Alternatives in Occupational Safety

by
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> A Brooklyn manufacturer inquired recently if the ventilation bill which was introduced in the state legislature last winter had become law. When informed that in common with several other measures it had failed to pass, but that up-to-date information on ventilation had been collected and could be mailed to him, this manufacturer said, "No, I don't care to know anything about that. I only wished to make sure that I was within the law."

John B. Andrews, "Protection Against Occupational Diseases", Academy of Political Science, Vol. II, no. 2, (1911).

This passage captures the current dilemma faced by many working women and men in the United States. Unlike their counterparts in other industrialized countries, workers in the United States depend almost exclusively on management to provide a safe workplace. To be sure, there is an established occupational safety system in the United States, but only rarely does it affect the way a company operates. Quite simply, there are not enough government inspectors to satisfactorily enforce the occupational safety laws. Furthermore, the U.S. occupational safety system, like the law, operates mostly in an adversarial manner with employers on one side and the government on the other. Unfortunately, workers are not effectively represented by either party in this adversarial relationship.

As a community of persons concerned with the effects of industrial development on the environment, we should all pay particular attention to the issues of occupational safety. Workers often are exposed to hazard levels much higher than the general population. Many of the hazards (especially toxic substances) that workers are exposed to are subsequently discharged into the environment. Thus, increasing our attention in the area of occupational safety will both improve conditions for workers and will reduce the amount of pollutants discharged into the environment.

One option available to some workers is to seek better occupational safety protection through collective bargaining. Some unions have negotiated for additional safeguards for their members. So far negotiating has produced limited improvements in isolated situations. For example, the automobile manufacturers and the United Auto Workers have agreed to create joint safety committees.

It is conceivable that the limited agreements could be improved upon and expanded. Furthermore, expanding the scope of occupational safety through collective bargaining may assist unions in reversing the trend towards declining membership. As unions gain more information and expertise in occupational safety matters, workers will have a greater incentive to ally themselves with unions. Thus, assuming that unions should begin to focus on improving occupational safety, the question then becomes how to accomplish such a transformation.

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This article will discuss such a transformation by (1) identifying a job-hazard abatement model which purports to ensure actual and effective occupational safety, (2) describing the U.S. approach to occupational safety, (3) identifying an alternative approach (currently in use in Sweden), and (4) evaluating each approach against the job-hazard abatement model.

JOB-HAZARD ABATEMENT MODEL

In the only treatise written on collective bargaining and occupational safety, Bargaining for Job Safety and Health, Lawrence Bacow, professor of urban studies at MIT, provided a model that includes three steps minimally necessary to ensure occupational safety. These steps are (1) identifying hazard, (2) defining a solution, and (3) implementing the solution.[1]

The first step requires that the parties have the ability to identify potential job hazards. Bacow suggests that hazards are best identified through direct observation by employees, inspections by competent persons (e.g., safety committees and industrial hygienists), and notice through articles in industrial hygiene journals.[2] The goal of this step is to ensure that all interested parties bargain from a position that includes knowledge of the severity and extent of job hazards.

The second element of the hazard abatement model requires that the interested parties define a solution. Bacow suggests that this step be divided into two subparts. The parties should identify and then balance the following factors: (a) the probability of an undesirable outcome if the hazard is left unabated; the number of workers exposed to the hazard; and (c) the extent of harm in the worst case exposure.[4] This balancing effort would produce some notion of the magnitude of the harm.

Next, the parties should select an abatement strategy that effectively and efficiently ensures occupational safety.[5] These abatement strategies may include engineering solutions (e.g., retool or redesign), use of protective devices, better training, and restructuring job assignments.

The third step in the hazard abatement model is to implement the selected abatement strategy. Bacow suggests that lower and mid-level supervisory employees must understand that management considers occupational safety a priority and that management approves of possible short-term productivity losses.[6] Also, workers must have some input in decision-making regarding occupational safety priorities.

OCCUPATIONAL SAFETY IN THE UNITED STATES

[T}he collective bargaining provisions generally provide employees with little actual power.

In the United States collective bargaining agreements and state and federal statutes and regulations mandate minimal occupational safety levels. Instances of occupational safety protection provided through collective bargaining are limited. In addition, the collective bargaining provisions generally provide employees with little actual power. For example, a 1981 Bureau of Labor Statistics study of industries with 1000 or more employees found that in 1550 collective bargaining agreements surveyed, 957 (61%) contained some safety provisions. However, only 572 (36%) of the agreements included labor/management safety committees, only 338 (21%) allowed workers to refuse unsafe work, only 268 (17%) gave workers the right to grieve unsafe work conditions, and only 254 (16%) allowed for joint safety committee inspection of work environment. Finally, even if we were to assume that these percentages have improved since 1980 (an assumption that is probably not likely given management's attitude towards labor in the 1980s), union membership declined during the 1980s. Thus, fewer employees are covered by collective bargaining agreements.

Federal and state statutes and regulations provide the only protection for most employees. Historically, the U.S. Government regulates occupational safety in three ways: legislate or promulgate rules and minimal safety standards, enforcement, and transfer of information.[8] The primary federal law is the Occupational Safety and Health Act of 1970 (OSH Act). The Coal Mine Safety and Health Act of 1969 and the Toxic Substances Control Act of 1976 also regulate occupation safety. This article will address the OSH Act.

Congress created two agencies to regulate occupational safety: the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH). OSHA is an agency within the Department of Labor. NIOSH is an agency within the Department of Health and Human Services.

The OSH Act requires that employers "furnish to each of their employees employment and a place of employment which are free from recognized hazards that are causing or likely to cause death or serious injury."[8a] "Recognized hazards" include those hazards for which OSHA has established a safety standard and those hazards for which research has demonstrated a likelihood of harm.[9] OSHA must establish (i.e., has the

burden of proof to show) that a condition or substance is hazardous before it can mandate compliance with a safety standard.[10] Employees must also comply with the provisions of the OSH Act.[10a]

The OSH Act also requires that OSHA promulgate and enforce job safety and health standards,[11] a mandate which OSHA has obeyed with little vigor. In the 20 years since Congress enacted the OSH Act, OSHA has only promulgated standards for 26 toxic substances.[12] Furthermore, the recent trend has been even more discouraging. While OSHA promulgated 22 standards during the 1970s, it only promulgated four standards in the 1980s. The slow pace of promulgating health standards is even more disconcerting when one considers that during any one year more than 1000 new chemicals are placed on the market.[13]

Commentators have suggested numerous reasons for OSHA's inability to promulgate new standards at a faster pace. These reasons include a split in research duties between NIOSH and OSHA. NIOSH, an expert scientific agency, prepares and submits to OSHA scientific analysis regarding potential job hazards. However, NIOSH's determinations regarding job hazards are merely advisory. OSHA is not required to adopt NIOSH determinations. The problem arises because Congress chose to put the research capabilities in NIOSH and the power to decide whether to issue standards in OSHA. Assuming OSHA decides to promulgate a standard, it must provide substantial evidence (1) that the substance is hazardous and (2) that proposed controls are technologically feasible.[14] Thus, even if we assume that OSHA wants to increase the frequency with which it promulgates standards, there are substantial institutional barriers that impede such action. One additional problem with relying on OSHA to promulgate safety standards is that OSHA has limited resources and will, of necessity, try to maximize the effect of any standard it promulgates. Thus, OSHA will focus its efforts on common problems and will neglect site-specific hazards.[15]

The OSH Act also requires that OSHA inspect workplaces.[16] Currently, OSHA will inspect a workplace either when requested by a worker or when the workplace has a worse than average safety record. The frequency of inspections has been low and appears to have decreased during the 1980s. For example, the number of OSHA inspectors decreased from 1300 nationwide in 1980 to 1100 by 1987.[17] The courts have also restricted OSHA's ability to inspect facilities by allowing businesses to refuse access to OSHA inspectors unless the inspectors first obtain a search warrant.[18]

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Recent statistics, as presented in Table 1, demonstrate that workers cannot rely solely on government regulations and enforcement to ensure occupational safety. The statistics illustrate that a general downward trend in the incidence rate of occupational injuries and illnesses that existed from 1979 to 1983 reversed in 1983 and now the trend is towards an increasing incidence rate. The deregulation emphasis during the Reagan administration may account for this change. The important message, however, is not that conservative administrations will necessarily tolerate increased worker

safety risks (although the reduction in the number of inspections during the 1980s suggests they will), but that workers should not rely primarily on the government to ensure occupational safety.

AN ALTERNATIVE APPROACH: OCCUPATIONAL SAFETY IN SWEDEN

Like the United States system of occupational safety, the Swedish system is built around occupational safety provided through collective bargaining and government regulation. However, unlike the U.S. system, in Sweden collective bargaining and government regulation protect workers effectively. For example, as illustrated in Table 2, work related deaths are less frequent in Sweden than in the United States. (Because the countries record the information differently, the occupational injury rates of the two countries cannot be compared here.)

The obvious question is what distinguishes occupational safety in the United States and Sweden. On the surface, the differences can be traced to collective bargaining agreements and differences can be traced to collective bargaining agreements and laws which provide greater protection in Sweden. However, underlying these two effects are the differences in the political power of U.S. labor unions and Swedish labor unions. In Sweden, a pro-labor government has been in power since 1936 with the exception of one four year period.[19] Furthermore, 95 percent of the blue collar workforce and 75 percent of the white collar workforce are union members.[20] Thus, the workers have been able to demand greater protection both through collective bargaining and through government regulation.

Table 1: Occupational Injury and Illness Incidence Rates 1979 - 1988
(per 100 full-time workers)

Year	Total Cases	Lost Workday Cases	Nonfatal Cases Without Lost Workdays
1979	9.5	4.3	5.2
1980	8.7	4.0	4.7
1981	8.3	3.8	4.5
1982	7.7	3.5	4.2
1983	7.6	3.4	4.2
1984	8.0	3.7	4.3
1985	7.9	3.6	4.3
1986	7.9	3.6	4.3
1987	8.3	3.8	4.4
1988	8.6	4.0	4.6

Source: Bureau of Labor Statistics (1989)

Table 2: Rates of Fatal Injuries
(per 1,000,000 hours worked)

Year	Sweden	United States
1978	0.026	0.043
1979	0.026	0.043
1980	0.024	0.039
1981	0.026	0.038
1982	0.022	0.037
1983	0.024	0.028
1984	0.019	0.032
1985	0.016	0.031

Source: International Labor Organization (1989)

This additional power has allowed workers in Sweden to effect two fundamental changes in occupational safety, changes which for the most part are still nonexistent in the Unites States. First, the unions have shifted the focus of occupational safety from individual behavioral and psychological interventions to collective political and environmental interventions.[21] This shift in emphasis involves considering changes to the work environment and not limiting safety decisions to attempts to modify individual behavior. For example, the company with input from worker representatives might decide to use a less toxic chemical instead of merely providing workers with thicker gloves to handle a more toxic chemical. Second, workers have assured themselves of much greater access to information and a greater capability to use the information to ensure occupational safety.[22] Much of this transformation was originally implemented through collective bargaining, but in 1978 the major elements were incorporated in the Swedish Work Environment Act.

The Swedish Work Environment Act of 1978 (SWE Act) provides general principles for regulating occupational safety and health, establishes a national board to promulgate safety standards, and provides for inspections by government officials.[23] The strength of the Swedish labor movement is evidenced by provisions in the SWE Act that require employers to (1) consider the effects of changes to the work environment on workers before the employers introduce new machines or production processes, and (2) consult with worker representatives (safety delegates) before any changes that may affect worker safety are implemented and before building permits for new facilities are approved.[24]

The SWE Act provides that safety delegates must be appointed at all workplaces with five or more employees.[25] A safety delegate may stop work if he or she believes there is an immediate and serious danger to the health of the workers.[26] Safety delegates also have authority to stop productions processes until a government inspector determines that the work environ-

ment is safe. Also, the safety delegates are not responsible for any loss the employer suffers while production is stopped.[27] Government statistics indicate that safety delegates invoked the right to stop production over 400 times in the first three years after the SWE Act became law.[28] The SWE Act also provides that employers must allow safety delegates access to all documents relevant to occupational safety.[29] Finally, safety delegates have a cause of action that allows them to sue the employer for damages if the employer interferes with their activities sanctioned by the act.[30]

[T]he SWE Act provides workers with greater occupational safety than does the OSH Act.

The SWE Act also instituted a tax equal to .155 percent of the wages and benefits earned by workers to fund a training program for safety delegates.[31] The program emphasizes small group exercises that are relevant to the delegate's workplace. Subjects covered include: noise, chemical risks, ergonomics, first aid, inspection techniques, and how the laws and collective bargaining agreements can be implemented at the plant level.[32] By 1984, 90,000 of the 121,400 safety delegates completed the program.[33]

The SWE Act also provides that employers with more than 50 employees must establish safety committees comprised of representatives from both labor and management.[34] In 1984, 77 percent of the workers were covered by worker safety committees.[35] Labor must have one more position on the committee than management but many of the important decisions require unanimous approval.[36] Also, labor must allocate their representatives proportionately between blue and white collar workers.[37]

The primary purpose of the safety committee is to plan the company's current safety and health activities.[38] This includes hiring company physicians and industrial hygienists. (The Act provides that employers with more than 500 employees must provide one physician and one industrial hygienist for every 1500 workers.) The committee also establishes long term health and safety goals[39] and consults with the management regarding any changes in the production process that may affect worker safety.[40]

The SWE Act also authorized the National Board of Occupational Safety and Health (NBOSH) to promulgate specific safety standards. However, labor commentators note that the NBOSH has only issued voluntary guidelines.[41] Further they contend the guidelines are too vague and that employers don't comply with the voluntary guidelines.

The standard setting process differs from the rulemaking process in the United States in that the Swedish system relies on informal contacts. NBOSH is not required to provide notice and comment, but apparently proposed standards are circulated informally to interested groups for their comments.[42] One other significant difference between standard setting in the United States and Sweden is that the Swedish Act expressly exempts proposed standards from cost-benefit analysis.[43]

Finally, the SWE Act provides for inspections by government inspectors. Government inspectors are not required to obtain a search warrant prior to inspecting a facility.[44] Among their powers, government inspectors may either impose a fine for safety hazards or they may shut down the facility.[45] However, the encouraged process if for inspectors to seek cooperation from the business to remedy the violation. In marked difference from

the United States, businesses in Sweden normally make any requested changes and then decide whether to appeal the inspector's determination.[46] If the business appeals, then it must present its appeal to a three-person board which consists of one member from labor, management and government.[47]

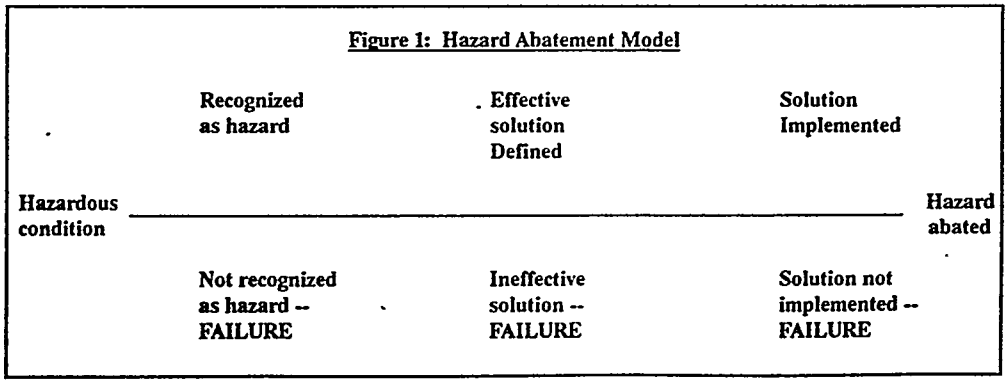
In summary, the Swedish Work Environment Act provides employees with substantial rights through the ability to monitor the work environment, participate in decisions which affect worker safety and in the ability to stop production when a dangerous situation arises. Furthermore, the SWE Act, through the requirement for training, ensures that safety delegates are well trained and able to effectively ensure occupational safety.

COMPARING THE OCCUPATIONAL SAFETY SYSTEM IN SWEDEN AND THE UNITED STATES

The hazard abatement model provided earlier identities three steps minimally necessary to ensure effective occupational safety. These steps are (1) identifying a hazard, (2) defining a solution, and (3) implementing the solution. As Figure 1 illustrates, failure to meet any of these steps diminishes the probability of ensuring a safe workplace. When the two competing systems of occupational safety are evaluated under the criteria suggested by Bacow, the inescapable conclusion is that the SWE Act provides workers with greater occupational safety than does the OSH Act.

Under the first step, identifying hazards, both the U.S. and Swedish systems have government agencies reluctant to promulgate standards. Thus, both systems rely on industrial hygienists employed by management to identify hazards. However, the Swedish system also provides trained safety delegates and safety committees to identify hazards. The presence of safety delegates on site allows site specific hazards to be identified. In contrast, U.S. workers who rely on OSHA will use its limited resources to address only the most common hazards. Finally, the Swedish workers have greater access to information regarding potential hazards because management must consult with worker representatives before management implements new productions processes or before they construct new production facilities. Also, in companies where safety committees are required, management and labor must discuss long terms occupational safety goals. Thus, worker representatives have an additional source of information regarding potential hazards.

Figure 1: Hazard Abatement Model



The Swedish system is also superior in designing a solution. As defined in Bacow's model, designing a solution requires that the parties (1) quantify the risk and (2) select the appropriate remedial response. In the U.S., workers are hampered in this process because in most instances they lack information necessary to quantify the risk. For example, the OSH Act requires that chemical producers provide material safety data sheets (MSDS) for the chemicals they sell. The MSDS provides handling instructions for the chemical but does not provide a list of ingredients. A concern for trade secrets allows the producer to withhold the actual ingredients. Because workers do not know the composition of the chemical, they are prevented from making their own evaluation of the proper safeguards. In contrast, management must inform safety delegates in Sweden about all materials used in the production process and the potential hazards these materials pose for workers. Thus, Swedish unions can learn the specific ingredients of a product and then conduct their own safety tests.

Furthermore, even when the information is available, in most instances U.S. workers lack the resources to adequately evaluate the risk. Most U.S. workers do not have access to independent occupational safety expertise. U.S. workers must rely on the effectiveness of OSHA to ensure occupational safety. In 1979, OSHA instituted a program at two universities to train workers in implementing OSHA standards and in hazard identification and abatement.[48] However, funding for this program was minimal compared to the need. Also, the effectiveness of training workers to implement OSHA safety standards is questionable given OSHA's notoriously slow pace for promulgating standards. Thus, the few training programs that exist are funded and used by unions such as OCAW and UAW who have traditionally made occupational safety a priority.

In contrast, workers in Sweden have immediate access to two groups of occupational safety experts -- safety delegates and occupational safety professionals. First, 120,000 safety delegates are trained to analyze information relating to risks. These delegates represent almost all Swedish workers. Furthermore, the safety committees employ industrial hygienists and physicians who specialize in occupational health and the unions may hire consultants at management's expense. Thus, Swedish workers have both access to information necessary to identify hazards and professional assistance to help them quantify risks.

In the U.S., workers . . . lack information necessary to quantify the risk.

Assuming the parties can quantify the risk, the model assumes that the parties then select an abatement strategy. At this step, the current U.S. system again fails to include the worker in the decision-making process. As the 1981 Bureau of Labor Statistics study of collective bargaining agreements illustrates, only 36 percent of the agreements provided for joint labor management safety committees. Workers must also contend with Supreme Court precedent which provides that decisions regarding management of the business (e.g., modifying the physical work environment) are at the "core of entrepreneurial control."[49] Those workers who are not protected by a collective bargaining agreement that requires consultation and/or approval are often excluded from the process of selecting an abatement strategy.

In contrast, Swedish workers have a right to bargain on technical and other aspects of the production process. Also, safety delegates and safety committees have an express right to information about changes in the materials used and changes to the work process. Finally, the safety committee (on which the workers form a majority) is required to formulate long term goals for ensuring occupational safety. Workers are well positioned to bargain for specific abatement strategies.

The final element of the hazard abatement model requires that management and labor implement the abatement strategies. Once again, the Swedish system provides more rights to workers. Most workers in the U.S. must rely on either voluntary compliance by employers or coercive compliance (inspection orders). The inadequacy of these options is evident in statistics provided earlier which show that during the Reagan years the number of inspectors decreased while the injury incidence rate increased. Furthermore, workers cannot rely on their own initiative to enforce the rules because most workers or their representatives are not allowed to inspect facilities. This situation is also true for union facilities where only 16 percent of the collective bargaining agreements allow worker representatives to inspect the workplace.[50]

[T]he Swedish system provides more rights to workers.

The SWE Act, however, provides that safety delegates can inspect the workplace at any time. More importantly, a safety delegate can stop the production if he or she believes that a safety hazard exists. Workers are also a majority on the safety committees. Thus, workers have significant input into the company's future occupational safety goals and the development of hazard abatement strategies. This local oversight also helps management to maintain productivity to the extent that potential equipment failures are identified and repaired quickly. At a more fundamental level, management benefits from having persons on site (both labor and management) who can immediately evaluate any claims of unsafe working conditions, making official regulatory agency inspections unnecessary.

CONCLUSION

The SWE Act is an example of what can be accomplished by groups of workers that possess significant bargaining power. Admittedly, it is the result of forty years of increasing union strength combined with 40 years of a government sympathetic to unions. However, it is important to remember that most of the significant provisions of the SWE Act merely incorporated what had already been accomplished through collective bargaining.

To effect improvements in worker safety in the United States, unions must devise new strategies to increase both their bargaining strength and membership. Obtaining occupational safety protection similar to the protection offered int eh SWE Act represents one policy goal that unions could adopt and then identify to prospective member. On a less global scale, unions

with expertise in occupational safety issues (UAW and OCAW) could educate workers in traditionally non-union workplaces about the dangers associated with the materials they use.

ENDNOTES

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1. L. Bacow, Bargaining for Job Safety and Health, at 32 (1980).
2. *Id.*
3. See *id* at 33.
4. *Id.*
5. *Id.*
6. *Id.*

7.Bureau of Labor Statistics, Characteristics of Major Collective Bargaining Agreements, at 32-36 (1981).

8.B. Levy & D. Wegman, Occupational Health: Recognizing and Preventing Work-Related Disease, at 135-139 (1988).

8a.29 U.S.C. Sec. 654 (a)(1).

9. Levy & Wegman, *supra* note 8, at 138.
10. *Id.*

10a. 29 U.S.C. Sec. 654 (b)

11. 29 U.S.C. Sec. 654 (a)(2)

12.Levy & Wegman, *supra* note 8, at 138.

13.Shapiro & McGarity, "Reorienting OSHA: Regulatory Alternatives and Legislative Reform", 6 Yale J. on Reg. 1, 3 (1989)

14. 29 U.S.C. Sec. 655 (f).
15. Bacow, *supra* note 8, at 142.
16. 29 U.S.C. 657 (a).
17. Levy & Wegman, *supra* note 8, at 142.

18.Marshall v. Barlow, 429 U.S. 1347, 98 S.Ct. 1816, 56 L.Ed.2d 305 (1978).

19.Navarro, "The Determinants of Health Policy, A Case Study: Regulating Safety and Health at the Workplace in Sweden", 9 J. Health Politics, Policy & Law 137, 143 (1984).

20. R. Elling, The Struggle for Worker's Health, at 73 (1986).
21. Navarro, *supra* note 19, at 149.
22. Id.

23.Fleischauer, "Occupational Safety and Health Law in Sweden and the United States: Are There Any Lessons to be Learned by both Countries?", 6 Hastings Int'l & Comp. L. Rev. 283, 291 (1983).

24. Id. at 291.
25. Id. at 292.
26. Id. at 310.
27. Id.
28. Id.

(Continued on p. 51)