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“The Curse of Our Trade”: Occupational Disease in a Vermont Granite Town

The distinctions between occupational and contagious diseases obscured the relationship between the working conditions of the stonecutters and the health of the larger community.

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Barre, Vermont, is a one-industry town. It is the center of the Vermont granite industry, where the stone is both quarried and manufactured. For the granite cutters who worked in the manufacturing sheds prior to the installation of dust-removing equipment in the late 1930s, respiratory problems were endemic and many of the men died before the age of fifty. During this period, granite cutters, physicians, and public health officials contested the nature and cause of the stonecutters' condition. An examination of that debate shows that it was also a dispute over the responsibility of the worker to remain productive and over the responsibility of the manufacturers for the health of the stonecutters, their families, and the community.

During the early decades of the twentieth century, as health problems among stonecutters became increasingly apparent, members of the workers' union claimed that the cause of their common health difficulties was work-related. At the time, however, physicians considered the workers' condition a form of tuberculosis, and public health information was directed at educating the stonecutters and their families in more sanitary practices. The stonecutters accepted the medical opinion that their illness

was a form of tuberculosis. In observing the vast number of the members of their trade who were afflicted, however, they concluded that the disease was somehow related to their working conditions, the most likely source being the great amount of granite dust that filled the manufacturing sheds after the introduction of pneumatic tools. The terms used in the town to describe the disease—such as “stonecutters’ t.b.” and “granite cutters’ consumption”—expressed their conception of a single disease that was both infectious and work-related.

In their struggle to change their working conditions and abate disease, the stonecutters’ union, the Granite Cutters’ International Association, forged a relationship with one of the town doctors, D. C. Jarvis, who also believed their condition to be work-related. This interaction facilitated the redefinition of the stonecutters’ condition as an occupational disease and as separate from tuberculosis.

The inclusion of silicosis in the Vermont Workmen’s Compensation Bill of 1951 signified its acceptance as an occupational disease in Vermont, placing responsibility for unhealthy working conditions on local industry. However, the bill did not include the infectious stage of the condition in the definition of occupational disease, even though by 1951 it had long been accepted in the medical profession that a relationship existed between silicosis (or pneumoconiosis) and tuberculosis. In other words, a worker who contracted silicosis was more susceptible to lung infections such as tuberculosis (and prior to the 1940s, tuberculosis was the greatest threat to the silicotic), but only to the extent that the physicians diagnosed the disability as having been a direct result of silicosis was the employee eligible for compensation. This medical definition of occupational disease was narrower than the one originally identified by the stonecutters—a disease that was both infectious and a result of the conditions of the trade.

The debate in Barre over the granite cutters’ disease provides support for the view held by anthropologists, historians, and sociologists that medicine is socially constructed.¹ In particular, I hope to convey the active role that laypeople play in the formation of medical knowledge. The authority that is held and sought by medicine provides avenues, not just for the expert, but also for members of the laity to advance their own interests. For example, the relationship between Dr. Jarvis and the stonecutters’ union offered Jarvis greater opportunity to do research on occupational disease and to advance his position in the profession, ultimately facilitating the expansion of the medical domain. However, it also imbued the stonecutters’ claims with the authority of scientific medicine, supporting their demands for improved working conditions. The evidence also suggests that, while participating in the redefinition

of their condition and in following the advice of doctors and public health officials, the stonecutters enacted an ideology, embedded in medical disease categorization and treatment, of the worker's responsibility to remain productive and of the limited responsibility of the manufacturers for the health of the stonecutters and their community.

Professional granite manufacturing began in Barre during the second decade of the nineteenth century. The first items produced by the manufacturing sheds were millstones. Eventually, the main product of the manufacturing companies became memorials, produced for both public spaces and private gravesites. By the turn of the century, cemetery monuments became the mainstay of the industry.² The expansion of the railroad in the last decades of the century eased the burden of bringing the granite from the quarries into town to be carved into monuments and allowed the industry to enter the world market. The growing industry attracted workers from other parts of the United States and from Europe, the majority from Scotland and Italy. The last two decades of the nineteenth century saw a huge growth in the granite industry and in the population of Barre, which rose from 2,060 residents in 1880 to 6,790 in 1890 and to 11,754 in 1900.³ The number of employees in the industry increased from one hundred in 1880 to three thousand in 1910.⁴

With the decline in farming in the region, local tool companies transferred their efforts from the manufacturing of agricultural tools to the development of technology for the expanding granite industry. By the early 1890s pneumatic tools were in use in both the quarries and manufacturing sheds, replacing the hand drills, chisels, and wedges that the stonecutters had previously been using.⁵ The concern over job security and the increase in dust created by the new tools caused unrest among the employees of the manufacturing sheds, where the added dust was most troublesome.

By the turn of the century, the stonecutters were becoming aware of the high rate of tuberculosis among the members of their profession. They suspected that the lung disease was related to the dust, but were unsure how to reduce it or its effects. For those who had cut stone in Italy, both the poorer health of the Barre stonecutters and the adverse working conditions they now experienced were in striking contrast to what they had known earlier. The cold climate made it necessary to work indoors in poorly heated sheds with little ventilation. The shed and the use of the new pneumatic tools made dust much more of a problem in Barre than in Italy. Iside Brusetti began stonecutting at the age of fourteen in northern Italy. He came to the United States with his father and started work in a Barre manufacturing shed in 1906. In a 1972 interview, Brusetti explained, "In Italy, the sheds were like the porch here, open



Granite finishing plant in Barre, ca. 1900.

with the wind blowing the dust away all the time. Here, the dust would be so thick in the sheds that you could not see the man next to you.” Even in winter Mr. Brusetti would work outside because “it was always better to breathe the icy air than it was to breathe the dust.”⁶

During this time the Barre-based *Granite Cutters' Journal* recorded the deaths of members by “consumption,” “tuberculosis,” “stonecutters’ consumption,” and “granite cutters’ consumption.” The journal also reflected workers’ concern with the amount of dust in the sheds and articulated their demands to have it removed. In a 1905 edition of the journal, a member of the union wrote that a device to carry away the dust should be used in the sheds because “the constant breathing of dust is unquestionably detrimental to health.” He further argued that it was the responsibility of the employers to reduce the dust and that “[a]mong the several methods in practice for producing and controlling currents of air, it is undoubtedly possible to arrange a device for carrying off the dust-laden atmosphere about stone-dressing machinery.”⁷

In 1909, stonecutters in Northfield walked off the job because they refused to use a hand-held surfacer (the “bumper”), the introduction of which greatly increased the amount of dust. Iside Brusetti recalled that the men walked out of the sheds because the machine was uncomfortably heavy. Another stonecutter referred to it as the “nerve destroying, body wrecking jar of a man-killing bumper”;⁸ but the most common complaint

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was that it created more dust. In the monthly correspondence to the *Granite Cutters' Journal*, a member from Waterbury, Vermont, wrote:

Once more the great white plague has claimed one of our most highly esteemed members, Thomas Milne, who passed away at the Vermont Sanatorium at Pittsford, Vt., after several months' illness. And who will say but that our fight to do away with such a deadly disease-breeding machine as "the hand surfacer" after a few of such cases, was a most just and honorable fight for self-protection.⁹

The manufacturers, however, were reluctant to limit the use of new tools. When an agreement was reached between the union and manufacturers that placed restrictions on hand-surfacers over a certain weight, the manufacturers were quick to introduce a machine that was less than the weight stated in the agreement.¹⁰

The problem of dust continued to cause tension between the stonecutters and manufacturers during the first decades of the twentieth century. By 1903, regulations regarding the control of dust in the sheds were included in labor agreements, but methods such as sweeping and watering down the stones were ineffective in the elimination of dust or in reducing the incidence of lung disease among the stonecutters.¹¹ The tuberculosis death rate for the county in which Barre is situated was three times as high as the state average between 1920 and 1939.¹² A study of mortality among granite workers from 1926 to 1936 showed that they died approximately eleven years younger than other Vermont males and that seventy-three percent of the granite cutters had died of silico-tuberculosis.¹³ Some efforts were made during the 1920s and 1930s to develop and place suction equipment in the sheds, but it was not until 1936 that an agreement was reached that required all manufacturing sheds to install effective suction equipment on all machines. This agreement between the Granite Manufacturers' Association and the union was made only after the stonecutters agreed to decline a raise of one dollar a day so that the amount saved by the manufacturers could go towards the cost of installation.¹⁴

The Barre manufacturers refused the stonecutters' demands to stop using the bumper on the grounds that it was necessary for competition.¹⁵ Richard Hathaway has argued that the use of machines increased efficiency in the sheds and that the competition between granite and other stone manufacturers slowed investment in dust reduction.¹⁶ The rapid innovations in technology made it difficult for labor negotiations on dust reduction to keep pace. According to Hathaway, "Every time management approached responsibility in creating healthy work conditions, new machines were introduced which offered greater profit."¹⁷ When confronted with demands for the installation of dust-removing equipment, the manufacturers claimed that there was no efficient equip-

ment available.¹⁸ It was common in Barre for the owner of a shed to work alongside his employees and subject himself to the same dangerous working conditions, further supporting the argument that the demands of competition were more compelling than the needs of the individual shed owner.¹⁹

The early deaths of the stonecutters, however, threatened to deprive the industry of the labor and skills necessary for its continued prosperity. Barre residents have explained that after the dangers of the profession became apparent, many families convinced their sons to take up other professions.²⁰ Antonietta Antivi Tomat was born in Milano, Italy, in 1895. At the age of seventeen she joined her brother in Barre and eventually married an Italian stonecutter there. When she was thirty-six years old her husband died of "silicosis," and she was left to care for four children with instructions from her husband not to allow them to take up his trade: "My husband told me when he was sick, and he said, 'Listen, let them do what they want. Even if they are bootlegger[s], they gonna' put them in jail, they gonna' feed them at least. But don't send 'em down the shed or they never can come out.'"²¹ This apprehension about the conditions in the stone sheds was common among families in Barre and made them reluctant to introduce new laborers to the trade, curtailing an important form of recruitment for the manufacturing industry.

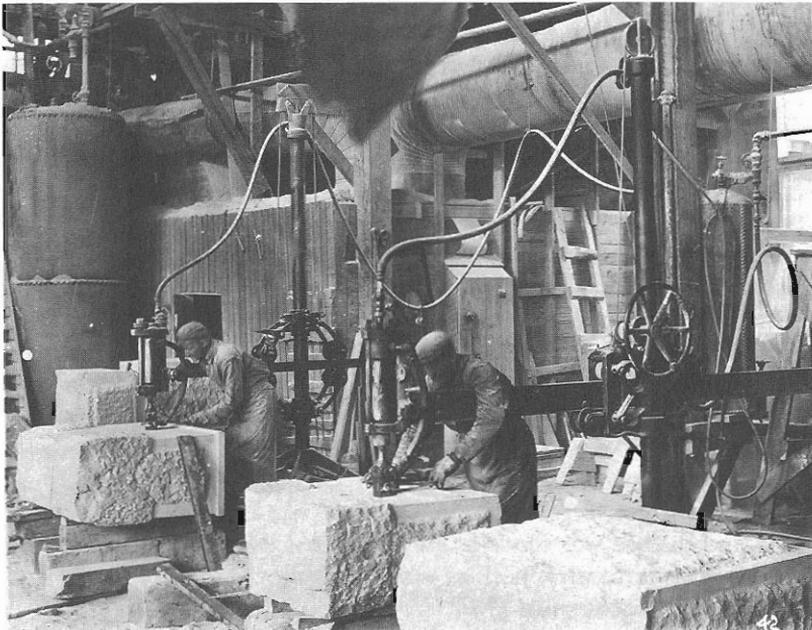
The decline in immigration, the early deaths of the stonecutters, and the reluctance of Barre families to introduce their sons to the trade brought changes in the labor supply, which were noted by the manufacturers. In 1923, the manufacturers formed the Apprentice Commission of the Granite Industry, which concluded from a national survey that "not enough apprentices were being trained to supply future requirements for competent and efficient journeymen cutters."²² Among other points, the commission recommended that "the trade be healthy" in order to attract more apprentices.²³ According to one granite manufacturer who had been a member of the Barre Granite Association for many years, a primary reason that dust-control regulations were brought into the industry in the 1930s was the threat to the industry posed by the shortage of labor.²⁴ A granite worker who began in a Barre manufacturing shed at the age of fifteen after his father, a stonecutter, died of lung disease in 1915, recalled the problem of dust in the sheds: "Well, that come up every time we had a problem with a strike. We had a lot of strikes. And the manufacturers themselves solved the problem . . ." He explained that the manufacturers "got tired of" granite cutters becoming ill just as they were acquiring the skills of the trade: "[W]e had a hard time with the manufacturers for a long time, you know. [But] [w]hen they begin to realize that it [the installation of suction equipment] would help 'em that's the way they done it."²⁵

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The future of the industry was also of concern to the stonecutters. Articles in the *Granite Cutters' Journal*, the publication of the national union, reflected not only their fears for their health but also for the destiny of the granite business. Other stone workers commented on the skills that had been lost when stonecutters died too young to pass on what they had learned. Giuliano Cecchinelli's father and grandfather were marble cutters in Italy, and Cecchinelli trained as a sculptor before moving to the United States in 1961. After arriving in Barre he was disappointed to find that although he had fewer years of experience than most local stonecutters, he was better trained and had little to learn from them. In a 1977 interview, Cecchinelli expressed his belief that the skills of the trade had been lost with the early deaths of the stonecutters:

Too bad most of them died. They couldn't very well, let's say, teach the trade to somebody else new coming in because of this dust business that they had, you know, they died of silicosis . . . that's another thing bad about it. You know, probably if the dust wasn't as . . . bad, I imagine there would have been, y'know better work today. Because naturally they would have kept it up.²⁶

We can see that the concern over the conditions in the sheds was not only related to the health of the stonecutters, but the effect of disease on the labor supply. The latter consideration would be reflected in the



Pneumatic surfacing machines in operation, Barre, ca. 1920.

information provided by members of the tuberculosis movement in the region and the advice given to the stonecutters and manufacturers by Dr. Jarvis.

The stonecutters' call for removal of dust and their suspicion of the machines that created it reveal the association they made between the dust and disease. Their names for their condition further indicate that they thought of it not only as a form of tuberculosis but as a tuberculosis that was tied to their work. Along with their efforts to influence the technological conditions of their work, the stonecutters also tried to stay abreast of medical knowledge of the causes and cures of tuberculosis. As we will see, this information influenced the stonecutters' own dialogue and beliefs about disease and their working conditions.

During the early decades of this century, American tuberculosis associations made an effort to locate causes of the disease in industry. According to Michael Teller, the relationship between tuberculosis and working conditions received increasing attention after 1910.²⁷ The high incidence of the disease among industrial workers drew attention to the possibility of prevention by changing the conditions of the workplace. This approach had some effect on investigations into the problem of tuberculosis in Vermont. In 1919, the National Tuberculosis Association founded the Committee on Mortality from Tuberculosis in the Dusty Trades. The research by the committee concentrated on the granite industry and was conducted in Barre.²⁸ In 1931, the Vermont Tuberculosis Association proposed studies on dust control in the granite industry.²⁹ That same year a representative of the organization stated: "If we could eliminate tuberculosis from the granite industry, Vermont would have the lowest death rate [from tuberculosis] of the New England States."³⁰

Nonetheless, most information on the prevention of tuberculosis in the workplace was vague and placed as much emphasis on the cleanliness of the work environment and the workers' personal habits as on methods of production. Mark Caldwell has noted that those concerned with the poor hygiene in factories pointed to dirty floors, fumes, hazardous substances, and poor lighting, ventilation, and sanitary facilities in the search for the causes of the disease.³¹ Teller found that legislation on factory ventilation and dust removal was also vague and rarely enforced.³² In fact, Teller claims that the association between occupational dust and disease was made as early as the sixteenth century; but the discovery of the tubercle bacillus temporarily moved the focus away from dust and onto contagion.³³

The workplace was seen by members of the public health movements

as an unsanitary environment conducive to the spread of the disease. In this way, it held no more potential for the cause of the disease than the home or other indoor spaces. This conception of the work environment made its way into the pages of the *Granite Cutters' Journal*. An article written by the Tuberculosis Association and printed in a 1922 edition of the journal stated: "Tuberculosis lurks in environments of bad living and working conditions . . . The first step is to bring people— children, workers, everybody— out of the dark, damp, poorly ventilated places, into homes, schools, workshops where sunshine and fresh air are plentiful."³⁴

The belief that tuberculosis was caused by unsanitary conditions compelled members of the tuberculosis movement in the United States to improve the public's hygienic practices. In an article in a 1925 edition of the *Granite Cutters' Journal* by Helena Lorenz Williams of the National Tuberculosis Association, the author quoted a doctor from the New York Department of Health: "It is one of the aims of the National Tuberculosis Association and its affiliated organizations to educate working men and women more in the rules of healthful living, thereby making them not only happier but more useful as producers."³⁵

Teller claims that "the educational campaign of the tuberculosis movement was based on the conviction that the masses could improve their health if they learned to change their practices."³⁶ The education of children became an avenue to change the habits of both the young and their parents. The aim was to teach new practices at school where the child would willingly accept the authority of the teacher and to influence parents through the lessons and materials brought home by their children.³⁷

The most popular program of health education developed by the National Association for the Prevention of Tuberculosis was the Modern Health Crusade.³⁸ According to Teller, the emphasis of the Modern Health Crusade "was on personal hygiene; the child, like the adult, could maintain health and prevent disease by individual effort."³⁹ The program was conducted through schools where children were taught to do "health chores."⁴⁰ The "health chores" not only instructed children and adults in the importance of self-discipline, but ensured the productivity of the student and worker by teaching them to maintain their health through individual behaviors. Thus, the "health chores" embodied the message that the cause of disease could be found in individual behavior and that it was the responsibility of the individual to maintain his or her health through improved habits.

The program began in 1917 and in 1919 the first edition of the *Modern Health Crusader of Vermont* was circulated.⁴¹ The magazine not only included stories and pictures for children, but lengthy articles apparently

intended for adults. An article instructing teachers how to begin the Modern Health Crusade advised: "Many teachers who have been successful with the Health Crusade recommend that once every week all the children bring in their chore cards and score them . . . Our only objection to this is that we feel that it is worthwhile to endeavor to arouse the parents' interest in having their children do the health chores. By the weekly plan parents and teachers work together."⁴² It is evident that in line with the general philosophy of educating the young in proper hygiene, the magazine was intended to instruct adults through their children.

Implicit in the stories, games, and pictures of the *Modern Health Crusader of Vermont* was the message that the germs of tuberculosis were lurking in the homes of the poor and careless and that the cure was to be found in improved personal habits and the paternal arms of public health. In one drawing with the inscription underneath, "Write a Story About This Picture . . . The best stories will be published in our paper," a woman in farm clothes holds a screaming girl by one hand with a switch in the other; before them stands a nurse with a look of scorn directed at the mother of the child, and over the nurse's head is a sign that reads: "HABIT CLINIC."⁴³ In another article entitled "A Fair Start: The Story of One Preventorium Child" a young girl is removed from her home by a nurse and taken to a preventorium. Her mother is tubercular and her father is described as a "worthless fellow who seldom worked and seemed to think others should provide for him and his family."⁴⁴

The Caverly Preventorium in Pittsford, Vermont, was built in 1922. It was an extension of the Health Crusade ideals and practices. The preventorium was designed as a place where children whose parents had tuberculosis could be cared for. The Tuberculosis Association held the belief that "in a home where one of the parents had the disease, the children were very likely to develop it when they grew up."⁴⁵ Thus, the preventorium served the dual purpose of caring for the children of ill parents and improving their diet and habits.

The opinion that tuberculosis began in the home was not held by all residents of the region. In her memoir *Santander to Barre: Life in a Spanish Family in Vermont*, Elizabeth Ramon Bacon wrote: "The purpose of the [Washington County] sanitarium was the detection and treatment of tuberculosis, a pulmonary disease which during those years was a constant and common threat to stonecutters and their families . . . Because of its highly contagious nature, children exposed to the disease were closely watched and some were sent to the Caverly Preventorium . . ."⁴⁶ Bacon grew up in Barre and was the daughter of a Spanish stonecutter. Her narrative recalls the impression held by the stonecutters and their families that the problem of tuberculosis in the region was intimate-

ly linked to the granite industry. In a manuscript from the 1940s by Mari Tomasi, a member of the Vermont Writers' Project, the author records an account given by a woman who owned a boardinghouse in Barre and who made a similar reference to the origins of disease in the region:

I've seen families move from the building on a day's notice because the neighbor across the hall, a stonecutter, was racked with lingering morning coughs. You hated to lose good tenants, but you couldn't blame them for fearing t.b. for themselves and their children. Living in Barre for more than a quarter of a century you can remember whole families that have been wiped out by it.⁴⁷

The belief that the working conditions of the manufacturing sheds presented a threat to the stonecutters' families and community represents an important contrast to the disease path as it was portrayed in the public health literature. The *Modern Health Crusader of Vermont* expressed the assumption held by the tuberculosis movement that the home—where unhealthy habits were learned—allowed the disease to spread to school and workplace and was thus the origin of tuberculosis.

The tuberculosis associations also placed information on the prevention of tuberculosis in the *Granite Cutters' Journal* and gave lectures in the towns of Vermont. While some employees of the granite industry maintained that the cause of "stonecutters' t.b." was found in production, other stonecutters began to examine the personal habits of the members of their trade to locate the reasons for the deaths and disease among them.

Overwork, drinking alcohol, and unsanitary practices at work and in the home were blamed by some members of the union for the poor health of the stonecutters.⁴⁸ The union members took to heart this advice: "[y]ou must educate your fellow members . . . to get fresh air, good food and decent houses. The keynote of this whole campaign is popular education."⁴⁹ Members of the union urged one another not to drink whiskey, spit on the floor of the shed, or overwork. One correspondent warned his fellow workers:

The "strenuous life," with its attendan [*sic*] nervous excitements, worries, the exhaustion of nerve force, with insufficient sleep, the time to take food and properly digest it practically omitted, or reduced to a minimum, so overwork the heart, brain and kidneys that ultimately they suffer organic change, with the result that, being unable to perform longer their normal duties in the human economy, death follows. If the individual would avoid these conditions,—he must avail himself of the one remedy—live the "simple life."⁵⁰

In conjunction with the belief that their individual habits were at the root of their condition, some of the stonecutters informed others in their trade that it was not only in their interest, but their responsibility to change behaviors in other areas of their lives so that they could withstand the abuse of the workplace. One member wrote in a summer edition of the

journal: "I hope all our members have been enjoying the warm sunshine, the scented breezes, and the nice cooling showers, for it is every granite-cutter's duty to spend the most of his leisure time in the open air for the sake of health!"⁵¹ Significantly, a 1924 study of health conditions in the trade conducted by the U.S. Public Health Service noted that the granite cutters were using their time off from work to recuperate from their illnesses.⁵² In accordance with the directives of the tuberculosis movement, these stonecutters monitored their own actions for the origins of illness and encouraged one another to stay healthy so that they could continue their trade.

Other members of the union held the opinion that it was the dust that threatened their health and were critical of the efforts of the tuberculosis associations. In response to a report in the *Granite Cutters' Journal* on a series of lectures given by members of the Vermont State Tuberculosis Commission,⁵³ a stonecutter complained:

I believe our stone-sheds could be ventilated much better than they are at present, but so long as the matter is not stirred up no changes will be made. Very true, members of the State Tuberculosis Commission were invited to lecture here last winter. Two of them came, as Brother McAdam states, but I fail to see any good results from their visit. One gave a harrowing account of his own experience of the disease, and how he effected a cure. The other treated us to a learned discourse on the subject, well garnished with Latin words and phrases. The lecture was all right as far as it went, but not a whit better than can be got in any up-to-date 10-cent magazine. These gentlemen did not trouble themselves to look through any of the stone sheds so that they might have been able to make a few suggestions about a better system of ventilation, or anything else that would be the means of lessening the mortality among our brothers from granite cutters' consumption.⁵⁴

Evidently, there was skepticism among the stonecutters regarding the ability of the tuberculosis movement to change the conditions of the sheds or to curb the epidemic of "granite cutters' consumption."

Some members were critical of the praise given to the discovery of the rest cure and to the advocates of sanitariums. They pointed out that rest cures were only available to the wealthy, and that the primary concern should be prevention of disease through investment in the ventilation of the sheds.⁵⁵ A member of the Montpelier, Vermont, local wrote that instead of funding a sanitarium for its members, the union should "purchase a park in a cold climate somewhere (Vermont for instance) and freeze them up, or embalm them and set them out along the avenues for the next generation of cutters to look at for they all leave us in the prime of life, and they will keep for eternity."⁵⁶ While the tuberculosis movement concentrated on the personal habits of the people of Vermont to

abate the problem of tuberculosis in the region, many of the granite cutters maintained the belief that their disease, while a form of tuberculosis, was caused by the conditions of their trade. Finding support in Dr. D. C. Jarvis, the granite cutters turned to him for advice.

Dr. Jarvis was a graduate of the University of Vermont Medical College and began a practice in Barre in 1909 as an eye, ear, and nose specialist.⁵⁷ He was one of the first physicians to draw attention to the relationship between dust and disease in the Vermont granite industry. The Granite Cutters' International Association eventually made him an honorary member for his efforts in the development of suction equipment in the manufacturing sheds and for the advice he gave to stonecutters in the *Granite Cutters' Journal* beginning in 1923, and through a clinic that he held in the union hall.⁵⁸

Through articles in the *Granite Cutters' Journal* and medical publications, Dr. Jarvis sought to convince both physicians and laity that the disease from which the stonecutters suffered was pneumoconiosis caused by their work. Although medical studies on the relationship between occupation and lung disease had begun as early as 1912, Dr. Jarvis realized that diseases related to dusty trades, such as granite cutting, were not recognized by local doctors.⁵⁹

In a 1921 article in the *American Journal of Roentgenology*, Dr. Jarvis explained to his readers why he considered pneumoconiosis the most appropriate term for the condition from which the stonecutters suffered: "It seems advisable to use the term Pneumoconiosis, as the two Greek words from which it is derived signify Lung Dust, which really represents the condition being studied . . . [T]he term Granite Pneumoconiosis suggests at once the nature of the lung lesion under consideration, the manufacturing process, percentage of silicon dioxide in the dust and the type of workman."⁶⁰ Jarvis also explained to readers of the *Granite Cutters' Journal* why the term pneumoconiosis was so important: "[This] term is derived from two Greek words meaning lung dust, and so is really the correct term to use . . . a granite cutter's illness would be called Granite Pneumoconiosis. This is a definite occupational disease and is entirely apart from tuberculosis."⁶¹

Through his careful consideration of terminology, Jarvis was endeavoring to locate the cause of the disease in the industry and eradicate the notion that it resulted from an infected environment or unhygienic living.

In accordance with his belief that the dust of the sheds was the cause of the stonecutters' condition, Jarvis acted as an advocate for the installation of dust-removing equipment in the manufacturing sheds. He participated in research on experiments with suction equipment in sheds during the 1920s and informed the stonecutters about the progress of those trials

in his column in the union journal.⁶² These efforts brought Dr. Jarvis praise from the members of the union. In reference to Dr. Jarvis's role in suction device installation by one of the manufacturers, one union member commented: "The Doctor showed the Presbrey firm that he had the goods, and when any up-to-date firm is shown that, they get down to business right away."⁶³

Dr. Jarvis was not, however, concerned only with the threat of disease to the stonecutters; he was also concerned with the problem that the disease posed for the granite industry. As mentioned above, the decline in immigration, the early deaths of stonecutters, and the reluctance of their sons to follow in their trade left the manufacturers and stonecutters anxious about the future of the industry. Dr. Jarvis expressed this concern, which underlay his interest in alleviating disease in the industry: "In 1915, we find in Barre 2,050 granite cutters working, while in 1919 we find only 1,240. The question suggesting itself whether this condition was peculiar to Barre alone, the total number of cutters for the United States was investigated and it was found that there was a corresponding diminution in the number of cutters throughout the whole country."⁶⁴ Clearly, Dr. Jarvis recognized the problem of the declining labor supply and took a medical interest in solving it.

Early criticisms of the role of the industrial doctor by some members of the stonecutters' union reveal their suspicion that the monitoring of their health by doctors was not to protect the frail worker but to serve industry by identifying those who could withstand its abuse. In a 1917 edition of the *Granite Cutters' Journal*, President John P. White of the United Mine Workers of America was quoted as saying that compulsory medical examinations of "wage-earners" was a method of "weeding out" the unfit so that industries could increase physical demands on the workers who remained:

As modern industries are organized today, the rejection of unfit men means, not the protection of those who are accepted, but license to increase the strain upon them so that eventually they, too, or their descendants, will be added to the class of the unfit. In this respect the fate of the physically fit is like that of the flower of European manhood, maimed and slaughtered on the battlefield.⁶⁵

While the granite cutters did not yet face compulsory medical examinations, White's accusation indicates a historical trend, which Dr. Jarvis represented—medical intervention in labor relations. Jarvis suggested that to protect themselves financially, the granite manufacturers should hire the type of worker who could withstand the effects of stonecutting and not those who would become ill after the manufacturers had invested in their apprenticeship and the eight to nine years it took "to bring a cutter to a final degree of excellence":⁶⁶

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Knowing that all men were not safe in the industry, and that some broke down earlier than others, it became necessary from an economic standpoint to ascertain if possible the type of individual who would not last long in the industry under present working conditions, and to suggest that he take some other trade . . . This type represents a hazard to the industry which if accepted, would soon break down in the industry and represent an economic loss to both industry and state.⁶⁷

Dr. Jarvis believed that the characteristics of an individual's upper respiratory tract provided a good indication of the type of worker whose health would be least effected by stone cutting: "An apprentice with normal turbinates, a smooth posterior pharyngeal wall, tonsils small in size, no evidence externally of enlarged lymph glands, represented a desirable type and one who under ordinary conditions would last in the industry."⁶⁸ He claimed that because of differences in the upper respiratory tract among the various nationalities of stonemasons, some were more "suitable soil" for the occurrence of lung disease. "On a basis of suitable soil, it was found that the different nationalities lined up in a different manner. In order of excellence they were found to line up as follows: Italians, Americans, English, Spaniards, Scotch, Swedes, Norwegians, Danes, French and Irish."⁶⁹ Thus, he suggested that the Irish should not be hired by the granite industry as "they represent[ed] a hazard."⁷⁰ As suggested by White, Dr. Jarvis advised that through medical examination, the industry would be able to distinguish between those workers who could physically withstand the trade and its increasingly dangerous conditions and those who could not.

Dr. Jarvis's paradoxical concerns for the survival of the industry and the health of the stonemasons can also be found in the advice columns he wrote in the union journal. Responding to the questions of the stonemasons and reporting on his conclusions after treating them, Dr. Jarvis provided the stonemasons with information on how to treat the symptoms of their condition. He told them about remedies to relieve or prevent coughing at night, chest pains, laryngitis, indigestion, constipation, and other products that were to be included in the "granite cutters' medicine kit."⁷¹

One stonemason who had been in the trade for twenty-five years wrote to Dr. Jarvis explaining that "his leaving the trade had often been discussed at home" and that he would like some advice. Dr. Jarvis informed him that if he wore a respirator, took a tablespoonful of oil at the first sign of a cough so that "any dust that happens to be swallowed [will be] moved along and not allowed to cling to the bowel walls," did "a day's work with less effort than the young chaps just beginning," and selected a shed and a part of the production process that created the least amount of dust, Jarvis saw "no reason why [he] should quit the granite industry."⁷²

Consistent with his expressed intention to assist the granite industry, Dr. Jarvis attempted to maintain the health of the stonecutters so that they could remain productive employees and withstand abuse from their working conditions. While Dr. Jarvis was trying to change the working conditions of the granite cutters, he also tried to ensure the industry of a stable work force. In fact, Jarvis claimed that "as a result of granite dust inhalation there occurs an adaptation to occupation of the upper respiratory tract . . ." measured by the insensitivity of the throat and eyes of the worker.⁷³ Moreover, he stated that granite cutters who remained absent from work during "periods of idleness brought on by strikes, lockouts or poor business" lost their occupational adaptation, leaving them prey to tuberculosis upon returning to work:⁷⁴ "Granite dust inhalation in itself is not the direct cause of tuberculosis, but it is suitable preparation of the soil when a cutter is endeavoring to reacquire his adaptation to occupation that assists in spelling his downfall."⁷⁵ Thus he suggested that the more consistently a granite cutter worked, the healthier he would remain.

Jarvis's definition of disease also had another result: while it placed more responsibility on the industry than previously, it constructed a narrower realm of responsibility than the definition held by the stonecutters. As mentioned above, the focus of the tuberculosis movement was the tubercle bacillus and hence the approach taken to tuberculosis in Vermont was to clean up the unhygienic environment and habits of the stonecutters and their families. When Dr. Jarvis set out to convince medical professionals and the manufacturers that the condition from which the stonecutters suffered was an occupational disease, it was necessary to contradict what he referred to as "the old argument" that it was "the stuff [the stonecutters] drank and the way [they] lived that brought on [their] sickness."⁷⁶ Consequently, while Dr. Jarvis acknowledged a relationship between tuberculosis and the condition of the lungs caused by the inhalation of dust, he focused his attention on the initial stage of the condition, concluding that tuberculosis with its contagious nature was a separate disease. The acceptance of this division by medicine at large would later be institutionalized in the Vermont Occupational Compensation Law.

The granite cutters welcomed Dr. Jarvis's advice and advocacy in their struggle for dust reduction, but they did not readily accept his disease definition. From their experience of disease, Dr. Jarvis's interpretation did not fully explain their condition. A comparison of writings by members of the union and those of Dr. Jarvis indicates a tension between the definition of the disease held by Dr. Jarvis and the more inclusive one held by the stonecutters. Despite Dr. Jarvis's insistence that the term pneumoconiosis be used to describe their condition, the stonecutters con-

tinued to refer to their disease as tuberculosis, usually distinguished as “stonecutters’” or “granite cutters’” tuberculosis. In the *Granite Cutters’ Journal* Dr. Jarvis remarked on the reluctance on the part of the stonecutters to change their terminology. He noted that the proper terminology for the disease was “a bit hazy in the minds of many” and that “[s]ome find it difficult to let go of the term tuberculosis and substitute in its place the new term Pneumoconiosis.”⁷⁷

By distinguishing between tuberculosis, a contagious condition, and pneumoconiosis, Dr. Jarvis not only tried to relieve the fears of the stonecutters, he also minimized the blame that had been placed on the industry by the stonecutters and community for disease in the region. While the stonecutters held that the disease contracted in the manufacturing sheds could be passed on to family members and others in the community, Dr. Jarvis assured the stonecutters that their occupational disease was separate from the contagious condition and was contained in the individual worker. This monocausal definition of the stonecutters’ condition held the authority of science and, therefore, legitimized the stonecutters’ claim that their condition was related to their occupation. Yet by distinguishing between occupational and contagious diseases, Dr. Jarvis removed the implication of the stonecutters’ concept of their condition that the industry was also responsible for those family members who had become ill through contagion, and for the entirety of work-related disease from which the stonecutters suffered.

Having divided the stonecutters’ condition into two phases, the occupational and the non-occupational, Dr. Jarvis made way for the judicial role of the physician to assess the severity and cause of a worker’s disease and hence the extent of the employer’s responsibility. With the recognition of pneumoconiosis the stonecutters’ disease could only be established through medical examination, particularly through the use of X-rays. The diagnostic location of the disease had moved from outward symptoms to one hidden inside the bodies of the workers. In contrast to the union member who suggested that the corpses of stonecutters be frozen and lined up in a park to dissuade the next generation from entering the trade, Dr. Jarvis encouraged the men to wear respirators by threatening to walk from shed to shed with a pair of fibrotic lungs in a jar.⁷⁸ Where the combination of working in the industry and the experience of lung trouble had once been enough for the stonecutter to realize he had “stonecutters’ t.b.,” Dr. Jarvis located the only signs in the lungs, thus requiring the diagnosis of the expert to identify the disease.⁷⁹ The ability of the doctor to distinguish occupational disease from other disease forms was essential to the new role of the doctor once disease was ruled compensable in Vermont.

The insistence by Dr. Jarvis that a distinction be made by physicians between tuberculosis and pneumoconiosis was not primarily to administer correct treatment but to ensure the correct diagnosis of occupational disease in those states in which diseases were compensable. Among those physicians who recognized occupational disease among granite cutters, the more commonly used term for the disease was silicosis, a form of pneumoconiosis, caused by the inhalation of dust containing silica. Throughout the 1920s, thirties, and forties periodic research on the relationships between granite dust, silicosis, and tuberculosis was discussed at conferences and published in medical journals and government publications.⁸⁰ Although the research was done in Vermont, a considerable amount of the interest in the research came from physicians practicing in other states where occupational disease was compensable. The doctors' interest in silicosis centered on information concerning diagnosis and its relationship to tuberculosis. The ability to diagnose occupational disease created a new area of expertise for the doctor and opportunity for the advancement of medical technology.⁸¹

It was not until 1951 that Vermont's compensation legislation covered disease. Some states elected to have general coverage of diseases contracted in the workplace, but Vermont's compensation bill included only those diseases that were scheduled for coverage. Silicosis was written into the Vermont law but tuberculosis was not.⁸²

A compensation case prior to the inclusion of silicosis in the Vermont Workmen's Compensation Law recalls a period when the relationship between silicosis and tuberculosis was not yet established, and the position of doctors in determining the connection between the workplace and the health of the worker was marginal. In August of 1932, Hiram Morrill, a granite cutter, was injured while working for Charles Bianchi and Sons, Inc. In October of that same year he died of pulmonary tuberculosis. In accordance with the compensation act of the time, which stated that disease resulting from an injury was compensable, a claim for compensation was made by his widow. In 1935, before the Supreme Court of Vermont, Charles Bianchi and Sons, Inc. defended itself by stating that the tuberculosis had resulted from silicosis, which Morrill had had at the time of his injury. Since compensation was not allowable for occupational disease, the employer was not responsible. During the trial the testimony of doctors was considered. Some testified that silicosis is a form of tuberculosis, others that they are separate and distinct diseases, but that the former usually develops into the latter. The decision of the court was in Mrs. Morrill's favor on the grounds that Morrill should not be excluded from compensation because of the presence of disease prior to his injury.⁸³ The distinction between tuberculosis and silicosis (and hence the

testimony of doctors) was moot, as the final verdict was based on the conclusion that the injury had aggravated the condition and led to Morrill's death.

In contrast to the above case, the following illustrates the change in position of the physician when disease became compensable. In the early 1970s, a Vermont doctor informed an insurance agent that the claimant

does have silicosis; however he does not exhibit enough functional defect to indicate that he would be disabled on the basis of pulmonary function. He does have a positive tuberculin test and is presently undergoing prophylactic [*sic*] treatment to prevent breakdown of a focus of tuberculous infection. At the present time this is not an active process and would not be considered to be aggravated [*sic*] by his silicosis.⁸⁴

Regarding another patient the doctor told the insurance agency: "We have then a 63-year-old man who has definite silicosis, who has moderate restrictive impairment of his lungs due to the silicosis, but is able to do ordinary activity without any real difficulty. I believe he is able to do still foremen's type of work; however, he could not do heavy work as sometimes required in the granite industry."⁸⁵ In 1972, a Barre stonecutter was informed by his insurance agent: "We feel that tuberculosis is the major contributing factor to your disability. The Occupational Disease Law does not include tuberculosis as a compensable disease and, therefore, we feel that a compromise is in order."⁸⁶ These three documents illustrate the centrality of medical diagnosis to the opinion of the insurance agent in regard to the extent of disability and the responsibility of the workplace for the condition of the stonecutter.

These cases do not suggest that defining silicosis as an occupational disease did not improve the granite cutter's chances of receiving compensation for damage to his health. They do, however, illustrate that the recognition of occupational disease placed the doctor in a central position in the relationship between the worker and work. This position is further exemplified by the inclusion of regular medical examinations as part of the conditions of the granite cutters' employment. With the recognition of silicosis as a distinct disease caused by work, the doctor acquired the judicial role of assessing the extent of work-related disability and hence of the responsibility of the employer for the health of the worker—even to the point of recommending what type of position the employee could hold at work.

The positions of the tuberculosis movement and Dr. Jarvis conveyed messages about the relationship between the home and workplace and subsequently about the limited realm of the workplace's effect on health. The tuberculosis movement, claiming that the cause of the stonecutters'

condition was equally located in the home, public spaces, and the workplace, assigned responsibility to the workers to maintain their health and curb the spread of disease by changing their individual habits. Dr. Jarvis, however, insisted that the cause of the stonecutters' condition was to be found in the process of production and that the disease was isolated in the individual body of the worker. He regarded the contagious nature of the condition, which could move from one worker to another or from the workplace to the home, as a separate disease. Like the public health movement, Dr. Jarvis did not allow for the possibility that working conditions affect the home or larger community.⁸⁷

The distinction between occupational and contagious diseases obscured the relationship between the working conditions of the stonecutters and the health of the larger community. Simultaneously, the public health information and the advice of Dr. Jarvis extended the demands of the workplace into the homes of the workers and broke down the division between the stonecutters' work and leisure time. By incorporating medical advice into their personal habits, the stonecutters internalized assumptions that the responsibility of the industry for the health of its workers was limited and that the workers had a responsibility to remain productive.

Ronald Frankenberg has written: "We do not consult physicians and have their social and medical views forced upon us. We consult them because we already share their views . . ." ⁸⁸ It was the belief in the authority of medicine to recognize the true nature of their condition and to legitimate their demands that the stonecutters sought the support and advice of Dr. Jarvis. The information imparted by the tuberculosis movement and Dr. Jarvis reshaped the conceptions held by the stonecutters of their disease as they took part in diagnosing their condition and regulating their behavior and the behavior of others. In their attempt to gain recognition that the cause of their disease could be found in their working conditions, the stonecutters of Barre took part in a process that not only brought about improved working conditions and compensation for disease, but also expanded the authority of medicine, concurrently narrowing the definition of their condition and extending the control of the workplace. The Barre stonecutters were able to successfully advance their position on the necessity of dust reduction through the authority of medicine and to eventually relocate partial responsibility for their condition onto the employer. Just as the stonecutters used the authority of medicine to further their position, Dr. Jarvis legitimized his own position through the authority of the scientific model by defining the stonecutters' condition in monocausal terms.⁸⁹ This invocation of the authority of scientific medicine to establish the definition of occupational disease in the granite industry positioned the doctor firmly in the workplace.

NOTES

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¹ See Peter Wright and Andrew Treacher, eds., *The Problem of Medical Knowledge: Examining the Social Constraints of Medicine* (Edinburgh: Edinburgh University Press, 1982); Elliot G. Mishler, *Social Contexts of Health, Illness, and Patient Care* (Cambridge: Cambridge University Press, 1981); and John Ehrenreich, ed., *The Cultural Crisis of Modern Medicine* (New York: Monthly Review Press, 1978).

² Karen Lane, "Unseen Hands: Apprenticeship and Anonymity in the Barre Granite Industry," in *Celebrating a Century of Granite Art*, ed. Gene Sessions (Barre, Vt.: T. W. Wood Art Gallery at the Vermont College Arts Center and Barre Museum Aldrich Public Library, 1989), 9.

³ Paul Demers, "Labor and Social Relations of the Granite Industry in Barre" (B.A. thesis, Goddard College, 1974), 3.

⁴ Rod Clarke, *Carved in Stone: A History of the Barre Granite Industry* (Barre: Rock of Ages Corp., 1989), 38.

⁵ David Richard Seager, "Technology and Health in the Granite Industry in Barre, Vermont, 1880-1940" (M.A. thesis, State University of New York at Binghamton, 1989), 19.

⁶ Interview with Iside Brusetti conducted by Paul Demers in 1972. Transcript held by Aldrich Public Library (Barre, Vt.), Vermont Room. The most experienced stone carvers had come from Italy where they had worked with marble. They did not realize that because of the silica content granite dust was more hazardous to their health than marble dust.

⁷ *Granite Cutters' Journal*, July 1905, 1.

⁸ Interview with Iside Brusetti conducted by Paul Demers in 1972. Transcript held by Aldrich Public Library (Barre, Vt.), Vermont Room; *Granite Cutters' Journal*, July 1910, 12.

⁹ *Granite Cutters' Journal*, April 1910, 16.

¹⁰ *Granite Cutters' Journal*, June 1910, 9.

¹¹ Richard Hathaway, "Men Against Stone: Work, Technology, and Health in the Granite Industry," in *Celebrating a Century of Granite Art*, ed. Gene Sessions (Barre, Vt.: T. W. Wood Art Gallery at the Vermont College Arts Center and Barre Museum Aldrich Public Library, 1989), 20.

¹² Peter B. Liveright, "Unionism and Labor Relations in the Granite Industry, Barre, Vermont" (B.A. thesis, Goddard College, 1943), 103.

¹³ *Ibid.*, 103-4.

¹⁴ *Ibid.*, 107.

¹⁵ Otto Johnson, "The Labor Situation in the Granite Industry in the Barre District, Vermont" (Ph.D. diss., American University, 1928), 144.

¹⁶ Hathaway, 19.

¹⁷ *Ibid.*

¹⁸ Johnson, 144.

¹⁹ A study of disease and mortality among workers in the Vermont granite industry from 1924 to 1926 and 1937 to 1938 found the death rate from tuberculosis among granite manufacturers to be "almost the same" as that among granite cutters. The author concluded that the high rate of lung disease among the manufacturers resulted from their exposure to granite dust while working as stonecutters prior to owning their own sheds. See Albert E. Russell, "The Health of Workers in Dusty Trades: VII. Restudy of a Group of Granite Workers," U.S. Public Health Bulletin no. 269 (Washington, D.C.: Government Printing Office, 1941), 45. Ann Banks estimates that three-quarters of the sheds in Barre were owned by men who were also stonecutters and continued to work as such while operating the sheds. See Ann Banks, ed., *First-Person America* (New York: Alfred A. Knopf, 1980), 98. This was supported by residents who told me that it was not uncommon for owners to work in the sheds, especially in the smaller firms.

²⁰ Several Barre residents told Andrew Sacher, in interviews he conducted for the Aldrich Public Library (Barre, Vt.) in 1976 and 1977, that many Barre families dissuaded their sons from pursuing careers in the manufacturing sheds because of the high number of stonecutters who had died of lung disease. Barre residents provided me with similar anecdotes during my fieldwork in 1990.

²¹ Interview with Antonietta Antivi Tomat conducted by Andrew Sacher in 1976. Recording held by Aldrich Public Library (Barre, Vt.), Vermont Room.

²² Lane, 10-11.

²³ *Ibid.*

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²⁴ Confidential interview conducted by the author in 1990. The 1941 study, "The Health of Workers in Dusty Trades," conducted in Barre, assured the reader that because of the suction equipment installed in the sheds, shortages of skills and labor would no longer be a problem for the manufacturers: "In the future, older granite workers will gladly permit their sons to follow the trade in their footsteps, a thing they have been reluctant to do in the past . . . The manufacturer is assured that highly skilled workers will not be doomed to death prematurely because of the hazard of their trade at a time of life when they are most useful. At present the industry suffers because there is an acute shortage of expert carvers and statuary cutters due to premature deaths." See Russell, "The Health of Workers in Dusty Trades," 71.

²⁵ Confidential interview conducted by the author in 1990.

²⁶ Interview with Giuliano Cecchinelli conducted by Andrew Sacher in 1977. Recording held by Aldrich Public Library (Barre, Vt.), Vermont Room.

²⁷ Michael E. Teller, *The Tuberculosis Movement; A Public Health Campaign in the Progressive Era* (New York: Greenwood Press, 1988), 103.

²⁸ D. C. Jarvis, "The Upper Respiratory Tract in Granite Dust Inhalation, Barre, Vermont: Report on 500 Cutters," *Annals of Otology, Rhinology and Laryngology*, 32 (1923): 405.

²⁹ "Fiftieth Anniversary Vermont Tuberculosis and Health Association, 1916-66" (pamphlet, no page numbers). Held in the Wilbur Collection, University of Vermont Library.

³⁰ *Modern Health Crusader of Vermont*, June 1931, 4.

³¹ Mark Caldwell, *The Last Crusade; The War on Consumption 1862-1954* (New York: Atheneum, 1988), 202.

³² Teller, 105.

³³ *Ibid.*

³⁴ *Granite Cutters' Journal*, February 1922, 2.

³⁵ *Granite Cutters' Journal*, November 1925, 21.

³⁶ Teller, 116.

³⁷ *Ibid.*

³⁸ *Ibid.*, 118.

³⁹ *Ibid.*, 118-19.

⁴⁰ The "health chores" included practices such as drinking milk, standing with a straight posture, and sleeping with the windows open. The children could earn titles and badges by doing the "health chores" and even compete in national tournaments.

⁴¹ "Fiftieth Anniversary Vermont Tuberculosis and Health Association, 1916-66" (pamphlet, no page numbers). Held by the Wilbur Collection, University of Vermont Library.

⁴² *Modern Health Crusader of Vermont*, October 1930, 8.

⁴³ *Modern Health Crusader of Vermont*, April 1925.

⁴⁴ *Modern Health Crusader of Vermont*, June 1931, 10.

⁴⁵ *Modern Health Crusader of Vermont*, December 1934-January 1935, 3.

⁴⁶ Elizabeth Ramon Bacon, *Santander to Barre; Life in a Spanish Family in Vermont* (Randolph Center, Vermont: Greenhills Books, 1988), 57.

⁴⁷ Vermont Writers' Project, "Men Against Granite" file. Held by the Vermont Historical Society.

⁴⁸ *Granite Cutters' Journal*, November 1914, 8-9, March 1908, 3, April 1906, 2, June 1905, 1.

⁴⁹ *Granite Cutters' Journal*, April 1906, 11.

⁵⁰ *Granite Cutters' Journal*, October 1906, 7.

⁵¹ *Granite Cutters' Journal*, August 1906, 4.

⁵² Seager, 46.

⁵³ *Granite Cutters' Journal*, June 1905, 1.

⁵⁴ *Granite Cutters' Journal*, July 1905, 4.

⁵⁵ *Granite Cutters' Journal*, September 1910, 12, September 1906, 1.

⁵⁶ *Granite Cutters' Journal*, March 1908, 7-8.

⁵⁷ *Granite Cutters' Journal*, October 1926, 26; *Vermont Sunday News*, 23 February 1958.

⁵⁸ *Granite Cutters' Journal*, December 1923, 18, November 1923, 8. D. C. Jarvis is also nationally known for his book *Folk Medicine*, published in 1958.

⁵⁹ In 1912 a British report entitled "Preliminary Report of the Miners' Phthisis Prevention Committee of South Africa" was published, followed by a "General Report" in 1916 and a "Final Report" in 1919. See Seager, 38. In 1917 Dr. Anthony J. Lanza published a report on silicosis among zinc miners in Missouri. Seager, 38.

⁶⁰ D. C. Jarvis, "A Roentgen Study of Dust Inhalation in the Granite Industry," *American Journal of Roentgenology*, 8 (1921): 244-58.

⁶¹ *Granite Cutters' Journal*, July 1924, 17.

⁶² *Granite Cutters' Journal*, July 1921, 8, May 1921, 8, April 1921, 3.

⁶³ *Granite Cutters' Journal*, July 1921, 8.

⁶⁴ Jarvis, "A Roentgen Study of Dust Inhalation in the Granite Industry," 248.

⁶⁵ *Granite Cutters' Journal*, January 1917, 18.

⁶⁶ Jarvis, "The Upper Respiratory Tract in Granite Dust Inhalation," 408-9.

⁶⁷ *Ibid.*

⁶⁸ *Ibid.*, 409.

⁶⁹ *Ibid.*, 409-10.

⁷⁰ *Ibid.* In an earlier article, Dr. Jarvis described the results from a study of 386 Barre granite cutters. He claimed that X-rays of Italian granite cutters' lungs showed less density than the lungs of other granite cutters with comparable exposure. After examining the X-rays in relation to nationality, he lined them up in "order of excellence." He noted that "there is a geographical distribution of these races" and suggested that the differences in the granite cutters' susceptibility to lung disease were related to the dustiness in the granite cutters' country of origin. Jarvis, "A Roentgen Study of Dust Inhalation in the Granite Industry," 252.

⁷¹ *Granite Cutters' Journal*, February 1927, 8, October 1926, 16-17, April 1926, 16, March 1926, 8, December 1924, 24.

⁷² *Granite Cutters' Journal*, September 1924, 23.

⁷³ D. C. Jarvis, "The Upper Respiratory Tract in Granite Dust Inhalation, Barre, Vermont: Report on 500 Cutters," *Annals of Otolaryngology, Rhinology and Laryngology*, 32 (1923):410.

⁷⁴ *Ibid.*

⁷⁵ *Ibid.*, 410-11.

⁷⁶ *Granite Cutters' Journal*, April 1926, 16.

⁷⁷ *Granite Cutters' Journal*, July 1924, 17.

⁷⁸ *Granite Cutters' Journal*, January 1927, 19.

⁷⁹ In a collection of oral histories of Newfoundland miners and their families, one of the miners recounted his attempt to get compensation for his contraction of silicosis in the mines: "[T]he Doctor took me down to this great big board. 'There's your X-Ray,' he said, 'there's all evidence of silicosis there. But we got to have a piece of your lung to have the real proof.' 'You're not getting no piece of my lung,' I said. 'Well sir,' he said, 'the proof is there, you got it; but we can't do nothing for you till we gets the real proof. . . we got to have proof before we can give you Compensation.' I said, 'Well you're not getting no piece of my lung! Everyone ye cut, do you know where they're at? They're in the graveyard.'" See Elliot Leyton, *Dying Hard; The Ravages of Industrial Carnage* (Toronto: McClelland and Stewart, 1975), 28.

⁸⁰ See D. C. Jarvis, "The Upper Respiratory Tract in Granite Dust Inhalation, Barre, Vermont: Report on 500 Cutters," *Annals of Otolaryngology, Rhinology and Laryngology* 32 (1923): 405-12; D. C. Jarvis, "A Roentgen Study of Dust Inhalation in the Granite Industry," *American Journal of Roentgenology* 8 (1921): 244-58; D. C. Jarvis, "A Conception of Chest X-Ray Densities Based on a Study of Granite Dust Inhalation," *American Journal of Roentgenology* 9 (1922): 226-34; William McFarland, "Silicosis and Tuberculosis as Seen in the Granite Workers in Barre, Vermont," *Journal of Industrial Hygiene* 9 (1927): 315-30; Albert E. Russell, "The Health of Workers in Dusty Trades: VII. Restudy of a Group of Granite Workers," U.S. Public Health Bulletin no. 269 (Washington, D.C.: Government Printing Office, 1941).

⁸¹ For example, Dr. Jarvis became the first X-ray specialist at the Barre City Hospital. *Barre Daily Times*, 12 March 1958. Gerald Markowitz and David Rosner have also argued that the inclusion of silicosis in American occupational compensation laws and subsequent changes to the definition of disability moved decision-making power out of the hands of local practitioners and into those of occupational disease specialists and company physicians. See Gerald Markowitz and David Rosner, "The Illusion of Medical Certainty: Silicosis and the Politics of Industrial Disability, 1930-1960," *Milbank Quarterly* 67 (1989): 228-53.

⁸² In 1961, an occupational disease bill was introduced in Vermont that would abandon a scheduled list of occupational diseases. The proposed bill was opposed by members of the Barre Granite Association (formerly the Granite Manufacturers' Association) who pointed out that an unlimited occupational disease provision would increase their insurance premiums. They claimed that because of competition in the industry they were unable to afford the added cost. See "A Statement Concerning H.269 by The Barre Granite Association" held by the Vermont State Archives (Montpelier, Vermont).

⁸³ *Morrill v. Bianchi & Sons, Inc.*, Supreme Court of Vermont, *Atlantic Reporter* 176 (1935), 416-22.

⁸⁴ Larry Daniels, "Study of the Occupational Disease Silicosis," Granite Cutters International Association, Barre Branch Executive Committee (Barre: 1977), n.p. Held by the Granite Cutters Association (Barre, Vermont).

⁸⁵ *Ibid.*

⁸⁶ *Ibid.*

⁸⁷ I suggest that this view reflects a larger denial of the interaction between work and home, stemming from what Naomi Gerstel and Harriet Engel Gross refer to as the "historical legacy of a spatial and ideological separation of work and families in the nineteenth century [which] both shapes and hides the ongoing relationship between them." Naomi Gerstel and Harriet Engel Gross, eds., *Families and Work* (Philadelphia: Temple University Press, 1987), 1-3.

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⁸⁸ Ronald Frankenberg, "Gramsci, Culture, and Medical Anthropology: Kundry and Parsifal? Or Rat's Tail and Sea Serpent?" *Medical Anthropology Quarterly* 2 (1988): 328.

⁸⁹ A similar phenomenon has been demonstrated by Dietrich Milles who studied the relationship between a "monocausal-scientific approach" to disease and campaigns by workers in the Federal Republic of Germany which "accelerated the reductionist trend of 'workers' diseases' being termed 'occupational diseases'." See Dietrich Milles, "From Workmen's Diseases to Occupational Diseases: The Impact of Experts' Concepts on Workers' Attitudes," in *The Social History of Occupational Health*, ed. Paul Weindling (London: Croom Helm, 1985).