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Dying to Know: A Historical Analysis of the Right-to-Know Movement

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DYING TO KNOW: A HISTORICAL ANALYSIS OF THE RIGHT-TO-KNOW MOVEMENT

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ABSTRACT

The history of the OSHA Hazard Communication Standard is presented, with the implications for the role of government in regulation of job health and safety. The gaining of the Right-to-Know about chemical exposure was a significant achievement for labor, although it took fifteen years to gain a national standard. Labor and community group coalitions, divisions between chemical producers and chemical users, economic forces, third-party lawsuits, and the difficulties in NIOSH/OSHA obtaining chemical identities were all important factors in gaining a standard. Chemical producers shifted from an ideology of "everything is safe" to "everything is dangerous," and finally had to mount a campaign to get the Reagan administration to issue a national standard as a way to pre-empt state and local laws. The case illustrates the relatively greater power of industry, but that workers were able to gain increased control over their work through organizing.

They were filming the scene in Munchkinland where the Wicked Witch is foiled in her attempt to get the ruby slippers. The Witch leaves amidst billows of smoke and fire. In one take, however, the fire came too quickly; Hamilton suffered second- and third-degree burns on her face and hands. To compound the problem, her green make-up contained toxic copper oxide. Before the burns could be treated she was painfully cleaned off with alcohol.

This wasn't the only serious accident on the set. Buddy Ebsen, known to many as Jed Clampett of the "Beverly Hillbillies" and now as "Barnaby Jones," was originally cast to play the "Tin Man." But unbeknownst to the make-up people or to him, he was allergic to the aluminum dust they powdered on him to make the character look silver. After breathing the dust, his lungs became coated with the stuff and he nearly died. When Jack Haley

took the role the aluminum was painted on as a paste, thereby avoiding the breathing problems. And doctors managed to catch the infection it gave his right eye before it did any serious damage. By the way, Haley wasn't told what happened to Ebsen.

"MGM has the most marvelous way of glossing (the accidents) over," says Hamilton. "And they're still doing it." She claims the Special Effects Director, Bud Gillespie, insists he doesn't remember her accident. She says the whole affair was "white-washed." "The idea," she said, "is that they were not to mention this (the accidents) because they were sure I would sue them, you see. Well I wanted to work again so naturally I would not sue. I wouldn't have done it for anything because you would never work again if you did . . .

"They (the studios) have that kind of power and they have an agreement, unspoken and unwritten, between them that if anything like that happens, and an actor is dismissed, nobody hires him either. So I didn't sue."

—Margaret Hamilton [1]

It is commonplace today to hear workers complaining about having to sit through another "wasted hour" of hazard communication training about chemicals in the workplace. Yet just fifteen years ago workers did not have the right-to-know the identity of the chemicals they were exposed to, even if the chemicals were making them sick. This article will give an overview of the history of the development of the OSHA Hazard Communication Standard, which gave workers across the country the right to that information.

The research consists primarily of a literature review of events concerning the right-to-know, focusing to a large degree on the very extensive OSHA hearing record of the standard, as well as Congressional hearings and other government records.

The right-to-know is of interest theoretically for a number of reasons. It is one of the few OSHA standards that applies to virtually all workers in all industries, and to a very large number of chemicals, as opposed to the specific standards that OSHA has typically issued. It also is one of the few standards that empowers workers in the sense that it provides them information that they can act on themselves, rather than having them rely on external experts to sample the air, or otherwise make a determination that the work environment is "safe," or at least "legal." By doing this, the standard intervenes in the balance of power between labor and management over control of the workplace, a balance that has been historically heavily skewed toward management. This makes it a revealing case study for understanding the role of government in dealing with conflicts between classes in society.

Coye et al. note:

> The new proposal for occupational health, [OSHA], threatened to invade new ground: the choice of substances to be used in the production and their permissible levels; levels of noise, heat, and other physical conditions; access

> for workers to "trade secrets" such as the names of chemicals they were working with. In addition, management in non-unionized sectors of the economy had even greater fears about the possibilities inherent in such proposals: health and safety might be a "back door" entrance for union organizers which they had so far fended off [2, pp. 8-9].

THEORETICAL PERSPECTIVES

At its core, the right-to-know issue is an example of government regulation of the workplace. Theories concerning why or how the government decides on a certain course of action or inaction are generally referred to as "theories of the role of the state." These generally cluster in four groupings: conflict analysis, pluralist analysis, theories of bureaucracies, and free-market theories. While these theories have underlying political premises that are very different, as they have become increasingly elaborated they have tended to draw closer together, reflecting as much differences in levels of analysis as in descriptions of how the state functions [3].

> Marxists emphasize that the capitalist class dominates the state in one way or another, and they believe that the state apparatus has a strong bias in favor of the capitalist system. But once they concede that the ruling class is divided into "segments" or "factions," that the state apparatus is often "autonomous" or "relatively autonomous," that other classes can control pieces of the state or at least have great influence in them, and that the ruling class does not always get exactly what it wants, then the differences become ones of degree and emphasis [4].

For example, conflict analysis begins with a description of classes, with an underlying premise that the state functions as a "handmaiden" of the upper class. However, as the theories have become elaborated, it is conceded that this is more of a "contingent control" where workers can influence the state through organizing pressure [5]. Other conflict theorists emphasize power elite analysis which shows that the upper class is to a large extent a coherent and self-aware class that dominates high governmental posts such as the Congress [6, 7]. Conflict theories also emphasize that in democratic capitalist societies, the government has to *appear* neutral in order to avoid fundamental change. In addition, the government must be able to negotiate between factions of the business class where there are disagreements, and resolve those generally in favor of longer-range interests rather than short-term profit [8].

Pluralist theories start with a premise that interest groups organize to influence the government, beginning with a premise of power equality between groups in a democratic setting. However, as these theories become elaborated, it is conceded that the business class has influence dramatically in excess of their numbers through control over resources such as political contributions, investment and job

creation strategies (the "business climate"), educational opportunities, and the media [9, 10].

Bureaucratic theories emphasize the importance of long-term governmental employees, and the life-cycle of regulatory agencies. However, these theories tend to ignore the questions of why these bureaucrats act in the way that they do, and how the different parts of government (for example, the Labor Department and Office of Management and Budget (OMB)) react differently to pressures from different classes. They are describing processes at a different level of abstraction than conflict theories and pluralist theories.

Free market theorists focus on the working of the market, with an underlying conservative ideology that less regulation is better. However, elaboration on these theories in "imperfect markets" concedes that market forces in regard to higher Workers' Compensation costs and "free choice" of jobs based on risks will not produce economically optimal conditions in regards to occupational disease (though they may be more adequate for traumatic injury) [11]. Furthermore, the theory states that the market will not provide for adequate information on chemical hazards to workers:

> These difficulties are enhanced in the job hazard situation by the fact that the employer has a direct economic interest in workers' use of this information, and this self-interest may not be conducive to the promotion of social welfare [12].

In regard to the right-to-know, then, the elaboration of each of these theories would predict that the businesses would dominate the political process due to their economic resources and political influence. However, workers might be able to affect the outcome significantly if they were able to organize sufficiently, particularly if

1. the issue were such that it could divide the business class over the longer term consequences for the capitalist system as a whole, and
2. workers could also get out a clear enough message that would indicate that the government is acting on businesses' behalf rather than as a neutral arbiter.

In addition, the government agency set up to address labor's concerns (that is, the Labor Department) should respond more favorably to labor's agenda than the agencies set up to respond to business' concerns (that is, OMB). The free market theories would indicate that it is likely that economic incentives would not be sufficient to get employers to voluntarily give workers information about the hazards of chemicals, and the class and pluralist theories would indicate that workers in a country with a low level of unionization would need government intervention in order to obtain the information.

Although the right-to-know is an important link in control over the workplace, it does not in and of itself give actual control. It is a necessary but not sufficient condition for such control. It is impossible for workers and unions to have toxic substances replaced or hazardous jobs shut down without first knowing what the substances are and their potential health effects.

There are an estimated 100,000 deaths per year due to occupational disease in the United States. Five to 20 percent of all cancer cases are thought to be linked to on-the-job exposures to hazardous chemicals [13]. One in four workers in the United States is exposed to substances regulated as hazardous by OSHA (the Occupational Safety and Health Administration) [14]. It is estimated that there are more than a quarter million chemicals in U.S. workplaces, with 500 new ones added each year. Most of these chemicals are virtually untested for potential health effects before being introduced into the workplace [15]. OSHA has standards for maximum allowed exposure to only about 400 of these chemicals. Most of those standards do not take into account long-term, chronic risks, such as cancer, in deciding the levels that are legally allowed in the workplace [16].

A 1979 public opinion poll found that 91 percent of workers and the public, 84 percent of business leaders, and 87 percent of Congressional members believed that employers should be required by law to tell workers if there was any information that worker health is being affected by conditions at work [17]. Despite such overwhelming verbal support, a national law on the right-to-know did not go into effect until 1986.

What were the factors that led to the right-to-know law? Why did it take so long? If the standard is of such central importance to business to protect such information and control over the workplace, and if business has so much power, how did it get issued at all? These are some of the issues we will discuss in this article.

EARLY HISTORY

The labeling of chemicals and hazard warnings began as the use of chemicals was starting to grow in the 1920s. Apparently spurred by the investigations of Dr. Alice Hamilton, in 1926 individual chemical companies signed agreements with the Surgeon General to institute warnings on tetraethyl lead. This is in line with later actions taken by companies in the "voluntary compliance" approach [18], where companies try to avoid regulation by instituting voluntary, usually weaker, labeling in order to avoid government regulation and/or to give a business-defined starting point for negotiations.

The first formal governmental action concerning labeling of hazardous chemicals was the passage of the Federal Caustic Poison Act in 1927, requiring precautionary labeling for eleven caustic chemicals bottled for home use. "Voluntary" labeling of household hazardous chemicals resulted from a proposed 1932 labeling law, spurred by a study of worker illness, which resulted in agreements

between the Surgeon General and the Manufacturing Chemists Association. A 1944 Manufacturing Chemists Association conference on labeling gave rise to the Labels and Precautionary Information, or LAPI, Committee, which produced its first manual on recommended labeling practices in 1945. A later edition of the LAPI Guide noted that adherence to the guide might obviate governmental regulation which "might or might not be wisely framed" [19].

The OSHA standard had its roots in the passage of the OSH Act in 1970. The Act specifically addressed the labeling of hazardous chemicals in Section 6(7):

> Any standard promulgated under this subsection shall prescribe the use of labels or other appropriate forms of warning as are necessary to insure that employees are apprised of all hazards to which they are exposed, relevant symptoms and appropriate emergency treatment, and proper conditions and precautions of safe use or exposure [20].

The section also gives the Secretary of Labor the authority to make changes in those specific requirements relating to "labeling or other forms of warning."

The Industrial Union Department of the AFL-CIO began sending letters to the Secretary of Labor every six months beginning in 1971 requesting a standard that would require that all OSHA-regulated chemicals be identified by their chemical name.

OSHA standards issued soon after the law took effect in 1971 required that workers be informed if they were exposed over the OSHA legal limit for the approximately 400 regulated chemicals. However, this was often impossible to do since even employers had no idea what chemical was being used. In addition, employers did not often sample exposures, and workers could not effectively advocate sampling without knowing the name of the chemical.

NIOSH (the National Institute for Occupational Safety and Health, the research agency set up by the OSH Act) began the National Occupational Hazards Study (NOHS) in 1972 to try to determine what chemicals were being used in large quantities, as well as to gather other hazard information. A central problem was that even NIOSH had extreme difficulty in identifying chemicals, because they were usually marked just with brand names. To make matters worse, many had "nested" trade names—that is, a chemical was sold by trade name to another chemical company which added other trade-name chemicals to it. In addition, many of these trade-name chemicals were considered to be "trade secrets" which the chemical formulator did not want to reveal (see Table 1).

NIOSH noted the extreme difficulties of the study:

> any kind of response imaginable, and I really mean anything, came back in response to this mailing. Anywhere from obscenities scrawled across the form to bulk samples with a little note, "You figure it out, we don't even know what is in it" [21].

Table 1. Results of the National Occupational Hazard Survey, 1972-1974

Total plants surveyed	5,200
Total of different chemical, biological, and physical hazards	4,391
Total of all exposure records	426,013
Total of all trade name exposures	190,348
Total of different trade-name products	85,814
Percent of trade-name exposures where employer didn't know chemical	90% (171,164)
Number of chemicals NIOSH received information upon request	40,592
Percent of trade-name products containing OSHA-regulated chemicals	44% (19,987)
Percent of products termed "trade secret"	27% (10,814)
Percent of trade secret chemicals containing OSHA-regulated chemicals	53% (5,760)

Source: National Occupational Hazard Survey [21].

At this point in time, another separate development also occurred which had an important impact on the right-to-know. It was the asbestos-related product liability case, the 1973 *Borel vs. Fiberboard* decision by the U.S. Fifth Circuit Court of Appeals, which established liability for chemical producers for *failure to warn* workers of hazards. The Court made five principal points:

1. If there is a failure to warn users of the hazards, then the product is unreasonably dangerous, even where there are benefits from the product.
2. The manufacturer is held to the knowledge and skill of an expert. The manufacturer has to keep up with current information, and also has the duty to test the product.
3. The manufacturer may be liable to warn the ultimate consumer, unless an intermediate interferes (that is, by destroying a label).
4. Misuse by the consumer, such as not wearing a dust mask when told to do so, would result in no damages being awarded.
5. The warning must take into account the severity of the result. The Court said: "The admonition that a worker should 'avoid breathing the dust' is black humor: there was no way for insulation workers to avoid breathing asbestos dust" [22].

The court decision provided a strong impetus to chemical manufacturers to come up with a plan to avoid such damage suits in the future, and prompted considerable "voluntary" labeling and the production and distribution to employers of Material Safety Data Sheets (MSDS).

The results from the NOHS prompted NIOSH to work on a criteria document for a recommended standard to OSHA on "An Identification System for Occupationally Hazardous Materials," which was finished in 1974. The document went through a panel of ten review consultants, five of whom were industry representatives (General Motors, Standard Oil, Shell, and Allis-Chalmers), and five who were medical, government, or apparently independent. None represented labor. NIOSH came up with a system comprised of three elements: labeling, Material Safety Data Sheets (MSDS), and training, with a focus on labeling.

The early history, then, shows a pattern of industry control over information, moving just enough to avoid government requirements, and with the government dealing only with industry on the issue.

THE OSHA STANDARDS ADVISORY COMMITTEE

Although a large number of NIOSH proposals had been ignored by OSHA, the NIOSH Criteria Document resulted in a Standard Advisory Committee being formed by OSHA. The committee's structure, based on the OSH Act, consisted of four employer representatives (Allis-Chalmers, U.S. Chamber of Commerce, American Cyanamid, Standard Oil), four employee representatives (International Chemical Workers, Teamsters, Rubberworkers, and Firefighters unions), three from federal agencies (NIOSH, DOT, and EPA), one state representative (Maryland Fire Marshal), and one from the National Fire Protection Agency ("public"). The chair was from a university.

The American Cyanamid representative, C. Boyd Shaffer, dominated the proceedings by putting out several proposals which became the working documents for the committee, rather than the NIOSH Criteria Document which had been the stimulus for the formation of the committee. The industry representatives appeared to have considerably more resources available than labor, bringing in outside experts from other industries to testify, and preparing drafts and proposals.

The major areas of controversy in the OSHA Advisory Committee deliberations were:

1. The requirement that Material Safety Data Sheets (MSDS) must be provided at all. Employer representatives said that such a requirement goes far beyond what is required, and perhaps permitted, by the OSH Act. One later proposal was that MSDSs be given only to the employers, and not to the workers.
2. The extent of the specific information that must be on the MSDS and label. This discussion focused on employer suggestions for a performance-based standard which would just list symptoms and hazards, a proposal to cover only the 400 OSHA-regulated chemicals, and proposals to not list maximum exposure levels (TLV's), nor to use a number rating system which labor thought would be easier to understand. The discussion included Berman (Chamber of Commerce) bristling at the idea of providing the manufacturer's phone number for emergency use: "It would be nice to do a lot of things . . . It is not required in the Act. And if it is not required in the Act, it cannot be required in the regulations . . . We cannot suggest the emergency telephone number any more than the maiden name of the company president's wife" [23].
3. Exemptions for laboratories and intermediate chemicals, and
4. Protection of trade secrets.

The final report had sharply dissenting comments from the labor representatives, who lost on many key votes in the committee.

Many of the employer arguments focused on the issue of high employer cost due to over-regulation. Berman (Chamber of Commerce) recalls then-President Ford's criticism of "over-regulation" and says "Let us worry about the basics and not think about what we might do in the 'Land of Oz.' " [24]. (Berman had apparently not heard of the story quoted at the beginning of this chapter.) Shaffer (American Cyanamid) stated, "We have to strike some sort of balance between an adequate protection of the employee and an almost impossible economic impact" [25].

The concern for the economic impact included predictions of industry shutdowns. When Shaffer asked for an exemption for intermediate chemicals in chemical plants, Craft (NIOSH) asserted that the time when chemicals are changing (for example, intermediates) is the time when a good labeling and training program is most needed, provoking the following exchange:

> Bridge (Standard Oil): "Well, Dr. Craft (NIOSH), that would be nice, but I submit the logical conclusion to that is that there are certain plants that will simply have to shut down."
> Beliczky (Rubberworkers Union): "I am sure you would not shut a plant down for that, Mr. Bridge."
> Bridge: "Well, let's put it this way: It [the standard] would surely end up in the courts."
> Craft: "And I submit that one third-party suit could pay for a lot of Material Safety Data Sheets" [26].

Protection of trade secrets was another clear economic concern. S. F. Strauss of the W. H. Brady Company, which manufactures warning labels to sell to other companies, was concerned about trade secrets for his firm's glues and adhesives used to attach labels. His company had an "Information Security System" where all materials were identified only by code numbers, and even supervisors didn't know what the chemicals were. He suggested that loss of trade secrets would lead to a loss of jobs, possibly overseas.

Beliczky questions him sharply, discovering that the Brady Company does not employ even one industrial hygienist or toxicologist, and often the warning sheets

don't give the specific hazards, but only warn that it is a "hazardous" chemical. Brady responds, "Basically what we are telling our people, 'Use this material. Treat it with great respect' " [27].

When Beliczky asked if all of his company's products were trade secrets, Strauss replied that not all substances were proprietary but: "We feel it is important to have this complete system in operation as it becomes a way of doing things, talking about materials in terms of the numbers. Then as a visitor comes through, or as people talking to outsiders they automatically have the number information rather than the chemical information."

Employer representatives also raised the idea that too much information would confuse workers. This included arguments against providing the chemical name instead of the trade name (the chemical names are "often very long and not well recognized"); arguments against providing MSDSs, since they were designed for technical experts; and arguments for just providing training rather than written materials.

The Report of the OSHA Standard Advisory Committee was released in June of 1975. It recommended a "total systems approach" to hazard communication, integrating requirements for 1) labeling, 2) Material Safety Data Sheets (MSDSs), and 3) training. Of these three categories, the recommendations emphasized labeling, which had the most detailed requirements. Labor issued a sharply worded minority report, criticizing the conclusions and the process. The report did not require providing the chemical name, which labor considered the one essential piece. It also exempted low-volume chemicals from MSDSs, allowed trade secrets, did not require chronic effects to be listed on labels, and did not require a numeric warning system.

Attention now turned to the OSHA proposed standard, which was delayed because of the sharp divisions between labor and business, and business pressure on the Republican Ford administration. Business attempted to keep the ball in their court by emphasizing voluntary compliance with hazard communication. Labor tried to pressure OSHA through Congressional hearings (the House was Democratically controlled).

One part of business's approach was the successful effort to get the Chemical Manufacturers Association's (CMA, known at the time as the Manufacturers Chemists Association) voluntary LAPI standard accepted by the American National Standards Institute (ANSI). ANSI is a private standard-setting organization dominated by business, which attempts to reach a "consensus" on standards by sending standards to affected groups for voting.

The process, as it came out in a congressional report, is that the CMA, as sponsor of the Right-to-Know proposed ANSI standard, developed a list of groups that had an interest in the subject and had them vote on the proposal. CMA then passed on the results of the voting to ANSI to review and try to resolve disagreements. The CMA list included some government agencies and three unions, but the vast majority of the twenty groups contacted were industry trade groups.

When the CMA testified at a Congressional oversight hearing on the delay in the OSHA standard, its representatives strongly implied that the ANSI standard was a true consensus standard that all parties agreed to, stating that it had been put through a substantial portion of the "union world," and specifically indicated complete agreement by government agencies, saying there were no negative votes.

The report noted, however, that the only two unions approached on the standard both rejected it, and that the Public Health Service did not vote for it. NIOSH, in its vote reply to the CMA poll, said that it must "vote against the proposal" because it was not in agreement with its proposed standard to OSHA. CMA counted that as an "abstention" rather than a "no" vote.

The congressional report issued after the hearings cautioned against giving any preferential treatment to such "consensus" standards, quoting from an earlier report which said that private organizations like ANSI are "susceptible to the pressures of commercial trade association interests, and that voluntary standards set by the consensus method represent the lowest common denominator of change in the status quo that is necessary to achieve acceptance" [28].

CMA argued that the marketplace was taking care of the information problem:

> There are product data bulletins developed on almost all materials. They are used by the sales force to convince potential customers of the desirability of that product. Many of them carry information on safety and health. This too should be part of the information available at the workplace [29].

Labor countered with many examples where the information was not getting through to workers, with consequent diseases:

> The men and women we represent are slowly coming to realize that the passage of the [OSH] Act did not change the ancient, widespread expectation that death and disease are part of the sacrifice that must be made for food, clothing, and shelter . . . It is a barbaric attitude which we reject" [30].

NIOSH supported the labor position through its description of its own problems getting information, including from CMA companies. Despite a NIOSH file of more than 200,000 trade name products, NIOSH found the file able to identify only about 1/20 of the trade names it was investigating.

For CMA companies only, NIOSH received 8,970 responses to trade name chemicals. Of that number, 3,110 were claimed as trade secrets (about 35%), or a little higher than the average for all companies. Of those claimed as trade secrets, 1,440 chemicals (46%) contained OSHA-regulated substances [31].

The hearings were followed by a Congressional Report issued by the Committee on Government Operations called "Chemical Dangers in the Workplace," which pressured OSHA for a standard.

OSHA'S PROPOSED STANDARD

OSHA issued an Advance Notice of Rulemaking for a labeling standard on January 28, 1977, as the new Democratic administration of Jimmy Carter took over. A total of fifty-one responses to the notice were received by OSHA, with the vast majority (49, or 96%) from industry. Surprisingly, labor did not formally respond to the notice. Of the responses from industry, the majority of responses were from chemical manufacturers (30, or 59%), rather than chemical users (12, or 24%) or chemical transporters (7, or 14%), who were mainly interested in being exempted from the standard since they were already covered by Department of Transportation regulations [32].

Responses to the proposal from chemical producers focused on legal and technical issues such as the proposal was not practical, was unenforceable, was already covered by other statutes, was not flexible, and went beyond OSHA's legal authority. A second set of concerns focused on economic issues, such as that it would encourage Workers' Compensation claims, would drive companies out of business, and that there was no cost-benefit analysis.

A very interesting and unusual position was taken by DuBois chemical, who stated that the *lack* of a standard was putting them at a "competitive disadvantage" since they were already providing information, but others did not have to. However, they were still opposed to giving the chemical name, saying that only experts can know what the hazards of mixtures are, and that the chemical name "will tend to confuse rather than aid."

A major split in the business community appeared at this time between chemical producers and chemical users. Up to this time, it had been the chemical producers who had dominated discussions. However, chemical users (such as automotive companies) had found that they were at a substantial disadvantage if they did not know the chemical name of the substances they were using. These problems included problems with monitoring chemicals for OSHA-regulated exposures, and how to treat workers made ill by chemicals. Problems also included important non-health related issues from not knowing exactly what chemicals they were using. These included difficulty in setting up consistent chemical reactions in processes, paying higher prices for chemicals with trade names instead of generic chemicals, as well as missing economies of scale which might be available by consolidating purchasing of the same chemicals from different vendors which were just labeled by trade name.

As a result, chemical users were twice as likely to support having a national standard (82% for a standard, compared with 43% of chemical producers), arguing that they were having difficulty getting information on chemicals from the producers. Users (as well as some producers) also felt that a uniform federal standard was needed to replace the conflicting state requirements that were developing.

Industry differed on whether they thought they should have legal responsibility for the accuracy of chemical information. Chemical producers thought they did not have such responsibility, with only 27 percent of the producers contending they had even shared responsibility. Eighty percent of the users thought the producers had at least shared legal responsibility. Only 11 percent of the responding producers, contrasted with 80 percent of responding users and transporters, thought that the chemical name should always be required. Among users, 43 percent thought there should be a long list (for example, the NIOSH Registry of Toxic Effects of Chemical Substances list with more than 18,000 chemicals), whereas only 3 percent of the producers thought the long list was good.

There were widespread arguments that the chemical name would cause confusion among workers who are used to the trade name. In fact, 40 percent of the chemical producers mentioned confusion as an issue either in regard to generic name, or in regard to regulations requiring detailed labels or MSDS, even though the Notice of Rulemaking did not request information on that issue. By contrast, only 30 percent mentioned cost factors, even though that information was specifically requested.

The labor and citizen side was summarized in a Public Citizen submission, following up their petition of September 27, 1976 to force OSHA to issue a standard on labeling, focusing on the requirement for release of generic name:

1. The need to require generic names for all chemicals, not just OSHA-regulated chemicals. Covering only the 400 OSHA-regulated chemicals would lock out labor from finding out what other chemicals are hazardous, and would rely on the "paternalism of industry to decide what was hazardous."
2. If workers don't know the chemicals they are exposed to, they can't exercise the rights given to them under the OSH Act such as complaining to OSHA or requesting a standard.
3. If workers don't know the chemicals they are exposed to, they can't make a proper decision whether to accept or continue employment, to press for contract language, or demand immediate protection.
4. OSHA can't cover all the country's workplaces with its small staff, so there is a strong need for worker involvement in controlling hazards.
5. A worker's doctor can't tap into the medical literature for a chemical without the name.
6. It is impossible to press a Workers' Compensation claim without a chemical name.
7. Unions give the Right-to-Know a high priority.
8. Nothing in the OSH Act prohibits a generic chemical name standard [33].

In short, the citizen/labor position argued that the profit motivation of companies was such that it was harming the health of the workers, and that therefore the situation required government intervention. The early position that chemical

companies had taken that voluntary actions by business would protect workers had been blown apart by worker stories combined with NIOSH data. In the context of a Democratic administration, business was left with little to argue except economic loss and legal technicalities. They were forced to move toward a position of trying to reduce the impact of the standard that seemed sure to arrive, hopefully with one that sounded like it gave workers rights, but in fact did little.

CMA wrote to OSHA concerning the proposed standard. It had two principal objectives if OSHA did decide to issue a standard: 1) Limiting the number of chemicals classified as "hazardous," and 2) Protecting trade secrets.

CMA wanted to limit hazardous substances by covering only substances intentionally present, and also by limiting it to chemicals encountered by employees "in such amount generally known to cause acute or chronic effects," with an emphasis on human rather than animal data. This proposal would dramatically reduce the number of chemicals covered by labeling because the key guide becomes not what the chemical is, but how much workers are exposed to. It would eliminate the possibility of workers discovering new hazards because only chemicals already generally known to cause effects in humans would be labeled. It would also eliminate the usefulness of labeling for emergency situations since they would only be labeled if they were generally at high levels. In fact, if the "such amount" was defined as the OSHA standard, then there would be little need for additional labeling since workers are not supposed to be exposed over that limit anyway.

In related developments, the National Labor Relations Board had ruled in 1979 in the 3M Decision that unions have the right of access to health and safety information, including information on chemicals, as part of the union's right to bargain. The decision gave added impetus to the drive for a standard.

THE OSHA STANDARDS

The OSHA standard was split into two parts: the Access to Medical and Exposure Records Standards was issued in May 1980, and the Carter Administration's proposal on Hazard Identification in January 1981, on the eve of the Reagan Administration. The Access standard basically said that if the employer has information, it must be shared with workers and unions. The Hazard Identification standard focused primarily on manufacturing, and said that employers must have information on chemicals, and included requirements for labeling, MSDSs, and training.

The Access Standard was upheld by the U.S. District Court against a court challenge by the Louisiana Chemical Association in 1984 [34].

The Labeling Standard proposal was issued as one of the Carter Administration's "eleventh hour" regulations just prior to Reagan's taking office. The Labeling Standard would have required chemical producers to evaluate and label hazardous chemicals, and require employers to obtain MSDSs and label in-plant

containers. The standard required chemical producers to do detailed literature reviews for the toxicology of chemicals they produce if the chemical is listed in EPA's Toxic Substances Control Act Inventory list (a very large list). All chemicals deemed hazardous by this review must be labeled with the chemical names in the order of concentration (like food labels), and chemical producers must send an MSDS with the first shipment of a covered chemical. Employers would have to label all workplace containers over five gallons, including pipes, make MSDSs available to workers and unions within forty-eight hours of a request (the Access standard allowed 15 days), and tell workers about their rights under the standard. There were no other specific training requirements. OSHA would also maintain a registry of all covered substances.

As an indication of the importance of the right-to-know issue, the proposal was withdrawn as the first official act of Labor Secretary Donovan of the new Reagan Administration on February 12, 1981, less than a month after the proposal was issued.

Labor managed to still get a sympathetic ear, even though no standard was issued, by getting a House Committee hearing under Joseph Gaydos, a strong labor supporter who then chaired the Subcommittee on Health and Safety of the Committee on Education and Labor. AFL-CIO Legislative Director Ray Denison testified:

> Two weeks into the Reagan Administration, on February 4, 1981, the Chemical Manufacturing Association [CMA] wrote to the designee for Secretary of Labor, Raymond Donovan, asking for the withdrawal of this so-called "startling" midnight regulatory action proposed on January 16, 1981, by the Carter Administration. The letter was copied to Vice President Bush, OMB director Stockman, CEA Chair Murray Weidenbaum, and OMB Regulatory Affairs Director James C. Miller. On February 10, 1981, before hearing from the labor movement on this critical issue, Secretary Donovan ordered that the proposed standard be withdrawn. This action was taken before an Assistant Secretary of Labor of OSHA had been nominated and with no review of the proposed regulation or consultation of OSHA staff familiar with the content of the rule or its history. The circumstances of the revocation of the proposal unfortunately suggest that political motivation was the sole basis for this arbitrary decision. We do not know who was responsible for the decision to withdraw the proposal, but we have serious questions that the Department of Labor was playing only a quarterback role responding solely to industry game calls and orders by the Office of Management and Budget [35, p. 2].

A follow-up letter from CMA to the subcommittee, which responded to a request to detail CMA's contacts with OSHA, accused OSHA of not listening to business, though the content of the letter indicated that there was very open access for business:

. . . Over the past two years, many highly productive meetings were held between various parties in EPA and CMA. EPA readily supplied drafts of developing regulations to CMA for discussion. Based on such dialogue, significant changes in these drafts were made by the EPA. The relationship with OSHA was quite different. In spite of repeated requests for drafts of OSHA's views towards proposed regulation, only two drafts were received by CMA before OSHA issued its proposed regulation. Few changes resulted from discussion of these drafts:

- On April 24, 1980, CMA requested a meeting with Dr. Bailus Walker (OSHA) and Mr. George Taylor (AFL-CIO) to discuss the relationship of confidentiality to worker protection. The meeting never occurred.
- On September 18, 1980, Mr. John Rivard (Shell), Mr. Tom Evans (Monsanto), and Mr. Jerry Robertson (Exxon) made oral and visual presentations of the problems associated with labeling all containers in the workplace to Dr. Arthur Oleinick and Mr. Richard Bank—authors of the proposed OSHA rule. The result of that meeting was a reduction of the required frequency of labeling of pipes. However, the burdensome requirement for labeling all containers in the plant was maintained.
- On October 23, 1980, Ms. Norma Skolnick (Essex Chemical), Dr. William Bittenberger (Borden), and others from CMA spoke with Dr. Oleinick at the University of Michigan about the excessive nature of literature search requirements for hazard evaluation . . . There was no decrease in requirements as a result of this meeting . . .
- On November 5, 1980, Mr. James O'Reilly, Esq. (Proctor and Gamble), Dr. Curtis Smith (Shell), and Mr. Carl Umland (Exxon) presented various aspects and examples of concerns in the area of trade secrets to Mr. Nathaniel Spillar, Esq. (OSHA's Office of General Counsel). In addition, Dr. Robert Scala (Exxon) and Dr. Harry Demopolous (NYU Medical School) discussed problems with generic chronic hazard regulation. Again, no changes were made as a result of the meeting. Except for the next-to-the-last meeting, OSHA restricted the number and type of CMA representatives in attendance . . .
- On November 19 . . . CMA met with Dr. Eula Bingham (OSHA) and Mr. Steve Jellinek (EPA) and others to express our concern over excessive specifications in OSHA's draft and to express CMA's continued interest in working with OSHA toward workable, cost-effective, performance-based regulation . . . No significant changes in [OSHA's] draft regulation were made as a result of this meeting [26, pp. 461-462].

Smith, speaking for CMA and Shell, again pushed the themes that the chemical industry is one of the safest industries to work in (citing accident statistics rather than illness statistics), that the Carter proposal was a "prime example of regulatory excess," and that the proposal would have required over-labeling, including labeling vinegar and sugar as carcinogens:

> OSHA's proposed regulation made no provision for protection of trade secrets concerning chemical identity and for this reason it was not acceptable.

> As discussed earlier, adequate worker protection from hazards can and should be accomplished without compelled destruction of trade secrets. Our government had provided protection of such information to encourage and support innovation, which results in the development of new chemicals and new jobs. As will be shown, the rate of introduction of new substances has already decreased seriously.
>
> A study by the Regulatory Research Service (RRS) commissioned by CMA found that "the rate of innovation appears to have declined drastically by approximately 70 to 90 percent from former levels." In this quote, innovation is equated to new chemical introductions . . . The loss of protection for trade secrets would aggravate the already serious decrease in the rate of introduction of new substances and should not be permitted [37, pp. 251-252].

In fact, other employers testifying at the congressional hearing made it clear that their positions were not the same as CMA's. Gehering, speaking for Master Chemical, a small specialty chemical firm, noted, "I think it is very important that the committee recognize the difference between the members of CMA and chemical processors such as Master Chemical" [38]. The Motor Vehicles Manufacturers Association (MVMA) also distanced themselves from the CMA in regards to regulating chemicals on a substance-by-substance basis: "MVMA is very cautious about the chemical industry statement . . . MVMA has considered this very serious question and has taken a more moderate approach than the chemical industry" [39].

Labor found themselves having to defend the standard by citing the cost-benefit studies that the Reagan administration was relying on in other matters. Oderich, of the United Steelworkers Union, said:

> We do not think the Occupational Safety and Health Act allows the government to barter workers' lives for economic gain. Nevertheless, the committee may wish to note the fact that OSHA's regulatory analysis found that the economic benefits of the proposal standard exceeded the economic costs. The total cost of the standard, over a 40-year period, was estimated at $5.3 to $8.2 billion, depending on certain assumptions about the economic growth rate. By comparison, the economic benefits of the standard over 40 years were estimated to be $10.1 billion. This analysis does not include non-monetary benefits—decreases in suffering and early death. Of course, the benefits of the standard will be enjoyed by workers and the society at large. The costs will be borne by industry, chiefly the chemical companies. It is not hard to understand their opposition [40, pp. 56-57].

Although even the Democrats did not want to appear to be enemies of employers, their questioning had a decidedly different tone. Chairman Gaydos questioned Monsanto this way:

> I would like to ask one question, Mr. Evans, and I want to apologize before I ask it. I say it in all due respect to my previous observations about the sensitivity of your company to educational requirements and what you have done and your whole approach to the problem. But on the record, I want to ask you about the case that is now pending, the $1.7-billion suit now filed against Monsanto by 54 former employees, that suit involving 2,4,5-D dioxin products, that you discontinued producing back in 1969. I raise that not to detract from your company's dedication to health and safety, but explain the situation. Isn't that rather dangerous to take a position that just because something has been tried and tested, it might not be found out in the future about the inherent danger and toxicity of the element involved [41, pp. 385-386]?

In sum, industry's complaint that it had not gotten a fair hearing seems to better indicate that the doors of influence are open, but that their arguments were not compelling enough. Labor's position reversed on the national level after the Reagan administration took over. The worker stories of disease, NIOSH studies, and media attention had gotten the issue to the front burner, but there had been too much opposition and too many delays for the Carter administration to get the standard issued and implemented before the administration change.

It became clear that a different approach was needed to get workers covered by right-to-know laws. A crucial part of this strategy was to go to the state and local level, working through COSH's (Coalitions on Occupational Safety and Health) and community groups. This grass-roots approach had begun previously in the drive for a national as well as local standards.

THE GRASS-ROOTS CAMPAIGN

The movement for the Right-to-Know was originally a strictly trade union goal, with some early funding in 1975 from the Youth Project, which helped a few existing COSH groups push for a federal standard. COSH groups are local and state-wide organizations based around union activists who are concerned about job health and safety, combined with politically progressive safety and health professionals, which do both education and political action around job health and safety issues. COSH groups in Philadelphia, Chicago, Massachusetts, and California gathered tens of thousands of signatures in a petition drive [42].

In 1976 PhilaPOSH (the Philadelphia-based COSH group), with the Ralph Nader-based Health Research Group, formally petitioned OSHA for a standard. The PhilaPOSH campaign also involved a push for a local law giving communities and workers the right-to-know what chemicals were being used, and was fueled by statistics showing very high rates of cancer in Philadelphia. PhilaPOSH organized a "Chemical Killers" conference in March 1979 when OSHA reacted slowly to the petition. The conference gathered more than 300 labor and community activists, who pursued a city ordinance relentlessly.

The cancer concern made the law very difficult to oppose. The president of the Chamber of Commerce said, ". . . this is a very difficult thing to oppose. I mean, it sounds like you are standing up for cancer" [43].

The grassroots campaign featured demonstrations, petitions, letter writing, media coverage, and mass lobbying. In a graphic illustration of workers' plight, the City Council Hearing featured a United Auto Workers (UAW) representative, Bill Kane, opening the valve of an unlabeled gas cylinder, to the alarm of the council members present. When the council members demanded to know what the gas was, Kane told them not to worry, "We've been using it for years." He later revealed it was harmless compressed air. The city ordinance passed in July of 1981.

Robert Vogel, who was the industry spokesperson on right-to-know in Philadelphia and is Chief Regulatory Counsel of Rohm and Haas, argued that industry supported "the concept" of right-to-know, but did not believe that the original proposal was a good law. He argued that "our knowledge of what causes or promotes cancer is incomplete and imperfect," that "the cause and effects [of environmental dangers are] largely unknown," and that these problems are "compounded by an unsatisfactory political response" where politicians respond to changes in public opinion. Vogel charged that environmental groups have shaped political opinion through their "easy access" to the media: "Unfortunately, some segments of the self-styled public interest groups are irresponsible. They feed the media's need for confrontation and confusion" [44].

The Philadelphia proposal was approved. According to Caron Chess, the five vital factors in getting the Philadelphia vote of approval were a large turn-out of supporters at the meeting, a quick thinking and knowledgeable spokesperson who could carry on a dialogue with industry spokespeople and legislators, strong arguments emphasizing the need for the legislation in human terms, clear non-technical arguments effectively countering the opposition's claims, and a public posture emphasizing reason, responsibility, and credibility.

The Philadelphia law was not the first right-to-know law passed. Connecticut, New York, Maine, and Michigan had laws that went into effect in 1980. The key ingredient in almost all of the state and local laws was that of building a citizen/labor coalition to work on passage of the laws. As the laws continued to pass in a growing number of states, notably the laws in New York (following the Love Canal concerns) and New Jersey, they also became more comprehensive. The net result was that national employers had to meet the requirements of a multitude of different laws which were getting more restrictive than what they thought could be obtained from the more business-friendly Reagan administration.

The citizen/labor coalition building was very effective on the state and local level. This resulted in the highly ironic situation where large employers successfully demanded a national OSHA right-to-know of the Reagan administration as a way of pre-empting the state and local laws.

THE REAGAN HAZARD COMMUNICATION PROPOSAL

There were approximately sixty-five presentations of oral testimony on the OSHA Hazard Communication Standard proposal in June and July of 1982. The hearings were heavily dominated by unions and chemical manufacturers, even more so than their numbers alone would imply. Both unions and chemical manufacturers had large panels and a lot of written submissions.

The presentations broke down into:

Chemical Manufacturers	18
Chemical users (employers)	12
Unions	23
Citizen or Coalition	6
Government	6

Some now-familiar issues clearly dominated the hearings. The key ones were trade secrets and related issues, the scope of the standard (both in terms of workers covered and chemicals covered), the comprehensiveness of Material Safety Data Sheets (MSDSs), and cost-benefit issues. These hearings, in contrast to earlier ones, had little controversy around the issues of whether there needed to be a national standard, and whether chemical manufacturers should be legally held responsible to issue MSDSs.

The Chemical Specialties Manufacturers Association spokesperson, Ralph Engel, spoke on the reason for industry support: "The real need for such a standard is to preempt conflicting state and local laws, not to avert significant workplace risks which are already being addressed on a voluntary basis by responsible manufacturers" [45].

Vogel, also speaking for CMA, added:

> The need for certainty and uniformity in this area is underscored by the fact that failure to comply with the various state and local laws, even inadvertent failure to comply, has extremely serious consequences. These include large civil penalties, loss of required licenses and permits, increased tort liability exposure to workers and third parties, and in the case of willful violations, criminal penalties, including fines and imprisonment [46].

Industry, however, presented no concrete information or examples of any enforcement actions under any of the state or local laws that would support the statement of "extremely serious consequences."

The National Association of Manufacturers, which had a low profile in its involvement with the development of the standard and at the hearing itself, alluded to the conflicts between factions on the employer side. While their spokesperson (Settle) said that the standard is "a matter of utmost concern" to their members, he also took time to say: "I would like to inform this panel that different segments of industry do not always see eye to eye on necessary elements of regulation or even in some cases on whether regulation is necessary" [47].

Labor's position was summarized by Jim Moran from PhilaPOSH, alluding to the words of the OSH Act:

> Now these are fine words. However, it is completely contradicted by OSHA's labeling proposal. The proposal starts off by excluding three-fourths of the American work force from coverage and after that it goes downhill. In the remaining workplaces covered, the company decides what is toxic. Then, the company decides what is a trade secret. If the company decides that any remaining chemicals are covered by this standard, even then they don't have to label that chemical with its real name. And, none of this process begins at least for a couple of years. Further, no mention of any worker rights has come up [48].

OSHA under the Reagan administration took more of a business stance in the hearings. Vance (OSHA) opened up the issue as to whether the degree of potential exposure to workers should be considered in deciding whether the standard would apply, and resorted to the industry tactic of making such a request sound absurd: "every substance on earth is harmful in some concentration. Water, when it gets above the eyeballs, and everything under some circumstances, becomes toxic" [49].

The similarity to business arguments can be illustrated by Huelson (American Foundryman's Association) who argued foundries that melt down scrap metals such as chromium and nickel [two known carcinogens] should be exempt from the standard because such metals are used by doctors and dentists and "Obviously, the medical and dental professions would not use these materials if they were detrimental to human health" [50].

OSHA tried to tiptoe around the central issue of requiring the chemical name without trade secret protections, but it was clear that the agency was more on the side of the chemical industry, noting that trade secrets are "one of the most sensitive issues" and that "Some . . . believe chemical identity is not necessary when the hazards are fully revealed" [51]. This provoked the following exchange with Seminario of the AFL-CIO:

> Seminario: "Is it the agency's view that . . chemical identity information only really need be provided after damage to an individual has occurred, or that chemical identity information should be provided to workers and their designated representatives prior to damage occurring, so that proper control measures can be instituted?"
>
> Vance: "That's the kind of policy decision that we've got to consider in a lot of detail . . . I think it's fair to say that the jury's out."
>
> Seminario: "The jury is out on whether or not it is the mandate of the Occupational Safety and Health Act to prevent employees [sic] as opposed to treating them after disease has occurred?"

Vance: "No. As to whether or not information needs to be provided at a particular point in time . . ."

Seminario: "Isn't it necessary for chemical user employers to have trade secret information to carry out their responsibility?

Vance: "I don't know that it's necessary to have precise chemical identity" [52].

Economic issues again were central to much of the discussion. OSHA estimated that it would cost $19 billion to comply with the state and local laws, as compared with an OSHA estimate of $2.6 billion for the new OSHA proposal. Wentzler, OSHA's economist, emphasized cost-benefit analysis, and was obviously puzzled that it could be viewed in any other terms. She questioned the Department of Defense (DOD) after its testimony about how it would analyze chemicals at great expense if it was unsuccessful in getting the chemical name from the chemical manufacturer.

"We are after, ultimately, to attempt to justify this standard in some economic sense, not simply in a policy sense, that this standard will be effective in terms of changing employer behavior. But why do you go to such great lengths to find this information? What is the rationale that you utilize to spend the money" [53]? Nelson (DOD) answered that they have had an average of 4,000 hazardous materials casualties a year, with 14,000 lost workdays a year, and that one can't do anything without chemical information. Nelson then cited a case where a sailor went to get water and glycol for fuel injection of an airplane at 4:00 A.M., when the petty officer was just going out for breakfast. The petty officer told him very briefly where to find the glycol, but the sailor drew cleaning fluid instead since they weren't labeled. As a result, the plane's engine caught on fire and everyone aboard was killed.

There was extensive disagreement over how much information should be required to be given, and how much of that decision should be left up to the "professional judgment" of employers and chemical companies. Bargmann of the Health Research Group noted: "Now, the vast majority of employers are not scientists; they are not physicians; they are not toxicologists; they are businessmen. So when they exercise their professional judgment, they are using their judgment as businessmen" [54]. Tufo (PhilaPOSH and the Independent Union of Rotometer Workers) noted that many MSDSs just put "not applicable" or "not available" instead of the actual information. "For most of my early time dealing with MSDSs, I thought that N/A was the most widely used chemical in industry" [55].

Melius from NIOSH said: "Selective or biased interpretations to the scientific literature could lead to wide variations in the labels and MSDSs developed for identical products. Competition for product sales based on differing hazard determinations could develop" [56]. Such a concern was not just in the future. Wolford, of the Painters Union, testified:

> Just recently there was a settlement for about $220,000 for a painter in Atlanta, Georgia against a paint company that I would prefer not to name, but the paint company in memorandums that were recovered in the process of the trial discovery had made a conscious decision not to label the product that contained an isocyanate to indicate use with an air feed hood because of profit motivation. They said it would affect the sales of the product . . . [57].

The passage of the OSHA standard became caught in the Reagan administration's deregulation drive, even though the standard was being sought by business in order to pre-empt the state and local laws. Chris Demuth, OMB's Administrator for the office of Information and Regulatory Affairs, gave the underlying reason for those deregulation strategies:

> Regulatory relief is an integral part of President Reagan's program for economic recovery. Slowing the rate of growth of ineffective regulatory expenditures in the private sector is as important for expanding savings, investment, jobs, and living standards as is slowing the rate of direct federal expenditures [58].

The OMB took a central role in this deregulation strategy, utilizing very conservative assumptions in their cost-benefit analysis. These differences in assumptions were evident in OMB's delay of the Reagan Hazard Communication Standard. OSHA had estimated benefits at $5.2 billion, with costs at $2.6 billion. OMB, using different assumptions, found benefits of only $65 million. OMB also opposed the standard because small business said the increased costs would hurt them in relation to large companies that already had hazard communication programs in place. OMB also argued against OSHA's premise that knowledge, in and of itself, was valuable. OMB admitted that "some value should be ascribed to knowledge even if it does not improve safety, [but that] this knowledge should not be considered a 'right' in isolation from cost considerations" [59].

OSHA head Auchter, along with the chemical companies who were concerned about the state and local laws, then approached Vice President Bush's Task Force on Regulatory Relief to try to get the standard freed up. Bush ordered another study by conservative economist Kip Viscusi, who found a benefit of $2.85 billion, just enough to cover the $2.6 billion in costs. The proposal was finally freed by OMB on the day before OSHA was scheduled to testify before a Congressional hearing concerning the standard's delay [60].

The importance of the OMB role in standards-setting was summarized by Congressman John Dingell:

> OMB, then, may serve as a secret conduit to administrative agencies for industry views. The potency of such conduit contacts cannot be overestimated. The influence of an interested party is vastly increased when it is anonymously transmitted through OMB to the agency. A position so relayed

comes to the agency decision maker with the apparent imprimatur of the President [61].

OMB clearly had become a way for industry to short-circuit a standard issued from one of the administration's own agencies. It was a way of letting business have another shot at a decision that they had lost at a lower level using politically-determined assumptions which would lead to what appeared to be objective economic fact. This can be seen as a way for the business class to overcome the governmental structures that it had allowed to flourish as a check on base, short-term, economic interest.

The final standard was released finally on November 25, 1983, over a year after the close of the comment and hearing period. A number of changes were made from the proposed standard, but none were major departures from the Reagan proposal. These included:

1. Tightening the trade secret provisions.
2. More clearly defining the requirements for hazard determination.
3. Strengthening the state and local law pre-emption aspects.

Other minor changes included widening industry coverage to include distributors and importers of chemicals (sought by chemical manufacturers who did not want unfair competition from overseas who did not have to label their products), requiring disclosure of trade secrets to any "health professional" rather than just physicians (however, confidentiality agreements are allowed, including damage clauses), partially including laboratories, allowing no blank spaces on MSDSs, and automatically considering unions as "designated representatives" [62].

Thus, neither side won a clear-cut victory. Business got a pre-emptive standard, and labor got a few concessions, but not a clear right to chemical name without trade secret concerns, and got clearly less than it had had under the short-lived Carter standard, and less than it was getting in some states.

The OSHA standard was brought to court by the citizen-labor coalition. The suit contended that the standard was "arbitrary and capricious" because it failed to adequately provide workers with sufficient information, that it was inconsistent with the OSH act, and was not supported by substantial evidence [63]. The objectives of the suit were to overrule the pre-emption of state laws, to broaden the scope of the standard to cover all workers, to override the trade secrets provisions in regard to chemical name, and to expand the scope of the standard to cover more chemicals (that is, the NIOSH RTECS list).

The outcome of the suit was a strong victory for the labor position. In an opinion dated May 24, 1985, Circuit Judge Gibbons said:

1. The scope had to be expanded to other workers, or compelling reasons given for not doing so
2. The identity of chemicals that could be reverse-engineered could not be a trade secret
3. Trade secret information must be provided to workers as well as health professionals
4. State laws were pre-empted, but only in manufacturing
5. The list of chemicals covered did not need to be expanded to cover the NIOSH RTECS list [64].

Interestingly for a decision of such scope, the decision was not appealed to the full panel of the Third Circuit. One reason was that the same judge, Gibbons, would have heard it alone a second time because *all* the other Third Circuit judges had recused themselves from the case because of possible conflict of interest due to their private stock holdings in companies that had an interest in the case [65], which underscores the issue of over-representation of the upper class in the judiciary.

DISCUSSION

What conclusions can be drawn from this case study? A few specific points can be noted:

1. Despite clear public support for right-to-know, it took almost fifteen years from the passage of the OSH Act, which had specific provisions for such a standard.
2. The right-to-know was an empowering form of government intervention, in that it gave workers and unions information that enables them to take action, as opposed to standards that require OSHA inspector intervention.
3. Workers ended up with a very significant victory in obtaining a guarantee of a dramatic increase of information on chemical hazards.
4. The standard did not give labor the key element it was seeking, which was the chemical name on the label, but it did give that information on MSDSs.
5. The combined labor and community group grass-roots activity on the state and local levels was a key ingredient in getting local laws passed which forced the federal government under Reagan to issue a national standard in an extremely anti-regulatory environment. The use of grass-roots organizing, joining forces with community groups, and acting on non-economic issues were all unusual for an American labor tradition that has been characterized as "business unionism."
6. The chemical producers, with the most direct and costly potential costs and liabilities from the standard, took the initiative on the process, putting extensive resources into controlling the process and setting the agenda through voluntary standards, testimony, and lobbying.

7. The division between chemical producers and chemical users was an important ingredient in getting the standard passed in a form that would require the chemical name.
8. Economic forces on chemical users in getting cheaper chemicals, and on chemical producers in third-party lawsuits for inadequately labeled chemicals were an element encouraging proper labeling and warnings.
9. Employers shifted from an ideology of "everything is safe" to "everything is dangerous" as pressure from labor and community groups combined with prominent media coverage of toxic chemical problems such as asbestos and Love Canal.
10. The courts allowed key extensions of the right-to-know, based on tort law and the OSH Act.
11. The Office of Management and Budget (OMB) played an important role in delaying the standard, and in granting employers an additional level of influence.
12. Although Republican administrations were considerably more pro-business than Democratic administrations, there were still considerable problems in getting out a standard under the Democrats, with cost-benefit analysis, OMB involvement, and very significant delays.

The case study on right-to-know shows clearly that the upper class had much greater access to resources, and that their class position therefore allows increased influence over government regulation. It also shows that workers are able to affect that control through organizing, although it is a very slow process when it concerns an issue that is important to control over the workplace. It also shows that workplace conflicts can get transferred to the government to be resolved politically. In this case there is not a lot of evidence to support the theory of upper class hegemonic control over the media, since media reports of extensive occupational disease abuses were influential in getting the standard promulgated. However, it should be noted that theories of hegemony emphasize that government (and media) have to *appear* neutral in order to preserve legitimacy, and that long-term preservation of capitalism take precedence over short-term upper class interests.

Was this, then, a case of preserving capitalism by over-riding short-term interests of employers, based upon a large organizing effort by labor? While it points in that direction, it should be noted that a key element also was a division between chemical producers and users, which made a standard in the short-term interests of some employers. It should also be noted that free-market theory supports the principle of "perfect information" for the market to work correctly, although no employer brought forward that concept as an argument for the right-to-know. The long time period involved in gaining the right-to-know also allowed business to change its ideology to one in which it would still be able to argue against changes in conditions on technical grounds that the risk at the workplace is an "acceptable risk," and that workers did not gain an

empowering enforcement mechanism such as the right to refuse to work with dangerous chemicals, or even the right to sue employers over and above Workers' Compensation.

In a situation of declining union strength, and, until recently, high unemployment rates, the victory of gaining access to the chemical name has a very limited usefulness in gaining control over the work environment. It is yet to be seen whether gaining the right-to-know will in fact lead to significant gains in worker control, although it has probably already significantly reduced worker exposures to toxic chemicals, since at least now conscientious employers know the chemicals they are using, and individually strong unions have been able to utilize the information.

Shepard provides a fitting conclusion to the right-to-know story: "The story of safety and health in the workplace is a story of the imbalance of power between labor and industry" [66]. The strategy that labor is pursuing currently, of focusing on organizing larger numbers of workers, is set to address that imbalance. It will be difficult to get favorable government interventions without it.

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