November 13, 1908.

¹⁴⁷ Thunder Bay Historical Museum Society. See letter of Beatrice Jeffries dated November 13, 1908.

¹⁴⁸ Thunder Bay Historical Museum Society. Beatrice Jeffries dated November 13, 1908.

¹⁴⁹ Thunder Bay Historical Museum Society. Beatrice Jeffries dated November 13, 1908.

Frederick Jefferies was not unique. The circumstances that followed his death exemplify the breadwinner mentality among Ontario's miners. There were far more breadwinners than the disproportionate few – compared to the whole – who were arrested or reported to have acted in violation of local or provincial ordinances. Breadwinner masculinity was especially recognizable in immigrant miners, who arrived from Europe to find new opportunities to support their families back in Europe. The men in Ontario's work camps placed a high priority on family obligations. Payroll records from the 1890s and through to 1915 show that both miners and lumberjacks preferred to keep very little money on hand for personal use, preferring instead to have employers remit the bulk of their earnings home.¹⁵⁰ Typically a lumberjack or miner would have only minor deductions made for tobacco, tools, articles of clothing or other minor personal items. Besides which, cash often attracted unwanted attention in the camps; it was safer to have wages paid by cheque to wives and parents through the employer rather than to risk losing it in the bush accidentally, gaming, theft or otherwise.

Mrs. Jeffries persistence, either through her increasingly desperate references to her “poor” children, or her retention of the law firm of Sarjeant and Cosling, eventually moved the City to raise its offer. By early December the City's insurer, The Railway Passengers Assurance Company of London England, together with The Employers' Liability Assurance Corporation Limited of London England recommended that one thousand Canadian dollars (\$1000 Cdn) be paid in full settlement of Fred Jeffries' death.

On March 22nd, 1909, the last piece of correspondence from the file confirmed that a final payment of \$1200 (£246) – more than double the original offer - was remitted to

¹⁵⁰ In July 1890 a letter from Gillies Brothers payroll office confirmed that eight lumberjacks had sent a total of \$120 to their families in Hull and Trois Rivieres. Archives of Ontario F150-12-1-13.

Beatrice Jeffries, (the same amount received by William Jack): six hundred dollars each from the City of Fort William and The Railway Passengers Assurance Company. Jim Crowley, the shift foreman and alleged author of the explosion, was deemed to have been culpable in his own death and, as a result, there was no compensation provided to his successors or assigns. Although Crowley was single, his marital status did not appear to have played any role in the City of Fort William's consideration of him, morally or financially. Nothing was ever paid to his family.

Fred Jeffries' workplace death was contested because he was the principal wage earner for his family. The Jeffries case reveals that by 1908 employers were beginning to recognize a tacit but implied *moral* obligation to some of the dead and injured miners. This was particularly true in instances among those who suffered death or permanent disability simply because they were present at the wrong time and place. The coincidence of time and place did not exempt employers from delivering some redress (compensation) to the innocents who were made vulnerable because of their fathers' or husbands' deaths.

In the Jeffries' matter, it is significant that the coroner's jury did not assign any blame to the City of Fort William. Even more noticeable, and evidence of a shift toward a new attitude about workplace safety, was that the jury did not assign any blame to Jeffries either. By 1908 some juries were beginning to turn away from the shield of assumed risk. They favoured having corporations shoulder a larger share of the burden. Beatrice Jeffries was able to seek compensation, not only because her husband was absent of complicity but also because he was a "good man" and a reliable provider.

Chapter Four

Striking a Balance:

The Great War, Unions, and the Workmen's Compensation Act

(1915 -1925)

The political economy of mining changed dramatically with the outbreak of war. Demand for recruits and for minerals created new strains on the industry as well as on the bodies of the men who remained working in northern mines. After the war, the economy stabilized and miners occupied a slightly improved position regarding occupation health, injuries, and health care. This chapter examines how new challenges – including World War One and a new Workmen's Compensation agency – affected not only mine workers but also the demands of the revived unions that represented them. The changes that took place encouraged union leaders to seek benefits that pushed the Bureau of Mines and mine owners to value occupational health and safety in new ways. This chapter follows the effects of complex, interwoven and overlapping forces through to 1925.

The Mining Economy 1915-1925

World War One was a boon to the mining economy of Ontario. Initially, markets reacted cautiously to the June 1914 assassination of Austria's Archduke Ferdinand in Sarajevo. In the short term, uncertainty caused the prices of precious metals and minerals to fall.¹ International global warfare – and total war – was a new phenomenon and Canada's role was unspecified beyond unbridled support for Great Britain.

¹ Precious metals were distinct from minerals like salt, gypsum and talc, as well as sand and gravel although they were all administered by the Bureau of Mines.

A worldwide depression in 1913 had depressed ore prices and hardrock mining in Northern Ontario had plateaued.² In 1915 there were twenty-five percent fewer mining companies incorporated: fifty-nine compared to eighty the previous year. The Bureau of Mines report for 1915 recorded seventy-nine operating mines, sixty-two (78%) of which were profitable.³ The consolidation that had taken place in the mining industry had produced an overall contraction.⁴ There were 20,530 miners employed across Ontario in 1914 but the following year those numbers were down to 17,190, a sixteen per cent drop.⁵ Taxation streams and new claims also declined. The revenues the provincial government derived from that sector declined more than thirty percent to \$342,986 from \$503,668 the year before.⁶ The 25% royalty on ores at the collar of the shaft was changed to five percent of the net profits. This arrangement confirms that the provincial government was a partner of business in the resource economy.⁷

As World War One took hold, explorations of remote northern regions of Ontario slowed.⁸ New approaches and methods for locating ore bodies and evaluating underground

² Production of Ontario's mines in 1914 was already 13% lower than what it had been in 1913. *Twenty-Fifth Annual Report of the Bureau of Mines*. 1916. p.1.

³ *Twenty-Fifth Annual Report of the Bureau of Mines, 1916*. p. 1. The mining industry as a whole reported sales of more than fifty-four million dollars.

⁴ For a discussion of how and why mines began to merge see Chapter 12 in Michael Bliss' *Northern Enterprise: Five Centuries of Canadian Business*. Toronto. McClellan & Stewart. 1987. pp. 313 – 321.

⁵ Comparative figures are taken from the *Annual Reports of the Bureau of Mines* for each of these years. For 1915 see page 3; for 1916 see page 3.

⁶ Provincial revenues under the *Mining Tax Act* in 1915 also declined to \$177,000 from \$305,000 in 1914. *Twenty-Fifth Annual Report of the Bureau of Mines, 1916*. p. 46.

⁷ See *Twenty-Fifth Annual Report of the Bureau of Mines, 1916*. p. 45. For Nelles' arguments see *The Politics of Development: forests, mines and hydro-electric power in Ontario 1849-1941*. Second Edition. Kingston. McGill-Queens University Press. 2005. In particular see chapters eleven and twelve, "Politics as Business" and "The Image of the State" respectively. See introduction page xxviii "... [Nelles] argued that the state in the form of the provincial government had played a major role alongside private initiative in the development of Ontario's natural resources."

⁸ *Twenty-Seventh Annual Report of the Ontario Bureau of Mines*. See pages 68-69 of the 1918 *Annual Report*.

lodes began replacing traditional ones.⁹ *In situ* prospecting was still limited to the late spring, summer and early fall seasons; winter weather conditions continued to make access problematic. In some instances it was more economical to exploit extant sites rather than initiate new ones. In the *Twenty-Seventh Annual Report of the Ontario Bureau of Mines*, the provincial recorder at Port Arthur noted that the war had taken off so many prospectors there would likely be no new discoveries made for years.

... the war is telling against the mining industry. Assiduous and intelligent prospecting for new mineral areas and ore bodies is essential to the maintenance, not to say the progress of mining. Now, very many of the best and most capable prospectors have gone overseas to fight the King's enemies and their absence is being felt.¹⁰

By early 1915, when the Canadian government understood the breadth and depth of the conflict, mining operations resumed apace. Metals were the discourse of battles in World War One. Armaments and weaponry were fundamental to success and Ontario's mines were critically important in provisioning the armed services. Tanks, trucks, bullets, rifles, cannons, machine guns, planes, rifles, pistols, shovels, utensils and cans for food were all forged from natural resources, many of which came from Ontario. It is not necessary to enumerate all of the applications that nickel, copper, lead, zinc, silver, cobalt, molybdenum¹¹, iron pyrites, pig iron and gold were used in; they were virtually limitless. Needless to say, miners occupied important roles in the supply chain. The industry boomed.

⁹ Geologists played greater roles in determining sources of ores. The Bureau of Mines used some of their own staff to scout possible ore sites and some new scientific detection devices were introduced. Richard Henry Stretch examines some of these changes in his book *Prospecting Locating And Valuing Mines: A Practical Treatise For The Use Of Prospectors Investors And Mining Men Generall*. Kessinger Publishing. 2008.

¹⁰ *Twenty-Seventh Annual Report of the Ontario Bureau of Mines. 1918*. p. 5.

¹¹ Molybdenum, previously unrecorded as a metal, took on a new significance during wartime because it was an alloy of steel. It substantially improved the efficiency of metals that were used in high-speed tools, like continuous-fire machine guns and the drills used to manufacture weaponry.

After the initial drop in demand for metals and minerals¹² companies retooled for war and mining rebounded. Early in 1915 there were 17,190 “persons employed at metallurgical works and producing mines”.¹³ The 1916 Bureau of Mines Report claimed that northern Ontario mines “were worked with feverish activity....to supply the abnormal demand for metals...”¹⁴ The Imperial Munitions Board, which was responsible for all war-related production in Canada, was centered in Toronto and run by Joe Flavelle, a local business baron.¹⁵ Ontario’s mines soon profited from contracts let to ordinance and armament manufacturers. Nickel and copper mines employed the largest bloc of men at 4,178 or almost twenty-five per cent of the province’s miners. By comparison only 392 worked in the three producing iron mines, well below one per cent.¹⁶ The use of nickel in the plating of armour was new and heralded opportunities to expand those markets as well.

[The] Industrial depression which set in after the declaration of war in August, 1914, continued to some extent in the early part of 1915, but in the latter part of the year a revival in business was well under way. The mines were worked with feverish activity in order to supply the abnormal demand for metals, particularly nickel and copper. Prices, which are dependent on supply and demand, rapidly advanced.¹⁷

In 1914 the gross value of nickel-copper matte was \$7,000,000; it soared to \$21,000,000 in 1915. The “fortunes of war” bore both a literal and a figurative application: “So unprecedented an increase in the production of nickel, owing to the higher prices prevailing

¹² In 1913 mineral production in Ontario was just over fifty-three million dollars. It dropped to forty-six million in 1914 as a result of uncertainties in the marketplace about how and if commerce would be conducted during wartime. By 1915 the totals had rebounded to more than fifty-four million dollars and by 1916 it had jumped another twenty percent, to a record sixty-five million dollars. See the *Annual Reports for the Bureau of Mines* from 1913 to 1916 inclusive.

¹³ Bulletin No. 91. *Report on the Mining Accidents in Ontario in 1933*. Toronto. Herbert H. Ball. 1934. p.3. There were also estimated to be about fifteen hundred people employed at non-producing mines but those totals remained static and so were not considered in the overall increase of employees active in mining in Ontario.

¹⁴ *Twenty-Fifth Annual Report of the Bureau of Mines, 1916*. p. 1.

¹⁵ Bliss, M. *A Canadian Millionaire, The Life and Times of Sir Joseph Flavelle*. Toronto. MacMillan of Canada. 1978. See chapters ten through fourteen for his activities in World War One.

¹⁶ The Mond and Inco mines were the two largest beneficiaries of wartime productions because nickel improved the resistance of steel to shells. *Twenty-Fifth Annual Report of the Bureau of Mines*, p. 3.

¹⁷ *Twenty-Fifth Annual Report of the Bureau of Mines*, p. 1.

and the unusual demand for nickel-steel for armament and munition purposes, is a direct result of the great war now raging.”¹⁸

Predictably, the end of the war resulted in a drop in demand and prices sagged. The record \$72,093,832 total output¹⁹ in 1917, however, represented the increased value of the ores more than the tonnages extracted. The increase reflected higher prices and expanded applications. Except for gold, which remained steady, most other minerals and metals saw dramatic increases during the four years of fighting. Silver from the Cobalt area provides a particularly strong example of what happened.

In 1916 the Cobalt camps produced about 20,000,000 ounces of silver; they sold for slightly more than twelve million dollars. In 1917, silver production slipped to 19,000,000 ounces but sold for more than sixteen million dollars; a five percent decrease in production netted a thirty percent dollar value increase.²⁰ Other metals that gained similarly included cobalt, iron ore, nickel and molybdenite.²¹ The latter two offered properties that improved the performance of steel, which cause their prices to increase fastest. Non-metals like arsenic, feldspar, fluorspar, and quartz rose in value by almost fifty percent to five million dollars. Nonetheless, it was a limited window of opportunity.

Marginal mines closed quickly after the war. Businessmen focused once again on profits. Low-yield ore bodies were no longer viable. Employment figures reveal that the number of working miners dropped precipitously. The high of 16,791 miners in 1916 fell to

¹⁸ *Twenty-Fifth Annual Report of the Bureau of Mines, 1916*. p.15.

¹⁹ This figure rose to a record above \$80,000,000 in 1918 before quickly falling back to \$58,000,000 in 1919.

²⁰ *Twenty-Seventh Annual Report of the Bureau of Mines, 1918*. p.xiii.

²¹ Nickel sales in 1913 were \$5,000,000 and in 1917 they were more than \$21,000,000. Cobalt over the same period increased from \$420,000 to more than \$1,100,000. Molybdenite was not mined at all in 1913 but by 1917 sales had already eclipsed the \$100,000 mark. In the 1920 annual report molybdenite no longer appeared in the statistics.

11,926 in 1919, a decline of more than twenty-eight percent.²² By 1921 it was at 8,436, half of the wartime peak. Bureau records show that by 1925 total shipments from silver mines, smelters and refineries was below ten million ounces and it was a relatively small amount of revenue at \$6.7 million dollars.²³

The Changing Workforce

In twentieth century wars, men fought battles while governments mobilized materials and resources that funded military activities. This was true for the federal and provincial governments in Canada as World War One got underway. A coordinated effort was needed to meet national and international obligations: providing money, men, and *materiel*. The value of the miners' contributions increased accordingly. It was not simply a matter of their numbers; it was their skill sets as well.

When Canada declared war in September 1914, the nation was flush with patriotism and, as Carl Berger noted, imperialism was just one form of Canadian nationalism.²⁴ Accordingly, Prime Minister Borden made a "sacred promise" to England that Canada would, initially, provide 50,000 soldiers for the cause.²⁵

The need was urgent but the quota was quickly filled. Newspaper headlines bruited the need for everyone to do their share. Ontario's miners responded enthusiastically. Across the north, enlistments were high, which cut back the numbers of experienced miners

²² *Twenty-Sixth Annual Report of the Bureau of Mines, 1917*. Chart on p.3 and *Twenty-Ninth Annual Report of the Bureau of Mines, 1920*. Chart on p.6.

²³ *Twenty-First Annual Report of the Bureau of Mines, 1912*. Chart on p.6. and *Thirty-Seventh Annual Report of the Bureau of Mines, 1928*. Chart on page 17.

²⁴ Berger, C. *The Sense of Power; Studies in the Ideas of Canadian Imperialism, 1867 – 1914*. Toronto. University of Toronto Press. 1970.

²⁵ Stacey, C.P. *Canada and the Age of Conflict. Volume 1: 1867-1921*. Toronto. University of Toronto Press. 1992. Chapter Seven, "The World Explodes, 1914-1916. pp.172-201. By January 1916 the number of soldiers was revised up to 500,000.

available for work underground.²⁶ In fact, Ontario's miners enlisted in such overwhelming numbers that some worksites had to close: "... many of the best [mining men] ... have gone overseas to fight the King's enemies and their absence is being felt [in Ontario]."²⁷

The call to arms was answered so robustly by miners that limits were placed on the numbers accepted at northern recruiting stations.²⁸ At the Lakehead, on November 2, 1915 the *Port Arthur News Chronicle* confirmed an oversubscription of recruits. It said, "100 men surplus to 52nd Battalion needs offered to [new] unit." On November 10th the *Kenora Miner and News* reported: "Men are enlisting in Port Arthur as fast as the Medical Officer can handle them." On November 12, 1915 the *Fort William Daily Times Journal* said: "100 men from Fort William have enlisted to date and [military] drilling has begun in earnest. A new recruiting office has been opened in the John King Building on Victoria Ave."²⁹

Lineups were long, as men across the country feared the fighting would be over before they could claim a role in it.

In the Larder Lake area, the managers of some mines complained that they had lost forty percent of their workforce to the demands of war.³⁰ At the Coniagas mine, eighty-

²⁶ Wilde, T. "Freshettes, Farmerettes and Feminine Fortitude at the University of Toronto during the First World War" in *A Sisterhood of Suffering and Service; Women and Girls of Canada and Newfoundland during the First World War*. Ed. A. Shaw and S. Glassford. UBC Press. Vancouver. 2012.

²⁷ *Twenty-Seventh Annual Report of the Ontario Bureau of Mines, 1918*. p. 5.

²⁸ If volunteers were turned away from one station, they travelled to a different one. Some miners returned to their hometowns or urban centres, like Toronto, where they enlisted at neighbourhood venues. This spirit spoke to the masculinity and zeal of miners to enter the fray. Groom, M. *The Melted Years*. New Liskeard. Temiskaming Printing Co. 1971. pp.87-91.

²⁹ In Woodstock, a thief sentenced to two years in prison was allowed to enlist in the army instead. *The Toronto World*. December 1, 1915. p. 2.

³⁰ Defresne, V. and Thompson, C. *Canada's Forgotten Gold Rush :The Goldfields of Larder Lake*. Larder Lake. 1999. p.68. Mining communities robustly formed up and contributed regiments and proudly waved them off at local train sidings. For a thorough examination of the enthusiasm that informed the recruits see Jeff Keshen's *Propaganda and Censorship During Canada's Great War*. Edmonton. University of Alberta Press.1996. Although Keshen does not focus on Ontario specifically the information he presents in chapter one "A Nation Rallies to the Cause" fits the mining communities discussed herein. For more on recruitment see Desmond Morton's look at the atmosphere surrounding the call to arms in *Fight or Pay, Soldiers' Families in the Great War*. Vancouver. UBC Press. 2004. See chapter two "Pay and Allowances" and chapter four "Choices and Responsibilities."

three men – about one-third of the labour force – signed up for active service within the first ten months.³¹ In August 1914 there were eighty-five miners employed at the Keeley silver mine in Silver Centre (north of Cobalt). By the end of September 1914 there were only six left; the rest had enlisted in the Canadian Expeditionary Force.³² The mine closed. It reopened the following spring and for the duration of the war held to a May through October operating schedule.

A.L. Sharpe, a long time superintendent of the Garson Mine, left the mine in late 1916 to join the CEF's Tunnellers.³³ For the duration of the war, it was common practice for mining concerns, unlike other enterprises, to “guarantee” the job of every miner who signed up for active duty. Some companies went a little further:

All the mine managers of the Porcupine camp have guaranteed the men who leave with this corps [the Pioneer regiment] their positions back when they return and the Hollinger [company] further continue their Loyal [Service] Bonus service pay to go on as if they were in their place.³⁴

Due to a labour shortage, the silver mine at Bessemer closed in 1915.³⁵ The Magpie Mine, owned by Algoma Steel, closed in the fall of 1914 because there were not enough workers available; “conditions of war” was the term used to describe the closings.³⁶

³¹ “Patriotic Coniagas.” *The Northern Miner*. December 25, 1915. p.7.

³² Fancy, P. *Silver Centre: The Story of an Ontario Mining Camp*. Highway Book Shop. Cobalt. 1985. pp. 42-43. See chapter six: “Stretching Our Your Hand to Feel the Wind 1914-1915”.

³³ *Twenty-Sixth Annual Report of the Bureau of Mines, 1917. Vol. XXVI*. Toronto. William Briggs. 1917. p.87.

³⁴ “Wrecked Hollinger Staff”. *The Northern Miner*. October 9, 1915. p. 5.

³⁵ The Bessemer mine closed permanently in 1916. Hanes. D. *Iron Mining at Bessemer 1899 – 1914*. Cobalt. Highway Book Shop. 2002. Chapter 23. “A Final Closure.” Pp. 191-196.

³⁶ *Twenty-Fifth Annual Report of the Bureau of Mines, 1916. Vol. XXV*. Toronto. William Briggs. 1917. p.69. The Cordova Mine was closed in April 1915 for lack of manpower. P. 128. The *Twenty-Sixth Annual Report of the Bureau of Mines, 1917. Vol. XXVI*. Toronto. William Briggs. 1917 reports: “Owing to the scarcity and high cost of labour in 1916 many branches of the building trade[s] were hampered in their operations. There was also a decided falling off in the demand. Over 100 operators reported that their yards had been closed for the year, and the remainder, for the most part, worked on a much reduced scale.” p.32. There are many other examples of this throughout the war years.

The abovenoted examples reveal the enthusiasm many English-speaking miners felt for the War. Nevertheless, the experiences of miners deemed “enemy aliens” were markedly different. *The Northern Miner* claimed that as of October 1915 most mining companies had started to “tabulate their men according to nationalities.”³⁷ Shortly afterward many workers of German, Austrian or Bulgarian backgrounds were targeted for dismissal by British-owned mining companies. The following month dramatic steps were taken.

All employees of the Mining Corporation of Canada of nationalities belonging to enemies of the Queen ... have been discharged. This is in accordance with orders received from head office off the company in England. The policy of the company has been not to take on any further Austrians or Germans in the place of their fellow countrymen who left or were discharged.³⁸

This action affected approximately fifty men in and around the Cobalt area alone. The cosmopolitan nature of the mining population reveals a range of challenges among the various ethnicities. Wartime experiences in the mining camps of northern Ontario were far from uniform.

Working Conditions, Living Conditions, and Health

Overseas, enlisted men faced unprecedented injuries but on the northern Ontario homefront fewer miners meant fewer injuries and fatalities. A comparison of mining deaths listed in the Bureau of Mines *Annual Reports* reveals that in the five years following the war (1919-1923 inclusive) there were 152 deaths: a statistical average of 30.4 deaths per year, or about 2.5 per month.³⁹ This represented an important reduction from the 262

³⁷ “Austrians and Italians.” *The Northern Miner*. October 9, 1915. p.7.

³⁸ “The Only Way” and “All Enemy Aliens Discharged.” *The Northern Miner*. November 13, 1915. page 1.

³⁹ Beginning in 1922 the Annual Reports rounded the numbers of men employed in Ontario mines. Up to that point the totals appeared to specific and precise numbers; afterward they were 9,500 or 11,000. No explanation was made for the change in practice.

fatalities which occurred in the five years preceding the war: a statistical average of 52.4 deaths per year or about four men per month. This decline in the fatality rate was due in part to the shrinking workforce but it also reflects a sustaining enforcement ethic that insured adherence to the regulations would deliver in a safer workplace.

Year	Fatalities @ Active Mines	Total Employed @ Active Mines	Fatal Accidents per 1000 employed
1901	13	4135	2.77
1902	10	4426	2.05
1903	7	3499	1.79
1904	7	3475	1.80
1905	9	4415	1.83
1906	11	4017	1.90
1907	22	6305	2.93
1908	47	7435	5.11
1909	49	8505	4.66
1910	48	10862	3.73
1911	49	12543	3.37
1912	43	13108	2.84
1913	64	14293	3.93
1914	58	14361	3.60
1915	22	13114	1.51
1916	51	14624	3.07
1917	36	16791	2.02
1918	32	14726	2.10
1919	39	12926	3.00
1920	29	11486	2.61
1921	24	9436	2.54
1922	30	11000	2.72
1923	30	12000	2.50
1924	40	12500	3.20
1925	42	13000	3.23

Table 4.1⁴⁰

⁴⁰ All of the data for this table is taken from the Department of Mines Annual Report for 1926. *Ontario Department of Mines, Thirty-Fourth Annual Report*. Toronto. Queen's Park. 1926. p.63.

As Table 4.1 shows, over the four full years of fighting, ostensibly 1915 to 1918, mining deaths in Ontario declined significantly in real numbers compared to the four years immediately prior. In fact thirty-four percent fewer lives were lost which meant seventy-three fewer miners died in work-related accidents, notwithstanding frenzied production levels. The statistical increase in “Fatal Accidents per 1000 Workers” is due to a sharp decrease in the number of miners at work immediately after the war. This reduction in the workforce caused the statistical average per thousand to increase, despite the actual number of deaths declining. Between 1916 and 1925 there were 353 Ontario workers killed in mine-related incidents. While the number remained egregiously high, it was still sixty-nine fewer than had occurred between 1904 and 1915 when 422 lives were lost.

Workplace processes and conditions were largely unchanged during this time although there were refinements to existing mining methods (drill bits and pneumatics) and materials (better explosives). To avoid charges of profiteering – like those levied against Joe Flavelle – mine owners reinvested in their businesses by adding safety features like approved cages for transporting men to and from the surface. There were also new ventilation systems installed and lighting was almost universally electrical.⁴¹

Living conditions in the camps improved as better structures were erected and cleaner water was supplied.⁴² Before the war the mining companies owned all the land on which shacks/bunkhouses were erected. During the war, however, some mines exempted the families of men in service from ground rents and where there were labour shortages,

⁴¹ *Twenty-Eighth Annual Report of the Bureau of Mines, 1919*, p. 104. The Northern Pyrites Mine ceased winter production but improved ventilation systems during that time. The main shaft was not extended any lower. Existing conditions were improved. The Levack mine (30 km northwest of Sudbury) was over 700 feet deep and it concentrated on insuring fresh air to the lowest levels. P.111.

⁴² For a discussion of how some camps improved see chapter four of Brian Hogan’s thesis *Cobalt: The Year of the Strike, 1919*, pp.51 - 60.

rents were eliminated entirely. At the Tip Top mine in Keewatin in 1917 the inspector commented on the cleanliness of both the boarding house and the water supply.⁴³ All of these changes contributed to safer conditions for miners during the war and they continued afterward as well. Better road and rail systems improved access to mining towns.

Although the cause of Empire superseded all else, there were frictions and challenges inside the mining industry. These, however, were leavened by a broader patriotism that needed production. The machineries of war required raw ores from the mining sector. Records reveal that there were significant wage increases realized by Ontario's miners between the beginning of the war and the end - as much as 30% - 40% in Cobalt and Sudbury where cobalt and nickel were in high demand. The less publicized costs-of-living that attended those increases – and made them necessary – ranged from 60% to 75%, especially on items like food and clothing.⁴⁴ There were, in fact, complaints in *The Northern Miner* about the real, net loss of purchasing power being experienced by miners who had received a fifty-percent salary hike over the preceding years.

Cost of Living Increases in Cobalt 1914-1916⁴⁵

	1914		1916	
Beef	\$11.00		\$17.00	per/cwt
Pork	\$12.00		\$18.00	per/cwt
Cheese	\$0.15		\$0.21	p/lb.
Butter	\$0.28		\$0.38	p/lb.
Sugar	\$4.85		\$7.85	per/cwt
Flour	\$2.82		\$4.20	per/cwt
Beans	\$1.95		\$5.00	p/bushel
Potatoes	\$1.00		\$2.25	p/lb. ⁴⁶

⁴³ *Twenty-Sixth Annual Report of the Bureau of Mines, 1917*. p. xii.

⁴⁴ Wartime price increases across Canada during World War One have been dealt with widely. See Hogan, B. *Cobalt: The Year of the Strike, 1919*. pp.56-58 and Michael Bliss' introduction to *A Canadian Millionaire, The Life and Times of Sir Joseph Flavelle*. Toronto. MacMillan of Canada. 1978. pp.vii-xii.

⁴⁵ Hogan, B. *Cobalt: The Year of the Strike, 1919*. pp.55-58.

Table 4.2

While income in some cases moved up from \$20 to \$30 a week, based on a sliding bonus structure, purchasing power fell. As a result, there was little or no appreciable difference in the quality of life or standard of living for miners and their families.

By 1916 the miners were getting fed up with the inequities of the system.⁴⁷ In 1913 the Kerr Lake Mining Company declared a dividend of \$5.2 million dollars and in 1916 it rose to \$7.1 million an increase of thirty-six percent. At the LaRose mine for the same period the dividends were \$4.6 million in 1913 and \$6.1 million in 1916 a jump of thirty-two percent.⁴⁸ “Soaring profits” did not result in benefits to workers whose “real wages declined due to an inexorable rise in the cost of living.”⁴⁹ There were increasing profits and dividends for owners but increasing financial hardship in the workforce as revealed by the cost of work-related clothing. Prior to the war “it was possible to get over-alls for \$1.50 and \$2.00 [a pair] in 1914... but [in 1916] the common over-alls ... cost \$7.00 ... and a pair of short rubber boots that used to cost \$6.00 two or three years ago would cost \$10.75 [in 1916].”⁵⁰ The Industrial Disputes Investigation Act (IDIA) was enacted by the Laurier government in 1907 to ameliorate conflicts between labour and management and to broker arrangements or settlements for both sides. In August 1916, in the spirit of the IDIA, a Royal Commission⁵¹ was appointed by the federal government to investigate labour

⁴⁶ All figures are taken from the “Report of Royal Commission Appointed to Investigate Unrest in the Mining Industry in the Cobalt District 1916”. *The Labour Gazette*. October 1916. p.1636

⁴⁷ Hogan, B. *Cobalt: The Year of the Strike, 1919*. Chapter 4.

⁴⁸ These dividend amounts are taken from the Annual Reports of the Ontario Bureau of Mines for 1914 and 1917 which reveal totals for the previous years. *Twenty-Third Annual Report of the Bureau of Mines, 1914*. p 17. *Twenty-Sixth Annual Report of the Bureau of Mines, 1917*. p.16.

⁴⁹ Baldwin, D. “A Study in Social Control: The Life of the Silver Miner in Northern Ontario.” *Labour/Le Travail*. Vol. 2. 1977. p. 87.

⁵⁰ Hogan, B. *Cobalt: The Year of the Strike, 1919*. p. 56

⁵¹ One member of the Royal Commission was E.T. Corkhill, the former Chief Inspector of Ontario’s Bureau of Mines who was then working for Copper Cliff Canada. Corkhill was officially appointed on behalf of “the employing interests.” The Chairman was E. Coatsworth. Mr. Joseph Gibbons was appointed on behalf of the

conditions in the Cobalt mining community where there was a move to reduce the length of the working day. This had been opposed by the Temiskaming Mine Managers Association and tensions were increasing. The commission was struck at the behest of the British government which was worried that critical supplies of silver could be interrupted by labour unrest.⁵² While the miners were anxious to get their grievances aired, mine owners and management were more reticent. They had to be coaxed into attending and testifying in their own cause. Eventually eighty-seven witnesses gave testimony: seventy-nine were employees, only eight were employers. The crux of the matter was that living expenses had soared more than thirty per cent since the beginning of the war and miners wanted – at a minimum – to keep pace with those increases. In an attempt to avoid a walkout, the Cobalt mine owners, under a hastily formed umbrella group, the Mine Managers Association, gave all underground workers a twenty-five cent per day increase in March. They promised the same amount again if, or when, the price of silver rose above seventy cents an ounce.⁵³

There was silence about safety and the conditions of work.

With regard to grievances of the men, they were limited to two; one, a demand for increased wages; two, a demand that the employers recognize and confer with a committee appointed by the men ...[regarding] all other conditions of working in the mine[s] ... the miners express their satisfaction....⁵⁴

employees. *Labour Gazette*. October 1916. pp.1632-1633. The notes of the commission indicate that the Cobalt area had between 35 and 40 operating mines at the time and almost 3,000 miners actively employed.

⁵² Hogan, B. *Cobalt: The Year of the Strike, 1919*. p. 26. A letter dated August 1, 1916 from John Bradbury of the British Treasury to Canadian High Commissioner James W. Griffith says "... the maintenance of the silver output [from the Cobalt mines is] a matter of great importance at the present time."

⁵³ In March 1917 *The Northern Miner* printed a front-page story titled "What Miners Want" and it concludes with a schedule of the wages wanted in the Cobalt area for Underground Men and for Mill Men. The highest underground wage listed was \$4.75 per day for blacksmiths and it ranged down to \$3.25 for muckers and trammers. The rates for Mill Men were \$4.00 for battery men to \$3.00 for general laborers. "What Miners Want." *The Northern Miner*. March 31, 1917. pp 1 and 5. (Note: for camps that were distant from railroads, like Gowganda, a premium was requested.)

⁵⁴ "Report of Royal Commission Appointed to Investigate Unrest in the Mining Industry in the Cobalt District. *The Labour Gazette*. Pp.1634-1635.

Why only wages and the recognition of a collective committee alone? Because the Cobalt area was well established and miners now had families to feed; a growing breadwinner masculinity seemed to fuel the wage demands because wives and children needed to be cared for. As previously noted, the miners were concerned with how quickly inflation was outpacing wage increases. Because of the need for materiel and the key role miners played in the supply of ores, complaints were muted.

In the post-war period, living conditions at successful mines slowly improved, though the work underground remained dangerous. Nancy Forestell's work on the Porcupine gold camp between 1920 and 1950 reveals that injuries and disabilities remained widespread. The injured men were usually cared for at home by their wives, if they were married. The community, however, had to share in the responsibility if a sick or injured miner was an immigrant.⁵⁵ Forestell's study reveals that beginning in the early 1920s a greater amount of attention was being paid to the conditions of work and especially those that resulted in chronic illnesses like silicosis. Silicosis was first studied by Ontario Ministry of Health 1921 although it was not addressed by the Department of Mines until 1925 when a section of the *Annual Report* introduced the term and an explanation of it *Report on the Mining Accidents in Ontario in 1925*. A more intensive study of this mine-related disease was undertaken in the 1930s when it was brought to national attention. Rosner and Marcowitz provided the first comprehensive study of silicosis and argued that

⁵⁵ Forestell, N. "I Feel Like I'm Dying Mining for Gold" Disability, Gender and the Mining Community 1920-1950. *Labor: Studies in Working-Class History of the Americas*. Vol.3. Issue 3. 2006. pp.77-93. While the bulk of Forestell's study falls outside the timeframe of this dissertation it is important to note that a greater amount of attention was being paid to the conditions of work and especially those that resulted in chronic illnesses like silicosis. This was not studied by the Ontario Ministry of Health until 1921 and it was not addressed by the Department of Mines until 1925 when a section of the *Annual Report* introduced the term and an explanation of it *Report on the Mining Accidents in Ontario in 1925*. *Bulletin 54*. Toronto. William Briggs. Pp.43-48

interest in it peaked during the Great Depression especially in and around coal mining, rather than in hardrock districts.⁵⁶

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Government Interventions: The WCB

The improved safety record in Ontario mines during World War One was attributable in part to a more active enforcement of extant laws and regulations by the Bureau's inspectors. Changes to the *Mine Act* between 1915 and 1918 were nominal. The techniques involved in hardrock mining were the same, notwithstanding minor refinements to explosives, pneumatics and electrical devices. The existing regulations and rules only needed consistent enforcement to save more lives, especially in an era when so many new and inexperienced workers had replaced the more experienced miners who had enlisted.

The new *Workmen's Compensation Act*, long in the making, took effect on January 1, 1915. The new Board took over responsibility for all Ontario workers injured on the job. Its mandate was, ostensibly, to restore the health and function of workers as much as possible and also to provide financial compensation – according to predetermined formulae – for physical losses and injuries, or in the case of fatalities, to provide moneys to surviving family members. In the mining sector, the regulations further provided for chronic illnesses like phthisis⁵⁷ and black lung⁵⁸, as well for the more acute conditions occasioned by explosions and falls of rock. As the 1916 Bureau of Miners report explained:

⁵⁶ Rosner, D. and Markowitz, G. *Deadly Dust: Silicosis and the On-Going Struggle to Protect Workers' Health (Conversations in Medicine and Society)*. University of Michigan Press. 2006.

⁵⁷ This was a chronic condition that saw victims “waste away.” The term is no longer in use having been replaced by the appellation “pulmonary tuberculosis”.

⁵⁸ Black lung disease is usually associated with coal mining, not metalliferous extractions. It is also a chronic lung condition found in miners caused by inhaling particulate dust which slowly builds up and inhibits

It vests in a Government-appointed Board, the adjustment of compensation for employees [in mining and other industrial operations] who may meet with injuries or be killed in the pursuit of their work.⁵⁹

Any general concerns that miners were going to either act with wanton recklessness or file claims for trivial bumps and bruises do not appear in the archives. In fact, during the first full year of its implementation, there was a sharp reduction in the number of fatalities. *The Northern Miner* said that deaths in 1915 were down by forty-five per cent.⁶⁰ It noted however, that there was an increase of twenty-one per cent in minor accidents. Because of the no-fault nature of the new legislation, the increase was anticipated.⁶¹ Nonetheless, at the end of its first full year, the WCB Act was declared to have “worked smoothly”.⁶² Certainly the majority of mine managers were “... well content that the distasteful wrangling as to compensation [had been] taken off their hands even if it ... cost them a little more.”⁶³

The agency received and administered the funds it received from businesses. In the mining sector, the initial rate for 1915 was set at three percent of base payroll earnings, but this figure fluctuated – it was adjusted annually – according to the number of compensation claims made and paid out over the previous twelve-month period.⁶⁴ As touched on earlier, the philosophy that motivated collective compensation shared responsibility across like businesses, mine owners among them. Costs were spread across the mining industry of the province, rather than liabilities and litigation being borne directly and individually by companies whose workers met with injuries or deaths.

normal respiration. It was also called “miner’s asthma” and it leads to debilitation through emphysema and enlargement of the heart.

⁵⁹ *Twenty-Fifth Annual Report of the Bureau of Mines, 1916*. p.5.

⁶⁰ This figure was for all Schedule One industries throughout the province and did not reflect mining statistics individually. According to the Bureau’s *Annual Report* there were 22 deaths in 1915 which was down from 58 in 1914 or a reduction of more than 62% in one year.

⁶¹ “Compensation and Accidents.” *The Northern Miner*. March 25, 1916. p.1.

⁶² “State Compensation.” *The Northern Miner*. April 22, 1916. p.1.

⁶³ *The Northern Miner*. April 22, 1916. p.1.

⁶⁴ In 1916 for example the rate was reduced from 3% to 2 ½ % of base payroll earnings.

The WCB's appearance was written up in the Mine Bureau's 1915 *Annual Report* which anticipated a new age of cooperation between labour and capital. It went so far as to repudiate the demonization of businessmen by labour:

... the relations between capital and labour will [as a result of the 1915 WCB Act] no longer be disturbed by a system under which the employer was often made the unwilling instrument in denying compensation when an employee was killed or Injured, and which frequently led to the still further impoverishment of the victim or his beneficiary by ill-advised and expensive litigation.⁶⁵

The new legislation suggested a detached objectivity would inform its *raison d'être*. This was manifested in its tariff of compensation payments to workers that were not predicated on the assignment of guilt or blame. Monetizing the amounts paid for injuries and deaths sustained on the job could only be withheld from victims (or survivors) for two reasons: if the disability was minor and continued for less than seven days, or, if the accident was solely the consequence of "serious and wilful(sic) misconduct of the workman and does not result in death or serious disablement."⁶⁶

The involvement of the WCB in mining work indicated that the community of mine owners and managers anticipated that it would be a panacea of sorts. The *Workmen's Compensation Act* was supposed to eliminate what mine owners and managers saw as needless annoyances, protracted proceedings and the unnecessary expense of litigation. The Bureau of Mines endorsed this point of view as it maintained a pro-business profile after the WCB's first year.

One result of the [Workmen's Compensation] Act has been the speedy settlement of claims without expensive litigation. The rate paid by mine operators was 3 per cent. of the pay roll (sic) [in 1915]. This has been reduced to 2 ½ per cent. for 1916.⁶⁷

⁶⁵ *Twenty-Fourth Annual Report of the Bureau of Mines, 1915.* p.8.

⁶⁶ *Twenty-Fourth Annual Report of the Bureau of Mines, 1915.* p.73.

⁶⁷ *Twenty-Fifth Annual Report of the Bureau of Mines, 1916.* p. 5. The reduction in the contribution percentage reflected a perceived improvement in the safety record of the mines in the province as a whole.

The reduction of the employer contribution was the *sine qua non* of the Act at this point. Its success was evaluated in terms of dollars and cents. Notably, there was no corresponding recognition of the benefits (or their adequacy) that accrued to injured workers or their survivors. To the Bureau of Mines it appeared that the *Compensation Act* was a workplace expedient. For businessmen it was a litigation-saving device. For inspectors it was a release from the responsibilities that attached them to possible court actions.

From the Bureau's perspective, the impact of the new WCB regulations reduced litigation. The mine inspectors were not required to assign blame or fault any more. The Annual Reports do not comment on how the new agency shaped the attitudes of rehabilitated men to their work.

The "no blame" nature of compensation legislation, mentioned in Chapter Two, produced the unanticipated side-effect of improving mine safety. The Bureau's inspectors focused on the incidents alone. The responsibility for assessing blame or culpability, resided with the *WCB*. Mine inspectors and physicians submitted reports on the circumstances and injuries. The victims were not assumed to be careless or injury prone; neither were they repeatedly defined as reckless. The death of Dalton Boomer provides a case in point.

Dalton Boomer was killed at the Jupiter shaft, McIntyre mines, August 22nd [1917]. Boomer was one of a sinking crew and he had returned to the bottom after personally cleaning down the last three sets after a blast. He was an exceptionally careful miner, but in some way a small block of timber, used for wedging wall places, had been loosely placed behind the lagging and became dislodged when the crosshead struck the stop blocks.⁶⁸

The comment "he was an exceptionally careful miner" was a new and rare indication by the Bureau that some of the workers were reputed to exercise caution on the job. Furthermore, in the absence of evidence, the inspector did not speculate otherwise about the occurrence.

⁶⁸ Twenty-Seventh Annual Report of the Bureau of Mines, 1918. pp. 81-82.

There was no suggestion of any culpability on the miner's part and there was recognition of workplace safety practices among the workforce.

I attribute the reason for the reduction, at least in part, was that the Province – in the form of provincial mine inspectors – became more involved in the processes of mining than ever before. Law and labour historians Judy Fudge and Eric Tucker maintain that during World War One there was “an unprecedented level of state intervention in the economy.”⁶⁹

One immediate consequence of the new WCB was a proliferation of company-sponsored safety committees and campaigns throughout the industry. At the Coniston mine in 1916: “A permanent safety committee ... was organized in December to act in conjunction with a changing safety committee, chosen from the employees. This committee has been very active in endeavouring to make working conditions as safe as possible”⁷⁰ In this instance, not only was the introduction of a safety committee new, it was permanent. Its utility survived the war. And the fact that it was constituted by miners themselves was an important change. Further evidence of the government's attentiveness is found in 1915, when, for the first time, the Bureau of Mines began prosecuting foremen and mine managers – as opposed to the miners – for improperly transporting men up and down shafts in a skip.⁷¹ The onus for worksite safety ceased to reside exclusively in assumed risks; responsibilities were shared and the government of Ontario led the changes. The regulations began to be applied preventively.

⁶⁹ Fudge, J. and Tucker, E. *Labour Before the Law, the Regulation of Worker's Collective Action in Canada, 1900-1948*. Toronto. Oxford University Press. 2001. See especially Chapter Four, “Industrial Voluntarism Suspended, 1914-1918.” (p.89)

⁷⁰ *Twenty-Sixth Annual Report of the Bureau of Mines, 1917*. p. 87.

⁷¹ In this instance it was a foreman at Dome Mines who was fined \$100 plus costs. See *Twenty-Fifth Annual Report of the Bureau of Mines, 1916*. p. 59.

Although the volume of mining regulations and legislation had increased continuously since 1892, the province's *de facto* or "hands-on" involvement and enforcement was always less strenuous than its rules, regulations and rhetoric. Between 1914 and 1918, however, the Province engaged in safety and workplace processes directly and determinedly to insure that the supply of ores remained uninterrupted. The *Annual Reports* reflected this as two new sections appeared: "The War and the Mineral Industry" and the previously mentioned "Prosecutions."⁷²

Coincident with the introduction of the 1915 WCB regulations were new sections of practical recommendations in the *Annual Reports*. Under the "Mining Accidents" heading in 1916, for instance, Chief Inspector Sutherland included a set of "Rules of the Canadian Copper Company" to model guidelines for winding ropes as well as the correct procedures for operating skips and cages in main shafts. Such exemplars - operational templates - had never been presented before. In the same volume, fixed signaling codes for hoists were recommended in order to establish industry-wide uniformity. The government looked to introduce norms for workers covered by the *Mining Act*. The system used by Canadian Copper was almost immediately and universally adopted. The data reveal that safety issues and changes to the conditions of work were actively pursued by the Bureau.

The *Compensation Act* contributed to the introduction of alternatives to replace unsafe conditions. New ideas and recommendations were no longer the preserve of coroners' juries or other (quasi) judicial bodies. "The Crean Hill accident, on October 3rd, [1917] was due entirely to the use of a grab hook with a chain sling in lowering material, and this [activity] should be universally forbidden."⁷³ The inspector, independently, offered

⁷² *Twenty-Fourth Annual Report of the Bureau of Mines, 1915*. p. 78.

⁷³ *Twenty-Seventh Annual Report of the Bureau of Mines, 1918*. pp.82.

a new idea, a revision that likely saved lives. Once the element of blame was absented from inspectors' duties they were able to develop or identify new solutions that benefited the miners and, ultimately, employers also.

The Bureau also increased scrutiny of mine management and workplace operating styles. The following example reveals an emerging perception of the workers as accident victims. During the previous ten years miners had regularly been admonished for riding skips up and down shafts. When accidents resulted, they alone were, usually, found culpable. Management was almost always exempted from liability. This changed in 1916. A foreman named L. Mazzutto, at Dome Mines, was fined one hundred dollars and assessed court costs for violating the regulations governing the proper use of the device by sending [or allowing] his men to ride the skip.⁷⁴ This was a new understanding of management's responsibilities on site. Perhaps even more notable was that Mazzutto's fine was not levied as the result of an accident, injuries or a fatality: it was a procedural and operational penalty alone. The sentence, rather than the size of the fine, was a statement about occupational health practices and conditions. The procedure was not dealt with retrospectively through coroners. This sent a clear message: safety in the ways that mines were operated would be subject to greater scrutiny and enforcement by the Bureau.

In 1918 a miner was sentenced to three month's imprisonment for tampering with bell signals.⁷⁵ This incident was also not the result of a fatality or injury. The penalty was prescriptive. And, as mine safety gained momentum, the size of the fines increased. Jail-time for offences committed under the *Mines Act* - though articulated in the legislation - was virtually unheard of up to that time. In 1918, however, a cage tender was fined fifty

⁷⁴ *Twenty-Fifth Annual Report of the Bureau of Mines, 1916.* p. 60.

⁷⁵ *Twenty-Eighth Annual Report of the Bureau of Mines, 1919.* p. 83.

dollars and ninety days incarceration for actions that were “... calculated to endanger the safety of those employed in or about the mine ...”⁷⁶ An Austrian miner was fined twenty-five dollars, sentenced to thirty days in jail *with hard labour*⁷⁷ because he had an open flame near a box of explosives.⁷⁸ The offender also had to pay court costs or spend a second month in jail. Never before had the regulations – on the books since 1908 – been enforced with such rigor. Jail time, in addition to fines, set new benchmarks that sustained the effort to improve occupational health and safety underground. These actions were in part attributable to the WCB regulations which moved provincial administrators away from assessing blame and toward establishing safer working environments.

Another change that coincided with the advent of the WCB was the absence of admonitions to miners in the government’s annual accounts of accidents and fatalities. In 1917, for example, there were thirty-four accidents that resulted in thirty-six fatalities. Criticisms of the miners were reduced and speculations – rampant in earlier times – were avoided. The death of Harry Yates speaks to this:

Yates was employed as an underground hoistman [who] had stepped out on a plank to shake the cable and attract the attention of the men below. In returning to the station he in some manner slipped from the plank and fell to the bottom.⁷⁹

Previously, slips and falls like this were often attributed to miner inattention; sometimes there were (unsubstantiated) allegations of intoxication. The Yates account provides a more benign understanding. The phrase “in some manner” did not make any assumptions; it simply left the cause undetermined.

⁷⁶ *Twenty-Eighth Annual Report of the Bureau of Mines, 1919*. p. 103.

⁷⁷ Emphasis added.

⁷⁸ *Twenty-Eighth Annual Report of the Bureau of Mines, 1919*. p. 103.

⁷⁹ *Twenty-Seventh Annual Report of the Bureau of Mines, 1918*. Vol. XXVII. Toronto. A. T. Wilgress. 1918. p. 81.

Accompanying the less-accusatory tone was a marked reduction in the details offered within inspectors' accounts of annual fatalities. Whereas the Accident section of the *Annual Reports* usually occupied many pages – in 1913 it was thirty-six pages – by the end of the war it was only five or six. Instead of chronicling each incident in several paragraphs, fatalities were reduced to a single line on a chart.

In the *1919 Annual Report*, the examination of 1918's "Table of Fatal Accidents in or about the [Ontario] Mines" provided only skeletal information about the losses. Full details of the incidents might exist within WCB reports, but those archives are not yet open or available for study.

Another consequence of the new Workmen's Compensation Board was its focus on accidents, not just the fatalities that the Bureau had concentrated on to that time. In 1916 for example, the WCB cited 1,349 claims for compensation among Schedule 5 employees⁸⁰; eighty-seven of them (six percent) suffered permanent disabilities. More importantly, in terms of raw numbers, the accidents were enumerated as follows:

⁸⁰ Schedule or Class 5 employees were classified as: mining; reduction of ores and smelting, preparation of metals of minerals; boring and drilling including sinking of artesian wells ... manufacture of calcium carbide, carborundum or alundum, abrasives or abrasive articles other than stone.

For the first time the *Annual Report* charted myriad other injuries and “industrial diseases” that miners sustained. The WCB did not limit its interest or influence to annual fatalities. They were mandated to inquire into a panoply of other conditions as well as the causes that brought them about.

The Bureau of Mines continued supporting occupational safety measures. In 1919, for instance, the Bureau prosecuted three offences directly. They did not defer to alternative judicial bodies or jurisdictions. The first was against Robert Wright – a miner – who was fined \$15.00 and costs for violating the statute that required: “... such care and precaution for the avoidance of accident or injury to any person in or about the mine as the particular circumstances of the case require....”⁸¹ This example augured for preventive strategies to be enforced. The other two offences were against the Kingdon Lead Mine at Galetta and the White Reserve Mining Company near Haileybury for raising and lowering miners in cages not properly equipped with safety devices. Both companies were fined one hundred dollars plus costs. The penalties assessed were significantly higher than previous corporate fines. All three offences related to occupational safety. They were not part of a coroner’s inquiry or WCB interests. All were about the *prevention* of accidents and safety on the job.

In 1920 all five “Prosecutions” by the Department were against companies and/or management; none were filed against miners either individually or collectively.⁸² In four of the actions, dynamite was used or housed in violation of *The Mines Act* and in the final instance there was no proper barrier erected to limit entry into an active blasting area.

⁸¹ *The Mining Act of Ontario*. Part IX. Section 164. Subsection 98. There were no further details provided but the citation was not alcohol related as such infractions were dealt with under a different section of the *Act*. It is speculated that a barrier was not properly placed and that workmen were exposed to a fall or becoming entangled in a machine.

⁸² *Thirtieth Annual Report of the Ontario Department of Mines*. Legislative Assembly of Ontario. Toronto. Clarkson W. James. p.62.

Whereas corporate fines in prewar years had been in the neighbourhood of fifty to one hundred dollars, after the war they increased to between one hundred and two hundred dollars per occasion.⁸³ Fines of this nature were not onerous for companies with healthy balance sheets and income statements but they sent the message that regulations and safety practices were being monitored and enforced. The legislation - which had been at hand for thirty years - was applied with consistency. The bureaucratic will and resources that had flagged for many years were revived and sustained. Miners' health and safety were, in practice as well as theory, being protected. In the post-war workplace, occupational health and safety were supported by a diligent mines inspection department.⁸⁴

⁸³ In the five prosecutions mentioned above four of the companies were fined at \$100.00 for their offences and in the last instance a \$200.00 fine was levied for illegally thawing dynamite in the hoist house of the mine. Recorded revenues for companies like Dome and Hollinger were in the millions of dollars so the fines were not serious impediments to businesses but active enforcement of regulations and the increase in fines were nonetheless telling. *Twenty-Ninth Annual Report of the Ontario Bureau of Mines. 1920.* See pages 3-14 for a statistical review of their results.

⁸⁴ An anomaly is present in the statistical models of the province from 1916 to the mid-1920s. Artificial nuances in the government's data indicate there might have been a continuing sensitivity to mining fatalities, not only in terms of the numbers of dead bodies but also in consistently being at or below "comparable" percentages internationally. The Ontario government added between 500 and 2000 persons annually to the population of mining employees. They deemed these workers to be those employed in non-producing mines. The roundness of the numbers appears arbitrary but their inclusion significantly inflated the size of the workforce and skewed the statistical results. The consequence of this strategy lowered the final percentage figures for the number of "Fatal accidents per 1,000 employed". It is self-evident that non-producing mines did not operate. They did not use mining techniques, men or equipment in ways that would endanger the lives of workers. Indeed there were no "real" miners employed at non-producing mines at all, so the reason for inflating the totals to such an extent is unclear. It did however allow administrators to manipulate figures in ways that favoured the relative safety of Ontario's mines. In 1913 for example, the Bureau of Mines reported that there were 14,293 miners working at producing sites; it was a precise number. Then there were 2,000 more added - as an approximation - before calculating the total population of men employed in mining at 16,293.⁸⁴ The "fatal accidents per thousand" statistic that resulted from the combined totals was 3.93 whereas the more accurate figure would have been 4.47, or 25% higher than what was claimed. It is suggested here that while there were some clerical and perhaps some engineering staff involved in non-producing mines, the numbers and style of work suggested by the government were inconsistent with what was taking place in the field.

Changes in Medical Care

As was the case with miners, the outbreak of war in Europe exacerbated the shortage of physicians across Northern Ontario. A single, Canadian, field-hospital in France required thirty-five doctors, plus nurses and medical staff (students) additionally.⁸⁵ Like miners, doctors volunteered for overseas service also. Dr. Smylie could not resist the lure of the battlefield. He enlisted recalling: “I transferred ... to the Overseas Training Corp. I would have to get into this war and help get it over.”⁸⁶ The enlistment fervor depleted the corps of doctors, and “qualified” medical practitioners especially at resource extraction sites. Undergraduate medical students filled the vacancies and the contracts on *ad hoc* bases.⁸⁷ The province’s professional licensing body, the Ontario Medical Association (OMA) understood the pressures facing doctors at home during the war year.⁸⁸ At the 1915 annual meeting, the OMA passed a resolution applauding enlisted doctors’ service and acknowledged that physicians on the home front were helping to sustain their military colleagues’ practices:

... [we] wish to express our deep appreciation for the loyalty and self-sacrifice of our fellow [doctors] ... who have offered themselves and are now serving the Empire and its allies at the front In thus serving the cause of freedom, many will come back under

⁸⁵ Sawyer, G. *The First Hundred Years*. Toronto. Ontario Medical Association. 1980. See Chapter 18, “The Years of War” pp 332-337. The University of Toronto’s undergraduate newspaper *The Varsity* also contains rich data on its participation during the war including volunteer faculty, physicians and abbreviated course work for medical students who volunteered for overseas service. See various issues from January 1916 to January 1918.

⁸⁶ Smylie, C. *Northern Doctor*. Cobalt. Highway Book Store. 2002. p. 58. He was keenly disappointed when he did not make it to the Front. He was stationed in England for six months but never got to see any “action.” He arrived back in Canada on May 24th, 1919.

⁸⁷ For more on this topic see Editorial titled, “The Need for Conscription of Canadian Doctors”. *The Canadian Medical Association Journal*. Vol.8 (10) October 1918. The medical profession as a whole was willing to be taken over and organized by the government in any way that would best serve local, national and international interests. “The ideal would be to have the whole profession conscripted for service.” (p.935) In remote areas third year medical students were sometimes sent out to learn as they went along. The communities were so appreciative they did not worry about the credentialing process and welcomed any help they could secure.

⁸⁸ Attendance at OMA meetings and conferences was so slight that they were frequently cancelled. For example, at the OMA’s 1916 general meeting the sharp drop in attendance was attributed to wartime participation and domestic demands.

conditions which will practically mean beginning their professional life (sic) again. ...[we] assure them that ... we shall see that their old clientele awaits them on their return to civil practice ...⁸⁹

With diminished support and reduced access to supplies – many medicines were rationed – doctors who remained in the north had to serve ever-broader patient populations over ever-greater geographical areas. Medical care across the north was stretched thin.

A further challenge that affected healthcare matters was northern travel. Road improvements were limited during the war. The resource sector was criss-crossed by a lot of “summer roads.” Many camps were, once again, almost inaccessible during heavy winters. Horses returned as reliable conveyances. These conditions persisted after the war also. Despite the construction of some new roads and railways, designed to connect northern communities and integrate the north into the provincial economy, the reality was that many roads remained impassible in winter and gasoline shortages persisted through the early 1920s.⁹⁰ Doctors like Clifford Smylie continued to rely on horses as their principal means of winter transportation into the 1930s because roads and gas stations were not maintained at regular intervals across the north.⁹¹

Medical care was enhanced slightly by the establishment of Red Cross “hospital” facilities across rural Ontario. Historians Jayne Elliott and Sarah Glassford both document the role of the Red Cross in providing elementary facilities. These were not “contract

⁸⁹ Sawyer, G. *The First Hundred Years*. Toronto. Ontario Medical Association. 1980. p.333.

⁹⁰ Jayne Elliott argues that after the war however “... the ideals of good health became closely linked with the idea of good citizenship. Fuelled by the needs of large industrial areas to the south, the province’s northern regions appeared poised to enter a period of rapid growth and prosperity.” Elliott, J. *Keep the Flag Flying” Medical Outposts and the Red Cross in Northern Ontario 1922-1984*. Ph.D. Thesis. Queen’s University. Kingston. 2004. p.7. Social historians such as Karen Dubinsky, Ian Radforth and Nancy Forestell all address the persisting isolation of northern communities. Dubinsky, K. *Improper Advances: Rape and Heterosexual Conflict in Ontario, 1880-1929*. Chicago. University of Chicago Press, 1993. Radforth, I. *Bushworkers and Bosses*. Forestell, N. “‘And I Feel Like I’m Dying From Mining for Gold’: Disability, Gender and the Mining Community, 1920-1950,” *Labour: The Study of the Working Class in the Americas*, Vol.3 No. 3 (Fall 2006).

⁹¹ Smylie, C. *Northern Doctor*. See chapters 8, 9, 10 pp. 143-184.

hospitals” per se because they were available to miners and their families. Between 1915 and 1918 medical facilities in Quibel, Nakina and Jellicoe closed or were staffed only by nurses. They operated on irregular schedules because of war-related personnel shortages. Concerns about the paucity of health services persisted after the war as well. Meryn Stuart has shown how Ontario sent nurses into northern resource communities like Kenora, to staff or support local medical facilities.⁹² Between 1920 and 1925 the dearth of licensed medical professionals, especially at resource extraction sites, led to the use of public health nurses to supplement treatment and care initiatives. Motivated by the “Health Speech” of British MP Lloyd George which called for a “... constant and more intelligent interest in the health and fitness of [post war] people”⁹³ the Board of Health of Ontario designated seven nurses to educate the general public on matters that affected the health of families and individuals. Professional boundaries were contested as doctors wanted “control” over the nurses to see that they did not overstep their accreditations.⁹⁴ The situation demanded a working accord that allowed for a cooperative relationship that would serve these remote locations. Unlike the restrictions against women in mining, the medical community expanded how women could help in health-related matters.

The spread of the 1919 influenza epidemic meant that worries about health were alive in the population generally and in closely-quartered mining communities particularly.

The concern for hospital service, for compensation from injuries suffered in the line of duty and for proper and prompt referral to city centres where more expert facilities were available, was evident in the remarks made by men from every mining camp.⁹⁵

⁹² Stuart, M. “Ideology and Experience: Public Health Nursing and the Ontario Rural Child Welfare Project, 1920-1925.” *Canadian Bulletin of Medical History*. Volume 6: 1989. p.111-131

⁹³ Stuart, M. “Ideology and Experience.” *Canadian Bulletin of Medical History*. Volume 6: 1989. See also Stuart’s related paper, “Half a Loaf is Better than No Bread”: Public Health Nurses and Physicians in Ontario, 1920-1925 which examines the relationships between doctors and nurses in the post war era. *Nursing Research*. Vol. 41 No. 1, January 1992. pp.21-27.

⁹⁴ Stuart, M. “Half a Loaf is Better than No Bread” pp.21-27.

⁹⁵ Hogan, B. *Cobalt: The Year of the Strike, 1919*. p.55.

Conditions across mining camps remained far from uniform. The facilities in Gowganda, for instance, were not as sophisticated as those in larger camps like Cobalt, which boasted a population about double its size.⁹⁶ There were hospitals – referred to as *medical outposts* – in both locations but the size of the staffs and the quality of the technologies available in each was different.⁹⁷ There was not a single, mining camp hospital that was anywhere near as sophisticated or competent as those found in large urban centres like Toronto.

Occupational health relied on more than hospitals.

After the war, doctors were gradually drawn back to the north to serve single-industry communities despite the still-rugged nature of the country. Professional leaders encouraged returning physicians across the country to recast their relationships with their male patients. A 1917 *Canadian Medical Association Journal* article by a CAMC Major claimed; “Canadian physicians and surgeons come in contact with returning soldiers in many ways. They met, not only as physicians and patients, but as fellow-soldiers, fellow-citizens, and friends.”⁹⁸ While they had always been prominent as educated gentlemen deserving, in most cases, of deference and privilege, their professional associations began urging public leadership on its members.

The physician, if he is to retain his status in society, must be more and more a cultured gentleman. He must be more than “a dispenser of pills and powders.” He must be a leader in the community, with high ideals. His aim should be “how much can I contribute[?]” rather than, “how much can I get out of this community[?]” The study of the development

⁹⁶ The population of Gowganda peaked at less than 5,000 whereas Cobalt’s was over 12,000. Barnes, M. *Fortunes in the Ground, Cobalt, Porcupine and Kirkland Lake*. See “Peak and Slow Down. Pp. 61-83. Erin. Boston Mills Press. The 1922 Bureau of Mines Report notes that Cobalt’s silver production for the year exceeded ten million ounces whereas Gowganda’s was not even half a million. *Ontario Bureau of Mines Report for 1922*. p.10.

⁹⁷ Jayne Elliott explains the elementary nature of many of hospitals in the north. In her thesis she identifies them not as hospitals but as “medical outposts.” Elliott, J. *Keep the Flag Flying*” 2004.

⁹⁸ “Returned Soldiers and the Medical Profession.” *The Canadian Medical Association Journal*. April 1917. pp. 343-355. The author is identified only as *Major, C.A.M.C.* (Canadian Army Medical Corps). He argued for post-war rehabilitation of injured soldiers which included hospitalization in communities throughout Ontario.

and evolution of medicine can play a prominent part in stimulating such an altruistic attitude of mind.⁹⁹

The degree to which this attitude was embraced by northern doctors is difficult to assess, but there is no doubt that the OMA sought to reposition medicine's relationships with corporations, employers and the provincial government. The OMA began speaking against deficiencies in the (1915) *Workmen's Compensation Act*, targeting the inequities faced by miners.

Up to 1915 the medical community was only marginally involved in establishing the WCB. The orientation of the new agency was bureaucratic. It resisted how medical science and physiological treatments might affect its functions. It was, by design, a bureaucratic office, not a medical one. Precious few doctors were included in its administration. In fact physicians were commissioned only when needed. Moreover, no doctors sat on the board or advised it. Their opinions were sought – even required – in order to substantiate injury claims and noteworthy causal factors but they played no continuing roles in the WCB itself. Ontario's doctors believed, however, there was insufficient competence among WCB staff to properly assess the reports delivered to them. Doctors wanted to be involved in the agency and claims directly. They protested their lack of representation and continued to complain about it for the next ten years.

Dr. Marlow states that it was thought opportune to make some representation to the [Ontario] provincial government, with the view of bringing about some changes whereby medical services performed for the [workmen's compensation] board might be placed on a better basis and be accorded more fitting recognition: the committee, he further stated had considered ... that there should be at least one medical member on the Workmen's Compensation Board [and] that there should be a thorough reorganization of the medical services of the board.¹⁰⁰

⁹⁹ "Medical History". *The Canadian Medical Association Journal*. Vol. 13 (3) March. 1923. pp. 195-196.

¹⁰⁰ "Medical Societies, Ontario Medical Association Meeting." *The Canadian Medical Association Journal*. August 1925. pp. 862-865.

The OMA wanted “at least one” representative from among its membership appointed to the Board on a continuing basis. Moreover the OMA wanted to participate in the selection of that doctor. They resolved that: “His [the not-yet-appointed Board doctor’s] professional standing and ethical integrity should be of such a high degree as to command the confidence and cooperation of the medical profession of Ontario.”¹⁰¹ The doctors did not want the appointee to be political for it might impugn or compromise the integrity of the association. One result of the OMA’s claim for autonomy was an agreement in 1919 that the College of Physicians and Surgeons of Ontario would set the “schedule of medical and surgical fees to be used as a guide in fixing medical aid allowances.”¹⁰²

In this revised context, some physicians began locating the blame for workplace accidents squarely on the shoulders of mine owners.

So-called accidents are the result of placing an inadequate employee on a job. The job may even be so difficult that no employee could be competent for the work. The one who places the employee is the foreman ... and there is the crux of the situation. Automatically, accidents will indicate the incompetent foreman, and the greater part of the loss lies with the employer.¹⁰³

Dr. Addison, the author of this *Canadian Medical Association Journal* article, pointed up deficiencies in the compensation system from the standpoint of the worker. Addison’s argument is that the reduction of the individual employers’ liability dulled the owners’ (general) willingness to improve workplace safety. “Whatever the intention of the [Compensation] Act may have been, the policy of the Compensation Board has acted as an

¹⁰¹ “Medical Societies, Ontario Medical Association Meeting.” *The Canadian Medical Association Journal*. August 1925. pp. 862-865.

¹⁰² “Synopsis and Operation of the Workmen’s Compensations Act of Ontario” Pamphlet no. 138 1919. P 7

¹⁰³ W.L.T. Addison. “Some Disadvantages of the Workmen’s Compensation Act which Lead the Employer to be Less Interested in the Health of the Employee.” *The Canadian Medical Association Journal*. Vol. 15(7). July 1925. pp.728-729

efficient bromide to initiative in cutting the loss by industrial accident.”¹⁰⁴ Doctors believed that spreading the financial responsibility for deaths and injuries across the whole of the industry meant that individual companies did not have to be as diligent about their personal exposure to litigation or court-ordered assessments. It was speculated this might lead to continuing workplace dangers. Overall litigation costs were attenuated as a result of the Act. The strength of the medical profession as an independent body, beholden to neither business, nor government nor labour, meant that it could articulate and advocate for what it considered fair and reasonable occupational health practices to all parties.

One of those supporting workplace safety and accident prevention was a Fort William physician Dr. R.J. Manion. By 1904, at the age of twenty-three he held four medical degrees and operated a busy practice.¹⁰⁵ In 1915 he enlisted in the Canadian Army Medical Corps and earned the Military Cross at Vimy Ridge. In his memoirs, he recalled the difficulties that he had faced in rural practice. “[Doctors] are called out at irregular hours; a good deal of their work is of a repulsive character; and they are subjected at all times to the charge of ignorant patients that they were maltreated.”¹⁰⁶ Manion became politically active.¹⁰⁷ A similar course was taken by Dr. Herbert Bruce, who later became Ontario’s lieutenant governor.¹⁰⁸ Through the OMA, doctors exercised more autonomy and

¹⁰⁴ W.L.T. Addison. “Some Disadvantages of the Workmen’s Compensation Act which Lead the Employer to be Less Interested in the Health of the Employee.” *The Canadian Medical Association Journal*. Vol. 15(7). July 1925. pp.728-729

¹⁰⁵ At the end of the nineteenth century, medical school lasted only four years. Internships or residency terms were not required to obtain a medical license or “shingle”. As a result there were a lot of graduates opening practices while still quite young.

¹⁰⁶ Jack, D. *Rogues, Rebels and Geniuses, The Story of Canadian Medicine*. Toronto. Doubleday Canada. 1981. p. 366.

¹⁰⁷ Before the war, Manion was a local alderman but after his return from France he won a federal seat and eventually became the leader of the Conservative party after R.B. Bennett’s defeat.

¹⁰⁸ <http://www.parl.gc.ca/parlinfo/Files/Parliamentarian.aspx?Item=b7586ae8-2255-4662-8bba-fa77a642d956&Language=E&Section=ALL>

improvements in occupational health followed. For miners, they were no longer automatically assumed to culpable in, or predisposed to, injury.¹⁰⁹

UNIONS

Ontario doctors and mining authorities began redefining the standards of occupational health in response to the demands of organized labour in the large camps. Following the war, Ontario's miners – and labour generally – felt they had been held in check long enough. A growing sense of brotherhood and solidarity took hold as evidenced by increases in union memberships. According to Brian Hogan's analysis of Cobalt in the post-war era, in April 1916 there were about 500 members in the Western Federation of Miners' Cobalt branch; by September that had climbed to more than 1500, mostly unskilled below-ground workers. In August 1919, 86% of the membership voted to strike.¹¹⁰ They stepped out of the shadows and demanded more.¹¹¹

The strike was long and bitter; it lasted more than two months and was riddled with violence. Cobalt's mine managers collaborated and formed the Temiskaming Mine Managers Association which put up formidable resistance to collective bargaining. The failure of the owners to even recognize the committee of local representatives was criticized. Management excuses were seen as hypocritical. As Hogan noted:

... decades of tension in Cobalt really reflect[ed] a transition phenomenon occurring more or less simultaneously in industrialized nations and particularly in the North American area,

¹⁰⁹ The *Annual Reports* of the Bureau of Mines after 1915 reveal a softening of criticisms against miners and more charges and challenges against commercial interests.

¹¹⁰ Hogan, B. *Cobalt*: pp. 65-67.

¹¹¹ Brian Hogan's dissertation, *Cobalt: Year of the Strike 1919*. See Section Two, Chapter Three "War, Unrest and the Royal Commission of 1916" Section Three, Chapter One, "Labour: General Background, 1919" which deals with how miners responded to conditions and wages in the mines after the war ended. See also Craig Heron's *Workers' Revolt in Canada, 1917-1925*. Toronto. University of Toronto Press. 1998. for a detailed understanding of labour protests that took place across the country after the conclusion of World War One.

where a new relationship between manager and worker was slowly and painfully emerging.¹¹²

Eventually the union was recognized and it succeeded in getting some of its demands met. There were recommendations for raises; wages were pegged to the price of ore. For every ten-cent increase in the price of silver the miners received a bonus.

Occupational health was also on the table. A key element of the settlement was the “... election of an Employees Committee from employees of [each] mine, to discuss ... questions concerning that [site].”¹¹³ This concession is what helped the men to address on-going health and safety issues that were specific to their daily workspaces. Sickness insurance was high on the list of complaints that was dealt with over the following decade. Shorter shifts reduced fatigue as well as accidents and fatalities. In this vein, the men also wanted new equipment or techniques that would decrease the amount of dust they breathed.¹¹⁴ They also lobbied for improved lighting and ventilation and these were expected to lead to safer workspaces as vision would be markedly improved.

As a result of war-time cooperation and the importance of delivering uninterrupted quantities of ore to arms manufacturers, the government supported some union requests. Behind the scenes, politicians or their designates quietly set about persuading owners and managers to relent. Although the initial gains were modest – mostly promises, not guarantees – the precedent for collective bargaining was set. Occupational health and safety demands were front and centre in all future negotiations. The *Annual Reports* of the

¹¹² Hogan, B. *Cobalt: The Year of the Strike, 1919*. pp.29-30.

¹¹³ Hogan, B. *Cobalt: The Year of the Strike, 1919*. Cobalt. Highway Book Store. 1978. p137.

¹¹⁴ B. Hogan, *Cobalt: Year of the Strike 1919*. Cobalt. The Highway Book Store. 1978. Pp. Immediately after the World War One, silicosis was not the *cause celebre* it would become in the 1930s. It was known as “miner’s phthisis” but was not part of the public consciousness until the Great Depression. See: Rosner, D. and Markowitz, G. *Deadly Dust*.

Department of Mines in the post-war years look at the demands for and improvements in health and safety conditions.¹¹⁵

Mine management and ownership responded to union militancy around occupational safety as it adopted new programs geared to attracting and maintaining a stable workforce. In keeping with a broad move toward “corporate welfarism,”¹¹⁶ in January 1919, the International Nickel Company (INCO) voluntarily introduced a group insurance package:

Each employee who has completed one year of continuous service with the company is insured for \$500. This insurance is increased to \$800 at the end of two years’ service; \$1,200 at the end of three years’ service; \$1,600 at the end of four years’ service; and the maximum of \$2,000 at the end of five years’ continuous service. Past service is to be counted. These amounts [which did not limit, degrade or replace WBC payments] are payable in the event of death or total disability to the beneficiary named by the employee. The initial [benefit] payment is 20 per cent; the remainder is paid [to the named beneficiary] in 24 semi-monthly instalments.¹¹⁷(sic)

The abovementioned incentives were available to company’s employees in February 1920. They reveal a measurable sense of paternalistic responsibility that extended beyond the worker to include his family and the funds were provided in addition to WCB payments. Long-term employees were valued in dollars and cents which indicated an interest in their long-term health and welfare. Moreover, INCO also implemented a corporately funded “pension plan” at the same time. Unlike modern day pensions, this one was for “employees who have become incapacitated after twenty years of continuous service Pensions are paid monthly ... at a figure based on the average full-time earnings for the last year

¹¹⁵ Some issues were not dealt with for ten years. In the 1928 report the Creighton Mine introduced “refuge stations” in its mines after repeated cave-ins. At the same time “safety lamps” (that monitored the presence of carbon monoxide and dioxide) were first installed. *Bulletin No. 67, Report on Mining Accidents in Ontario 1928*. P.12. See also pages 12 and 13 of the *Bureau of Mines Report for 1928*.

¹¹⁶ This term was used by Margaret McCallum to describe post war workplace programs in Canada. She said “Through offering their employees something more than a daily wage, employers hoped to recreate the feeling of family and community that was thought to have characterized labour relations in an earlier age ...” See McCallum, Margaret E., ‘Corporate Welfarism in Canada, 1919-39,’ *The Canadian Historical Review*. 71 (March 1990), Vol.71, Iss. 1. p.47

¹¹⁷ *Twenty-ninth Annual Report of the Ontario Department of Mines*. 1920. p.73.

worked.”¹¹⁸ While not many would have qualified - and the terms need to be interpreted cautiously because they were at the sole discretion of the “executive of the company” - the pension program nonetheless marked a new threshold for miners. Only a healthy, able-bodied miner could work continuously for the company and in order to do that a safe environment had to be available. At the time INCO had more than 1,700 employees who qualified, at least potentially, for this coverage.

And the company went a step further. It made university scholarships¹¹⁹ available “... for a course in applied science at McGill, Queen’s or Toronto University for a certain number of the sons of employees, or of apprentices under 21 years of age.”¹²⁰

Notwithstanding the explicit gender distinction, INCO revealed a willingness to promote post-secondary education opportunities among the families of its employees. Three young men won the scholarships in September 1919 after being examined and qualified by a Sudbury High School Staff committee.¹²¹

Singly or collectively, these kinds of largesse encouraged the idea of job stability among the men and their families who settled permanently. Although the mining workforce declined quickly after the war, there were new compensation packages introduced that improved the palatability and safety of the work conditions.

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¹¹⁸ *Twenty-ninth Annual Report of the Ontario Department of Mines*. 1920. p.72.

¹¹⁹ The scholarship was for an applied science course and it could only be tendered at McGill, Queen’s or the University of Toronto.

¹²⁰ *Twenty-ninth Annual Report of the Ontario Department of Mines*. 1920. pp.72.

¹²¹ *Twenty-ninth Annual Report of the Ontario Department of Mines*. 1920. pp.72-73.

Masculinity

Between 1915 and 1925 medical and government authorities shifted their allegiances and alliances away from what had previously been a supportive relationship with mine owners and mine managers. The new approach was one that featured greater understanding of the risks miners faced when working in dangerous and unpredictable conditions. Over the same period, miners themselves began to recast their masculine identities, not only by making a stronger claim to breadwinner masculinity but also by reframing the older hypermasculine image into one that integrated a new patriotic or militarized masculinity made possible by the war.

Notwithstanding the exigencies of war, mining remained steadfastly male. Women were not integrated into the mining workforce, as they were in other areas, including munitions factories and ambulance driving. By contrast urban factories had to adopt war footings – changing their product applications and increasing their capacities – which required female participation. Women took up the tasks willingly, skillfully, and in great numbers. They were more than competent at discharging their work assignments in a plethora of industries, yet no women were admitted underground.¹²² My research did not uncover any evidence of women demanding to work underground.

Rather, breadwinner masculinity flourished before, during and after the war. Nancy Forestell's studies of gold mining communities in northern Ontario, most notably Timmins,

¹²² See various articles on WW1 and how women were integrated into the workforce, especially in Ontario. Des Morton's, *A Short History of Canada, Third Revised Edition*, 1997, Part 3, Chapter 3, National Crisis. Pp.164-178 and Robert Bothwell's *The Penguin History of Canada*. 2006. Chapter 11 "Breaking the Mould 1914-1930". pp. 283-308. For the contributions of women to World War One see "Freshettes, Farmerettes and Feminine Fortitude at the University of Toronto during the First World War" in *A Sisterhood of Suffering and Service; Women and Girls of Canada and Newfoundland during the First World War*. Ed. A. Shaw and S. Glassford. UBC Press. Vancouver. 2012.

confirm that breadwinner masculinity emerged as camps grew into settled towns.¹²³ After World War One the Bureau of Mines' reports began to include the marital status of miners.

For example, the 1925 report said:

Hollinger Mine: Thomas Fox, English, married, with six children, aged forty-two years, was caught in a cave-in of broken rock in a stope 91 east of 14 crosscut on the 550-foot level of the Hollinger mine at 5.00 p.m. on March 18th and [he] was buried for twelve hours.¹²⁴

This recognized not only the circumstances of the injury but also the marital status and virility of the miner.

Alongside breadwinner masculinity, a new model of masculinity evolved; it was one that grew out of the contributions made by miners to the Allied war efforts.

Throughout the war northern Ontario mining communities and the mining industry – as was with the case with Canada more generally – valorized support for the war in a number of ways. In Ontario, mining was considered essential by the Bureau. Its *1918 Annual Report* said: “The mining industry [in Ontario] is essential to the carrying on of the war since it provides the raw materials for the weapons, and munitions and the metals required for financing the struggle.”¹²⁵ The Bureau of Mines recognized the wartime enlistments of their own staff. For example, in the report for 1916, Deputy Minister T.W. Gibson said:

... the staff of the Bureau of Mines, which has not been laggard in the defence of the cause of freedom and justice at stake in the present tremendous conflict. [Nine members of the Bureau volunteered and one had been killed.] They have one and all worthily maintained the honour of Canada.¹²⁶

¹²³ Forestell, N. “And I Feel Like I’m Dying, Mining for Gold.” pp. 77-93. Forestell, N. “Bachelors, Boarding-Houses and Blind Pigs”. Gender Construction in a Multi-Ethnic Mining Camp, 1909-1920. *A Nation of Immigrants; Women, Workers, and Communities in Canadian History, 1840s-1960s*. Ed. Iacovetta, R. et al. Toronto. University of Toronto Press. 2002.

¹²⁴ *Bureau of Mines Annual Report for 1925*. Toronto. Queen’s Park. 1925. p. 25.

¹²⁵ *Twenty-Seventh Annual Report of the Bureau of Mines, 1918*. p. 61.

¹²⁶ *Twenty-Sixth Annual Report of the Bureau of Mines, 1917*. p. xii.

Some members of the mining community thought still more could be done. At Larder Lake, the Harris Maxwell Gold Mine operated on a limited schedule in 1915. Only a skeleton crew kept it going. It closed during the summer of 1916 but reopened in the fall following protests from miners themselves. John Shafer, a local miner, wrote a letter that was published in the *Northern Miner*.¹²⁷ He was sharply critical of Harris Maxwell for not doing more to exploit proven assays at that site. Shafer's criticism sparked activity. By the spring of 1918 the mine flourished once again. A new shaft was sunk two hundred feet and forty men were hired. A year later there were plans afoot to invest more than a million dollars and expand the operation. Miners saw patriotism in their war-work and advocated it.

Mining communities offered not only their labour but also their financial support for the fight abroad, notwithstanding their personal struggles to make ends meet at home. *The Northern Miner* reported that "... a well attended gathering of the citizens of Coniston ... [which] unanimously decided to give one day's pay each month during the continuation of the war and [for] six months thereafter to be devoted to the Red Cross and various other patriotic purposes."¹²⁸ Pledges were consistent with one by the employees at the nearby Mond Nickel Company who donated two machine guns. This was a tangible expression of solidarity with the troops "... in the cause of liberty and humanity".¹²⁹ The unanimity of these expressions reflected a willingness to share in the war effort.

Support for the Allied cause was also reflected in ethnic prejudices at mine sites. One report announced that a hundred men had been fired: fifty-five Germans and forty-six

¹²⁷ *Northern Miner*. April 1916. p.4.

¹²⁸ "Periscope on the Great War". *The Northern Miner*. September 4, 1915. p. 7

¹²⁹ This spirit of solidarity evidenced what was usefully described as "a simple faith and a sense of duty to their family and their country that is grand and yet full of pathos." See "In the Trenches". *The Northern Miner*. September 11, 1915. p. 7.

Austrians.¹³⁰ To those “enemy aliens” who remained, their nationalities affected them in different ways. In the pre-war years, fatally injured miners were usually referred to by name but from 1915 to 1919 the deaths of German-speaking miners, or those of enemy origin, were only identified by their nationalities.¹³¹ In 1917, for example, twenty English-speaking miners were killed. The Bureau named them individually. During the same year there were seven Austrians, two Bulgarians and one German killed on the job. Not one was named: “... an Austrian fell about 25 feet”¹³²; “... an Austrian walked into a blast”¹³³; “... the Bulgarian blockholer ... walked into the third blast.”¹³⁴ In spite of the dead men’s work in support of Ontario’s mines and their ultimate sacrifice contributing to the Canadian war effort, they were not personalized or identified by anything except nationality.

By contrast, miner/soldiers who enlisted for the Allies were recognized. The newly constituted Department of Mines identified war veterans and returning soldiers in its reports and statistics.¹³⁵ For example, the *Annual Report* for 1920 recorded twenty-nine fatalities and included the recognition: “Six war veterans were among those killed.”¹³⁶ War service was a new way of identifying some of the dead. None of the victims was alleged to be careless, reckless, dangerous, drunk or incompetent. Their characters and work habits were not impugned because their war efforts had re-established and reconstituted their natures as heroic and valourous.

¹³⁰ “All Enemy Aliens Discharged.” *The Northern Miner*. November 13, 1915. p.1.

¹³¹ This first becomes obvious in the 1915 “Accident Report” when twenty-one fatalities were recorded. Austrian and Roumanian (sic) deaths did not include names whereas English deaths did: Lennox and Eldridge and Sauve were all identified by their surnames. See pages 52-65 of the *Twenty-Fifth Annual Report of the Bureau of Mines, 1916. Vol. XXV*. Toronto. William Briggs. 1916.

¹³² *Twenty-Seventh Annual Report of the Bureau of Mines, 1918*. p.81.

¹³³ *Twenty-Seventh Annual Report of the Bureau of Mines, 1918*. p.82.

¹³⁴ *Twenty-Seventh Annual Report of the Bureau of Mines, 1918*. p.83.

¹³⁵ In 1920 the Bureau of Mines was reconfigured as the Department of Mines although the Annual Reports continued in numeric order and the format of the reports remained, largely, unchanged.

¹³⁶ *Thirtieth Annual Report of the Ontario Department of Mines 1921*p.55.

Communities, too, celebrated enlisted men. The image published by the Chapleau Public Library depicts the 227th Battalion, “Men of the North.” The photo taken in Chapleau, Ontario in 1916 captured a group of enlisted men leaving for service amid community celebrations.



Figure 4.2 Chapleau, Ontario in August 1916.¹³⁷

One of New Liskeard’s local historians, Maude Groom, lived through the Great War and recalled that because northern recruitment stations were oversubscribed initially, quotas were established to limit the numbers of volunteers. At the first call in Cobalt in late 1914, only twenty men were admitted though more than two hundred applied. Some of those who were denied enlistment travelled to other recruiting stations – in Haileybury or Sudbury – such was the fear that the fighting would be over before they could get there. The willingness of miners to volunteer for service was conspicuous. Groom recalled a parade song celebrating the contributions of “New Ontario”:

Our Battalion Number is a Hundred and Fifty-nine
 Away from New Ontario, the backwoods and the mine
 We’ll dress you up in Kahki,(sic) if you’ll only come and sign
 And we’ll all go marching along.¹³⁸

¹³⁷ <http://www.chapleaulibrary.com/crichton/VC2/411.JPG>

¹³⁸ Groom, M. *The Melted Years*. p. 99

One officer from northern Ontario, Colonel Davis, was explicit about wanting to form a Pioneer Regiment comprised exclusively of miners. He argued that miners brought special talents to the Front. Davis called for "... men who can handle power and steel, dig trenches, fix up barb wire entanglement[s] and ... miners and prospectors, men who can set off a charge, swing a pick or an axe with knowledge and skill."¹³⁹ Davis' recruiting campaign raises an intriguing possibility that miners had particularly useful skill-sets for trench warfare especially if compared with, for example, a shoe salesman or an office manager. Conditions at the Front and in mining had some similarities. Both environments were dangerous, wet, cold, uncomfortable and dark. They were underground and plagued by unforeseen collapses, toxic gases, incessant noise, dirt, discomfort, darkness, and explosions. Miners were used to dangerous circumstances, where death was never far away. Although men did not die in Ontario's mines daily, there was a tacit understanding that death and injury attended underground work. Enlisted miners on the battlefields of Europe were certainly at risk. Given these risks, as the *Northern Miner* reported in September 1915, "Col. Davis could get a thousand men tomorrow from the recruited men: but he wants miners and prospectors...."¹⁴⁰

The strength, bravery and valour that miners in the armed forces displayed overseas shaped a new patriotic masculinity among miners at home. This was particularly evident in the post-war years when unions were active. Led by "returned men" in Cobalt, in the late spring of 1919, union men sang:

The working class is poor
 Will be forever more
 'Till we unite to gain our right
 If they resist we'll use our might

¹³⁹ "The Miners' Regiment." *The Northern Miner*. September 11, 1915. p.1.

¹⁴⁰ *The Northern Miner* 11 Sept 1915 p 1.

There must be no middle ground
 This fight is all one round
 From slavery to victory
 As we go marching on.¹⁴¹

The militaristic tone of the chant was obvious. Their action was a “fight” against “slavery” and “victory” was the only option. The vocabulary of war informed the miners’ language.

Men who did not join the Cobalt strike were publicly shamed by being marched down the camps’ main streets in aprons.¹⁴² The message was clear: miners were masculine and united; anything less was effeminate. In this context, union leaders were celebrated for their physical size. Nicknames like: “Big Jim” McGuire, “Big Bill” Haywood, reflected a way of identifying masculinity in the company of other men. The breadwinner masculinity that had informed their prewar identity was joined by a soldier/warrior masculinity in the post-war period.¹⁴³ The masculine ideal of the warrior offered a more positive version of the hypermasculinity that once cast miners in a negative light.

The characterization of medical professionals stood in contrast to miners. Like miners, doctors were valorized for their service in the war.

Members of the medical profession, civil and military, in Canada occupy a position of great responsibility since it is through them that the physical condition of Canadian soldiers is established; consequently, physicians and surgeons are constantly called upon to express their professional opinion concerning the physical condition of men, not only to decide their fitness for service, but also in connexion[sic] with the awarding of pensions. The responsibilities of the medical profession ... are then of great public importance. Medical men must realize the responsibilities added to their positions by the war.¹⁴⁴

¹⁴¹ Groom. M. *The Melted Years*. p. 99.

¹⁴² Groom. M. *The Melted Years*. p. 98.

¹⁴³ Moore, R. & Gillette, D. *King, Warrior, Magician, Lover; rediscovering the archetypes of the mature masculine*. New York. Harper Collins. 1990. The authors use the soldier/warrior term to describe a male aggressiveness that attaches to a sense of loyalty “... a cause, a god, a people, a task, a nation [that is] larger than individuals, through a transpersonal loyalty may be focused on an important [issue].” See chapter six. Pp. 75-95. In this instance, the miners came together and stayed together to align themselves against a common enemy and to fight for their rights as men who have been recognized as socially and nationally valuable.

¹⁴⁴ “An Appeal to the Profession”. *The Canadian Medical Association Journal*. February 1917. pp.142-143.

Their work was equivalent to that of the men in the trenches. “The heroism of the troops in battle has been equaled [sic] by that shown in the hospitals and the wounded have been attended with courage, assiduity and success, often under the most trying circumstances.”¹⁴⁵ Doctors at the Front were valorized for their life-saving work. Physicians across Ontario became agents in the government’s prosecution of the war by covering off doctor shortages, especially in the north where doctors were scarce during the war.

At the University of Toronto, third and fourth year students in medicine were awarded their degrees after returning from the war because the need was so great.¹⁴⁶ Doctors were committed to the war. In February 1915 the Senate of the University of Toronto resolved that third and fourth year men who volunteered for active service overseas would be granted their “year in full.”¹⁴⁷ This enticement did not apply to conscripts or other undergraduates or to any women who volunteered.

The January 1919 edition of the CMAJ proudly acknowledged: “Of our membership of five hundred and five, there have been one hundred and thirty-two [26%] on active service, of whom one hundred and eight have served overseas. Of those ... there have been three killed in action or died while on service.”¹⁴⁸ The doctors who worked at the Front were claimed to have had “good fortune” because of their patriotic work.¹⁴⁹ From

¹⁴⁵ “The Canadian Medical Profession and the War.” *The Canadian Medical Association Journal*. December 1915. p.148.

¹⁴⁶ Wilde, T. “Freshettes, Farmerettes and Feminine Fortitude at The University of Toronto during the First World War.” 2012. Although the numbers are hard to reconcile it appears that more than a hundred students took advantage of this offer.

¹⁴⁷ University of Toronto Senate Minutes of 1915.

¹⁴⁸ CMAJ. Vol. IX. January 1919. No. 1. p. 2. The article further confirms that the Canadian Medical Corps will have its own displays at the War Museum in Ottawa.

¹⁴⁹ CMAJ. Vol. IX. January 1919. No. 1. p. 2.

shared experiences in the war doctors and miners gained a measure of autonomy in their work. Both had new opportunities to self-identify and to advocate a newfound masculinity.

CONCLUSIONS

The confluence of World War One and the introduction of the WCB legislations provided the possibility of doctors and miners meeting as equals, as war veterans. But by the early 1920s this possibility had evaporated. Doctors reverted to a professional masculinity, and miners celebrated a respectable patriotic masculinity alongside their breadwinner masculinity. Risk-taking itself, as an individual act, might not have been diminished from the point of view of observers but this is challenged by other forms of masculinity that oriented more toward respectability and patriotism.

Within the Bureau of Mines the effects of these perspectives were found in inspectors who looked for and remedied the causes behind deaths and injuries.

... the payments made to the ... Board were looked upon by employers as a cost of doing business since it was publicly believed that industry was largely to blame for accidents even though many were the result of worker negligence.¹⁵⁰

Inspectors turned away from “assumed risk” and the innate characteristics of miners. This brought about upgrades in the conditions of the workspace as well as the expansion and enforcement of extant regulations.

World War One was the single most critical element in reshaping the public profile and masculinity of miners. Their work conditions mimicked some of the battlefield conditions more closely than most other types of civilian labour. This equivalency meant that characteristics of courage replaced carelessness in popular representations of miners

¹⁵⁰ Heath, F.M and Tessier, G.E. “Industrial Accidents and Working Conditions 1900 – 1920”. *50 Years of Labour in Algoma, Essays on Aspects of Algoma’s Working-Class History*. Sault Ste. Marie. Algoma College. 1978. p.29.

who had worked hard for the interests of the country. Some were piqued if owners did not keep mines operating to help the war effort. Everyone had to do his share for country and empire not self-aggrandizement.¹⁵¹ Miners met these qualifications immediately. The importance of keeping Ontario's mines open and producing could not be overstated. The after-effects were seen in the Department of Mines' report for 1919 which read:

... the energies of the world which had been so long and so intensely organized for slaughter, could not at once be diverted into their wonted channels of production and manufacture. Moreover, in some of its aspects the old order has been changed, and to all appearances permanently. Labour insists upon less onerous conditions and a larger share in the fruits of production.¹⁵²

The newly found independence of the medical community also produced gains for miners. The reach and influence of the OMA brought contract physicians out from under corporate affiliations and provided a sense of independence. Patients became the new focus, as physicians looked for causal factors contributing to ill-health and injuries. This gave contract doctors more autonomy.

In spite of the gains, however, there was still a great deal that needed to be done. The annual death toll spiked periodically¹⁵³ which once again drew political attention and fired public concern. It was not until well after World War Two that concerted labour activism effected sustaining changes in occupational health and improved mining in the province.

¹⁵¹ *The Northern Miner*. October 20, 1917. p.5.

¹⁵² *Twenty-Ninth Annual Report of the Ontario Department of Mines*, p.1.

¹⁵³ The Hollinger Disaster of February 1928 killed thirty-nine men in a single incident. There was a great hue and cry about the loss of life and the WCB's treatment of the families left behind. See "Bulletin No. 67". *Report on the Mining Accidents in Ontario in 1928*. pp.20-23.

Chapter 5

Conclusions and Aftershocks

After 1925, health and safety issues in Ontario's hardrock mines continued to be shaped by deaths and injuries. One of the most tragic of these was the underground fire at the Hollinger mine in 1928. It resulted in thirty-nine fatalities and remains the worst, single, disaster in Ontario's hardrock mining history. The numbers of fatalities indicate how large the workforce was at that mine: more than 900 men were on shift at Hollinger that day, some beyond the 2,500 feet level. An inquiry into the incident found that a pile of flammable waste, stored in an unused space, spontaneously burst into flames filling the drifts, stopes and chambers with choking smoke and poisonous gases.¹ The Department of Mines said: "... it is perhaps fortunate that not more than 39 men were suffocated."² The tragedy sparked more regulatory changes including the establishment of safe locations that could be retreated to in case of an unforeseen event. Other stipulations called for the improvement of (exhaust) ventilation systems. The "Hollinger Disaster," as it came to be known, revealed better ways of understanding and addressing the health and safety of men working underground. One of the salient comments concerning the deaths at Hollinger was: "The Compensation Committee [of the WCB] advises that the [tariff] figure for 1928 ... includes \$156,000, which was the cost of the Hollinger disaster"³ This figure indicates

¹ The pile of debris was 100 feet long, 12 feet wide. It was made up of boxes, fuses, paraffin, and miscellaneous dry combustible items. *Bulletin No. 67, Report on the Mining Accidents in Ontario in 1928*. Toronto. Queen's Park. 1929. p. 20.

² *Bulletin No. 67, Report on the Mining Accidents in Ontario in 1928*. Toronto. Queen's Park. 1929. p.22.

³ *Bulletin No. 67, Report on the Mining Accidents in Ontario in 1928*. Toronto. Queen's Park. 1929. p.2.

a mathematical average of \$4,000.00 for each of the deceased miners, although the specific formula for the calculation is unknown.

Reporting procedures of deaths and accidents after 1925 regularly included the marital status of the deceased and the numbers of children they left behind. This was new and there is no explanation for why marital status became a statistical preference. The inclusion of offspring in the report from 1929 recounts: “Rudolph Fluvian, Italian, aged 43 years, married, with wife and six children...”⁴ and “Teemu Maki, driller, Finn, aged 31 years, married with a wife and two children...”⁵ and Mike Lubera, 29, Pole, with a wife and three children....”⁶ At a minimum, this information acknowledges miners as family men, or breadwinners rather than as boisterous, frontier brawlers.

This dissertation explores a period during which breadwinner masculinity is not known to be the norm. It is a time of flux and of new formations. While the frontier labour force was known about, it was little studied because of its remote locations and scattered numbers. My study has attempted to reveal more about the circumstances of mining workplaces in order to understand the nature of the risks they faced every day. It was, in fact, the nature of the work – especially in terms of occupational risks – that impacted miners’ health and safety. Few scholars have examined the nuances of hardrock mining and how it affected the health of the men involved, preferring instead to understand mining’s economic and political effects.

I have acknowledged the legislation that recognized the workforce as well as the regulatory protections that were in place and regularly revised and updated. My evidence

⁴ *Bulletin No.71, Report on the Mining Accidents in Ontario in 1929*. Toronto. Queen’s Park. 1930. p.24

⁵ *Bulletin No.71, Report on the Mining Accidents in Ontario in 1929*. Toronto. Queen’s Park. 1930. p.23

⁶ *Bulletin No.71, Report on the Mining Accidents in Ontario in 1929*. Toronto. Queen’s Park. 1930. p.29

reveals that there was never a shortage of regulations in the mining sector. Nevertheless, I have also demonstrated that the protections bruited in the various incarnations of *The Mine Act* were largely ineffective because they were weakly enforced. However, as mines, and the communities that built up around them, became more firmly established, and as workers evolved into citizens and voters with families, their political value increased. Therefore, as the number of on-the-job fatalities increased, no longer were the characters of miners automatically impugned as causal, reckless or careless. World War One made it clear that they were valuable and patriotic. The product of their work produced the metals needed to defend God and Empire. Therefore, with only the occasional exception, mining improved. While not “safe” per se, the machines, explosives, methods, and the work itself became less dangerous than it was thirty years earlier. Consequently the number of fatalities declined. While I use statistical data showing declining death and injury rates to prove that safety got better, I do not suggest that mining was a safe occupation. The addition of new electrical and mechanical devices certainly provided better conditions yet being underground amid loud drilling and explosions was still dangerous. Data from 1926 to 1945 reveal an average of 43 deaths and more than 2,000 injuries in the industry each year.⁷ The numbers indicate that, in spite of improvements, the work remained fraught with danger.

My work accords with Larry Lankton’s analysis of hardrock mining communities.⁸ In northern Ontario, the work was different from coal mining and from American methods

⁷ *Annual Report*. Ontario Department of Mines 1946. p. 70. By 1946 mining expanded to include quarries, and sand and gravel pits also.

⁸ Lankton uses an American framework and culture but looks at silver and copper mining. Lankton, L. *Beyond the Boundaries: Life and Landscape at the Lake Superior Copper Mines*. New York. Oxford University Press. 1997. Lankton, L. *Cradle to Grave, Life Work and Death at the Lake Superior Copper Mines*. New York. Oxford University Press. 1991.

as well. Some of the differences relate to the unionization or non-unionization of the workforce. Extending the scholarship of Brian Hogan, I explore how and why the Meredith Commission intervened in order to determine the necessity and the motivations that argued for new worker compensation legislation which further identified the deleterious effects of mine work on the bodies of men.

I have argued that the conditions of work persisted for a long time because, from the outset, accidents were small and involved only one or two men. Seldom was there an accident that caused more than one or two deaths. My study helps understand remote, early resource extraction in Canada and especially the lot of hardrock miners. It is a unique field that is too-often surrounded by hyperbolic popular histories. The work of Edmund Bradwin⁹ and Wallace Clement¹⁰ are notable for their examinations of the men and the historical techniques that evolved over time. There was a well-established bureaucracy at Queen's Park that was aware of the men in the mines. The paternalistic attitude of the law-makers was reflected in well-documented reports initiated and written by mine inspectors. They saw first-hand what happened to victims of accidents underground.

Part of my investigations into fatalities included the convening of coroners' juries. I include the findings of those panels, which, after a time, took issue with mine owners, operators, and the regulations. I have used some of their rather sharp comments about the need for much greater protections for the men. Their *obiter dicta* recommendations reveal how miners themselves felt about their conditions of work. Their findings point up some of the issues and silences in the government's own records. Using Bureau of Mines data and

⁹ Bradwin, E. *The Bunkhouse Man; A Study of Work and Pay in the Camps of Canada 1903-1914*. Toronto. University of Toronto Press. 1972.

¹⁰ Clement, W. *Hardrock Mining; Industrial Relations and Technological Changes at Inco*. Toronto. McClelland and Stewart. 1981.

statistics, I show how important mining was to the province's revenues as well as to how its administration reflected political interests. My findings support the arguments of H.V. Nelles¹¹, but mine reveal the effects of policies on the lives and health of workers rather than on Ontario's economy or on the processes that informed political thought of the time.

Workplace fatalities in mines were in single digits every year from 1890 until 1899, when fourteen men died over twelve months. Between 1891 and 1904 the cumulative total was reported at ninety-four, an average of seven per year or about one every second month. While some of these statistics have been developed in the secondary literature, like Bernie Jaworsky's *Lamps Forever Lit*, my analysis of annual fatalities opens up resource extraction to closer scrutiny that addresses both the qualitative and quantitative dangers of that work and its remoteness.¹² Being at a frontier site meant little access to medical treatment which led to greater health risks even for minor incidents. It seems clear that an infection or broken bone at a difficult site to access posed additional threats to the well-being of those involved.

I also try to explain how the tacit acceptance of dangerous work privileged the legal precedent of "assumed risk." The concept was widely known but my use of the Frederick Jeffries case examines how its consequences left family members vulnerable. My conclusions coincide with those of historians Eric Fudge and Judy Tucker who detail the types and styles of laws that were enacted.¹³ While I agree with their explanations, I attempt to show how the legislation applied directly to the men to determine how it

¹¹ Nelles, H.V. *The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1849-1941*. Toronto: Macmillan of Canada. 1974.

¹² Jaworsky, B. *Lamps Forever Lit; A Memorial to Kirkland Lake Area Miners*. Calgary. Cambria Publishing. 2001.

¹³ Fudge, J. and Tucker, E. *Labour Before the Law: The Regulation of Workers' Collective Action in Canada, 1900-1948*. Don Mills. Oxford University Press. 2001. Tucker, E. *Administering Danger in the Workplace: The Law and Politics of Occupational Health and Safety Regulation in Ontario, 1850-1914* Toronto: University of Toronto Press, 1990.

impacted the health, and indeed the lives, of workers. Using the *Annual Reports* of the Bureau of Mines, I documented a broad spectrum of findings by mine inspectors that illuminate how regulations were interpreted over time, if in fact they were interpreted at all. Early on, the evidence suggests that laws were weak because they were seldom enforced. This contributed to ever-higher death and injury rates year-after-year. My conclusions speak to a nuanced understanding of the regulations and how they responded to the vicissitudes of social and political events. They reveal a good deal about the paternalistic legislators who passed them and more about the workers who were governed by them. There are yet more studies needed to unpack and explain the effects of laws on labour forces. When the Workmen's Compensation archives become available, there will be much to learn about occupational health and safety and how they interacted, especially in industries that were heavily regulated.

My dissertation also examines the history of health and how it was negotiated. At the moment, Canadian scholarship in this field has maintained an urban focus that tends to examine women, children, and public health matters such as pandemics. Health historians that have examined women's health have argued that it was shaped by sexuality and childbirth. Wendy Mitchinson's comprehensive study, *The Nature of Their Bodies*¹⁴ is the most influential of those works. Men, by contrast, have their health defined mostly by their work. The industrial accidents and injuries documented in this dissertation suggest that more research is need on how men navigated workplace dangers, especially in the early part of the twentieth century. There is considerable scholarship about later decades but my

¹⁴ Mitchinson, W. *The Nature of Their Bodies: Women and Their Doctors in Victorian Canada*. Toronto. University of Toronto Press. 1991. *Essays in the History of Canadian Medicine*. with Janice P. Dickin. Toronto. McClelland and Stewart. 1988.

research highlights some of the problems and issues that informed work and health at the turn of the twentieth century.

My research demonstrates how the relationship between work and occupational health shaped understandings of the ways in which men's bodies were influenced on and off the job. The frontier workplace, with its rudimentary living conditions, affected men's bodies to the greatest degree. The circumstances of both work and habitation were always demanding and oftentimes severely detrimental to health outcomes. I show the links between the two as well as how the proximity of co-workers meant that mistakes, or errors of judgement, caused injuries or death. Off the job, close living quarters were susceptible to the spread of germs and diseases. Once taken ill, a miner had virtually no one to look after him. While the later arrival of women and families offered some improvements in community and personal care, they did not mitigate or interrupt any of the actual workplace risks.¹⁵ Before that, however, health circumstances were extraordinarily demanding. From the crude structures they lived in, to premature explosions, and spontaneous falls of ground, the physical constitutions of men were always under pressure and at risk. My detailed analysis of the occupational risks miners faced and the resultant injuries and deaths constitutes one of the few Canadian studies in the history of occupational health.

In this regard, my work is one of the few that studies the history of medical practices in the north. Most academic research centres on the southern part of Ontario and on heroic, urban doctors who contributed remarkably to the development of the medical

¹⁵ Forestell, N. "Bachelors, Boarding-Houses, and Blind Pigs: Gender Construction in a Multi-Ethnic Mining Camp, 1909 – 1920" in *A Nation of Immigrants*. ed. F. Iacovetta et al. Toronto. University of Toronto Press. 2002. "'And I Feel Like I'm Dying From Mining for Gold': Disability, Gender and the Mining Community, 1920-1950," *Labour: The Study of the Working Class in the Americas*, Vol.3 No. 3 (Fall 2006).

profession as well as to the treatment of diseases.¹⁶ While I acknowledge that socialized medicine was present in urban communities and that urban doctors “contracted” to serve particular groups of people, I also point up the unique challenges faced by frontier physicians. More clarifications of the differences between North and South have to be provided lest there be a misunderstanding that medicine was practiced uniformly across the province. My research contributes to the small body of scholarship on contract physicians who are only ever referenced tangentially. I say that these doctors practiced within a coercive system that co-opted their loyalties. In focusing on contract doctors in the north, my dissertation also adds depth to Canadian medical history that has been oriented primarily to southern, urban doctors and hospitals.

I join a small group of scholars investigating frontier workspaces and their relationship to medical practices. Like Sasha Mullally, I look at rank and file physicians and the hardships they faced traveling to their patients and working under conditions that were at best adequate and sometimes primitive.¹⁷ Frontier doctors developed different kinds of relationships than those featured in urban practices. “Contract doctors” faced unique challenges. This influenced how medicine at the frontier was practiced, paid for and even moreso, how physicians perceived their patients. While social medicine was practiced in urban environments like Toronto, Ottawa, and Hamilton, it was not mediated as intensely by commercial interests as it was in the north. I agree with Mike Corbett’s

¹⁶ See Michael Bliss’ work on William Osler, Banting and Best; Wilder Penfield’s autobiography *No Man Alone*; various works on Dr. Norman Bethune;

¹⁷ Mullally, S. “The Importance of Being a ‘Country Doctor’: Narrative and Identity in 20th Century Rural Health Care,” *History of Medicine Lecture Series*, University of Alberta, Edmonton, AB. 2008. “Unpacking the Black Bag: Country Doctors and Narratives of Rural Health Care, 1920s-1970s,” *History of Medicine Lecture Series*, East Carolina University, Greenville, NC. 2008. “Practicing Public Health in Rural Canada: Interprofessionalism in History,” *Studies in Interprofessionalism Lecture Series*, Northern Ontario School of Medicine, Thunder Bay, ON. 2008.

observations flowing from the history of education that: “Canadian historiography is shot through with a fundamental urban bias.”¹⁸ This is evident in medical history as well. My work questions the interactions of contracted physicians with corporations, with bureaucrats and with competing physicians. I am able to show how outside influences generated tensions that acted pejoratively on patients. My conclusions are drawn from evidence that confirms the physicians were hired by companies rather than the workmen. This effectively coerced the doctors into being more loyal to the companies that paid their invoices than to the men who funded them through payroll deductions. In this regard, I rely on autobiographical materials from contract doctors like doctors Clifford Smylie, Herman Bryan and Edwin Gimby. Their memoirs speak of the troubled finances faced by northern doctors and how much they coveted work contracts that paid in cash. There is much more work yet to be done on the urban/rural separation and how it acted upon those responsible for healthcare.

While I locate my research on a few doctors in northern Ontario, there is still much more to be gleaned about supplementary healthcare and how it was addressed. Scholars like Jayne Elliott have studied medical outposts – they were not hospitals in any modern sense of the word – and the people who staffed them.¹⁹ My work predates hers and tries to understand the complex nature of the company-doctor-client relationships that operated on and off the job. There are more analyses to be done of specific doctors and how they negotiated the circumstances of their work.

¹⁸ Corbett, M. “A Protracted Struggle: Rural Resistance and Normalization in Canadian Educational History.” *Historical Studies in Education*. 13. No. 1. 2001. p.19.

¹⁹ Elliott, J. “Keep the Flag Flying” Medical Outposts and the Red Cross Across Northern Ontario, 1922 – 1984. Doctoral Dissertation. Kingston. Queen’s University, Department of History. 2004.

One of the most challenging aspects of my dissertation has been the study of masculinity. Early on, I could see its subtle influences on the daily behaviours and workplace practices of miners. My findings confirm the ideas and work of both Nancy Forestell and Karen Dubinsky concerning the numbers of women who resided in what had previously been exclusively male and masculine environments. Like Gail Bederman and Ava Baron assert, late nineteenth century miners exhibited a rugged masculinity that was rooted in physical risk-taking.²⁰ That was essentially true of the early miners but that kind of masculinity was quietly overtaken by a breadwinner masculinity that sought to provide for families nearby or abroad.

The onset of World War One complicated breadwinner masculinity with a new patriotic, warrior-like masculinity. Northern Ontario's masculine ethos was reshaped in the aftermath of World War One. Over time, there were multiple masculinities at play that were subject to marital, racial, ethnic, age, and workplace interpretations. There was a distance and a divide between the "rugged masculinity" of risk-taking, frequently revealed by single men, and the quieter, more widespread "breadwinner masculinity" of married men who cared for families. Accessing the voices of the men proved difficult and I met with only limited success in documenting miner's own attitudes, but I did find clear examples of men putting themselves in harm's way to demonstrate fearlessness to their co-workers. My research builds on Nancy Forestell's important work, expanding both the

²⁰ Baron, A. "Acquiring Manly Competence: The Demise of Apprenticeship and the Remasculinization of Printers' Work". *Meanings for Manhood; Constructions of Masculinity in Victorian America*. Ed. Carnes, M. and Griffen, C. Chicago. University of Chicago Press. 1990. Baron, A. "On Looking at Men: Masculinity and the Making of a Gendered Working-Class History." *Feminists Revision History*. ed. Ann-Louise Shapiro. New Jersey. Rutgers University Press. 1994. Baron, Ava. "Masculinity, the Embodied Male Worker, and The Historian's Gaze". *International Labour and Working-class History*. Bederman, G. *Manliness and Civilization; A Cultural History of Gender and Race in the United States 1880-1917*. Chicago. University of Chicago Press. 1995.

timeframe back to consider the decades before World War One. In small camps far beyond Timmins, men worked hard and lived sparingly in order to support families who lived away. On the other hand, the death of Frederick Jefferies exemplifies the almost invisible life of a breadwinner who worked hard, saved hard, and lived modestly in order to support a family of five in England. Quantitatively, I show that the names on police blotters and in newspaper headlines were a minority of aberrant, usually, single males. They made big headlines and sold newspapers but did not represent the majority of anonymous family men who plied their trade underground or on a timber limit or laying track. The distance between these two masculinities in the same space is considerable. I also point up a new “warrior” or “military masculinity” that took hold during wartime. Miners enlisted in such extraordinary numbers that recruiting stations and worksites had to close because they could not accommodate all those who wanted to join the fight. As I look at those who remained in the mines during the fighting I find evidence of them embracing the fighting spirit and developing a more militant attitude and identity that helps their union activities in the post-war years. This builds on wartime literature like that of Jonathan Vance to reveal how the masculinity of war – domestic and foreign – was quickly reconfigured around models of patriotism which included the resource workers whose contributions were essentially, the discourse of war: armaments.

The masculinities involved in this study reflect on doctors also. Their masculinity was different but of equal importance, just as it was for those who wanted to educate men at the frontier. Understandings were developed that accommodated different masculinities: although doctors had “soft hands” they nonetheless exposed themselves to dangers when traveling to or treating miners at dangerous sites. These multiple masculinities are

important to the history of the north and will benefit from additional studies or the examination of micro-histories of doctor/patient relationships. While my findings agree with the presence of rugged and breadwinner masculinities, I reveal their complexities and the challenges they produced at work. I argue that workplace masculinities are amalgams of different masculinity streams and that they forged something of a *lingua franca* which adapted and adopted characteristics according to the needs of the work and the men performing it.

Finally, the history of work is a key element in my thesis. My study is situated in resource extraction and adds to the work of Brian Hogan, Ian Radforth and Jeremy Mouat.²¹ After examining hardrock mining, I agree with the idea of workplace danger but I focus on occupational health rather than on mining and especially the work that has been done on coal mining. My examination complements the work of Karen Buckley²² as I point up the “petty” dangers that plagued Canadian labour forces as well as the ever-increasing numbers of deaths and severe injuries occasioned by labourers. I extend the knowledge in this field with statistical data that follows how the danger of work was negotiated by the men, their employers, and the government. Rather than following H.V. Nelles’ example of researching policy making, I looked at the effects of policies on the workers and this has broadened the ways in which work is studied.

Up to 1904 mining work was unsophisticated. It clearly relied on muscle power; the vein and the active stope were probed by twisting a steel drill bit which was struck by a

²¹ Hogan, B. “Cobalt, The Year of the Strike, 1919.” Cobalt. Highway Book Shop. 1978. Doctoral Dissertation. Toronto. University of Toronto, Department of History. 1975. Radforth, I. “Bushworkers and Bosses: A Social History of the Northern Ontario Logging Industry, 1900-1980.” Doctoral Dissertation. Toronto. York University, Department of History. 1985. Mouat, J. *Roaring Days; Rossland’s Mines and the History of British Columbia*. Vancouver. UBC Press. 1995.

²² Buckley, K. *Danger, Death and Disaster in the Crowsnest Pass Mines, 1902-1928*. Calgary. University of Calgary Press. 2004.

second man using a sledgehammer. These spaces were demonstrably small, cramped and poorly lit. The men faced icy or poorly constructed ladderways; the release of toxic gases; and the spontaneous collapse of walls and ceilings on unsuspecting workers. These elements conspired against the workman, notwithstanding the paternal attitudes that informed the legislation and the regulations.

As extraction industries consolidated and matured, camps became hamlets, villages and service, politically active towns. They were populated by men, women and children and so the breadwinner masculinity began to compete with the traditional rugged masculinity of earlier times. Immigrants swelled the ranks of the resource sector as the effects of the National Policy put more and more foreigners into mining and lumbering. The results of all of these have produced a fascinating and compelling site for more historical studies which this dissertation addresses.

Bibliography

Primary Sources

Government Reports/Legislation

“A Simple Method of Water Purification.” Ontario Provincial Board of Health. 1914. Health records. Misc. Box 1 No. 13. (1914)

Annual Reports of the Ministers of Education. Toronto. Queen’s Park. Archives of Ontario. RG 2-42-0-2249. 1900-1925.

Bureau of Mines.

Canadian Pacific Railway correspondence 1912-1913. Archives of Ontario. MU 7170 and 7169, CPR Surgical Fees Schedule.

Census of Canada 1881. Algoma District. Reel C – 13282. Thunder Bay Museum and Historical Society.

“Circular #24 on Smallpox” (with photographs) Ontario Provincial Board of Health. Archives of Ontario. Health records. Misc. Box 1 No. 13. (1914)

“Complaints of miners about camp sanitation in unorganized districts.” Ontario Provincial Board of Health. Health records. Misc. Box 1 No. 13. (1914)

“Death of Donald McCrae from exposure while drinking.” 1911. Coroner’s Report. RG4-32. File 1912 #40

De Kalb, C. *Manual of Explosives, A Brief Guide for the Use of Miners and Quarrymen s.* Toronto. Ontario Bureau of Mines. 1900.

First Annual Report of the Inspector of Mines for the Province of Ontario. 1890. Toronto. Warwick and Sons. 1891.

“First Annual Report, Ontario Provincial Board of Health for 1882.” Toronto. C. Blackett Robinson for the Ontario Legislative Assembly. 1883.

Fisher, Dr. W.J. “Personal Accounts, Daybook and Billings 1911-1920.” Archives of Ontario. F-1379. Containers MU7671-7672.

General Mining Act of 1869. Toronto. Government of Ontario.

Gold Mine Act of 1864. R.S.O. Toronto. Government of Ontario.

Goldfields of New Ontario (microform). March 1899. Archives of Ontario. F-14769. RG-4-32.

Health Act (1899) "Regulations for the Sanitary Control of Lumber, Mining and other Camps, Sawmills and other Industries situated in Unorganized Districts". Government of Ontario.

"Hollinger Mine Disaster, 1928." Archives of Ontario. RG4-32. File1928. #1327.

"Instructions on Disinfection of Quarantined Premises." (16 pages) Ontario Provincial Board of Health. Health records. Misc. Box 1 No. 13. (1914)

"Instructions on Disinfection" Circular #29. Provincial Board of Health. 1909
"Pamphlet #37 – Smallpox in Ontario." Board of Health. Archives of Ontario. 1905.

McNally, Dr. T. J. "Sanitary Report of the Town of Listowel." 1913. Archives of Ontario. RG-Series B-2-a. Board of Health No. 452. File #452.8

McNally, Dr. T.J. "Faulty accommodations/sanitation of work camp September 1913." Archives of Ontario. RG-62 Series B-2-a. Board of Health No. 453. Reports #26-50. (1913)

Metalliferous Mines Regulation Acts of 1872 and 1875 (35 & 36 Vict. C77
eppi.dippam.ac.uk/documents/19206.txt

Meredith, Sir William Ralph. *Final Report on Laws Relating to the Liability of Employers*. Toronto. L.K. Cameron. 1913.

Nova Scotia's *Workmen's Compensation Act 1916*, "The Protection of the Workman's Life, His Family, His Home".

Ontario Bureau of Mines. *Annual Reports* 1891-1926 inclusive. Archives of Ontario. Archives of Ontario. Government Doc's M. Microfiche.

Ontario Bureau of Mines. *Report of the Bureau of Mines, 1904. The Limestones of Ontario*. Toronto. L. K. Cameron, Printer to the King's Most Excellent Majesty. 1904.

Ontario Bureau of Mines. *The Mining Act of Ontario (1908) with Amendments to 1912*. Toronto. L.K. Cameron, Printer to the King's Most Excellent Majesty. 1912.

Ontario Health Act. (36 Vic. Cap.43.) Archives of Ontario. . RG62, B-2

Pamphlet #37 from 1905. "Smallpox." Published by the Ontario Provincial Board of Health. Prepared by Dr. Chas. A. Hodgetts, MD, LRCP. P.5.

R.S.O. c.135 Lord Campbell's Act. Government of Ontario. 1884.

R.S.O. The Mining Act of Ontario. 1896.

R.S.O. The Mining Act of Ontario. 1908.

R.S.O. The Mining Act of Ontario. 1912.

“Regulations for the Sanitary Control of Lumber, Mining and other Camps, Sawmills and other Industries situated in Unorganized Districts.” *The Health Act 1911*. Library and Archives Canada. RG299 375-4-10 pt.1.

Report of the Minister of Education for the Year 1901. Part I. Ministry of Education. Queen’s Park. 1901.

Report of the Ontario Board of Health 1914. Provincial Board of Health. Toronto. Queen’s Park. 1915.

Special Report on the Accident at the Blezard Mine 1892. Ontario Bureau of Mines. Toronto. Queen’s Park. 1892. (authored by Inspector A. Slaght)

Special Report on the Work of the District Officers of Health for the Year 1912 – 1913. Archives of Ontario. RG62, B-2-a. District Officers of Health Reports.

“The passing of the Nova Scotia Workmen’s Compensation Act; The Protection of the Workman’s Life, His Family, His Home. A Story.” Halifax. Nova Scotia. 1916.

“The Royal Commission on the Relations of Labour and Capital in Canada 1889”, in *The Workingman in the Nineteenth Century* ed. by Michael Cross, “Legal Rights of Workers” pp.76-87.

Royal Commission Appointed to Investigate Unrest in the Mining Industry in the Cobalt District. 1916. Published in *Labour Gazette XVI*. October 1916.

The Workmen’s Compensation for Injuries Act, 1892. R.S.O. 1887 Commonly known as Lord Campbell’s Act. Toronto. 1893.

Meredith Commission. 1911-1912. *Minutes of Evidence on Workmen’s Compensation.* Various sitting and different locations.

Young. G. E. “1913 Sanitary Reports of Inspector George Young.” *Provincial Board of Health Reports/Office of Chief Medical Officer of Health: Sanitary Inspector #1-25 January 1913 – October 1914.* Archives of Ontario. RG62 Provincial Board of Health Series B2b, B2c, B2d. #462.2

Published:

“Another Stabbing Affray”. *New Liskeard Speaker and Temiskaming News-Letter (sic)*. June 1908.

Byrne, J.J. *Autobiography of J.J. Byrne*. Don Mills. T.H. Best Printing Company. 1971.

“Dago Runs Amok”. *Sudbury Daily Star*. Sudbury. January 1910. Archives of Ontario. RG4-32. File 1910. #88.

“Dr. J.E. Gimby Made 100 Mile Trip to Batchewana ... to Attend Sick Guide; Perilous but Interesting Journey.” *Sault Star*. 1926

“Dynamite, Handle Me Easy”. *New Liskeard Speaker and Temiskaming News-Letter (sic)*. June 1908.

“Instructions on Disinfection”. Provincial Board of Health. 1909.

“Powers and Duties of the Ontario Provincial Board of Health.” *Second Annual Report 1883*. Ontario Board of Health. Toronto. 1883.

1910 – 1920 A Review of Ten Years’ Progress. Ontario Provincial Board of Health. Toronto. Board of Health. 1920.

Bryan, Dr. H. “Snowshoe Medicine.” Nipigon Museum. Publication date uncertain.

Byrne, J.J. *Autobiography of J.J. Byrne*. Toronto. T.H. Best Printing. 1971

Groves, A. *All in the Day’s Work; Leaves from a Doctor’s Case-Book*. Toronto. The MacMillan Company of Canada at St. Martin’s House. 1934.

Grout, A.J. *Tall Tales from the Tall Timbers: Many Memories, mostly from the Northern Ontario life of Arthur J. Grout, Chapleau, Ontario*. Chapleau. Alex Wilson Publications. 1968.

Howey, F. (M.D.) *Sudbury Minus One* (part of a series called *Pioneering on the C.P.R.*). 1938.

Macdougall, J.B. *Two Thousand Miles of Gold from Val d’Or to Yellowknife*. Toronto. McClelland & Stewart. 1946.

Meredith, W. R. *Final Report on Laws Relating to the Liability of Employers, To Make Compensation to their Employees for Injuries received in the course of their employment which are in force in other countries..* Toronto. L.K. Cameron. 1913.

“Pioneer Families; Their odyssey, Their Settlement.” Historical document no.5 of the Societe Historique du Nouvel-Ontario. Sudbury Public Library. 1944.

“Prospectus, The Lake Harold Gold Mines Company Limited.” Port Arthur. 1895.

“Instructions on Disinfection”. Provincial Board of Health, Ontario. 1909.

Smylie, C.H. *Northern Doctor: Memoirs of Clifford Hugh Smylie, M.D.* Cobalt. The Highway Book Shop. 2002.

The Harold Lake Gold Mines Company Limited Prospectus. 1897. Thunder Bay Museum and Historical Society.

“The Mining Laws of Ontario.” International Mining Convention at Montreal. 1893.

The Gold fields of New Ontario [microform] comprising the Lake of the Woods, Rainy Lake, Seine River, the Manitou and Michipicoten districts: reached only by the Canadian Pacific Railway (1899). Canadian Pacific Railway. March 1899. Library and Archives Canada. RG299

Wegenast, F.W. *Workmen’s Compensation for Injuries, A Sketch of the Present Law in Ontario and a Comparison of the Systems of some other Countries.* Toronto. Canadian Manufacturers Association on January 1, 1911

Young, George E. Provincial Health Inspector. Archives of Ontario. RG-62 B-2-b File #6. Letter from Sudbury. 1913.

Unpublished:

“Admonition re: coroner’s conflict of interest, February 1910.” Archives of Ontario. RF4-32 File 1910. #88.

Bell, A. “Angus Bell’s Memoirs of Railroading”. Unpublished. Lakehead University. General Archive Series. 123-126D. D69.

Bryan, Dr. H. "Experiences with the Indians: their Characteristics, language, traditions and legends of Thunder Bay". Carson Piper Historical Collection. A20. Thunder Bay Museum and Historical Society. Unpublished.

Egerton, Dr. G. Government of Ontario Archives. Govt Doc, He, Misc, Box 1, No. 16.

Frue, W.B. “Copies of William Bell Frue’s Correspondence when Superintendent of the Silver Islet Mine. Lakehead University. General Archive Series. Roderigo-128C. D69.

Gimby, W. *William Edwin Gimby's Autobiography*. Sault Ste. Marie Archives.
<http://fenris.net/~lizyoung/WeGimby.html>

Jaworsky, B. Notes on the history of Kirkland Lake, sent by the author with permission to use. 2007.

Jeffries, R. (Papers relating to the death and settlement of his death). Thunder Bay Historical Museum Society. City of Fort William fonds. (copies reside with the author)

“Leblanc and Lemay Payroll records for shantymen circa 1890.” Archives of Ontario. F150-12-1-11.

“Recommendations for amendments to the Workman’s Compensation Act.” Attorney General of the Province of Ontario. Dated March 1904. Archives of Ontario. RG4. File #1904. No. 886

“Report by R.B. Nickerson, Mining Engineer, relating to the Laurentian Mine, including operations during the year 1908.” Dryden Public Library.

“William Bell Frue’s Correspondence when [he was] Superintendent of the Silver Islet Mine”. Thunder Bay Historical Museum Society. B 25 Silver Islet Mining Company fonds.

Bentley, Dr. D. B. (District Officer of Health). “Organizing doctors, health officers and medicalization of public safety matters.” *Provincial Board of Health*. RG-62 Series B-2-a. File 452.1. (1913.)

Bentley, Dr. D.B. (Health Audit of Amsa Wood Hospital). *Provincial Board of Health*. RG-62 Series B-2-a. File 452.1. (1913.)

Coleridge, Dr. J.B. (Contract physician to the CPR.) Archives of Ontario. F-1367. Container MU7169-7170. (1909, 1911, 1912, 1913).

Coroner’s Jury Verdict/Recommendation 1908 Dynamite Explosion. Archives of Ontario. RG-4-32. File 1908 #79.

Coroner’s Jury Verdict/Recommendation into 1913 death of Harry Burns.” Archives of Ontario. RG 4-32 File 1913. #1099.

Dr. Jamieson (autobiography). (Osnabruck & Kemptville 1902-1910). Archives of Ontario. F2089. Container #1.

Drayton, Dr. H.L. (Crown Attorney) “Inquiry into death of Antonio Paletto while in the employ of the James Bay Mining Co.” Archives of Ontario. F4-32. File 1905. No. 966.

Duke, Dr. (Letter soliciting a contract with Gillies Brothers.” Archives of Ontario. F150 15—12-1-13. Circa 1890.

Foy, J.J. "Inquest into death of Gresha Mishwick(sic) and coroners' conflicts of interest." Archives of Ontario. RG4-32. File 1913 #1628. (1913)

Gillies Brothers. "Complaint from wife about her husband's wage remittance." Archives of Ontario. F150-12-1-11.

Gillies Brothers. "Payment of wages to wives and family". Archives of Ontario. F150-12-1-13. 1890.

Gillies Brothers. "Payroll records for John Anglehart." Archives of Ontario. F150-12-3-2.

Gillies Brothers. "Tithing of wages to Rev. Father Lafard." Archives of Ontario. F150-12-1-9.

McDougall, A. "Fatal Accident, Hollinger Consolidated Gold Mines." Archives of Ontario. Accession #RG4-32-File 1926. #190.

Moore, R. M.D. and Associate Coroner for the Rainy River District. Archives of Ontario. Accession #RG4-32 File 1912 #40.

Moss, M. "Militarism and Manliness Lectures" Parts 1, 2, 3. March 2009.
<https://senema.senecac.on.ca/search.php?type=videos&keyword=Militarism>

Scott, W. "Investigation of deaths of Scandinavians on CPR 1906." Attorney General of Ontario. Library and Archives Canada. RG. 399.

The Canadian Pacific Railway Company correspondence and fee schedules for contract physicians. Archives of Ontario. MV7170, MV7169, CPR-Surgical fees Schedule 1905 and 1912, 1913.

The Life and Work of Father Richard Baxter, Missionary. City of Fort William Archives. A48/1/28

Archives

City of Fort William

City of North Bay

City of Port Arthur

Cobalt Miners' Museum

Dryden & District Museum

Library and Archives Canada (LAC)

Thunder Bay Museum and Historical Society

Newspapers

The Cobalt Daily Nugget 1909-1910

Daily Times-Journal (Fort William) 1908.

The Sun Times. Owen Sound.

Port Arthur News. 1964. Lakehead University. General Archive. 126D.

The New Liskeard Speaker. Various years and editions.

The Northern Miner. Various years and editions.

The Parry Sound North Star from December 3, 2003. “Million Dollar Camps.”

The Sault Star. Various editions and dates 1919 – 1930.

The Temiskaming Herald/Speaker editions and dates 1905 – 1924.

Secondary Sources

Doctoral Theses:

Burnett, K. *The Healing Work and Nursing Care of Aboriginal Women, Female Medical Missionaries, Nursing Sisters, Public Health Nurses and Female Attendants in Southern Alberta First Nations Communities, 1880 – 1930.* Doctoral Dissertation. Toronto. York University, Department of History. 2006.

Elliott, J. “Keep the Flag Flying” *Medical Outposts and the Red Cross Across Northern Ontario, 1922 – 1984.* Doctoral Dissertation. Kingston. Queen’s University, Department of History. 2004.

Forestell, N. “All that Glitters is not Gold”; *The Gendered Dimensions of Work, Family and Community Life in the Northern Ontario Goldmining town of Timmins, 1909-1950.* Doctoral Dissertation. Toronto. University of Toronto. 1993.

Hogan, B. *Cobalt, The Year of the Strike, 1919.* Cobalt. Highway Book Shop. 1978. Doctoral Dissertation. Toronto. University of Toronto, Department of History. 1975.

Radforth, I. *Bushworkers and Bosses: A Social History of the Northern Ontario Logging Industry, 1900-1980*. Doctoral Dissertation. Toronto. York University, Department of History. 1985.

Books and Articles

A Vast and Magnificent Land; An Illustrated History of Northern Ontario. edited by Matt Bray and Ernie Epp. Lakehead University. Ontario Ministry of Northern Affairs. 1984.

“Arts of the Contact Zone” by Mary Louise Pratt. *Profession* 91. New York: MLA. Pp.33-40.

“Ask the Grey Sisters” *Sault Ste. Marie and the General Hospital, 1898 – 1998*. Toronto. Dundurn Press. 1998.

“Matewan” (1987) motion picture. Directed by John Sayles. Cinecom Entertainment Group.

Adams, A. and Burke, S. “Not a Shack in the Woods”: Architecture for Tuberculosis in Muskoka and Toronto. *Canadian Bulletin of Medical History*. Vol. 23. No. 2. 2006.

Angus, C. & Griffin, B. *We Lived a Life and then Some; The Life, Death and Life of a Mining Town*. Toronto. Between the Lines. 1997.

Avery, D. “Dangerous Foreigners” *European Immigrant Workers and Labour Radicalism in Canada, 1896-1932*. Toronto. McClelland and Stewart. 1979.

Bachman, K. *Porcupine Goldfields*. Looking Back Press. 2003.

Baldwin, D. “A Study in Social Control: The life of the Silver Miner in Northern Ontario.” *Labour/Le Travailleur* Vol. 2, 1977. pp.79-106

Baldwin, D. “Public Health Services and Limited Prospects: Epidemic and Conflagration in Cobalt.” *Ontario History*. Vol. LXXV. No. 4. Ontario Historical Society. December 1983.

Barnes, M. *Fortunes in the Ground: Cobalt, Porcupine & Kirkland Lake*. Toronto. Stoddart Publishing. 1986.

Baron, A. “Acquiring Manly Competence: The Demise of Apprenticeship and the Remasculinization of Printers’ Work”. *Meanings for Manhood; Constructions of Masculinity in Victorian America*. Ed. Carnes, M. and Griffen, C. Chicago. University of Chicago Press. 1990.

Baron, A. "On Looking at Men: Masculinity and the Making of a Gendered Working-Class History." *Feminists Revision History*. ed. Ann-Louise Shapiro. New Jersey. Rutgers University Press. 1994.

Baron, Ava. "Masculinity, the Embodied Male Worker, and The Historian's Gaze". *International Labour and Working-class History*.

Bederman, G. *Manliness and Civilization; A Cultural History of Gender and Race in the United States 1880-1917*. Chicago. University of Chicago Press. 1995.

Berger, C. *The Sense of Power; Studies in the Ideas of Canadian Imperialism, 1867 – 1914*. Toronto. University of Toronto Press. 1970.

Bilson, G. *A Darkened House, Cholera in Nineteenth Century Canada, 1832-1871*. Toronto. University of Toronto Press. 1980.

Black, M.J.L. "Early History of the Fort William Public Library." Thunder Bay. Thunder Bay Historical Society. 1977.

Bliss, M. *A Canadian Millionaire: The Life and Business Times of Sir Joseph Flavelle, Bart., 1858-1939*. Toronto. University of Toronto Press. 1978.

Bliss, M. *A Living Profit*. Toronto. McClelland and Stewart Limited. 1983.

Bliss, M. *Northern Enterprise: Five Centuries of Canadian Business*. Toronto. McClelland and Stewart. 1990.

Bliss, M. *Plague, A Story of Smallpox in Montreal*. Toronto. Harper Collins. 1991.

Bothwell, R. *The Penguin History of Canada*. Toronto. Penguin Group. 2006.

Bothwell, R. Drummond, I., English, J. *Canada 1900-1945*. Toronto. University of Toronto Press. 1990.

Boulton, J. *Pic, Pulp and People; A History of the Marathon District*. Township of Marathon. 1981.

Bourke, J. *Dismembering the male: men's bodies, Britain and the Great War*. Chicago. University of Chicago Press. 1996.

Bradwin, E. *The Bunkhouse Man; A Study of Work and Pay in the Camps of Canada 1903-1914*. Toronto. University of Toronto Press. 1972.

Brown, N. *Logging Principles and Practices in the United States and Canada and USA*. University of Michigan. J. Wiley & Sons. 1944.

Brown, R. & Llewellyn, J.J. “ ‘Capitalist Justice’ as Peddled by the ‘Noble Lords’ ”: Toronto Electric Commissioners v. Snider et al.” *Work on Trial; Canadian Labour Law Struggles*. Toronto. The Osgoode Society for Canadian Legal History. 2010. pp.15-42.

Bryan, A.M. *The Evolution of Health and Safety in Mines*. London. Ashire Publishing. 1978.

Buckley, K. *Danger, Death and Disaster in the Crowsnest Pass Mines, 1902-1928*. Calgary. University of Calgary Press. 2004.

Burgess, (Rev.) W. *Land, Labor, Liquor; A Chapter in the Political Economy of the Present Day*. Toronto. S.R. Briggs. 1887.

Burton, V. “The Myth of Bachelor Jack: Masculinity, Patriarchy and Seafaring Labour.” in *Jack Tar in History: Essays in the History of Maritime Life and Labour*. Edited by Colin Howell and Richard J. Twomey. Fredericton, 1991. pp. 179-198.

Canadian Frontiers of Settlement. “Settlement & the Forest Frontier in Eastern Canada (Lower) and Settlement and the Mining Frontier (Innis).” W.A. Mackintosh (ed.) Toronto. MacMillan Company of Canada. 1936.

Canadian Labour History. St. John’s. 1985.

Cassidy, G.L. *Arrow North, The Story of Temiskaming*. Cobalt. Highway Book Shop. 1976.

Readings in the Sociology of Work and Industry. Ed. Lowe, G.S. and Krahn, H.J. Toronto. Methuen Press. 1984.

Chaput, D. “Michipicoten Island Ghosts, Copper and Bad Luck.” *Ontario History*. Vol. LXI. No. 4. Ontario Historical Society. December 1969.

Clement, W. *Hardrock Mining; Industrial Relations and Technological Changes at Inco*. Toronto. McClelland and Stewart. 1981.

Clement, W. “The Subordination of Labour in Canadian Mining.” *Labour/Le Travail*. Canadian Journal of Labour. Spring 1980.

Coleman, T. *The Railway Navvies*. London. Penguin Books. 1981.

Conley, J.R. “Frontier Labourers, Crafts in Crisis and the Western Labour Revolt.” *Labour/Le Travail*. Journal of Canadian Labour Studies. 23. 1989.

Connell, W. T. “Disinfection in and after Infectious Diseases.” *The Canadian Medical Association Journal*. May 1912.

Connell, R. Connell, R.W. *Masculinities. 2nd Edition*. Cambridge. Polity Press. 2005.

Craig, B. "Smallpox in Ontario: Public and Professional Perceptions of Disease, 1884-1885." *Health, Disease and Medicine, Essays in Canadian History*. Ed. Charles Roland. The Hannah Institute of the History of Medicine. Clarke Irwin. 1984.

Craig, B. L. "State Medicine in Transition: Battling Smallpox in Ontario 1882 – 1885." *Ontario History*. Vol. LXXV. No. 4. Ontario Historical Society. December 1983.

Craven, N.E. *In the Beginning; The Story of New Liskeard and Now*. New Liskeard. Temiskaming Printing and The Highway Book Shop. 1977.

Craven, P. *"An Impartial Umpire": Industrial Relations and the Canadian State 1900-1911*. Toronto: University of Toronto Press. 1980.

Craven, P. *Labouring Lives, Work and Workers in Nineteenth Century Ontario*. ed. Paul Craven. Toronto. University of Toronto Press. 1995

Creighton, D. *Canada's First Century, 1867-1967*. Toronto. Macmillan of Canada. 1970.

Cross, M. "The Canadian Worker in the Early Industrial Age." *Lectures in Canadian Labour and Working-Class History*. Ed. Cherwinski, W. and Kealey, G. Committee on

Cross, M. S. *The Workingman in the Nineteenth Century*. Toronto. Oxford University Press. 1974.

Crowley, T. "Rural Labour". *Labouring Lives; Work and Workers in Nineteenth-Century Ontario*. ed. Paul Craven. Toronto. University of Toronto Press. 1995.

Curtis, J.D. *St. Thomas and Elgin Medical Men of the Past*. (no publication data) Gerstein Library. R464 A1C87c.1

Curtis, B. *The Politics of Population: State Formation, Statistics and the Census of Canada, 1840-1875*. Toronto. University of Toronto Press. 2000.

Dela Fosse, F. *Reminiscences of a Vagabond*. Thunder Bay Historical Society. undated.

Derickson, A. *Workers' Health, Workers' Democracy, the Western Miners' Struggle 1891 – 1925*. Ithaca. Cornell University Press. 1988.

Dermatotoxicology, Seventh Edition. Edited by Hongbo Zhai, Klaus-Peter Wilhelm, Howard I. Maibach. CRC Press. Boca Raton. 2008.

Dodd, D. "Helen MacMurphy: Popular Midwifery and Maternity Services for Canadian Pioneer Women" in *Caring and Curing: Historical Perspectives on Women and Healing in Canada*, edited by Dianne Dodd and Deborah Gorham. Ottawa. University of Ottawa Press. 1994.

Douglas, F.C. "The Fort William Epidemic of Typhoid Fever in 1906." *The Canadian Association Medical Journal*. August 1911.

Dubinsky, K. *Improper Advances: Rape and Heterosexual Conflict in Ontario, 1880-1929*. Chicago. University of Chicago Press, 1993.

Ducin, L. "Labour's Emergent Years and the 1903 Riots." *50 Years of Labour in Algoma; Essays on Aspects of Algoma's Working-Class History*. Sault Ste. Marie. Algoma University College. 1978.

Duffin, J. *Langstaff, a Nineteenth Century Medical Life*. Toronto. University of Toronto Press. 1993.

Dufresne, V. and Thompson, C. *Canada's Forgotten Gold Rush: The Goldfields of Larder Lake*. Township of Larder Lake. 1999.

Dymond: One Hundred Years in the Making. ed. Deborah Ranchuk. Corporation of the Township of Dymond. 2001.

Endicott, S.L. *Bienfait: The Saskatchewan Miners' Struggle of '31*. Toronto. University of Toronto Press. 2002.

Fancy, P. *A Coleman Township Road Guide to Historic Cobalt Mines*. Cobalt. Peter Fancy. 1994.

Fancy, P. *Boston Creek: Golden Echoes of an Ontario Mining Camp*. Cobalt. The Highway Book Shop. 2002.

Fancy, P. *George A. Young; Mining Broker, Early Northern Ontario Stories*. Cobalt. The Highway Book Shop. 2004.

Fancy, P. *Silver Centre: The Story of an Ontario Mining Camp*. Cobalt. The Highway Book Shop. 1985.

Farmiloe, D. *Elk Lake: Lore and Legend*. Cobalt. Highway Book Shop. 1999.

Fitzpatrick, A. *The University in Overalls; A Plea for Part-Time Study*. Toronto. The Hunter-Rose Company. 1920.

"'And I Feel Like I'm Dying From Mining for Gold': Disability, Gender and the Mining Community, 1920-1950," *Labour: The Study of the Working Class in the Americas*, Vol.3 No. 3 (Fall 2006).

Forestell, N. "Bachelors, Boarding-Houses, and Blind Pigs: Gender Construction in a Multi-Ethnic Mining Camp, 1909 – 1920" in *A Nation of Immigrants*. ed. F. Iacovetta et al. Toronto. University of Toronto Press. 2002.

Frank, D. "Organized Labour and the Making of Public Policy in Twentieth-Century New Brunswick", *Journal of New Brunswick Studies/Revue d'études sur le Nouveau-Brunswick*, Issue 2 (2011)

Fudge, J. & Tucker E. *Labour Before the Law: The Regulation of Workers' Collective Action in Canada, 1900 – 1948*. Toronto. Oxford University Press. 2001.

Fudge, J. & Tucker E. "Introduction." *Work on Trial; Canadian Labour Law Struggles*. Toronto. The Osgoode Society for Canadian Legal History. 2010.

Gagan, D. *A Necessity Among Us: the Owen Sound General and Marine Hospital 1891-1985*. Toronto. University of Toronto Press. 1990.

Gaudeau, G. *La Mobilité des Ouvriers-Mineurs du Nord Ontarien et Québécois 1900-1939*. Sudbury. Human Sciences Monograph Series.1998.

Gentilcore, L. and Head, C. H. *Ontario's History in Maps*. Toronto: Published for the Ontario Historical Studies Series, University of Toronto Press. 1984.

Gidney, R. and Millar, W. "The Origins of Organized Medicine in Ontario, 1850-1869."

Ginzburg, C. "Morelli, Freud and Sherlock Holmes: Clues and Scientific Method." *History Workshop Journal*. Rome. 1980.

Godfrey, C.M. *Medicine for Ontario, A History*. Toronto. Mika Publishing. 1979.

Gouda, F. "Gender and 'Hyper-Masculinity' as Post-Colonial Modernity during Indonesia's Struggle for Independence, 1945-1949." *Indonesia*. Ithaca. Cornell University. 1997.

Greening, W.E. "The Lumber Industry in the Ottawa Valley and the American Market in the Nineteenth Century." *Ontario History*. Vol. LXII. No. 2. Ontario Historical Society. June 1970.

Howard, I. *Gold Dust on His Shirt; The True Story of an Immigrant Mining Family*. Toronto. Between the Lines. 2008.

Grove, J.W. *Organized Medicine in Ontario*. Toronto. Queen's Printer. 1969.

Hak, G. "British Columbia Loggers and the Lumber Workers Industrial Union, 1919-1922." *Labour/Le Travail*. 23. Spring 1989. pp. 67-90.

Hanes, D. *Iron Mining at Bessemer, 1899-194 The Hand of Father Time*. Cobalt. The Highway Book Shop. 2002.

Health, Disease and Medicine, Essays in Canadian History. Ed. Charles Roland. The Hannah Institute of the History of Medicine. Clarke Irwin. 1984.

Heath, F.M. & Tessier, G.E. "Industrial Accidents and Working Conditions". *50 Years of Labour in Algoma; Essays on Aspects of Algoma's Working-Class History*. Sault Ste. Marie. Algoma University College. 1978.

Heath, F.M. "Labour, the Community, and the Pre-World War I Immigration Issue." *50 Years of Labour in Algoma; Essays on Aspects of Algoma's Working-Class History*. Sault Ste. Marie. Algoma University College. 1978.

Hedges, C. *War is a Force that Gives Us Meaning*. New York. Random House Publishing. 2002.

Hedley, D.G.F. *Rockburst Handbook for Ontario Hardrock Mines*. Mining Research Laboratories. Minister of Supply and Services Canada. Ottawa. 1992.

Heron, C. "Boys Will Be Boys: Working-Class Masculinities in the Age of Mass Production." *International Labor and Working-Class History*. 2006. (on-line publication)

Heron, C. *Workers' Revolt in Canada, 1917-1925*. Toronto. University of Toronto Press. 1998.

Heron, C. *Working in Steel, The Early Years in Canada, 1883-1935*. Toronto. McClelland and Stewart. 1991.

"History of Coal Mining in Nova Scotia." On-line source.
<http://www.mininghistory.ns.ca/nsdm/dm187104.htm>. Accessed October 5, 2007.

Hoffman, A. *Free Gold; The Story of Canadian Mining*. Toronto. Rinehart and Company. 1947.

Holley, F. *Just Passing Through; The People and the Places North of Matachewan*. Cobalt. The Highway Book Shop. 1984.

Holman, A. *A Sense of Their Duty: Middle-Class Formation in Victorian Ontario Towns*. McGill-Queen's University Press. Montreal. 2000.

Hopkins, J.C. *Progress of Canada in the Nineteenth Century*. Toronto. Progress Series. 1900.

Howard, I. *Gold Dust on His Shirt; The True Story of an Immigrant Mining Family*. Toronto. Between the Lines. 20008.

Howey, F. *Sudbury Minus One* (part of a series called *Pioneering on the C.P.R.*). 1938.

Humphries, M. "War's Long Shadow: Masculinity, Medicine and the Gendered Politics of Trauma, 1914 – 1939." *The Canadian Historical Review*. Vol.91. Issue 3. September 2010. pp.503-531.

Hunter, K.M. *Doctors' Stories; The Narrative Structure of Medical Knowledge*. Princeton. Princeton University Press. 1991.

Isles, E.A. *Ask the Grey Sisters; Sault Ste. Marie and the General Hospital 1898-1998*. Toronto. Dundurn Press. 1998.

Jack, D. *Rogues, Rebels, and Geniuses; The Story of Canadian Medicine*. Toronto. Doubleday Canada Limited. 1981.

Jager, R. "Tool and Symbol, the Success of the Double-Bitted Axe in North America." *Technology and Culture* 40.4. Society for the History of Technology. 1999.

Jarvis, E. "The Georgian Bay Ship Canal: A Study of the Second Canadian Canal Age, 1850-1915." *Ontario History*. Vol. LXIX. No. 2. Ontario Historical Society. June 1977.

Jarvis, W.H.P. *Trails and Tales in Cobalt*. Toronto. William Briggs. 1908.

Jaworsky, B. *Lamps Forever Lit; A Memorial to Kirkland Lake Area Miners*. Calgary. Cambria Publishing. 2001.

Kauffmann, C. *Logging Days*. Sault Star Commercial Printing. Sault Ste. Marie. 1970.

Kealey, G. "The Structure of Canadian Working-Class History." *Lectures in Canadian Labour and Working-Class History*. Ed. Cherwinski, W. and Kealey, G. Committee on Canadian Labour History. St. John's. 1985.

Keefer, T.C. *Philosophy of Railroads; Railroad Promotion and Manipulation in the Nineteenth Century*. Toronto. University of Toronto Press. 1972.

Keshen, J. *Propaganda and Censorship During Canada's Great War*. Edmonton. University of Alberta Press. 1996.

Kuhlberg, M. "Eyes Wide Open": E. W. Backus and the Pitfalls of Investing in Ontario's Pulp and Paper Industry, 1902-1934." Laurentian University. 2007.

Lankton, L. *Beyond the Boundaries: Life and Landscape at the Lake Superior Copper Mines*. New York. Oxford University Press. 1997.

Lankton, L. *Cradle to Grave, Life Work and Death at the Lake Superior Copper Mines*. New York. Oxford University Press. 1991.

Laugen, R.T. *The Gospel of Progressivism: Moral Reform and Labor War in Colorado, 1900-1930*. Boulder. University of Colorado. 2010.

Levi, G. "On Microhistory". *New Perspectives on Historical Writing*. Ed. Peter Burke. P.102. University Park. University of Pennsylvania. 2001.

Lower, A.R.M. *Canadians in the Making, A Social History of Canada*. Toronto. Longmans, Green and Company. 1958.

Lower, A.R.M. *Settlement & the Forest Frontier in Eastern Canada* - A.R.M. Lower. MacMillan Company of Canada at St. Martin's House. Toronto. 1936.

Lower, A.R.M. *Great Britain's Woodyard: British America and the Timber Trade, 1763-1867*. Toronto. McGill-Queen's University Press. 1973.

Long, G. & Whiteman, R. *When Giants Fall: the Gilmour quest for Algonquin Pine*. Huntsville. Fox Meadow Creations. 2001.

Lower, A.R.M. *North America's Assault on the Canadian Forest as well as Great Britain's Woodyard, British America and the Timber Trade 1763-1867*. New Haven. Yale University Press. 1938.

Lucas, R. *Minetown, Milltown, Railtown: Life in Canadian Communities of Single Industry*. Toronto. University of Toronto Press. 1971.

MacDonald, J.E. *This Point of Land: An account of the early history of Thessalon and the surrounding farming community within the bounds of Thessalon Township*. Thessalon Township. 1977.

Macdougall, J.B. . *Two Thousand Miles of Gold, from Val D'Or to Yellowknife*. Toronto. McClelland and Stewart. 1946.

Macdonnell, N. *Dr. Thos. S.T. Smellie, 1849 – 1925*. Times Journal Presses. Fort William. 1932.

Macleod, D. "Colliers, colliery safety and workplace control: the Nova Scotian experience, 1873 to 1910." *CHA Hist. papers*, 1983.

MacNab, E. *A Legal History of Health Professions in Ontario*. Toronto. Committee on the Healing Arts. 1970.

MacSwinney, R.F. *The Law of Mines, Quarries and Minerals. Second Edition*. London. Sweet and Maxwell. 1897.

- MacTaggart, H.I. *Publications of the Government of Ontario 1901-1955*. Toronto. University of Toronto Press. 1964.
- Marchak, P. "Labour in a Staples Economy." *Working Canadians; Readings in the Sociology of Work and Industry*. Ed. Lowe, G.S. and Krahn, H.J. Toronto. Methuen Press. 1984.
- Marks, L. "Religion, Leisure and Working-Class Identity." *Labouring Lives; Work and Workers in Nineteenth-Century Ontario*. ed. Paul Craven. Toronto. University of Toronto Press. 1995.
- Martin, C.D. "Algoma Becomes Politically Active 1914-1922." *50 Years of Labour in Algoma; Essays on Aspects of Algoma's Working-Class History*. Sault Ste. Marie. Algoma University College. 1978.
- Marwick, A. *Northland Post; pioneer people, the saga of railroad building, the hazards of settlement, and the tales of old-timers reveal all the humour, pathos and adventure of life in Northern Ontario*. Cochrane. 1950.
- Masters, D.C. *A Short History of Canada*. Toronto. Anvil Press. 1958.
- Maynard, S. "Rough Work and Rugged Men: The Social Construction of Masculinity in Working-Class History." *Labour/Le Travail*. Spring. Journal of Canadian Labour Studies. 1989.
- McCallum, M. E. "Corporate Welfarism in Canada 1919-1939." *The Canadian Historical Review*. Vol. 71. (March 1990.)
- McEvoy, B. L. *Canada's Buried Treasures; The Story of Minerals and Their Discovery*. Toronto. McClelland and Stewart. 1968.
- McIntosh, R. "Boys in the Mining Community". *Home Work and Play; Situating Canadian Social History, 1940-1980*. ed. Opp, J. and Walsh, J. Toronto. Oxford University Press. 2006.
- McIntosh, R. *Boys in the Pits: Child Labour in Coal Mines*. Montreal & Kingston. McGill-Queen's University Press. 2000.
- McKay, I. "The Realm of Uncertainty: The Experience of Work in the Cumberland Coal Mines, 1873-1927." *Acadiensis* 16. 1986.
- McPhedran, A. "Undergraduate Training and Requirements for License to Practice." *The Canadian Association Medical Journal*. January 1912.
- McPherson, K. *Bedside Matters: The Transformation of Canadian Nursing, 1900-1990*. Toronto. Oxford University Press. 1996.

“Medical Societies.” *The Canadian Medical Association Journal*. August 1925.

Mellinger, P. *Race and Labor in Western Copper; the Fight for Equality 1896 – 1918*. Tucson. University of Arizona Press. 1995.

Miller, I.H. *Our Glory and Our Grief; Torontonians and the Great War*. University of Toronto Press. Toronto. 2002.

Mills, J.M. “Life in the Lumber Camp: 1883.” *Ontario History*. Vol. LIX. No. 3. Ontario Historical Society. September 1967.

Mitchinson, W. *The Nature of Their Bodies: Women and Their Doctors in Victorian Canada*. Toronto. University of Toronto Press. 1991. *Essays in the History of Canadian Medicine*. with Janice P. Dickin. Toronto. McClelland and Stewart. 1988.

Moore, R. and Gillette, D. *King, Warrior, Magician, Lover: Rediscovering the Archetypes of the Mature Masculine*. New York. Harper Collins. 1990.

Morris, D. *When Your Number's Up: The Canadian Soldier in the First World War*. Toronto. Random House. 1993.

Morrison, J. “Ethnicity and Class Consciousness: British, Finnish and South European Workers at the Canadian Lakehead Before World War One.” *The Lakehead University Review*. 9/1. 1976.

Morton, D.A. *Fight or Pay, Soldiers' Families in the Great War*. Vancouver. UBC Press. 2004.

Morton, D. *A Military History of Canada*. Toronto. McClelland and Stewart. 1999.

Morton, D. *A Short History of Canada, Third Revised Edition*. Toronto. McClelland and Stewart. 1997.

Mouat, J. *Roaring Days; Rossland's Mines and the History of British Columbia*. Vancouver. UBC Press. 1995.

Mullally, S. “The Importance of Being a ‘Country Doctor’: Narrative and Identity in 20th Century Rural Health Care,” History of Medicine Lecture Series, University of Alberta, Edmonton. 2008.

Mullally, S. *Unpacking the Black Bag: Country Doctors and the Social Transformation of Rural Medicine 1900-1950*. Toronto. University of Toronto Press. 2009.

Myers, G. *A History of Canadian Wealth. Vol. 1*. Toronto. James Lewis and Samuel. 1972.

Nash, Jeffrey et al. *The American People, Creating a Nation and a Society*. 3rd Edition. Don Mills. Longman Press. 2000.

Naylor, T. *The History of Canadian Business 1967 – 1914. Vol. 1*. Toronto. James Lorimer and Company. 1975.

Neill, R. “The Politics and Economics of Development in Ontario.” *Ontario History*. Vol. LXX. No.4. Ontario Historical Society. December 1978.

Nelles, H.V. *The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1849-1941*. Toronto: Macmillan of Canada. 1974.

Norris, J. “The Country Doctor in British Columbia 1887-1975. An Historical Profile.” *BC Studies*. No. 49. Spring 1981. pp.15-39

Oliver, E.B. “Department of Health”. Thunder Bay Historical Society 1914. Thunder Bay. 1915.

Pain, S. A. *The Way North: Men, Mines and Minerals*. Toronto. The Ryerson Press. 1970.

Pain, S. A. *Three Miles of Gold: The Story of Kirkland Lake*. Toronto. The Ryerson Press. 1960.

Palmer, B. “Labour in Nineteenth-Century Canada”. *Lectures in Canadian Labour and Working-Class History*. Ed. Cherwinski, W. and Kealey, G. Committee on Canadian Labour History. St. John’s. 1985.

Palmer, B. “Use of Census Manuscript Data for Historical Research.” *Histoire Sociale/Social History*. XXVIII. 56. November 1995.

Parr, J. *The Gender of Breadwinners; Women, Men, and Change in Two Industrial Town, 1880-1950*. Toronto. University of Toronto Press. 1990.

Penfold, S. “Have You no Manhood in You?”: Gender and Class in the Cape Breton Coal Towns, 1920-1926.” *Acadiensis* XXIII. 2 (1994) pp.21-44

Perry, A. *At the Edge of Empire; Gender, Race and the Making of British Columbia, 1849-1871*. Toronto. University of Toronto Press. 2001.

Piovesana, R.H. *Robert J. Manion: Member of Parliament for Fort William, 1917-1935*. Thunder Bay. Thunder Bay Historical Museum and Society. 1990.

Piva, M.J. “The Workmen’s Compensation Movement in Ontario.” *Ontario History*. Vol. LXVII. No. 1. Ontario Historical Society. March, 1975.

“Planes Race Dog Teams in New Gold Rush; Wildest Stampede Since Klondike Days Follows Reported Discovery of Rich Mines in Wilds of Northern Ontario.” *Popular Mechanics*. Vol.45 No. 6. June 1926.

Powell, M. “Public Health Litigation in Ontario 1884-1920” *The History of Public Health in the Modern State*. ed. Porter, D. Atlanta. The Wellcome Institute. 1994.

Poutanen, Mary Anne. “Swatting Flies for Health” CHA conference paper. 2005.

Powell, M. and MacDougall, H. “Enlightening the Public” The Views and Values of Executive Health Officers of Ontario 1886-1903”. *Activists and advocates: Toronto's Health Department, 1883-1983*. ed. Heather Anne MacDougall. Toronto. Dundurn Press. 1990.

Qadeer, M. and Kumar, S. “Ethnic Enclaves and Social Cohesion.” *Canadian Journal of Urban Research. Special Issue. Our Diverse Cities: Challenges and Opportunities*. Winnipeg. Institute of Urban Studies. 2006.

Radforth, I. “The Shantymen.” *Home Work and Play; Situating Canadian Social History, 1940-1980*. ed. Opp, J. and Walsh, J. Toronto. Oxford University Press. 2006.

Rajala, R. “Up-Coast: Forests and Industry on British Columbia's North Coast, 1870-2005.”

Rajala, R.A. “The Forest as Factory: Technological Change and Worker Control in the West Coast Logging Industry, 1880-1930.” *Labour/Le Travail*, 32. Fall 1993.

Rhymes of the Miner; An Anthology of Canadian Mining Verse. ed. E.L. Chicanot. Gardenvale, P.Q. Federal Publications Limited. 1937.

Risk, R.C.B. “This Nuisance of Litigation” The Origins of Workers’ Compensation in Ontario” *Essays in the History of Canadian Law*. Vol 11. Ed. D. Flaherty. Toronto. The Osgoode Society. 1984. p.421.

Robin, M. *Radical Politics and Canadian Labour, 1880-1930*. Kingston. Queen’s University. 41968.

Robson, R. “Idle Hands on the Resource Frontier: Leisure Time Activity in Canada’s Resource Sector.” *Journal of American History*. Vol. 14. 1991.

Roland, C. G. “Ontario Medical Periodicals as Mirrors of Change.” *Ontario History*. Vol. LXXII. No. 1. Ontario Historical Society. March 1980.

Romano, T. “Professional Identity and the Nineteenth Century Ontario Medical Profession”. *Social History*. May 1995.

Roper, M. "Slipping Out of View: Subjectivity and Emotion in Gender History." *History Workshop Journal*. Issue 59. 2005.

Rosner, D. and Markowitz, G. *Deadly Dust: Silicosis and the On-Going Struggle to Protect Workers' Health (Conversations in Medicine and Society)*. University of Michigan Press. 2006.

Sandbert, L.A. "Trouble in the Woods: Forest Policy and Social Conflict in Nova Scotia and New Brunswick." Fredricton. Acadiensis Press. 1992.

Sawyer, G. *The First 100 Years; A History of the Ontario Medical Association*. Toronto. Ontario Medical Association. 1981.

Smith, L.N. *Schumacher, Voices in the Gold Fields*. Burnstown. General Store Publishing House. 2002.

P. *Harvest from the Rock; A History of Mining in Ontario*. Toronto. Macmillan of Canada. 1986.

Solski, M. and Smaller, J. *Mine Mill; The History of the International Union of Mine, Mill and Smelter Workers in Canada since 1895*. Ottawa. Steel Rail Publishing. 1984.

Spaulding, W. B. "Smallpox Control in the Ontario Wilderness, 1880-1910." *Health, Disease and Medicine, Essays in Canadian History*. Ed. Charles Roland. The Hannah Institute of the History of Medicine. Clarke Irwin. 1984.

Stacey, C.P. *Canada and the Age of Conflict, Volume 1: 1867 – 1921*. Toronto. University of Toronto Press. 1992.

Stott, R.M. *Hamilton's Doctors 1863-1935; Guardians of the City's Health*. Hamilton. The Hamilton Academy of Medicine and The Hamilton Academy of Medicine Foundation. 1995.

Stretch, R.H. *Prospecting Locating And Valuing Mines: A Practical Treatise For The Use Of Prospectors Investors And Mining Men Generally (1900)*. Helena. Kessinger Publishing. 2008.

Taylor, B. *New Liskeard; The Pioneer Years*. Cobalt. The Highway Book Shop. 2003.

Taylor, B. *Place Names of Temiskaming*. New Liskeard. White Mountain Publications. 2000.

Taylor, M.G. "The Role of the Medical Profession in the Formulation and Execution of Public Policy." *Canadian Journal of Economics and Political Science*. Vol. 26. 1960.

Taylor, B. *A Pioneer Ministry. St. Andrew's Presbyterian Church, New Liskeard, Ontario, Centennial History 1895 – 1995*. New Liskeard. St. Andrew's Presbyterian Church. 1995.

Temiskaming Abitibi Heritage Association. *Early Temiskaming Stories of Survival; "Root, Hog, or Die!"* Mississauga. Gateway Reproductions Ltd. 1998. p.18.

The Family Physician or Every Man his Own Doctor, an Encyclopedia of Medicine. Toronto. The Musson Book Company. 1889.

The Home Physician and Guide to Health; A Treatise on the Prevention and Cure of Disease; Not Intended to Take the Place of the Family Physician, but to Aid the Reader in Cooperating with Him Intelligently. ed. Evans, N., Magan, P., Thomason, G. Oshawa. Canadian Watchman Press. 1924.

"The J.R. Booth Story." *Your Forests*. Vol. 11. No.2. a Forestry Resources Group Publication. Public Archives Canada. Ontario Ministry of Natural Resources. 1978.

"The Medical Inspection of Immigrants." *The Canadian Association Medical Journal*. Editorial. November 1912. pp. 1020-1022.

Tosh, J. "What Should Historians do with Masculinity? Reflections on Nineteenth-century Britain." *History Workshop Journal, Issue 38*. 1994.

Trinnell, J.R. *J.R. Booth: the life and times of an Ottawa lumberking*. Whitney. TreeHouse Publishing. 1998.

Tronrud, T.J. "Frontier Social Structure: The Canadian Lakehead, 1871 and 1881." *Ontario History*. Vol. LXXIX. Number 2. June 1987. pp.145 – 165.

Tucker, A. *Steam into Wilderness, Ontario Northland Railway 1902-1962*. Toronto. Fitzhenry and Whiteside. 1978.

Tucker, E. *Administering Danger in the Workplace: The Law and Politics of Occupational Health and Safety Regulation in Ontario, 1850-1914* Toronto: University of Toronto Press, 1990.

Tucker, E. "The Law of Employers' Liability in Ontario 1861-1900: The Search for a Theory." *Osgoode Hall Law Journal Vol. 22, No. 2*, pp. 213-280, 1984.
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1892297

Tyer, R. *Saddlebag Surgeon: the Story of Murrough O'Brien*. Toronto. Dent & Sons. 1954.

"Use of Census Manuscript Data for Historical Research." *Histoire Sociale/Social History*. XXVIII. 56. November 1995.

Vance, J. *Death So Noble: Memory, Meaning and the First World War*. Vancouver: University of British Columbia Press, 1997.

W.L.T. Addison. "Some Disadvantages of the Workmen's Compensation Act which Lead the Employer to be Less Interested in the Health of the Employee." *The Canadian Medical Association Journal*. Vol. 15(7). July 1925.

Wamsley, K. and Whitson, D. "Celebrating Violent Masculinities: The Boxing Death of Luther McCarty." *Home Work and Play; Situating Canadian Social History, 1940-1980*. ed. Opp, J. and Walsh, J. Toronto. Oxford University Press. 2006.

Webber, J. "Labour and the Law". *Labouring Lives; Work and Workers in Nineteenth-Century Ontario*. ed. Paul Craven. Toronto. University of Toronto Press. 1995.

Wegenast, F.W. *Workmen's Compensation for Injuries; a sketch of the present law in Ontario and a comparison of the systems of some other countries*. Toronto. The Canadian Manufacturers Association. 1911.

Wilde, T. "Freshettes, Farmerettes and Feminine Fortitude at The University of Toronto during the First World War." *'A Sisterhood of Suffering and Service': Women and Girls of Canada and Newfoundland during the First World War*. Vancouver. UBC Press. 2012.

Wilde, T. "Literacy at the Resource Frontier; A Matter of Life and Death." *Historical Studies in Education Journal*. 2012.

Willinsky, A. I. *A Doctor's Memoirs*. Toronto. The Macmillan Company of Canada. 1960.

Wittick, M.A. *The Doctor Who Never Refused a Call: An Autobiography*. Sprucedale, Ont.: Olympic Printing, 1978.

"Workmen's Compensation in Ontario." *The Canadian Association Medical Journal*. June 1914. pp. 516-517.

Wyman, M. *Hard Rock Epic Western Miners and the Industrial Revolution, 1860-1910*. Los Angeles. University of California Press. 1979.

Zarnowski, C.F. "Working at Play: The Phenomenon of 19th Century Worker-Competitions." *Journal of Leisure Research*: Second Quarter 2004.

Ziff, B. *Unforeseen Legacies*. Toronto. University of Toronto Press. 2000.

Internet Sources

Canada Census figures and data from 1891, 1901 and 1911.

<http://automatedgenealogy.com/census/> and <http://automatedgenealogy.com/census11/> .

The Canadian Association Medical Journal. Various issues 1911-1930.

<http://www.ncbi.nlm.nih.gov/pmc/journals/188/>

“What are giardia and cryptosporidium?” Environmental and Workplace Health. 2001. Health Canada. Accessed August 2008. http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/giardia_cryptosporidium-eng.php.

De Kalb, C. *Manual of Explosives*. Toronto. Ontario Bureau of Mines. 1900.

<http://www.archive.org/details/manualofexplosiv00dekarich>. Accessed December 2008.

Ontario Ministry of Northern Development and Mines.

www.geologyontario.mndm.gov.on.ca

Public Health Canada 1899. National Archives of Canada. Accessed 2009.

[http://www.archivescanada.ca/english/search/ItemDisplay.asp?sessionKey=1251137684043_206_191_57_202&l=0&v=0&lvl=1&coll=1&rt=1&itm=183814&rsn=S_WWWaaaNP_WKXF&all=1&dt=AW+"montizambert"&spi=-](http://www.archivescanada.ca/english/search/ItemDisplay.asp?sessionKey=1251137684043_206_191_57_202&l=0&v=0&lvl=1&coll=1&rt=1&itm=183814&rsn=S_WWWaaaNP_WKXF&all=1&dt=AW+)