German Occupational Safety and Health Regulation From an American Perspective

Kenneth S. Kilimnik

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German Occupational Safety and Health Regulation From an American Perspective

Kenneth S. Kilimnik*

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I. Introduction**

We live in a world made small by the wonders and dangers of technology. Chernobyl, Bhopal, and Three Mile Island are synonyms for workplace accidents that can affect not only workers in the


English-language publications on this subject are rare. The International Labor Organization published in 1984 in English the report of a visit by three non-German specialists on enforcement of standards: *Report of the Tripartite Mission on the Effectiveness of Labour Inspection in the Federal Republic of Germany*.

The ILO in the *International Labor Review* also on occasion carries brief articles about one aspect or another of German occupational safety and health.


While every effort has been made to cite books, articles, cases and statutes according to the Uniform System of Citation (14th ed. 1986) a note on citation form is due.

The current text of the most important codes, statutes, and regulations are published in compact volumes according to general subject. Each volume is known by its original editor, *e.g.*, H. Schoenfelder (for civil and criminal laws), C. Sartorius I (for constitutional and administrative laws), H. Nipperdey I and II (for labor and technical safety laws). There is no official code comparable to the United States Code. These volumes are updated regularly and clearly indexed so that the title or abbreviation of the law is an adequate reference. There are also numerous paperback editions of relevant laws, organized similarly by subject and title. It is misleading to give a citation to the official Federal Law Gazette (*Bundesgesetzblatt*), because it contains the law as passed, and does not reflect other parts of the same law or later amendments. The *Bundesgesetzblatt* is similar in this respect to the United States Statutes at Large. However, citations are given to the *Reichsgesetzblatt* for laws that are no longer in effect.

The German court system in terms of federal-state relations is unitary. It is divided into five jurisdictions according to subject matter: ordinary (civil and criminal branches), administrative, labor, fiscal matters, and social welfare. Each jurisdiction has trial, appellate, and supreme courts. The *Bundesverfassungsgericht* (Federal Constitutional Court) is the final authority in constitutional disputes. Only the decisions of the five supreme courts, the *Bundesverfassungsgericht*, and some courts of appeals are published in official collections. Court decisions are frequently published in abridgement with annotations by professors in various law journals. Such decisions are referred to by giving the abbreviation of the court, the abbreviation of the journal, the year of publication of the journal, the volume, and the page. Finally, unpublished decisions are cited by giving the date of decision, the court's abbreviation, and the case number.

1. In 1986, an explosion in a nuclear reactor caused a meltdown and fire that burned for twelve days. The fire spewed radioactive particles into the air and far beyond the borders of the Soviet Union. Over thirty-one fatalities occurred in the immediate aftermath of the explosion and fire. Note, *The International Fallout From Chernobyl, 5 Dick. J. Int'l L.* 319-20 (1987).

2. In 1984, a chemical leak of methyl isocyanate at Union Carbide's pesticide plant in Bhopal, India killed at least 1,758 people and may have injured up to 300,000 others. *Thumbs Down: India Spurns Carbide's Offer*, Time, Apr. 7, 1986, at 48. A civil suit in New York was dismissed on grounds of forum non conveniens, and a civil and criminal action are pending in India against the company and several former executives. *Union Carbide Charged in '84 Leak*, Facts on File World News Digest, Dec. 4, 1987, at 902, col. A2.

plant, but also the local and international environment. Regulation in the areas of occupational safety and health affects the macroeconomy of a nation in a more subtle fashion: regulation may encourage industry to move certain activities to less regulated countries and may inhibit trade by setting standards that are difficult for foreign manufacturers and suppliers to fulfill. Despite the international effects of accidents and regulation, standard-setting and enforcement in the field of occupational safety and health remain primarily at the national level.

Little is known outside technical expert circles about comparative occupational safety and health regulations. consequently, this article presents one foreign system from an American perspective. Initially, the article addresses the linguistic and historical hazards of comparing these regulations. Thereafter, several major problems in American occupational safety and health regulation are compared with the German system. Subsequently, a discussion of the basic divisions in the two countries’ systems follows, exploring the description of the regulatory system, the procedures for adopting standards, and their enforcement. Finally, recommendations are made for both the United States and West Germany.

II. Hazards of Comparison

A. Language and Values

1. Language.—It is difficult to translate into English those German concepts lacking American counterparts. A literal translation may not be understood; a functional explanation risks confusion and mistaken assumptions. For example, in German, the term for law or jurisprudence (Rechtswissenschaft) includes the word for science (Wissenschaft), whereas Americans generally consider science and law to have little in common with each other. Hence, the link between language and social values defies facile translation, as culture often determines usages.

Another word with different value connotations is “the Administration” (Die Verwaltung). In the United States, it indicates the current President and his policies, while in Germany it signifies the civil service rather than the daily policies of the executive branch. Simi-

4. Occasionally, reports about a foreign country, agency or program in a particular field of occupational safety and health appear, but they rarely place the topic within that country’s overall system of regulating occupational safety and health.

5. For example, the Bundesministerium fuer Arbeit und Sozialordnung, literally translated, is the Federal Ministry for Work and Social Order; a functional translation would be the Federal Department of Labor and Social Welfare. Translated functionally, the reader is tempted to believe that the foreign entity has the same functions as its domestic equivalent. This assumption is incorrect. In addition, a functional translation may confuse others when the reader seeks further information about the entity or deals with it directly.
larly, the topic of this article — occupational safety and health regulation — lacks a direct counterpart term in German. Such differences in language are warnings against simple comparison.

2. Values. — The differing connotations of science and administration convey a sense of the contours of occupational safety and health regulation in the two countries. In the United States, a single federal agency, the Occupational Safety and Health Administration (OSHA), creates and enforces primarily mandatory standards. As a federal agency, OSHA is the object of political pressure from both labor unions and employees. Scientific work is judged by a jury of lay persons in product liability litigation, which frequently concerns occupational accidents or diseases. On the other hand, West Germany has no federal standard-setting or enforcement agency in occupational safety and health matters, and science is viewed by judges with deference to technical expertise. Furthermore, administrative enforcement in West Germany is primarily local and less subject to the shifting fortunes of politics. Consequently, differing values result with different applications of safety and health standards. Voluntary compliance with standards may be the norm in one country while another country must enforce the same standards coercively with sanctions.

There are tremendous differences between American and German values towards regulation. The American orientation posits

6. The equivalent German legal fields are called technical labor protection (technischer Arbeitsschutz), technical safety (technische Arbeitssicherheit), occupational medicine (Arbeitsmedizin), and accident prevention protection (Unfallverhuetungsschutz).
8. The Basic Law (Grundgesetz), West Germany’s Constitution, assigns federal law enforcement to the states (Laender) with limited exceptions. These exceptions include the foreign service, the railroads, the armed forces, and the postal service. See Grundgesetz (Basic Law) Arts 83-91. German commentators view this division of responsibility between legislation and enforcement as an example of separation of powers (Gewaltenteilung). E.g., H. ERICHSEN, STAATSRECHT UND VERFASSUNGSGERICHTSBARKEIT II 64 (2d ed. 1979). The Constitution is postponed until the reunification of Germany. Grundgesetz Art. 146. Functionally, the Basic Law provides fundamental rights and establishes the framework of government.
9. See infra notes 484-503 and accompanying text.
10. Federal elections do not lead to changes in local administration, personnel or policies since enforcement of state and federal law rests primarily with the Laender, see supra note 8.
11. Something other than the threat of a sanction makes garage mechanics in West Germany attach vacuum ducts over each car’s exhaust pipe before turning on the car motor. Similarly, German consumers do not save used paint thinner and batteries for deposit in special containers because they fear an OSHA citation. In West Germany today, approximately 40% of paper products are made from recycled paper.
12. Traditional American values of independence and liberty are rooted in the philoso-
the freedom of the individual to do what he wishes, imposing social control only as to actions that injure others. Regulation in the United States is attacked from the ideological right as well as from the ideological left. In general, patriotism in the domestic context in the United States means the exaltation of individual freedom.

The German orientation tends to favor absolute moral values and social order over the individual or his freedom. Despite the radical abuse of these theories by Germany in the twelve years under Hitler, that terrible experience has indelibly stamped West Germany's institutional dedication to a system of normative values.

3. Additional Considerations.—In addition to the differing values given to individual freedom and social order, concepts of technology, openness, and social welfare differ in West Germany and the United States. In West Germany, technology is regulated by technical experts who are assumed to reach an objective view of the cur-
rent state of technology. The regulatory system is premised on an objective notion of truth-finding, delegating almost total authority to groups of experts in standard-setting activities. In the United States, the government is viewed as the sole responsible authority to make technological choices in regulation. Accordingly, technical experts in West Germany set binding standards whereas in the United States, binding standards are issued by understaffed administrative agencies. German standard-setting, consequently, reflects greater productivity and scope.

To the extent that German standard-setting groups of experts and political bodies discuss and vote on occupational safety and health regulation, the proceedings are not usually available to the public. Openness and publicity of debates and proceedings about proposed regulations are the exception and almost never occur until after a decision or vote is taken.

In contrast, the federal Occupational Safety and Health Administration, a part of the United States Department of Labor, is required to give notice and opportunity for public comment before it promulgates occupational safety and health standards. The Secretary of Labor files an advance notice of proposed rulemaking in the Federal Register, the daily official publication of the federal government. This notice invites the public to submit written comments, creating a record that often fills thousands of pages. Hearings may be held and a proposed standard published in the Federal Register.

---

18. Technical standards issued by public committees have no force of law but become binding through their adoption in judicial decisions. On the other hand, technical standards issued by the vocational insurance associations as accident prevention regulations or which are published as general administrative regulations, are legal standards of their own accord. P. Marburger, Die Regeln der Technik im Recht 616-17 (1979).

19. E.g., Challenging the adequacy of technical standards is a very recent and still uncommon phenomenon. See infra note 470 and accompanying text.

20. See infra text accompanying notes 104-18.


22. E.g., The Bundesrat (The Council of Constituent States or Federal Council). See infra text accompany notes 438-46.

23. E.g., Technical standards (Technische Regeln) developed by the technical committees of the Bundesarbeitsministerium are published in the official monthly journal of the ministry, the Bundesarbeitblatt. Drafts or proposed standards are not published. Although the meetings of the full Bundesrat are open and recorded, the main debates over regulations requiring Bundesrat approval take place in the committee sessions, which are secret in order to make agreement possible. K. Reuter, Bundesrat und Bundesstaat 32 (5th ed. 1985). Nevertheless, the government publishes petitions by individual Laender, see supra note 8, for amendments to the government's draft, and the changes advocated by each committee to which the draft has been referred. On controversial issues, individual Laender or political parties often give the press information about markup sessions.

24. 29 U.S.C. § 655(b) (1982). Cf. Emergency temporary standards may be issued, which take immediate effect upon publication. However, they are valid only six months. Id. § 655(c). Ten emergency temporary standards have been issued by the federal Occupational Safety and Health Administration, many of which were replaced by issuing standards after notice and opportunity to comment. Congress of the United States, Office of Technology Assessment, Preventing Illness and Injury in the Workplace 229 (1985).
Publication of the final standard is accompanied by a description and evaluation of the comments received by the agency. Additionally, the level of social welfare payments and service is much higher in West Germany than in the United States. Public subsidy for reductions in working hours (Kurzarbeitergeld) and public wage reimbursement for missed workdays due to bad weather (Schlechtwettergeld) are examples of German social welfare payments. American social security provisions pale in comparison. These contrasting attitudes towards individual freedom, social order, technology, governmental openness, and social welfare illustrate the framework of German occupational safety and health and its reliance on technical experts and the state.

B. Historical Background

In order to effect a proper study of German occupational safety and health regulation, it is imperative to understand its history in general. The roots of occupational safety and health regulation in West Germany lie in three institutions: the occupational factory inspectorates (Gewerbeaufsicht), the vocational insurance associations (Berufsgenossenschaften), and the work councils.


26. In the United States, studies show that social security, not worker compensation, is the source of most occupational disability payments. However, it is estimated that four-fifths of occupational disease victims are ineligible for social security disability income (SSDI). HOUSE COMM. ON GOV'T OPERATIONS, Occupational Illness Data Collection, H.R. REP. NO. 1144, 98th Cong., 2d Sess. 19 passim (1984). The absence of obligatory insurance leaves many Americans without wage replacement and without even medical coverage in the event of serious illness or injury. Cf. infra text accompanying notes 598-605.

27. American social security provisions are intended to provide minimal protection against unemployment, occupational injury or illness, and poverty. SSDI awards resulted in 1978 in an average annual award of $3,900 in the form of periodic payments rather than the lump sum paid by worker compensation. Interim Report to Congress on Occupational Diseases, June 1980. If unemployment compensation, worker compensation, or a special benefits program such as black lung benefits for miners are not available, the remaining social security consists of income maintenance programs: federal social security and medicare costs for qualifying persons over sixty-five years, and state administered public welfare payments for persons below a minimal income.

28. The occupational inspectorates began in Prussia in 1853 as a consequence of a law restricting child labor and providing for factory inspections by state authorities to check for compliance. A. MERKENS, Der Arbeitsschutz und seine Entwicklung 6 (Bundesanstalt fuer Arbeitsschutz und Unfallforschung, No. 15, Schriftenreihe Arbeitsschutz, 1978). By the end of the nineteenth century, the responsibilities of the occupational inspectorates had expanded to cover social labor protection, industrial hygiene and technical labor protection. Id. at 9; see infra notes 31-36 and accompanying text.

29. Reich Chancellor Otto von Bismarck introduced obligatory health insurance, accident insurance, and old age and disability insurance in 1883, 1884, and 1889, respectively. Accident insurance was established through the creation of vocational insurance associations. All employers of a particular industry in a given area became obligated to join an association, and they paid insurance premiums to this association. The 1884 law also authorized the vocational insurance associations to issue accident prevention regulations, binding on their mem-
1. The Occupational Inspectors.—The occupational inspectorates have their origins in the police law (Polizeirecht) of the Middle Ages and in the absolutist rule by the princes of the German states before creation of the Reich at Versailles in 1871.31 The function of the police in the Middle Ages and the Age of Absolutism32 was to promote welfare as well as maintain order.33 The duty of repelling danger (Gefahrenabwehr)34 included the prevention of disorder in sanitation, health, safety, and other fields. The gradual disappearance of the concept of the welfare functions of the police is illustrated by the use of the term “police” for virtually all local government functions until after World War II.35 The contemporary reaction against absolutist police law is represented by the constitutional requirement of statutory authorization for administration.
action (Gesetzesvorbehalt). A

Analogous to the early welfare role of the police is the principle of "caring for" (Fuersorge) under which both the state and the employer have a duty to "care for" the welfare of the people dependent on them. The medieval guilds (Die Zuenfte) and public authorities traditionally provided social and health benefits to citizens. Twenty years after England introduced state factory inspectors, the local governments of Aachen, Arnsberg, and Duesseldorf in 1854 established the first German occupational inspectorates. Originally charged with enforcement of protective child labor laws, occupational inspectorates became mandatory throughout the Reich in 1878 with the adoption of amendments to the Trade Law (Gewerbefuhrordnung). The amendments gave factory inspectors the same authority as local police authorities. However, administrative instructions severely limited the authority of the inspectors. All violations of regulations had to be referred to the local police for prosecution, and violations of duties not derived from specific regulations had to be referred to upper level administrative officials.

2. The Vocational Insurance Associations.—A second source

36. The Grundgesetz, see supra note 8, art. 80(1), for example, states that "[t]he federal government, a federal minister, or the state governments may be authorized by statute to issue regulations having the force of law (Rechtsverordnungen). Content, purpose, and extent of the authorization must be set forth in the statute."

37. "The care (Fuersorge) for the poor was a matter basically for church and private activity in the Middle Ages . . . [I]n the nineteenth century a thoroughgoing system of care (Fuersorge) arose that relied on the local community and was supplemented by so-called welfare associations." H. ZACHER, EINFUHRUNG IN DAS SOZIALRECHT DER BUNDESREPUBLIK DEUTSCHLAND 14-15 (2d ed. 1983). This principle remains one of the employer's duties today. W. ZOEHLNEN, ARBEITSRECHT 173 (3d ed. 1983). Examples are scattered throughout the Civil Code and statutes, e.g., the employer has a duty to protect his employed against danger for life and health as far as the nature of the work permits. Bueroerliches Gesetzbuch [hereinafter BGB] (Civil Code) §618(1).

38. Guild members and apprentices were part of a hierarchical society that contained different ranks within nobility, townspeople, and farmers. The guilds controlled handcrafts and economic life in the cities. Each guild member was permitted to use only a designated quantity of raw material and apprentices. The guilds were organized by product and carefully watched that no one competed with them. FRAGEN AN DIE DEUTSCHE GESCHICHTE 31, 35 (Deutscher Bundestag, 11th ed. 1985).

39. Hans Hattenhauer, a legal historian, writes: "The system of social security that developed . . . was self-enclosed, determined by the principles of hierarchical caring (obrigkeitliche Fuersorge) and unfranchised subjects (unmuendige Untertanen)." H. HATTENHAUER, DIE GEISTESGESCHICHTLICHEN GRUNDLAGEN DES DEUTSCHEN RECHTS 247 (3d ed. 1983).

40. A. MERTENS, DER ARBEITSSCHUTZ AUF DEM PRUEFSTAND 11 (Bundesanstalt fuer Arbeitsschiutz und Unfallforschung, No. 25, Schriftenreihe Arbeitsschiutz, 1980). The inspectorates were run by local governments (Regierungsbezirke), mostly municipalities. Today they are still run by local governments but are supervised by the Laender, see supra note 8.

41. The Trade Law issued in 1869 by the North German Federation (Norddeutscher Bund) established detailed requirements for the exercise of specified occupations through registration, supervision, and other limitations. At the same time it guaranteed the free establishment of the terms of individual employment contracts (§105). The Trade Law remains a federal law, although it has frequently been amended and supplemented by other laws.

42. A. MERTENS, supra note 40, at 28.

43. Id.
of occupational safety and health regulation are the vocational insurance associations established by Reich Chancellor Otto von Bismarck in 1884.44 Prior to establishing the vocational insurance associations, Bismarck tried without success to abolish the occupational inspectorates.45 The vocational insurance associations in conjunction with the occupational inspectorates have competitively maintained overlapping jurisdiction in preventing occupational accidents and illnesses.46

In introducing the Accident Insurance Law on January 9, 1882, Bismarck stated in the Reichstag:47 "An organization is necessary that draws together the interested parties, that combines compensation of the injury with the task of preventing and limiting injuries through inspection."48 The insurance system created by Bismarck has survived almost intact to this day.49 The vocational insurance associations have continued to prevent work accidents, to rehabilitate accident victims, and to compensate the victim, family members, and survivors.50 Governed originally only by employer representatives, the insurance associations gradually opened their boards to employees. Consequently, since 1952, an equal number of employer and employee representatives have governed them.51

44. See Accident Insurance Law of 1884, REICHSVERSICHERUNGSORDNUNG [RVO] (Social Insurance Code) §§ 636(1), 637. As with American worker compensation statutes, the Accident Insurance Law substituted for the fault liability of the employer to his employees a no-fault recovery against the statutory insurance carrier.
45. Bismarck wrote in 1877: I . . . consider it an error, which we have made on account of opinions of some personalities, when we believe that the difficulties which the relation of employer and employee creates will be solved through creation of a new class of government officials (Beamtenklasse), which carries in itself all the seeds of a proliferation of bureaucratic interferences (Missgriffe).
S. POERSCHE, DIE ENTWICKLUNG DER GEWERBEAUFSICHT IN DEUTSCHLAND 73 (1911), quoted in A. MERTENS, supra note 40, at 27.
46. This overlap remains a lively subject of a debate and is an exception to the generally systematic organization of law and administration in Germany.
47. The Reichstag, the parliament or "imperial assembly," assembled for the first time in 1871. It could neither nominate the chancellor nor oust him.

The Reichstag was elected by general suffrage. Although it had no say in the formation of the cabinet, the Reichstag did influence the government by its participation in lawmaking.
49. See supra note 29. It is constitutionally grounded in Art. 20(1) of the Grundgesetz see supra note 8, which provides that "(t)he Federal Republic of Germany is a democratic and social federal state."
50. RVO § 537.
51. A. MERTENS, supra note 40, at 20. Elections for employee representatives to the boards of the vocational insurance associations are called social elections (Sozialwahlen) and are conducted in all member enterprises biannually. The governance of vocational insurance associations is referred to as self-administration (Selbstverwaltung) This principle derives from local government law. It was introduced by Count Karl von Stein in 1808 in the Prussian Staedteordnung (Municipal Code) to foster popular participation in local government and thus reduce the absolute administrative power of the local princes. The term Selbstverwaltung first became used in the middle of the eighteenth century. Maschinenbau und Kleineisenindustrie Berufsgenossenschaft, 100 Jahre 1885-1985 Maschinenbau und Kleineisenindustrie Berufsge-
3. The Work Councils.—The third institution that handles occupational safety and health regulation is the work council. After World War I, the German government required factories to establish these councils at the workplace (Betriebe). They consisted of all the employees, and often the employer joined as well.

Contrary to the expectations of those advocating work councils, however, the work councils concentrated on the needs and goals of the enterprise. The nature of worker participation became one of cooperation with the employer, rather than conflict. Consequently, as early as 1929, the work councils were criticized as organizations from which fascism could develop. In fact, the work councils may have undermined resistance to fascism by fostering reliance on the group rather than the individual. However, the lack of support for fascism in the workplace is evinced by the election statistics. In 1930, not a single National Socialist party member had been elected to a work council despite the fact that there were 156,145 work councillors in that year. In 1931, there were only 710 National Socialist members among 138,418 work councillors.

The federal Workplace Constitution Law continues the em-
phasis on cooperation. Work councils are forbidden to take part in strikes. The overriding statutory duty of the work council is to cooperate with the employer in the interest of the enterprise. The union movement has adopted collective bargaining at the industrial and regional levels, with the right to strike, on the one hand, and cooperative worker codetermination (Mitbestimmung) with the individual employer at the levels of the establishment and the enterprise (Unternehmen), on the other hand. Health and safety issues are handled primarily at the establishment level.

III. Comparative Inquiries

A. Method

Mindful of the language, values, and historical differences between Germany and the United States, this article shall examine whether certain problems in occupational safety and health regulation in the United States similarly appear in West Germany, and if so, how they are resolved. To understand and improve our own legal system, it may be helpful to "crawl out of our skins" and view it in the context of a foreign legal system, as a foreign observer himself might see it.

The methodology used here is functionalism; one looks behind the form of the law to see whether identical problems exist and how they are resolved. Sociology of law is as important for the comparatist as the law itself. Understanding the identity of the institutional actor and the method by which it operates often explains more

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59. Betriebsverfassungsgesetz [BetrVG] (Workplace Constitution Law) § 74(2) "Acts of industrial dispute [Arbeitskampf] between the employer and the work council are not permitted; industrial disputes of collective bargaining parties are not affected by this provision."

60. BetrVG § 2(1) "Employer and work council shall work together in a spirit of mutual trust having regard to the applicable collective agreements [Tarifverträge] and in cooperation with the labor unions and employers associations represented in the establishment for the good of the employees and of the establishment."

61. In practice, the union movement influences work councils greatly; about three-quarters of elected work councillors are union members. E.g., P. Hanau, K. Adomeit, Arbeitsrecht 101 n.8 (7th ed. 1983). In 1975, the Deutscher Gewerkschaftsbund [DGB] "won" 77.5 percent of all work council seats — 148,102 of 191,015. In a few industries, union representatives act at the workplace as shop stewards (Vertrauensleute), however, they have not obtained statutory or judicial recognition. W. Zoellner, Arbeitsrecht 414 (3rd ed. 1983); W. Daeubler, supra note 30, at 528.

62. The codetermination laws do not define an enterprise. The labor courts have distinguished it from an establishment according to its purpose: the "establishment" pursues a technical labor purpose, the "enterprise" an overriding purpose, usually an economic one. W. Zoellner, supra note 61, at 400.

63. The plebians in Rome achieved one of their most important successes when they compelled the patricians to consent to the appointment of a commission to write down the laws and thus to make their knowledge generally accessible.

than a detailed examination of the law's contents. Two hundred years ago, Montesquieu warned against one country borrowing the institutions or laws of another. Technologically speaking, the world has since become more closely linked. Besides the academic delight of learning about another system and gleaning greater knowledge and understanding for one's own legal system, a comparative analysis is useful for developing international legal principles and harmonization of national law.

B. Scope

The scope of occupational safety and health regulation is examined here in three ways. The groups affected by the regulation are described first, followed by the institution that implements the regulation. Lastly, the substantive fields of regulation are outlined.

1. The Affected Groups.—In the United States, the federal and state occupational safety and health laws target almost exclusively the workplace. Important elements of public health goals appear in the efforts to collect epidemiological information for research purposes by the National Institute for Occupational Safety and Health (NIOSH). However, this is not part of the regulatory or enforcement apparatus. Environmental and consumer protection laws are not promulgated or enforced by the same agencies that are responsible for workplace safety and health.

In West Germany, there is a pronounced overlap of workplace protection laws with consumer and public health regulations. For

66. Montesquieu wrote: "The political and civil laws of each nation are so completely a part of the people for whom they are made that it is a grand hazard to adapt those of one nation for another." C. Montesquieu, De l'Esprit des Lois 12 (R. Dafrahe ed. 1973).
68. One exception are particular state and local "right to know" laws that also are directed at the public at large or the local community.
69. Epidemiology is "the study of the relationships of the various factors determining the frequency and distribution of diseases in a human community." Dorland's Illustrated Medical Dictionary 451 (26th ed. 1985) [hereinafter Dorland].
70. NIOSH is presently part of the federal Center for Disease Control, itself under the supervision of the Department of Health and Human Services. NIOSH conducts workplace studies and issues recommendations for mandatory health and safety standards. See, e.g., Center for Disease Control, United States Dep't of Health & Human Services, NIOSH Recommendations for Occupational Health Standards (32 Morbidity & Mortality Weekly Rep. No. 15, 1983).
71. For example, the federal Environmental Protection Agency (EPA) and Consumer Protection Safety Commission (CPSC) are independent agencies, entirely separate from OSHA. OSHA promulgates and enforces most mandatory occupational health and safety standards.
72. E.g., the Equipment Safety Law requires compliance with technical standards to assure safe operation of manufacturing machines as well as consumer goods.
example, the Equipment Safety Law (Gesetz über technische Arbeitsstaetten) primarily concerns consumer issues. The Workplace Sanitation Regulation (Verordnung über Arbeitsstaetten) covers public health concerns addressed by municipal housing codes in the United States. As in the United States, environmental goals are not contained in labor protection rules.  

2. The Implementer.—There exist clear differences between the United States and Germany in the implementation of the regulations. The vocational insurance associations, which are public bodies established under federal law, have an explicit legal role in standard-setting and enforcement in West Germany. In the United States, for the most part, insurance bodies are not required to make inspections and rarely are involved in standard-setting activities. Furthermore, individual states have little input into the development of federal occupational safety and health rules. In West Germany, however, the states' counterparts, the Laender, occupy a central role in approving similar regulations through the Bundesrat.  

Consistent with most administrative functions, enforcement of occupational safety and health regulations is carried out by the Laender in West Germany. In the United States, the federal gov-

73. Also called the Geraetesicherheitsgesetz.
74. There are separate statutes concerned with protection of water, waste removal, air, nuclear energy, and dangerous substances. Regulations address some environmental aspects for labeling and handling dangerous substances. See infra text accompanying notes 244-306.
75. See supra note 29.
76. Art. 87(2) of the Grundgesetz, see supra note 8, states: "social insurance carriers whose jurisdiction extends beyond the area of one Land are federal bodies of public law." See also H. Wolff, 2 VERWALTUNGSRECHT 156 (4th ed. 1976).
77. RVO §§ 546(1), 708. See infra text accompanying notes 375-405, 549-66.
78. Insurance regulation in the United States is an area regulated chiefly by the states, not the federal government. Six states make public insurance carriers the exclusive provider of worker compensation insurance, the rest permit private insurance companies or employers to offer such insurance. L. Darling-Hammond & T. Kniesner, The Law and Economics of Workers' Compensation XIV (Rand Institute for Civil Justice, No. R-2716-ICJ, 1980).
79. There is no institutionalized flow of comment from the states to the federal government on occupational safety and health matters. Unions generally oppose state takeover of federal occupational authority on the grounds that states are less effective and more susceptible to local political influence. Preventing Illness and Injury in the Workplace, supra note 24, at 241.
80. There are three city-states (Bremen, Hamburg, and the special case of West Berlin). The other eight, in north to south direction, are Schleswig-Holstein, Niedersachsen, Nordrhein-Westfalen, Hessen, Rheinland-Pfalz, Saarland, Baden-Wuerttemberg, and Bayern (Bavaria).
81. See infra note 438.
82. The planned Amt fuer Strahlenschutz (Office for Radiation Protection) within the federal Umweltministerium (Environmental Ministry) will be an unusual instance of federal safety enforcement. It will have 500 employees, who will oversee radiation protection, waste
ernment enforces the Federal Occupational Safety and Health Act in twenty-seven states while the remaining states enforce the state standards under federally approved plans. American courts exercise a much stronger role than their counterparts in West Germany in reviewing the validity of occupational safety and health regulations.

Two other institutional actors occupy important roles in setting and enforcing standards in West Germany. Industry and academic technical experts in conjunction with government experts write the regulations and are largely responsible for their interpretation through their published work and affidavits on which the courts rely. In the United States, the drafting process is more open, yet the final decision rests with the administrative agency and the reviewing courts. Privately set standards in the United States are not accorded as much weight in the determination of legal standards as they are in West Germany. Furthermore, the work councils existing in most large West German enterprises have no American counterpart. Likewise, the German statutory provisions for technical engineers, doctors, and safety stewards at the workplace have no equivalent in American occupational safety and health law. Thus,

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management, and safety in nuclear technology. *Das Amt fuer Strahlenschutz wird mit 500 Mitarbeitern ausgestattet,* Frankfurter Allgemeine Zeitung, Feb. 6, 1988, at 1, col. 3.


84. See 29 U.S.C. § 667(b)-(h). In 1987, California returned to federal enforcement and South Carolina received final approval for its state program.

85. American courts are also involved in occupational safety and health disputes in another context: private compensation lawsuits under product liability theories bring large damage awards along with increasingly higher insurance premiums. Product liability litigation does not exist on the same scale in West Germany; social health insurance and accident pensions provide compensation on a broader basis without providing the occasional large awards that receive so much publicity in the United States.

86. See infra text accompanying notes 406-36, 484-94.

87. 29 U.S.C. § 655(g) (1982) accords to the Secretary of Labor the determination of priority for establishing standards. Section 655(f) permits any person “who may be adversely affected” by an OSHA standard to challenge its validity in a federal court of appeals where he resides or has his principal place of business. All but four of OSHA’s eighteen health standards have been so challenged. See Preventing Illness and Injury in the Workplace, supra note 21, at 363 (table A-1, Dates of Completed OSHA Rulemakings for Health Standards, col. 7).


89. Company-inspired plant committees with more than advisory powers have often been enjoined as an unfair labor practice under section 8(a)(2) of the National Labor Relations Act, 29 U.S.C. § 158(a)(2). Section 8(a)(2) makes it an “unfair labor practice” for an employer “to dominate or interfere with the formation or administration of any labor organization or contribute financial or other support to it . . .”

90. Occupational medicine and safety engineering are small but growing professions in the United States. These professions, however, lack the benefit of statutory requirements that their services be used.
compared to the United States, West Germany has many more institutional actors involved in standard-setting and enforcement of these standards.

3. Substantive Fields.—The substantive fields regulated in the two countries are similar: chemical exposure, equipment safety and medical testing are key areas of regulation. However, ergonomics has yet to be incorporated into the American system of governmental safety and health regulation. In West Germany, only the work councils address ergonomic issues.

The definitions used for collecting data on occupational injuries and diseases are different in both countries. A comparison of the occupational injury and illness statistics in an absolute sense is thus of questionable utility. Methods of collection also differ. Nationwide figures in the United States are derived from surveys; in West Germany, each reported and compensated injury or illness is tabulated. There is no comparable unified data base in the United States, since worker compensation is primarily administered by the individual state.

At first glance, West Germany employing a workforce about one-third the size of the American workforce, suffered nearly as many fatal occupational accidents and injuries in 1984 as did the United States. However, a comparison of the raw numbers is misleading because statistical coverage of the workforce is much larger in West Germany. Students, public sector workers and all private sector workers are included in German tabulations, while in the United States the figure is only an estimate for private industry establishments with eleven or more employees. Moreover, nonfatal injuries and illnesses are reported differently. In the United States, estimates are made by industry and based upon days of work lost due to occupationally related injury or illness. The German figures

91. *See infra* text accompanying notes 244-313.
92. *Id.* notes 234-43.
94. Ergonomics, also called human factors engineering, is "the science relating to man and his world," and embodies "the anatomic, physiologic, psychologic, and mechanical principles affecting the efficient use of human energy." Dorland, *supra* note 69, at 459.
96. 3,125 fatal occupational accidents and injuries were reported as compared to an estimated 3,740 in the United States. *See Unfallverhuetungsbericht,* *supra* note 95, at 5; *News Release at 1* (United States Dep't. of Labor, Bureau of Labor Statistics, Nov. 13, 1985).
97. *Preventing Illness and Injury in the Workplace,* *supra* note 24, at 29.
98. *Id.* at 31.
are based upon filed and awarded claims for insurance payments due to occupational injury or illness. \(^9\) Studies demonstrate that the German conception of work accidents covers accidents not treated as occupationally related in the United States. \(^10\)

On the other hand, occupationally related illnesses \(^10\) may be undercounted in Germany more often than in the United States. The official figures for fatalities due to occupational illnesses in West Germany in 1984 totaled only 229. \(^10\) This figure is misleading, since fatalities are reported in this category only where the deceased person did not have a pension for occupational illness. \(^10\)

C. American Problems

Eight problems in American occupational safety and health regulation will be used as benchmarks for comparison to the German system. In the standard-setting process, recurring issues include: (1) the relation of technology and the relation of scientific knowledge to

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\(^9\) Unfallverhütungsbericht, supra note 95, at 23.

\(^10\) A comparison of accidents in West Germany and the United States found that 5,625 school children in West Germany were injured in school bus accidents in 1983 while only 4,300 school children in the United States were injured in school bus accidents the same year. These numbers are dramatic in light of the fact that 21 million American school children rode buses daily while the German figure was merely 1.6 million. The difference was ascribed to German school bus drivers, who are part-time moonlighters, not full-time employees; to traffic regulations in the United States that require motorists to stop behind a stopped school bus; and to better markings on school buses in the United States. The German author reported with astonishment that school bus design has not changed in 50 years in the United States. Kamps, Arbeitsbelastungen und berufsbedingte Strassenverkehrsunfälle, AMTLICHE MITTEILUNGEN DER BUNDESANSTALT FUER ARBEITSSCHUTZ 3 (July 1986).

\(^101\) The most frequent occupational disease according to official statistics in both countries is noise-induced trauma. The United States Bureau of Labor Standards states that 66% of occupational illnesses are due to skin diseases or noise-related trauma. News Release at 2 (United States Dep't of Labor, Bureau of Labor Statistics, Nov. 13, 1986). The largest category of compensated occupational illness in West Germany in 1984 was noise (1,268 of 4,407). Unfallverhütungsbericht supra note 95, at 34-35. Such claims are challenged in both countries. In the United States, NIOSH considers that five other occupational diseases are more frequent: occupational lung diseases, occupational cancers other than lung cancers, cardiovascular diseases, reproductive disorders and neurotoxic disorders. Union representatives in West Germany make similar claims regarding occupational cancers. E.g., Konstanty, Berufsgenossenschaften und präventive Gesundheitspolitik, 38 WSI Mitteilungen. Zeitschrift des Wirtschafts- und Sozialwissenschaftlichen Instituts des Deutschen Gewerkschaftsbundes (WSI Communications - Magazine of the Economic and Social Science Institute of the German Confederation of Labor [DGB]) 193, 195-96.

\(^10\) Fatalities due to an occupational illness for which the deceased person has already received a pension are not counted. For example, a miner who retires and receives a pension because of silicosis caused by his occupation will not be counted as a fatality even if he dies a few months after receiving the pension. Annually, these deaths average about 1,800, according to union representatives. Kaiser & Konstanty, Unfallversicherung: Der Reformbedarf ist gross- Bilanz unter Ausblick nach 100 Jahren, 34 Soziale Sicherheit - Zeitschrift fuer Sozialpolitik (Social Security-Magazine for Social Politics) 161, 163 (1985). Additionally, estimates of occupationally related cancer deaths are excluded and average five percent of all deaths due to cancer (about 5,000). Konstanty, supra note 101, at 195. OSHA has used an estimate of five percent of all cancers as work-related. See Hazard Communication, Final Rule, 29 C.F.R. § 1910 (1983).
mandatory standards, (2) the role economic considerations should have in determining the contents of occupational safety and health standards, (3) the effect of judicial review of standards, and (4) the rules governing preemption of state standards by federal standards. Within the enforcement process, the most common problems include: (5) enforcement methods at the administrative level, (6) the desirability and form of worker participation in enforcing occupational safety and health rules, (7) the proliferation of product liability and toxic tort litigation from occupational exposure as well as environmental exposure, and (8) the preemption of federal enforcement by state enforcement and vice versa.

1. Technology.

a. United States.—In the United States, technical experts do not draft legal mandatory standards. Technical judgments are made after lengthy public hearings by administrative agencies with limited resources. Their judgments are then reviewed if challenged by any person. On one hand, there is uncertainty in the validity of the standards until they are judicially confirmed. However, on the other hand, since the standards are usually drafted with specific exposure limits and procedures for compliance, there is certainty in application. The quantity of occupational safety and health regulation is considerably less in the United States than in West Germany. There is no legal relation in the United States between the public standard-setting process and private voluntary standards set by technical experts.

The lack of incorporation of technical experts and rules in the administrative decision-making process results in perennial delay which is called priority-setting. Due to lack of resources, only a

104. Preventing Illness and Injury in the Workplace, supra note 26a, at 275-94.
105. Id.
108. In the United States, technology and indefinite legal concepts appear in post-accident compensation lawsuits, where non-experts (often laypersons on juries) apply broad legal concepts, ostensibly taking technical standards into account. Uncertainty exists here, too, until dissipated in the concrete case by what often appears to be an arbitrary judgment by a jury of laymen, unequally bestowing benefits on "lucky" individuals. Whether the potential liability of manufacturers and suppliers results in de facto compliance with voluntary standards is unknown. However, given the lack of a state-of-the-art defense in most jurisdictions for products liability litigation in the United States, the incentives to comply are not strong. In addition, litigation in occupational health is concentrated on only a few substances, such as asbestos. Technical rules and indefinite legal concepts in the vast majority of substantive areas of regulation are never reviewed by a court.
109. See, e.g., National Congress of Hispanic American Citizens v. Marshall, 626 F.2d 882, 888 (D.C. Cir. 1979) ("so long as his action is rational in the context of the statute, and is taken in good faith, the Secretary [of Labor] has authority to delay development of a standard at any stage as priorities demand") (footnote omitted).
few issues can be regulated at one time. Therefore, the danger that improvements in technology will outdate the regulations before they are implemented is tolerated as inevitable in the United States.\footnote{110}{One example: the 1971 National Electrical Code was incorporated as an OSHA consensus standard in 1971. In 1984, there had been four revisions of the code, and the latest edition was issued in 1984. Yet OSHA still required use of the 1971 code, 29 C.F.R. 932, 936 (1985); \textit{Regulatory Program of the United States Government 1985}, at 320 (Office of Management & Budget, Executive Office of the President, 1986).}

\textbf{b. West Germany.---}In West Germany, technology — through technical standards\footnote{111}{See infra text accompanying notes 198-203.} and indefinite legal concepts\footnote{112}{Id. at notes 204-17.} — is incorporated in regulation. The law keeps up with technological changes because it defers to the experts for standard-setting and application of the standards.\footnote{113}{P. Marburger, \textit{supra} note 18, at 145-47, 286-91.} In effect, the employer has great flexibility in applying safety and health standards, although this flexibility is accompanied by uncertainty. However, the uncertainty is settled by general agreement among technical experts, and as a result, has not caused legal controversy in practice. The trend in new legislation is towards directly mandating technical standards or scientific judgments as legally enforceable norms, thereby relying less on indefinite legal concepts.

The traditional view in the German literature staunchly opposes the incorporation of technical standards into mandatory legal standards.\footnote{114}{Building codes are an exception.} The fears expressed are illustrated by the American experience with inflexibility, inability to keep up with technical developments, lack of experts in the bureaucracy, and conflicts between the government bureaucracy and private standard-setting groups that inhibit the private development of technical standards.\footnote{115}{See, e.g., W. Ernst, \textit{Rechtsgutachten zur Gestaltung des Verhältnisses der übetreiblichen technischen Norm zur Rechtsverordnung} 29-30 (Deutscher Normenausschuss (1973). The new Dangerous Substances Regulation strikes new ground in incorporating technical rules as legal obligations. Here again, however, the Germans have shown considerable flexibility in adopting technical standards into mandatory obligations. For example, the obligation to undercut technical reference concentrations (TRKs) is not backed up by a fine, it is phrased as aspirational rather than absolute (\textit{dafuer sorgen}); employment restrictions are seen as the remedy for a violation rather than fines (leaving room for doubt as to whether they actually will be enforced); and the employer is obliged to adopt new technological developments improving on TRKs, again without the mechanism of a fine as enforcement. See infra text accompanying notes 260-83.}
setting bodies in comparison with their counterparts in West Germany. The advantages of greater coverage by including voluntary standards and technical expertise in the legal process are so great that methods should be found to remedy the weaknesses of voluntary standard-setting organizations in the United States. The danger exists that incorporating technical rules and judgments as mandatory standards in the United States, in the absence of institutional participation by all affected groups, would lead to industry capture of government. A concern about delegating public power to private groups is unwarranted at least for public health and safety problems, because without broad delegation, health and safety in the workplace will be ineffective in a preventive sense.

Some standards, however, have been codified in the United States. In public health and safety matters, voluntary technical standards have long been incorporated directly in state and municipal codes, with many codes referring to the latest edition of professional voluntary standards as the legal standard, without any prior review. Moreover, the Code of Federal Regulations expressly incorporates safety standards of the American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), the National Fire Protection Association (NFPA), and other standard-setting organizations.

Technical expertise has been tapped in the United States for technical safety, but is not yet utilized in determining health hazards. This may be a result of the fact that the field of safety is more scientifically certain whereas the health field is subject to controversy and speculation. In this way, the German public has a tendency to put too much trust in its technical experts and avoids the benefits of explanations and justifications.

2. Economics.

a. United States.—In applying economic guidelines to standard-setting, Americans are generalists, in that identical guidelines are used to evaluate regulations without regard to their subject or

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116. E.g., fire prevention, tank boiler and elevator safety, and codes for electricity, housing conditions, and construction.


118. This view is shared by some Germans, too: scientists on expert committees charged with the classification of substances as cancer-causing are urged to document (1) why certain facts were deemed decisive and others not important, (2) the assumptions of the committee, and (3) the justifications for using the assumptions made. Woelcke, Zur Einstufung von Stoffen als krebserzeugend, 3 Amtliche Mitteilungen der Bundesanstalt fuer Arbeitsschutz 3, 6 (1985). Perhaps it is a reaction to this lack of questioning that explains why the Green Party enjoys substantial support among the young for its positions rejecting technology and reliance on technical experts. No comparable political movement has accompanied the rise in environmental awareness in the United States.
content. The procedure for enacting federal occupational safety and health regulations is modeled on statutory procedures in the Administrative Procedure Act modified by an executive order requiring consideration of economic factors. Occupational safety and health regulations are subjected to a cost benefit analysis, and are not to be issued unless their potential benefits to society outweigh their potential costs to society. This has resulted in the President's economists returning several safety and health regulations proposed by the Department of Labor, and influencing many others. In effect, the United States has instituted centralized economic planning for government regulations, using free market guidelines as the decision-making criteria. Thereby, OSHA regulations in the United States are shaped by a tug of war between industrial hygienists and safety engineers on the one side and economists on

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121. Exec. Order No. 12,291 § 2(b).
122. The Office of Management and Budget [hereinafter OMB] was established in the Executive Office of the President in 1970. 5 C.F.R. § 1303.2(a) (1986). It is staffed largely by economists. Exec. Order No. 12,291 empowers the Director of OMB to, inter alia, “require an agency to obtain and evaluate, in connection with a regulation, any additional relevant data from any appropriate source.” Exec. Order No. 12,291 § 6(a)(3).
123. E.g., OMB returned the following proposed regulations to the Department of Labor for reconsideration in 1984: (1) occupational exposure to toxic substances in laboratories, and (2) concrete and masonry construction. See OMB, Executive Office of the President, Regulatory Program of the United States Government 578 (1985) (Exhibit 8 — Regulations Returned to Agencies for Reconsideration in 1984).
125. Such control has been criticized as using microeconomic rules to govern regulations intended to operate on a macro-economic level. Economists tend to look at a standard isolated from the context in which it appears. Existing social costs such as litigation awards, litigation costs, medical costs and unmet medical treatment needs are not considered and cannot be logically considered by each separate standard. In support of economic review of individual standards in occupational safety and health, it is argued that without them there will be excessive costs imposed on enterprises that will harm the competitiveness of American industry in the world.
b. West Germany.—In West Germany, economic costs and benefits of proposed occupational safety and health regulations are considered informally on an ad hoc basis. Several factors within West Germany contribute to the tendency to neglect economic analysis of the costs of regulations.

First, indefinite legal concepts pervade the legal obligations leaving the precise limits of these obligations defined by technical rules and privately issued standards. Estimation of compliance costs within scientific judgments or technical rules are made difficult given the varied interpretations of legal obligations.

Second, the political environment in West Germany prevents economics from playing a large role in occupational safety and health standard-setting. The minority "liberal" party\textsuperscript{126} espouses a free, unregulated market yet garners only five percent of the vote. The major "conservative" party\textsuperscript{127} is rooted in religious and populist values and rejects the pursuit of political policy solely on economic grounds of efficiency or rationalization. Therefore, the five "wise ones"\textsuperscript{128} give their expert opinions on the general economic situation in a yearly report, and national economic stability is a goal imposed on government by statute.\textsuperscript{129} Yet, no central government apparatus exists to carry out these mandates as a matter of regulatory planning. The system of social insurance initiated by Bismarck in 1884\textsuperscript{130} has marked German "conservative" politics clearly at the social welfare end of the economic spectrum.

Moreover, there are complaints in West Germany about the social welfare burdens: the increasing costs of governmental social benefits, the wisdom of government control of the employment market, indefinite employment contracts that make it difficult to terminate employees and thus inhibit creation of new jobs, and rising insurance and medical care costs.\textsuperscript{131} This debate has not extended, however, to technical labor protection. The contrast with the United States in

\begin{footnotes}
\item[126] The \textit{Freie Demokratische Partei} or FDP is pivotal and has been a coalition partner in all governments since 1966.
\item[127] \textit{Christlich Demokratische Union} or CDU; in Bavaria, the \textit{Christlich Soziale Union} (CSU) is slightly more conservative but shares similar values.
\item[128] This is the popular label given to the five economics professors who evaluate national economic developments in an annual report to the federal government. \textit{See Gesetz ueber die Bildung eines Sachverstaendigenrates zur Begutachtung der gesamtwirtschaftlichen Entwicklung, BGBI.I} 685 (1963), as amended, BGBI.I 633 (1966).
\item[129] \textit{Gesetz zur Foerderung der Stabilitaet und des Wachstums der Wirtschaft} (Law for the Promotion of the Stability and Growth of the Economy), 1967 BGBI.I 582. \textit{See infra text accompanying notes} 449-50.
\item[130] \textit{From the employers' viewpoint, Bundesvereinigung der Deutschen Arbeitgeberverbaende, Jahresbericht 1987} 50-51 (1987), and \textit{id.,} Gesamtueberblick aus dem Jahresbericht 1987, at 6, 8-10.
\end{footnotes}
the economic dimension could not be greater. Economically speaking, Americans not Germans, are the centralists.\textsuperscript{138}

An equivalently centralized system in West Germany,\textsuperscript{133} similar to that occupied by the Office of Management and Budget in the United States, would not be consistent with the politics of the two major political parties in West Germany. It would be rejected by public opinion as unsocial. Nevertheless, the inclusion of economic costs and benefits as a formal part of deliberations in setting regulations and technical standards would help concretize the discussions and resulting norms. A public economic review of occupational safety and health standard-setting in West Germany is perhaps intentionally avoided in order to keep technological and scientific judgments immune from political compromise. The risk of this omission is manifestly inapposite of the laudable goals set by the incorporation of technological advances in the law: the non-recognition of safety and health dangers due to the absence of economic pressure on enterprises to discover or solve technical problems.

3. Judicial Review.

\textit{a. United States.}—The threat of judicial review often eliminates controversial parts of regulations in the United States. This in turn effects a delay of several years before regulations become effective.\textsuperscript{134} Through the process of judicial review, courts examine the administrative record of regulatory bodies in search of a reasoned justification for the conclusions and rules reached. The courts have required a showing of significant need\textsuperscript{135} for regulations concerned with occupational health. This requirement impedes the agency from taking preventive action where the hazard is not completely recognized.\textsuperscript{136}

It is questionable, however, whether the courts are qualified to

\begin{itemize}
\item \textsuperscript{132} The term centralists refers to a group of policymakers who approve or reject governmental regulations using identical criteria.
\item \textsuperscript{133} E.g., creating a federal Office of Management and Budget in the Chancellor's office.
\item \textsuperscript{134} In the past ten years, OSHA regulatory processes and their written justification have become steadily more comprehensive. Public records of proceedings frequently run more than 10,000 pages. Moreover, although federal OSHA is not required to hold hearings on proposed rules or standards, major regulations are accompanied by extensive hearings, which also delay the process.
\item \textsuperscript{135} E.g., deaths, injuries or illness. See Industrial Union Dep't v. American Petroleum Inst., 448 U.S. 607 (1980) (benzene standard held invalid for lack of a showing that the standard was "reasonably necessary and appropriate to remedy a significant risk of material health impairment. 448 U.S. at 639.")
\end{itemize}
make a judgment concerning the amount of uncertainty in determining an occupational safety and health standard. The emphasis on party-appointed experts rather than court-appointed experts does not aid judges in reaching scientific judgments. Frequently, the administrative record is simply too vast for rational review. Although American courts regularly review expert opinions in worker compensation cases, they reject this in administrative law cases and instead defer to an agency whose limited budget and expertise are well known.

b. West Germany.—The German system of incorporation suffers from excessive reliance on technical experts. West German courts have no statutory authority to invalidate occupational safety and health regulations or most federal law other than on constitutional grounds. In addition, proceedings of standard-setting are secret and haphazard. Technical standards published by the Labor Ministry and the expert committees of the insurance bodies as well as deliberations in governmental bodies such as the Bundesrat, should be more accessible to public review. Similarly, judicial review of the validity of occupational safety and health regulations issued by the state or insurance bodies should be available. Such measures would insure that the incorporation of technology in law is taken seriously.

This criticism further extends to the courts. The resolution of appealed orders and fines, and appeals of criminal convictions are difficult to determine. Appeals and judgments are not automatically available to the public and the court panel has the discretion whether or not to release a copy of the judgment to a non-party upon request. Only the Federal Constitutional Court (Bundesverfassungsgericht) and the Federal Supreme Court for Civil and Criminal Law (Bundesgerichtshof) publish all of their decisions. Furthermore, officially published decisions are not always printed in full.

The authorization, in American law, for a court to order administrative rulemaking is unknown in German law. German regula-

137. It is also questionable whether administrative agencies, which are continually short of technical expertise, staff, and funds, are qualified to make these judgments.
138. This is partially due to the individualist ethic, which distrusts scientific objectivity and pretends that the administrative state will be a neutral arbiter.
139. Greater openness, it is feared, would discourage compromise and prevent consensus.
140. See infra text accompanying note 207.
141. See infra notes 435-36.
142. See infra text accompanying notes 445-46.
143. The names of the parties are deleted from published decisions. This may be traced to the belief that decisions bind only the immediate parties and do not set precedent, and to a desire for privacy.
144. See Wuertenberger, Die Normenerlassklage als funktionsgerechte Fortbildung verwaltungsprozessualen Rechtsschutzes, 105 Archiv des öffentlichen Rechts 370, 374 nn.21-22 (1980) (noting that such orders are generally rejected by the courts and commentators).
tions are divided into levels of increasing complexity — statutes, regulations, general administrative regulations, technical standards, and scientific judgments. Despite this complex hierarchy of regulations, German courts need to consider in cases presenting imminent occupational risks, whether an order to an administrative agency or a public insurance body to consider or take specific action on a particular issue or substance makes sense, regardless of the existence of technical standards.

Judicial review of the private standard-setting bodies to force rulemaking would not fall under administrative law in either the United States or West Germany, since these organizations are private bodies. The sole basis on which judicial review of private bodies would be warranted is on procedural and participatory ground rules. Abuses in setting private standards are reviewable adequately in the United States under antitrust law and in West Germany under unfair competition and delictual law.

4. Preemption in Standard-Setting

a. United States.—The American states rather than the fed-

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145. See infra text accompanying notes 189-97.
146. This is especially so in the field of dangerous substances where there exists a trend towards the concretization of occupational safety and health duties into legal norms. However, the use of indefinite legal concepts that incorporate technical standards makes such promulgation of legal norms unnecessary in theory, since the obligation to act already exists. See infra text accompanying note 484.
147. See Furth, Evaluation of a Rescinded Regulation, in Standards and the Law 1,2 (American Nat'l Standards Inst. 1984) (description of a federal "circular" that required each private standard-setting organization to give public notice of its meetings and other standard-setting activities through media designed to reach persons reasonably expected to have an interest in the subject, issued in 1980, withdrawn in 1982) (United States); Normenvertrag §§ 1, 2, 4 (Agreement between the Federal Republic of Germany and DIN), 54 DIN-Mitteilungen 359-67 (1975) (DIN agrees to consider the public interest in its standard-setting, to give representatives of the federal government a place in its standards committees upon request, to involve government agencies in its standards-setting activity, to give priority to requests from the federal government for standard-setting, and to withdraw or adopt a DIN standard if the federal government issues a contradictory rule. The federal government agrees not to issue rules pending DIN's consideration of priority requests from the government, so long as the public interest, laws or enforcement do not otherwise require action) (West Germany).
148. See, e.g., American Society of Mechanical Engineers v. Hydrolevel Corp., 456 U.S. 556 (1982). In this case, Hydrolevel, a manufacturer of boilers, claimed that the American Society of Mechanical Engineers, a private standard-setting group, issued a false interpretation of its code upon the urging of a competitor of Hydrolevel. The Supreme Court held that the standards group and Hydrolevel's competitor could be held liable for treble damages if this was done with the intent to materially damage Hydrolevel's marketing of its boilers. In Indian Head, Inc. v. Allied Tube & Conduit Corp., 817 F.2d 938 (2d Cir.) cert. granted, 56 U.S.L.W. 3242 (Oct. 6, 1987), efforts by manufacturers of steel conduit to stack the vote at a meeting of the National Fire Protection Association against a proposal by manufacturers of PVC conduit were held to be unprotected anticompetitive acts, which subjected them to treble damages on a $3.8 million verdict. If the standards effort, however, is connected with the adoption by legislative bodies of the private standards, and the legislative adoption rather than the private standards caused the competitive injury, the actions will be exempt from antitrust scrutiny. Sessions Tank Lines, Inc. v. Joar Mfg., Inc., 54 U.S.L.W. 2393 (C.D. Calif. Jan. 21, 1986) (United States); see infra text accompanying notes 477-83 for German cases.
eral government have traditionally taken the chief legislative and administrative role in setting public health laws. Nevertheless, federal OSHA standards are frequently written to preempt states from maintaining or setting inconsistent rules. The opportunity of testifying at hearings or submitting written comments does not afford adequate participation by the states and by private groups in federal standard-setting. The states’ expertise and resources cannot be effectively utilized by offering views to an understaffed and inexpert federal agency. “The science of government is ‘the science of experimentation,’ " yet the use of preemption often cripples state experimentation and prevents developments of a preventive system that adopts current technology.

b. West Germany.—In West Germany, the Laender may promulgate laws in occupational safety and health matters provided that the federal government has not occupied the field. Duplicative standard-setting occurs more frequently between federal regulations and the accident prevention regulations of the vocational insurance associations. No formal preemption rules exist in this area. Since the membership on the technical committees of the Federal Labor Ministry (Bundesarbeitsministerium) and the technical committees of the vocational insurance associations (Berufsgenossenschaften) normally overlap, there is little danger of conflict. In practice, professionals at the plant level often use technical standards published by private bodies rather than the more unwieldy compilations of approved technical standards issued by the Federal Labor Ministry. The vocational insurance associations have not been active in setting exposure levels for chemicals in the workplace. However, where overlap does exist between accident prevention regulations and federal regulations, the former have a narrower coverage unless extended by statute.

Conflicts have been mentioned in the literature but have sel-

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149. In upholding a state statute that required insurance carriers to include minimum mental health care benefits in health insurance policies offered to state residents, the Supreme Court stated: “The States traditionally have had great latitude under their police powers to legislate as to the protection of the lives, limbs, health, comfort and quiet of all persons . . . laws affecting occupational health and safety . . . are. . . examples.” Metropolitan Life Ins. Co. v. Massachusetts, 471 U.S. 724, 756 (1985).


151. Art. 74(12) Grundgesetz, supra note 8. For example, the 1986 Dangerous Substance Regulation expressly preempts numerous Laender laws.

152. E.g., DIN. See infra note 193.

153. They have left this to the German Research Society’s Panel for MAK-Values and to the Technical Committee for Dangerous Substances of the Federal Labor Ministry.

154. The coverage extends only to members of the Vocational Insurance Association.

155. See, e.g., Bundesanstalt fur Arbeitsschutz und Unfallforschung, Arbeitsschutzsystem — Untersuchung in der Bundesrepublik Deutschland 1088-89 (Forschungsbericht [Research Rep.] No. 232, 1980).
dom come before the courts for review. The continuation of the double track system is favored by the historical role of the vocational insurance associations in linking medical treatment and workplace safety with accident insurance and disability pensions. Multiplicity of regulators is seen by workers as providing a double security for workplace protection. Political and institutional forces in German society probably will prevent the elimination of the standard-setting authority of the vocational insurance associations.

5. Methods of Administrative Enforcement

a. United States.—In the United States, there is a distinction between inspection for consultation and inspections that can lead to citations and fines. A violation is immediately cited with a fine. However, remedial orders must be issued by a court and are extremely rare. Few inspections are made despite the enforcement system’s emphasis on compliance subject to the imposition of sanctions. Advocates of stricter state enforcement of occupational safety and health standards in the United States tend to focus on the amount of fines and number of violations rather than on how compliance could better be achieved.

b. West Germany.—The occupational inspectorates (Gewerbeaufsicht) in West Germany maintain no distinction in staff or inspections regarding consultation and inspections. Remedial orders are issued in great quantities, but fines are imposed only exceptionally. The emphasis is on consultation. No exemptions from inspections are given.

156. Id. at 1083.
157. A federally funded, state operated consultation program offers small business consultations with different personnel rather than those used for regular inspections. No citations are issued during the consultation and no regular inspection is scheduled for one year. See House Comm. on Education and Labor, Subcomm. on Health and Safety, Oversight on OSHA: State of the Agency, Serial No. 99-12, 99th Cong., 1st Sess. 18 (1985) (testimony of Robert Rowland, Asst. Secretary of Labor for Occupational Safety and Health); All About OSHA supra note 7, at 35-36.
158. In absolute terms, the number of inspections by the occupational inspectorates and vocational insurance associations in West Germany is ten times the number of state and federal inspections by occupational safety and health agencies in the United States. In Germany, the number of inspections of workplaces totalled 1,719,691 in 1984 (about evenly divided between the two institutions). Unfallverhuetungsbericht, supra note 95, at 47, 51. In the United States, federal and state OSHA inspections totalled 179,000 in fiscal year 1984 (71,000 were federal inspections and 108,000 were by the states). Of this number 9,000 federal inspections covered only a review of employer records without a view of the workplace itself. U.S. Dep’t of Labor, 72d Annual Report, Fiscal Year 1984, at 1, 2, 34; U.S. Dep’t of Labor, OSHA Inspection Reports. This comparison is somewhat overdrawn in that many American states use other agencies for inspections of certain equipment or machinery. Nevertheless, when the relative number of employees and establishments in the two countries are taken into account, the gap remains staggering and provocative. Fines by federal OSHA totalled $7.7 million. Id.
159. E.g., Preventing Illness and Injury in the Workplace, supra note 24, at 23.
Curiously, there is little concern among unions for more sanctions. Similarly, the Social Democratic Party proposes a Chemicals Policy advocating more governmental authority to prohibit use of dangerous substances but omits reference to the use of sanctions.

The Laender, which are charged with enforcement of safety and health laws through the occupational inspectorates, complain that they lack the authority to issue fines in certain cases. For example, in approving the new Dangerous Substances Regulation, the Bundesrat requested the federal government to make noncompliance with orders (Anordnungen), under the Chemicals Statute, punishable by a fine. The proposed revision would declare non-compliance with an order to be a breach of order (Ordnungswidrigkeit), enabling the occupational inspectorate to issue a fine and seek its collection through the criminal branch of the ordinary courts.

The relevant question is not how many fines are levied or violations found but how compliance can best be achieved in each society. The West Germans have opted for frequent inspections, plentiful orders, but few external sanctions. The Americans would do well to examine this as a possible course of action in place of few inspections accompanied by coercive fines.

6. Participation

a. United States.—American labor unions are hesitant to undertake enforcement responsibilities in safety and health matters, fearing liability in suits by their members or joinder by employers and insurance companies in product liability suits. “Right to know” regulations and regulations regarding the right to refuse dangerous work are aimed at the individual or union as actors, but not at

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160. The staff of the Deutscher Gewerkschaftsbund, in making suggestions for improved enforcement by the accident insurance associations, suggests not levying more fines, but hiring more technically qualified personnel — engineers, doctors, chemists, physicists, psychologists, and sociologists. Kaiser & Konstanty, supra note 103 at 167.


163. E.g., infra note 529.

164. Infra note 158.

165. Union lawyers, for example, urge the union to (1) caution their safety committee members against personally undertaking efforts to abate or eliminate hazardous conditions, and (2) make it plain in the collective bargaining agreement that the employer retains exclusive responsibility to provide a safe and healthful workplace. Cohen, Union Liability Under State Tort Law For Workplace Injuries or Illnesses, 3 The Labor Law Exchange 28, 32 (1985).


the workplace community as a whole. The concept that the majority-elected union has a duty to represent the entire workforce also requires the union to consider safety in the workplace as a whole. However, the “duty of fair representation” is a judicial construction and vague in content. More important, unions represent less than 20% of the workforce. Workplace involvement in occupational safety and health regulation in the United States exists only where safety committees have been established by company policy or collective bargaining agreements.

b. West Germany.—The West German participatory system is oriented towards the interests of the work community or team (Arbeitsgemeinschaft) which includes workers as well as supervisors and employers. Mandatory requirements for safety and medical services at the workplace, for plant safety and health committees, and for safety stewards as well displace the role of the labor union as an institution for enforcing occupational safety and health rules. It is difficult for individual workers to call attention to problems that the work council does not acknowledge. Workplace medical services are not always used by workers for fear of losing jobs. The emphasis on medical testing results in neglect of measures for plant engineering and exposure controls, and the lack of central data collection of medical statistics inhibits effective prevention or recognition of many occupational disease cases.

7. Litigation

a. United States.—Product liability and toxic tort litigation concerned with occupational disease and accidents are an indirect method of private occupational safety and health enforcement in the

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170. In 1987, the U.S. Bureau of Labor Statistics reported that 17 percent of the wage and salary work force over the age of 16 were members of unions. Daily Labor Rep. (BNA), Jan. 25, 1988, at 1.
171. See infra notes 367-74.
172. Infra note 400.
175. Infra notes 367-74.
176. Toxic torts refer to the effects on health of substances in the environment or workplace. Litigation about toxic torts relies on product liability for theories of recovery. Its use has increased dramatically in the past ten years.
United States. Litigation, however, is a largely inadequate and ineffective tool. Such litigation occurs over a limited number of accidents and diseases, and only after injury or the probability of future injury has been caused. Moreover, it is brought by individuals who alone reap remedial benefits. Thus, as a compensation system, such litigation is unfair and unpredictable. Those who do not sue receive nothing, whereas a few litigants receive millions of dollars.\textsuperscript{177} Litigation raises insurance costs without affecting insurance benefits and insurance companies search for ways to avoid exposure. Insurance companies would rather withdraw from fields with high litigation recoveries than institute prevention programs. There is little evidence that litigation inspires prevention programs.\textsuperscript{178}

\textit{b. West Germany.}—Product liability claims against manufacturers and suppliers are infrequent due to the procedural barriers to litigation in West Germany.\textsuperscript{179} The lack of strict liability in this area, the generous social insurance system, and the reluctance of accident insurance bodies to sue other insurance companies further discourage product liability claims.\textsuperscript{180} The individual lacks financial incentive to sue in West Germany on claims stemming from occupational causes. Toxic tort litigation claiming occupational links is virtually unknown in West Germany, although complaints by community residents against neighboring factories and schools containing PCBs have occurred in large cities.

Questions of causation\textsuperscript{181} that plague American product liability litigation arise in West Germany primarily with occupational pension determinations. Only some 13\% of these claims are granted in West Germany.\textsuperscript{182} Medical affidavits from different doctors often conflict with one another, leaving the decision to the pension committee. The decision is not appealable. Thus, increased coverage for social insurance in the United States can be expected not to eliminate the difficulties of determining causation. Moreover, it is likely to transfer the arena of dispute from the courts to an administrative body and from tort law to insurance law.

Product liability claims in West Germany are rare and are brought by and paid in annuity payments to the vocational insurance

\textsuperscript{177.} In 1985 and 1986, one study located only 488 jury verdicts in the United States of over $1 million, eighty-three of which were product liability cases. Phila. Legal Intelligencer, Jan. 5, 1987, at 3.

\textsuperscript{178.} Plaintiffs' personal injury lawyers contend the opposite, but not persuasively.

\textsuperscript{179.} \textit{Infra} text accompanying notes 596-98.

\textsuperscript{180.} \textit{Infra} notes 582-88, 598-605.

\textsuperscript{181.} For example, is shortness of breath due to being overweight or to asbestosis?

\textsuperscript{182.} \textit{Unfallverhuetungsbericht}, supra note 95 at 35.
associations where a worksite accident or injury is involved. The individual is placed in no better position after a successful lawsuit. The costs of accident and health insurance in Germany are often ignored when Germans voice their outrage about the costs of liability insurance in the United States.

8. Preemption in Enforcement

a. United States.—In the United States, state and federal enforcement of occupational safety and health regulation are treated as exclusive of one another. Federal supervision of states with state approved OSHA plans is inadequate. Some state and local agencies perform duties that cover safety concerns, however, many laws they enforce are not federally governed. In specific employment fields, such as mining, nuclear power plants, and agricultural employment, special enforcement bodies exist at either the federal or state level. While the exclusive enforcement jurisdiction of these agencies fosters simplicity of inspection and avoids conflicting orders, the additional safety margin that duplicate checks may provide is lost.

b. West Germany.—There is no preemption of vocational insurance associations’ enforcement responsibilities by the occupational inspectorate. The unions, which favor increased enforcement, are the only institutional group favoring the consolidation of enforcement responsibilities in one agency.

The judicial appellate process further illustrates the concurrent sources of occupational safety and health enforcement authority in West Germany: social courts review the accident insurance associations’ remedial orders, administrative courts review the remedial orders of the Laender, and criminal court panels of the ordinary civil courts review fines levied by both authorities. The administrative

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183. This may change after the new European community directive on product liability is implemented in German law. O.J. EURO. COMM. (No. L 210) 31 (Aug. 7, 1985).

184. While accident insurance payments and health care costs are difficult to compare, payments of accident insurance in West Germany in 1984 totalled 11.5 billion German marks, or over seven billion dollars at current exchange rates. This figure is more than one-half of the total worker compensation payments in the United States in 1978. Also interesting to note are other, higher social payments: fifteen billion German marks as payments for children (Kindergeld); twenty-five billion German marks for wage replacement for illness (Lohnfortzahlung), and 109 billion marks for health insurance payments (Krankenversicherung). Hauck & Schenke, Voraussetzungen geschaffen, Bundesarbeitsblatt 5, 7 (1985) (chart).

185. E.g., licensing inspection requirements for boilers, elevators and other mechanical equipment.

186. E.g., The U.S. (Department of Labor maintains a separate agency for overseeing mine safety. Many states have agencies for migrant farm workers.


188. § 51(4) Sozialgerichtsgesetz, 1975 BGBl.1 2535 (social courts); § 40(1) Verwal-
enforcement system is part of the entire legal judicial system; it is not built on a single specialized agency, as in the United States.

IV. German Technical Standards

A. Nomenclature

German statutes concerned with occupational safety contain mostly general clauses and leave their concretization to administrative regulation. State regulations (Verordnungen) bind all persons; accident prevention regulations (Unfallverhütungsvorschriften), by themselves, bind only the employer members and insured persons of the vocational insurance association that issues the regulation. Where statutes or state regulations (Verordnungen) adopt the accident prevention regulation as legal standards, they then bind all persons.¹⁸⁹

General administrative regulation (allgemeine Verwaltungsvorschriften) cannot be used by administrative authorities to require behavior by private persons, but the administrative authorities must accept behavior that complies with such regulations.¹⁸⁰ Since individuals cannot be required to obey general administrative regulations directly, such regulations lack the status of legal norms (Rechtsnormen).¹⁹¹

Non-binding guidelines (Richtlinien), circulars (Merkblätter) and enforcement advice (Durchführungsanweisungen) do not bind the issuing authorities either internally or externally. They indicate recommended policy only, and so cannot be the basis for a fine.¹⁹² Similarly, technical standards occupy an important role but are not legally binding by themselves. Private organizations¹⁹³ and expert
advisory committees\textsuperscript{194} of the Federal Labor Ministry prepare these technical standards.

There are three types of technical standards: technical rules (\textit{die Regeln der Technik}), technical norms (\textit{technische Normen}), and scientific findings (\textit{wissenschaftliche Erkenntnisse}). In the field of exposure to dangerous substances, technical standards are called scientific findings. These scientific findings establish maximum worksite concentrations (\textit{maximale Arbeitsplatzkonzentrationen} or MAK-Values)\textsuperscript{195} as determined by a panel of the German Research Society (\textit{deutsche Forschungsgesellschaft}).

The panel sets no maximum concentrations for carcinogenic substances (\textit{krebserzeugende Arbeitsstoffe}) or mutagenic substances (\textit{erbgutveraendernde Arbeitsstoffe}). Instead, the Advisory Committee for Dangerous Substances (\textit{Ausschuss fuer Gefahrstoffe})\textsuperscript{196} determines “toleration” values (\textit{Toleranzwerte}) or technical reference concentrations (\textit{technische Richtkonzentrationen} (TRKs) of such substances. The panel of the German Research Society advises employers to seek concentrations below this toleration value to the greatest possible extent.\textsuperscript{197} Thus, occupational safety and health standards rely on technical experts to define their content.

B. Incorporation

The nearly unanimous view among German commentators and government authorities is that regulation (\textit{Vorschriften} or \textit{Rechtsverordnungen}) should not contain technical standards:

It lies in the nature of the subject and is proven through practice that regulations can never contain ready technical solutions. These are constantly in flux. A literal fulfillment (\textit{Erfuelling}) of legal requirements for technical equipment in general is not possible; it always depends on the \textit{appropriate} compliance (\textit{Durchfuehrung}). The decisive point is that the requirements for the goal of protection are achieved.\textsuperscript{198}
Technical standards, unlike regulations, provide no independent legal basis for enforcement measures by public authorities. These standards, however, become mandatory whenever statutes, binding regulations, administrative authorities, or the reviewing courts determine that the specific technical rule, guideline, or regulation is a “generally recognized rule of technology” (eine allgemein anerkannte Regel der Technik).

The German system makes up for the lack of mandatory rules by instituting broad, legally binding regulations containing indefinite legal concepts (unbestimmte Rechtsbegriffe) whose scope can encompass technical standards. Statutes and regulations, incorporating general formulae such as “the generally recognized rules of technology” and “the state of technology” (Stand der Technik), link technical standards to the regulatory structure and hence to a legal standard.

1. General Recognition Rules.—The majority view still defines “generally recognized” as the technical rule adhered to by a majority of experts active in a particular field. In addition, the rule must have been applied in practice and have shown itself to be practicable. The minority view, which finds no support in judicial decisions, dispenses with the practice requirement and requires only that


200. This includes technical rules as well as nonbinding technical standards set forth in guidelines and general administrative regulations.

201. This term appears in numerous statutes.

202. Indefinite legal concepts must be distinguished from general clauses (Geralnklauseln). General clauses give courts open-ended discretion to define legal norms. An example would be the duty of good faith imposed on parties in performing contracts by section 242 of the Civil Code (Buergerliches Gesetzbuch) (BGB). The determination of an indefinite legal concept by the courts or agencies, on the other hand, involves establishing factual elements.

203. The origins of this term lies in building standards referred to by medieval guilds as the “rules of building art” (die Regeln der Baukunst). The guilds had their own inspectors, and continued functioning until well into the nineteenth century. The “rules of building art” became part of police law rules governing construction of buildings. P. MARBURGER, supra note 18, at 149-50.

The expression “generally recognized rules of technology” found its first entry into statutory law as a standard of negligence for what is now the crime of serious endangerment of the environment, as found in the Criminal Code. (Strafgesetzbuch) Section 330(1)(3) makes punishable with three months to five years imprisonment for a person, inter alia, “to operate pipeline equipment for transporting water-endangering substances or work equipment for storing, unloading or transferring water-endangering substances . . . in a manner that is a gross violation of the generally recognized rules of technology.”

The original version of section 330 referred to the generally recognized rules of building art, which were defined by the Reichsgericht in 1891 as rules “thoroughly recognized and accepted as correct in the circles of concerned technicians.” Judgment of June 26, 1891, (Reichsgericht in Strafsachen) [RGSt]. See also Judgment of Oct. 11, 1910, 44 RGSt 76 (1910).

204. P. MARBURGER, supra note 18, at 145.

205. Id.
they be experimentally tested and scientifically controllable.\textsuperscript{206} The determination of a “generally recognized rule of technology” is aided by the presumption that technical rules published in the \textit{Bundesarbeitsblatt} are “generally recognized.”\textsuperscript{207} Many commentators would go even further and accord to technical standards the status of “generally recognized” even without their publication in the \textit{Bundesarbeitsblatt}.\textsuperscript{208}

2. \textit{State of Technology Rules.}—The “state of technology” formula appears primarily in environmental laws.\textsuperscript{209} Recent regulations also use this formula.\textsuperscript{210} “State of technology” has a higher threshold than “generally recognized rules of technology.”\textsuperscript{211} State of technology need not represent the prevailing theory or practice while the “generally recognized rules” must do so.\textsuperscript{212} The modern trend in German safety and health regulation is towards using “state of technology” rather than “generally recognized rules of technology” as a regulatory basis.\textsuperscript{213}

3. \textit{Indefinite Concepts in General.}—Although the use of indefinite legal concepts in statutes and regulations is common, the courts have determined that the legislature itself could have constitutionally set the permissible types of risks and risk factors, as well as the pro-

\textsuperscript{206} Id. 146-47. An example of a guideline that received recognition as “a generally recognized rule of technology” and subsequently became a mandatory rule is a guideline about wiremesh and other aspects of children’s playpens. It was prepared by public officials in federal and state labor departments. In an action brought to prohibit the import of a certain brand of playpens, the administrative court recognized the guideline as binding and as a generally recognized rule of technology. The court stated that the officials who were charged with enforcing the law on machine safety, as well as importers and manufacturers of playpens, recognized the guideline’s soundness in view of accidents many small children had suffered after being placed in playpens. Judgment of May 6, 1974, No. W2V74 Verwaltungsgericht Würzburg [VERwG], (Administrative Court Wuerzburg) (copy in author’s possession).

\textsuperscript{207} E.g., General Administrative Regulations for the Equipment Safety Law § 11 (reprinted in Nipperdey II, Technical Labor Protection [\textit{Arbeitssicherheit}]).

\textsuperscript{208} E.g., W. Ernst, supra note 115, at 12-13.

\textsuperscript{209} E.g., Federal Emissions Protection Law § 3(vi) \textit{(Bundesimmissionsschutzgesetz)}; Technical Directives for Air and Noise \textit{(Technische Anleitungen Luft und Laerm)}.

\textsuperscript{210} E.g., GEFahrstoffVO § 19(1), see infra note 244.

\textsuperscript{211} Advanced processes, equipment or plant methods that have been tested experimentally may be used to define the “state of technology.” P. Marburger, \textit{supra} note 18, at 162-63.


\textsuperscript{213} Two additional indefinite legal concepts appear in specific areas of safety and health. First, the Law Concerning Regulation of Atomic Power uses the term “state of technology and science” (\textit{Stand der Technik und Wissenschaft}). This concept requires application of the newest scientific developments that are technically feasible (\textit{machbar}). Budde, \textit{supra} note 212, at 738. Second, the term “reliable ergonomic findings” (\textit{die gesicherten arbeitswissenschaftlichen Erkenntnisse}) is used in connection with work councils and ergonomic considerations generally.
procedure to determine them or tolerance limits. However, the courts have recognized that the executive branch is much better suited to make continuing adjustments of risk evaluation based on the newest technological knowledge:

The statutory fixing of a particular safety standard through the adoption of inflexible rules would, even were it to come about, hold back rather than promote further technological development. It would be a step backwards at the cost of safety.

Basically, then, the use of indefinite legal concepts as non-specific safety and health standards in German administrative law still prevails and remains an exception to the principle that every administrative invasion of the private sphere must be justified by explicit statutory authorization (Gesetzesvorbehalt). The majority of commentators favor the use of indefinite legal concepts. Those who oppose the introduction of concepts such as "generally recognized rules of technology" into new areas of environmental law do so on the grounds that the expression gives agencies and courts too broad a delegation of power.

214. Judgment of Aug. 8, 1978, Bundesverfassungsgericht, 49 BVERFGE 89 (1978) [hereinafter Kalkar]. The Kalkar decision concerned the Atomic Power Law but the court did not limit its statements to the field of nuclear power. At the same time as the Bundesverfassungsgericht was discouraging more precise legislative standards, the administrative courts were upholding their power to define the "state of technology." Czajka, Der Stand von Wissenschaft und Technik als Gegenstand richterlicher Sachaufklärung, 35 DIOEFFENTLICHE VERWALTUNG 99, 106 (1982).

The highest administrative court (Bundesverwaltungsgericht) (BVERwG) recently took a step towards reducing its power to define indefinite legal concepts, at least in nuclear power cases. In the Why case, the court, while noting that the executive must seek the advice of science in evaluating risks of nuclear power, emphasized that judicial control cannot replace the executive's evaluation of scientifically disputed matter through its own evaluation. To allow the administrative court to make an independent evaluation would ignore the executive's technical superiority over the legislative and judiciary in the fields of repelling danger (Gefahrenabwehr) and risk prevention (Risikovorsorge), and offend the principle of separation of power (Gewaltenteilung). BVERwG, Dec. 19, 1985, 39 DIOEFFENTLICHE VERWALTUNG 431 (1986).


216. Despite the preference for using indefinite legal concepts as a link between technical rules and law, an increasing trend in West Germany is for the law to contain a reference to a "static" or "dynamic" technical rule. Static refers to a specific edition of a particular rule, while dynamic includes subsequent revisions.

Static references are contained in the lists of technical rules regularly published by the Bundesarbeitsblatt. They are also contained in the adoption of technical standards (mainly DIN standards) by the building supervisory authorities as uniform technical construction regulations (einheitliche technische Baubestimmungen) (ETB) under section three of each Land's building regulations. Static references are binding only on administrative authorities, not on the courts. Budde, supra note 212, at 739.

In technical safety law, the static reference is not very prominent in German law because it is seen as too inflexible. On the other hand, some German commentators see the dynamic reference as equally infirm as it unconstitutionally transfers law-setting functions to private associations. Nevertheless, the Dangerous Substances Regulation now adopts the dynamic reference in dealing with chemical exposures.

V. The German Regulatory Framework

In addition to administrative regulation in occupational safety and health, two other contexts of regulation exist: organizations and technical services for the workplace, and the vocational insurance associations (Berufsgenossenschaften). Workplace organizations have the authority to partially determine the content of labor protection standards. The vocational insurance associations issue and enforce accident prevention regulations for their employer members. Thus, throughout all three levels of regulation — administrative, workplace, and accident insurance — the incorporation of privately-set rules of technology is pervasive.

A. Administrative

There is no single legal field called occupational safety and health. Rather, the substantive rules are scattered throughout six areas of legislation identified as technical labor protection (technischer Arbeitsschutz). These are (1) industrial hygiene, (2) installations requiring supervision, (3) equipment safety, (4) dangerous substances, (5) testing new substances, and (6) working hours.

1. Industrial Hygiene.—In 1891, the Trade Law (Gewerbeordnung) was amended to introduce basic requirements applicable to industrial and service enterprises (Gewerbe) in the field of workplace facilities and industrial hygiene. These requirements, however, were framed in very general terms. The Commercial Code (Handelsgesetzbuch) in 1897 imposed similar duties on employers of commercial workers and apprentices.

A more recent federal regulation concerning industrial hygiene (Arbeitsstaettenverordnung) was promulgated in 1975. Although this regulation on workplace facilities is more detailed and applies to more workers than the Trade Law, it also contains broadly-defined goals. Specifically, it requires “adequate, healthful, and acceptable ventilation” in workplaces during working time, with consideration of the nature of the work and the needs of the employees. This regulation also requires the vacuuming and removal from the workplace facilities of unhealthy amounts or concentrations of gas, steam,
mist or dust at the point of emission, insofar as their accumulation cannot be prevented.\textsuperscript{224} Workplaces must utilize an independent alarm system to signal otherwise undetectable breakdowns in the vacuuming equipment. Furthermore, employers must take additional measures to protect employees against danger to their health in the event of such breakdowns.\textsuperscript{225} A general clause of the regulation obligates employers to comply with the generally recognized rules of technical safety, occupational health, and industrial hygiene as well as reliable ergonomic findings and any applicable regulations.\textsuperscript{226}

The regulation on workplace facilities is accompanied by detailed guidelines (\emph{Arbeitsstaetten-Richtlinien}) defining generally recognized rules and reliable ergonomic findings. The guidelines refer frequently to technical standards set by private organizations and provide the occupational inspectorate, the administrative courts, and the public with nonbinding advice as to the content of these general clauses.

2. \textit{Installations Requiring Supervision (ueberwachungsbeduertiige Anlagen).—}Laws in the 1840s requiring police approval of steam boilers were the earliest regulations in the field of technical labor protection.\textsuperscript{227} Since 1953, their inspection, along with inspection of a wide range of other technical installations, has been mandated by the Trade Law.\textsuperscript{228} Federal safety regulations\textsuperscript{229} have been issued for types of equipment listed in the Trade Law. They frequently require building permits for construction or installation of designated equipment.\textsuperscript{230} The regulations require regular testing\textsuperscript{231} and adherence to "the generally recognized rules of technology."\textsuperscript{232} General administrative regulations provide that adherence to rules set by the advisory committee for the specific type of equipment satisfies "the generally recognized rules of technology."\textsuperscript{233}

\begin{itemize}
\item \textsuperscript{224} Id. § 14.
\item \textsuperscript{225} Id.
\item \textsuperscript{226} Id. § 3(1)(1).
\item \textsuperscript{227} See A. MERTENS, \textit{supra} note 28, at 24.
\item \textsuperscript{228} Included in this list are elevators, beverage dispensing equipment, technical medical machines, electrical machinery, tanks storing acetylene or calcium carbide, equipment storage or transport of flammable liquids, pressurized connections for flammable, acidic or poisonous gases, steam or liquids, and equipment for transferring pressurized, liquefied or solidified gases. See \textit{GEWO} § 24.
\item \textsuperscript{229} E.g., Steamboiler Regulations (\textit{Dampfkesselverordnung}), Elevator Regulations (\textit{Aufzugsverordnung}), Regulations for Flammable Liquids (\textit{Verordnung ueber brennbare Flussigkeiten}). These regulations are reprinted in Nipperdey II, \textit{Technical Labor Protection (Arbeitssicherheit)}.
\item \textsuperscript{230} E.g., Dampfkesselverordnung § 10.
\item \textsuperscript{231} Id. § 17.
\item \textsuperscript{232} Id. § 6(1).
\item \textsuperscript{233} E.g., \textit{Allgemeine Verwaltungsvorschrift zur Dampfkesselverordnung}, 1980 \textit{BGBl.} I 173, § 1.
\end{itemize}
3. Equipment Safety.—The Federal Equipment Safety Law\textsuperscript{234} functions as preventive consumer protection in addition to occupational protection. Passed in 1968, the Equipment Safety Law obligates manufacturers and importers bringing equipment into commerce to conform with the “generally recognized rules of technology” and the regulations for labor protection and accident prevention. Conformity means that the user or third party who utilizes the equipment properly is protected against all types of dangers to life or health so far as the proper use permits.\textsuperscript{236} Deviations from the rules are permitted provided that the same safety is guaranteed by other means.\textsuperscript{236} Approved equipment is permitted to be marked by a seal signifying “tested for safety.”\textsuperscript{237} Under the general administrative regulations\textsuperscript{238} for this statute, technical standards of specific private organizations\textsuperscript{239} are presumed to be “generally recognized technical rules” upon their publication by the Federal Minister of Labor and Social Order in the \textit{Bundesarbeitsblatt}.\textsuperscript{240}

Allowing the sale or importation of unsafe products into commerce can also be prohibited by the \textit{Laender} under the Equipment Safety Law.\textsuperscript{241} The list of such prohibitions is published regularly in the \textit{Bundesarbeitsblatt}. Violation of a prohibition order (\textit{Untersagungsverfügung})\textsuperscript{242} subjects only the manufacturer or importer in the state where the order is issued to penalties. Thus, the order is not valid in other \textit{Laender} against the same person or a different person. However, the occupational inspectorates usually give precedential weight to prohibition orders from different \textit{Laender}, so that another \textit{Land’s} occupational inspectorate would issue a new prohibition order promptly.\textsuperscript{243}

\begin{thebibliography}{1}
\item 234. \textit{Gesetz ueber technische Arbeitsmittel} (\textit{Geraetesicherheitsgesetz}), 1968 BGBI 717.
\item 235. \textit{Geraetesicherheitsgesetz} § 3(1). Regulations under this statute have been issued for electrical tools, decoration lights and paraphernalia, and technical medical machines.
\item 236. \textit{Id.}
\item 237. \textit{Id.} § 3(4). The label is “GS,” which stands for “tested for safety” (geprüfte Sicherheit).
\item 238. General Administrative Regulations, Equipment Safety Law (\textit{Allgemeine Verwaltungsvorschrift zum Gesetz ueber technische Arbeitsmittel printed in Nipperdey II}, supra note 207).
\item 239. \textit{i.e.}, \textit{Deutscher Normenausschuss e.V.} (DIN), \textit{Verband Deutscher Elektrotechniker e.V.} (VDE), and \textit{Deutscher Verein von Gas und Wasserfachmaeennern e.V.}, \textit{id. at} § 3(1). Section 3(2) permits the same recognition to be given to foreign and international standard-setting organizations.
\item 240. \textit{Id.} § 4(1)[1], [2]. The same recognition applies to accident prevention regulations and guidelines of the vocational insurance associations when they are published in the \textit{Bundesarbeitsblatt}. \textit{Id.} § 4. Appendices to the general administrative regulation list the technical standards that have been published according to organization, title of technical rule, and date of issuance. \textit{See, e.g., Bundesarbeitsblatt} 22-55 (Jan. 1986) for a list of then-approved technical standards.
\item 241. \textit{Geraetesicherheitsgesetz} § 6.
\item 242. Prohibition orders usually involve consumer products, for example, barbecue grills, \textit{Bundesarbeitsblatt} 110 (1985), or children’s playpens, \textit{VERwG Wuerzburg}, \textit{supra} note 206.
\end{thebibliography}
4. Dangerous Substances.—The most recent and evolving branch of German technical labor protection law is the area of dangerous substances.244 Similar to the previous regulations, the current Dangerous Substances Regulation245 regulates these substances both upon their entry into commerce (Inverkehrbringen) and through their use or handling (Umgang).

a. Entry into Commerce.—The Dangerous Substances Regulation contains uniform labeling rules246 for some 1,100 substances.247 Moreover, a categorization and labeling guide (Leitfaden) is provided for substances not specifically included in the list. In addition to the duty of labeling, these rules require certain kinds of packaging,248 and permits249 or ban outright the entry of certain substances into commerce.250 In order to enter commerce, cancer-producing substances must have warnings in the form of labels identifying their contents.251

The requirements for packaging are general: packaging of dangerous substances and preparations is to be designed so that the contents do not "unintentionally" leak outside the container.252 Packaging that conforms with transportation regulations meets this requirement.253 When appropriate use of solid dangerous substances or preparations does not result in danger for life or health of humans, or danger for the environment, special packaging is not required. Misleading or confusing packaging or labeling is prohibited.254

Specific products containing asbestos are banned from being brought into commerce.255 Formaldehyde containing wood and parti-
icle board are prohibited from commerce in certain concentrations. Eight other compounds are banned as well. Persons bringing into commerce substances categorized as poisonous or very poisonous must have permits. To obtain the permit, the applicant must employ a person with the required expert knowledge. This is determined by an examination conducted by the authorities or waived if the applicant employs a pharmacist or pharmacist's assistant. Changes in personnel of such persons must be communicated to the authorities without delay.

b. Handling and Use.—The regulations on handling and use of dangerous substances comprise the largest part of the regulation and contain the most fundamental changes compared with earlier versions. Major sections deal with testing, supervision of testing, labeling of substances when they are being handled, prohibitions on employment, and medical examinations. Coverage extends beyond manufacturing to service and retail industries as well as other activities.

The definition of dangerous substances for purposes of handling includes the substances required to be labeled for entry into commerce. The regulation provides for additional substances to be treated as dangerous by introducing several broad definitions. Chemical concentration and toleration values have been introduced directly into a legal regulation for the first time. The regulation when an appropriate substitute is not available. § 9(2).

255. The method of testing the concentration of formaldehyde is to be determined by a procedure that must conform with "the state of technology and science." Id. § 9(a). A grandfather clause permits substances containing these banned substances to be brought into commerce until June 1989, if they were produced before the effective date of the Regulation. Id. §§ 45(2), (3), (5).

257. Id. § 11. Exceptions are made for pharmacies, public facilities such as laboratories and universities as long as they have expert knowledge, wholesales, and gas stations.

258. Id. § 13.

259. Id. § 11(7).

260. Supra note 244.

261. GefahrstoffVO §§ 16, 18, 23, 26, 28-35.

262. Newly covered persons include civil servants, soldiers, students (from kindergarten to university), and persons employed at home. GefahrstoffVO § 15(3).

263. Supra note 244.

264. A substance or preparation is dangerous if it is poisonous, irritating, combustible, flammable, cancer-producing, teratogenic (fertility-damaging), mutagenic (gene-changing), or possesses other chronic damaging qualities. It is also dangerous if it changes any part of the natural non-human habitat such that significant dangers or disadvantages for the public (Allgemeinheit) ensue. GefahrstoffVO § 15(1)[1]; Chemicals Law (Chemikaliengesetz) [hereinafter CHEMG] § 3(3). The definition includes products that set free dangerous substances, and substances known to carry disease or sickness (Krankheiserreger). GefahrstoffVO § 15(1)[4].

265. The Regulation declares that MAK and BAT values are concentrations of substances in the air (MAK) or body (BAT) within which generally, the health of employees will not be damaged. GefahrstoffVO § 15(4), (5). TRKs, on the other hand, are defined as concentrations of substances in the air "which can be attained by the current state of technology." Id. § 15(6). No assurance as to the level of safety provided by TRKs is given.
also introduces a new technical concept: the threshold value (Aus-
loeseschwelle), defined as “the concentration of a substance in the
air at the workplace or in the body, an excess of which requires addi-
tional measures for the protection of health.”

Under these regulations for handling and use, an employer has
a duty to determine whether a substance, preparation or product he
uses involves a dangerous substance. Where uncertainties remain
in the use of dangerous substances, the manufacturer or importer is
obligated to inform the employer, upon request, of the dangers posed
by the substance and the measures the employer should take to pro-
tect his employees. The regulation also establishes a general
duty on the employer to protect human life and health as well as
the environment. The general duty is measured by the contents of
the regulation and the applicable labor protection and accident pre-
vention regulations. It also includes “generally recognized” technical
safety (sicherheitstechnischen), health (arbeitsmedizinischen)
and hygienic (hygienischen) rules as well as reliable ergonomic find-
ings (die sonstigen gesicherten arbeitswissenschaftlichen Erkenntnisse).

The employer remains responsible for testing to determine
whether chemical concentration and toleration values are acceptable
or exceed the threshold value. Consequently, the entire effect of the
various dangerous substances in the air at the workplace is to be
evaluated. The results of tests are to be preserved for at least 30
years. The authorities can order that the employer test chemical
concentration and toleration values.

A priority list of protective measures is established in the regu-
lation. Within this, the first priority is to avoid, as far as is possi-

266. Id. § 15(7). Skin contact automatically exceeds the threshold value. Id.
267. An examination should be made to determine whether products, substances or
preparations consisting of a less health-damaging risk can be used and whether that substitute
should be used exclusively if its use is reasonable (zumutbar). The result of this test is to be
presented to the competent authorities on demand. Id. § 16(1)-(2).
268. Id. § 16(3).
269. Id. § 17. However, the Regulation permits variance from the general duty. Upon
written application the authorities can grant exceptions where an equally effective measure is
used or when a disproportional difficulty (unverhaeltnismaessige Haerte) would result and the
deviation is consistent with protection of the employees. Id. § 36.
270. Id. § 17(1).
271. GefahrstoffVO § 18(1). The Regulation requires that whoever performs these
tests must have the necessary expert knowledge and equipment. Id. The employer may assume
that tests carried out by persons not part of his enterprise possess the necessary qualifications
only if they belong to the network attached to the Advisory Committee for Dangerous Sub-
stances and are on the testers’ list published by the Minister of Labor and Social Order in the
Bundesarbeitsblatt. Id. § 18(2). Thus, a network of environmental workplace testing services
and laboratories is being created.
272. Id. § 18(3). When a plant closes, the test results must be given to the accident
insurance carrier. Id.
273. Id. § 18(4).
274. Id. § 19.
ble according to the state of technology, the release of gases, vapors or floating substances dangerous for man and environment.\textsuperscript{275} If release of dangerous gases, vapors or floating substances is unavoidable, the next priority is to completely capture them at their place of effect or creation and to remove them without danger to man and the environment as far as possible according the state of technology.\textsuperscript{276} Thirdly, ventilation measures corresponding to the state of technology are to be taken.\textsuperscript{277}

No fine is provided for in case of violation of these priorities. If the appropriate concentrations\textsuperscript{278} are not obtained in spite of the first three steps, the employer must provide effective and appropriate personal protective equipment and maintain it in usable, hygienic condition.\textsuperscript{279} The employer must also take care that the workers are only employed when the work process makes it absolutely necessary and when their health can be protected.\textsuperscript{280} The employer is required to post, in understandable form and language, the dangers, protecting measures, behavior rules, and disposal methods concerning the use of dangerous substances.\textsuperscript{281} Instruction of employees using dangerous substances is required before employment and at least once annually thereafter. The content and time of the instruction is to be kept in written form and signed by the affected employees.\textsuperscript{282} Women capable of bearing children are to be further instructed about the possible dangers to pregnant women and employment restrictions pertaining to them.\textsuperscript{283}

Medical examinations for employees exposed to eighteen specified dangerous substances and all listed cancer-producing and flammable dangerous substances are to be conducted and repeated at stated intervals at the employer's expense.\textsuperscript{284} Upon demand, the employer must provide to an authorized doctor necessary information about workplace circumstances and facilitate an inspection of the

\textsuperscript{275} Id. § 19(1). Skin contact of employees with dangerous solids or liquids is to be avoided as far as permitted by the state of technology. \textit{Id.}

\textsuperscript{276} Id. § 19(2).

\textsuperscript{277} Id. § 19(3).

\textsuperscript{278} See generally supra note 265.

\textsuperscript{279} The prevailing practice in 1984, according to the \textit{Deutscher Gewerkschaftsbund}, was to use personal protective gear much more frequently than technical preventive measures. \textit{STELLUNGNAHME ZUM ENTWURF EINER VERORDNUNG ÜBER GEFÄHRLICHER STOFFE (Statement Regarding the Draft of a Regulation on Dangerous Substances)} [hereinafter \textit{STELLUNGNAHME}] 11 (Feb. 28, 1984) (copy in possession of author).

\textsuperscript{280} If allergic reactions are to be expected, personal protective equipment should be provided. However, the wearing of breathing masks and entire protective suits may not become a permanent measure. \textit{GEFAHRSTOFFVO} § 19(4). If MAK or BAT concentrations are not obtained, personal protective equipment is to be used. \textit{Id.} § 19(4).

\textsuperscript{281} Id. § 20(1).

\textsuperscript{282} Id. § 20(2).

\textsuperscript{283} Id.

\textsuperscript{284} \textit{GEFAHRSTOFFVO} § 28 and app. 5.
workplace.288

The employer must further keep a medical file for each employee undergoing medical examinations.288 On leaving employment, the employee receives the original medical record and the employer keeps a copy.287 Statements in the medical record may not be communicated to "unauthorized third parties."288 Where it is determined that an employee's health may be damaged by his further employment, the authorities can order that an employee may only continue employment after he is examined by a doctor.289 Where the doctor has "medical reservations" (gesundheitliche Bedenken) he must advise the employee in writing. The doctor must recommend in writing to the employer a review of the workplace when the examined employee appears to be endangered as a result of his workplace conditions.290 The work council must also be informed of "medical reservations" that the employer has received;291 in the case of employment prohibition, the proper authorities must also be notified.292

Further employment at the same worksite of an employee who receives "medical reservations" is permissible only after the employer reviews the effectiveness of the preventive measures and establishes that no further medical reservations exist for the employee. Furthermore, other employees can only be employed when they can be sufficiently protected through preventive measures.293

Additional requirements exist for handling dangerous substances294 that are cancer-producing, poisonous or flammable. Each of the fifty-four substances listed as cancer-producing is categorized according to the strength of its concentrations: (1) very highly endangering, (2) highly endangering, and (3) endangering.295

286. Id. § 34(2). The information is to include, inter alia, the date and result of the examination, a description of past and current employment that has a potential for endangerment, the date of the next examination, and the name of the person maintaining the file. Id. Unions' efforts to establish medical examinations of persons after they have stopped working in an endangered workplace (e.g., retirees) were not adopted in the Regulation. See Stellungnahme, supra note 279, at 8.
287. GefahrstoffVO, supra note 244, § 34(3).
288. Id. § 34(4). The Regulation does not define this term.
289. Id. § 35(1).
290. GefahrstoffVO § 31(3). Either the employer or the examined employee can appeal the doctor's finding to the competent authorities. Id. § 32. If a medical affidavit is obtained by the authorities before the decision, the employer bears the cost. Id.
291. Id. § 31(4).
292. Id.
293. Id. § 33. The preventive measures are listed in section 19.
294. These are set forth in separate appendices.
295. Dangerous Substances Regulation, app. 2 — Special Regulations for Handling Cancer-Producing, Teratogenic and Mutagenic Dangerous Substances (Besondere Vorschriften fuer den Umgang mit krebeserzeugenden, fruchtschadigenden und erbgutveraenderden Gefahrstoffen), (printed in Nipperdey II, supra note 207). For example, Benzidin is classified as very highly endangering at concentrations of more than one percent, highly endan-
Authorities and employees are to be notified of the manufacture of any cancer-producing substance within the first two categories.\textsuperscript{296} However, if the threshold value\textsuperscript{297} in a second category substance is not exceeded, notification is not required.\textsuperscript{298} Authorities can prohibit the handling of a cancer-producing substance by the employer where the substance falls within the first category when its handling is not necessary.\textsuperscript{299} Handling a substance in the second category may be prohibited when its use is not necessary and no disproportional difficulty would arise from a ban.\textsuperscript{300} Duties of reporting, continued testing, and medical examinations are waived for substances within categories two and three where the threshold value is not exceeded.\textsuperscript{301}

With minor exceptions, the labeling obligations for the handling and use of dangerous substances are the same as the requirements for entry into commerce. Substances formed in the production process that change form into non-dangerous substances need not be labeled as long as the employees involved are alerted to these substance changes.\textsuperscript{302}

Employment restrictions for handling designated types of dangerous substances exist for pregnant women,\textsuperscript{303} nursing women,\textsuperscript{304} women capable of bearing children,\textsuperscript{305} and youths under certain ages.\textsuperscript{306}

5. Testing New Substances.—In accordance with a directive of the European Community,\textsuperscript{307} the 1980 Chemicals Act\textsuperscript{308} requires

gering at concentrations from .01% to one percent, and endangering at concentrations from .001% to .01%. \textit{Id.} app. 2 ¶ 1(1).

For carcinogenic substances the employer must ensure (dafuer sorgen) that the tolerance values (TRKs) are undercut, and he must adopt, within a reasonable period, technical safety developments that have been shown to improve safety. \textit{Id.} ¶ 1.2.2(1)-(3), (5).

Special handling requirements exist for several cancer-producing substances (including asbestos, arsenic, benzene, and vinyl chloride), for specified poisonous substances (including lead, anti-fouling colors used to coat the undersides of ships, formaldehyde, and pentachlorophenol), for ammonium nitrate, and for flammable substances in general. \textit{Id.} § 1.3.1-1.3.7.2; appendices three and four.

296. \textit{Id.} app. 2 ¶ 1.2.2(1).
297. \textit{See supra} text accompanying note 266.
298. \textit{Id.} app. 2 ¶ 1.2.2(5).
299. \textit{GefahrstoffVO, supra} note 244, app. 2, ¶ 1.2.2(3)[1].
300. \textit{Id.} ¶ 1.2.2(3)[2].
301. \textit{Id.} ¶ 1.2.2(5).
302. Registered pesticides in pesticide equipment need not be labeled. In addition, pipes do not need labels either. \textit{GefahrstoffVO} § 23(1), (4).
303. \textit{Id.} § 26(5), (6).
304. \textit{Id.} § 26(5).
305. \textit{Id.} § 26(7). Women capable of bearing children are prohibited from employment in handling lead or mercury unless the threshold value has not been reached.
306. \textit{Id.} §§ 25(4); 26(2), (3), (4).
new chemical substances to undergo tests by manufacturers and importers and to be registered with a national registration authority of the European Community forty-five days before bringing the substance into commerce.\textsuperscript{309} The registration authority in West Germany is the Federal Institute for Labor Protection and Accident Research.\textsuperscript{310} The manufacturer is permitted to choose the state in which to register; the Chemicals Act exempts from registration substances registered in another member state in an equivalent procedure.\textsuperscript{311} The Chemicals Act permits the competent \textit{Laender} authorities to ban the manufacture or bringing into commerce of new dangerous substances, preparations, or products for a period of only three months where factual indications exist that they pose a significant danger for life, human health, or the environment.\textsuperscript{312}

The Chemicals Act provides the statutory authorization for issuing regulations on labeling and authorizes the promulgation of regulations requiring testing of existing substances,\textsuperscript{313} but no regulations on testing of existing substances have as yet been issued.

6. \textit{Working Hours}.—The field of regulation of working time properly belongs to social labor protection along with protection against dismissal, rather than to the technical labor protection area. Nevertheless, certain provisions are considered part of technical labor protection.

Statutory restrictions on working hours maintain an important place in German employment law. The 1938 Regulation On Working Time\textsuperscript{314} is still in force. This regulation prohibits regular working hours over ten hours a day unless the use of other workers is impossible.\textsuperscript{318} The Regulation on Working Time assumes a regular six day work week of eight hours a day.\textsuperscript{315} It has long since been outdated in this respect by collective agreements that usually provide for a regular forty-hour or thirty-nine-hour work week. The Trade Act prohibits most work on Sundays and holidays.\textsuperscript{317} Unless otherwise provided by a collective agreement, the requirement of extra compensation for overtime\textsuperscript{318} over forty-nine hours\textsuperscript{319} still controls, even though the

\begin{itemize}
\item \textsuperscript{309} \textit{Id.} § 4(1).
\item \textsuperscript{310} \textit{Bundesanstalt fuer Arbeitsschutz und Unfallforschung}.
\item \textsuperscript{311} \textit{CHEMG} § 4(1).
\item \textsuperscript{312} \textit{CHEMG} § 23(2).
\item \textsuperscript{313} \textit{Id.} § 17(1).
\item \textsuperscript{314} \textit{Arbeitszeitverordnung [AZO]}, 1938 RGBI. I 447.
\item \textsuperscript{315} \textit{Id.} § 5(3).
\item \textsuperscript{316} \textit{Id.} § 3.
\item \textsuperscript{317} \textit{GewO} §§ 105a, 105b, 1978 BGB. I 97 Hospitals, utilities, police, hotels and restaurants are excepted.
\item \textsuperscript{318} 125\% of regular pay.
\item \textsuperscript{319} \textit{AZO} § 15.
\end{itemize}
regular work week is no more than forty hours. Additional restrictions apply for particular occupations and groups. Most significantly in terms of occupational health and safety, the Mother Protection Law prohibits women from working during the six weeks preceding and eight weeks following birth. In the absence of a doctor’s statement that the health or life of the mother and child would be endangered, this prohibition is lifted upon request of the woman. In either case, the employer must pay full wages during these pre and post natal periods. Moreover, pregnant women are not permitted to work between 8 p.m. and 6 a.m. or on Sundays or holidays, and may not work overtime. They are not permitted to be paid by piecework, to regularly lift objects weighing more than five kilograms, to perform heavy manual work, or to work where they are exposed to health-endangering substances, heat, cold, wetness, noise or radiation.

Similarly, the Youth Protection Act prohibits the employment of children. Moreover, older youths are prohibited from

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321. Retail stores must close during the hours between 6:30 p.m. and 7:00 a.m. during the work week. On Saturday they must close at 2:00 p.m., except on the first Saturday of the month when the hours are extended to 6:00 p.m. Shop Closing Laws of the Laender (Ladenschlussgesetze, § 3(1)) 1956 [BGBl.1875 Gas stations, newspaper stands and one pharmacy per community are excepted to varying degrees. Id. §§ 4-6. Sunday and holiday work in the production branches is prohibited; exceptions exist for bakeries (two hours on Sunday), restaurants, theaters and the like. Trade Law §§ 105, 105(b)[1]. Branchwide exceptions may be made by regulation. See G. SCHAUB, ARBEITSRECHTSHANDBUCH 926 (5th ed. 1983) [hereinafter G. SCHAUB]. Attempts to make shop hours more flexible have been generally unsuccessful.
323. Id. §§ 3, 6. This law prohibits dismissals of pregnant employees except in extraordinary circumstances. Id. 88.
324. Id. § 6.
325. Id. § 8. The Regulation on Working Time prohibits all women from employment between 8 p.m. and 6 a.m. In shiftwork the hours can be extended to 12 a.m. AZO, supra note 314, § 19(1), (2). On days before Sundays and holidays their employment must end by 5 p.m. Id. § 19(1).
326. Id. § 4. Some female protective legislation has been challenged; the 1982 draft of a Unified Labor Protection Code by the former social democratic-liberal governing coalition would have eliminated weight lifting prohibitions for women. Draft of a Labor Protection Law: The Most Important Provisions (Entwurf des Arbeitsschutzgesetzes - die wichtigsten Bestimmungen), Federal Ministry of Labor and Social Order, § 6. The Freizeitanordnung [FreizeitAO] (Free Time Regulation) (RAB.III 325), issued during World War II in 1943, is in effect in states that have not passed their own home workday statutes. The Free Time Regulation and its state counterparts grant women a day off for housework. However, since a similar state law was held unconstitutional by the Bundesverfassungsgericht (highest constitutional court), the regulation is no longer applied. The court held it violates the constitutional principle of equality of man and woman in Article three of the Basic Law. G. SCHAUB, supra note 321 at 962-63.
328. Defined as under fourteen years of age. Id. § 2. Among the exceptions are that thirteen year olds are permitted to do agricultural work up to three hours daily and to deliver newspapers for up to two hours daily. Id. § 5(3)[1], [2]. Fourteen year olds may work as an apprentice seven hours daily and thirty-five hours a week in light and “appropriate” activity. Id. § 7(2). Youths between the age of fifteen and eighteen may work eight hours a day and
piecework, and from work exposing them to damaging effects from noise, vibrations, radiation and substances that are poisonous, acidic or irritating. 329 Medical examinations, paid for by the state government, are required for youths when entering employment and one year after the start of their employment. 330

B. Enterprise and Workplace

1. Collective Bargaining.—Little attention has been focused on occupational safety and health in collective bargaining. 331 Unlike in the United States, unions in West Germany are industrially and regionally organized, with only one principal confederation 332 and seventeen constituent federations. 333 Bargaining occurs at the industrial level with regional and often national coordination. Union membership is individual and voluntary; no exclusive bargaining unit concept is needed since union competition hardly exists and most employers apply collective agreement provisions voluntarily or by administrative extension to all their employees, regardless of whether they are union members. 334 Although about 40% of German employees are union members, 335 informal application of collective agreements by employers and their extension by administrative order doubles the coverage for collective agreements to approximately 80%. 336

Unions have no statutory responsibility in the occupational safety and health field; their autonomy to bargain (Tarifautonomie) and freedom to enter coalitions (Koalitionsfreiheit) would make statutory duties problematic if applied to them. Collective bargaining agreements (Tarifvertraege) rarely include clauses relating to forty hours a week, but not between the hours of 8 p.m. and 7 a.m., Sundays, holidays, or for the most part, Saturdays. Id. 58.

329. Id. § 22.
330. Id. §§ 32-34.
331. An exception has been labor’s demand for thirty-five hour work week at forty hours a week wages. This was the sole demand of a five week strike by the Industrial Metalworkers Union (Industriegewerkschaft Metall) in 1984. After mediation, the metalworking industry agreed to a 37.5 hour work week with plant level implementation after consultation between work councils and plant management. In 1987, the same union sought a 32.5 hour work week for night shift workers.
332. The German Labor Confederation (Deutscher Gewerkschaftsbund).
333. The three largest federations are the metalworkers (Industriegewerkschaft-Metall) with 2.6 million members in 1981, the public service workers (Gewerkschaft Oeffentliche Dienste, Transport und Verkehr) with 1.1 million members, and the chemical, paper, and ceramic workers (Industriegewerkschaft-Chemic, Papier, Keramic) with 650,000 members. W. Zoellner, Arbeitsrecht 98 n.8 (3d ed. 1983).
334. See generally, Arbeitsring der Arbeitgeberverbaende der Deutschen Chemischen Industrie e.V., Wie Tarifvertraege zustande kommen 1-3 (Jun. 1973); Boedler & Kaeser, 30 Jahre Tarifregister, Bundesarbeitsblatt 22 (Sept. 1979).
335. Id.
336. Id. A mark of unions’ political strength is that over 60% of representation in the Bundestag, supra note 456, are union members. W. Zoellner, supra note 333, at 98.
occupational safety and health. Thus, the one principal confederation, the *Deutscher Gewerkschaftsbund* (DGB), employs two persons for occupational safety and health matters. None of its constituent federations employed full time staff in the area of occupational safety and health in 1986.1

2. *Work Councils.*—The 1972 Workplace Constitution Law permits the election of work councils (*Betriebsräte*) in establishments (*Betriebe*) with at least five employees. Work councils are composed solely of elected employees.

Work councils have several tasks regarding occupational safety and health. These tasks are assigned to them by the Workplace Constitution Law. In the absence of rules set by collective bargaining agreement or statute, this law gives the work council a right of codetermination concerning two aspects of regular working time: (1) the disposition of working hours; and (2) the temporary shortening or lengthening of usual working hours. Significantly, work councils have a right of codetermination concerning the prevention of work accidents and occupational diseases, and the protection of health. This codetermination right is self-initiating; the plant council need not wait for the employer to act before raising issues. However, this right extends only to action within the scope of administrative or accident prevention regulations where no statutory or collective agreement rule exists.

A similar right of codetermination applies to the introduction and use of technical equipment designed to supervise the behavior or work performance of employees. Work councils also have a right

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337. The union's primary focus for occupational safety and health issues is the workplace. The DGB's proposal concerning occupational safety and health and codetermination, for example, is to employ full time union-selected representatives in the enforcement offices of the state and accident insurance associations. The function of these labor protection representatives (*Arbeitsschutzbeauftragte*) would be to support enforcement of labor protection rights by plant councils and unions and to promote their cooperation with the administrative and insurance offices. Another DGB proposal is to require employer members of vocational insurance associations to allow union representatives access to workplaces. Kaiser & Konstanty, *Aspekte betrieblicher und überbetrieblicher Mitbestimmung der Arbeitnehmer im Kampf für Gesundheit in der Arbeitswelt, 34 Soziale Sicherheit: Zeitschrift für Sozialpolitik* 72, 75 (1985).


339. Three of the five persons must be qualified to serve as work councillors. BetrVG § 1.

340. See infra text accompanying note 349.

341. BetrVG § 87(1)[2].

342. Id. § 87(1)[3].

343. Id. § 87(1)[7].


345. Betriebsverfassungsgesetz § 87(1)[7].

346. BetrVG § 87(1)[6]. An example would be the introduction of computers that enable the employer to review the performance of its sales employees. In ordering codetermination in this area, courts analogize to the protection of privacy anchored in Article two of the
to codetermine changes in jobs or work surroundings which obviously contradict or burden in a special way the humane organization of work.  

The workplace implementation of occupational safety and health measures in its broadest sense is thus usually a matter of codetermination between the work council — if one exists — and the employer. In public enterprises and government, employees elect staff councils (Personalausweise) rather than work councils; a separate statute governs the operation of these staff councils (Personalausweisgesetz).  

Work councils and employers may conclude workplace agreements (Betreibvereinbarungen) which may set guidelines for safety and health conduct at the establishment. Striking to obtain a plant agreement is prohibited. If the work council and employer are unable to agree on a subject that is within the scope of codetermination, a conciliation committee (Einigungsstelle) decides the dispute. The work council has no power to compel agreement on a matter not subject to a right of codetermination. In order to require the employer to comply with obligations under the Workplace Constitution Law, the work council or a union having members who work in the plant may petition the labor court for an injunction.  

The work council has obligations to promote and review enforcement at the workplace of the regulations concerning labor pro-

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347. The reliable ergonomic findings define the meaning of humane organization of work. BetrVG § 91.

348. Bundespersonalvertretungsgesetz, 1974 BGB.I 693 (as amended).

349. At the Ford plant near Cologne, for example, workplace agreements exist in the field of safety and health that set higher qualifications than are required by regulations in the following areas: qualification of workplace doctors, safety engineers, and safety technicians; establishment of guidelines for how workplace health and safety professionals are to cooperate with each other; and implementation of safety rules for testing new cars. Interview with Professor M. Seeger, Chief Safety Engineer, Ford factory near Cologne (April 23, 1986).

350. This office may be formed by work agreement or convened ad hoc. It is composed of an equal number of persons selected by the work council and employer, and a neutral chairperson whom both sides select jointly. In the absence of agreement, the local labor court selects the chairperson. The decision (Spruch) of the Einigungsstelle can be reviewed only for abuse of discretion by the labor court. BetrVG § 76.

351. The work council has no power to compel agreement on a matter not subject to a right of codetermination (Mitbestimmungsrecht). However, the Workplace Constitution Law does contain three other types of participatory rights besides codetermination for work councils: (1) a right to veto particular personnel decisions for reasons prescribed in the statute [hiring of individual employees — § 99(2) — and dismissals of individual employees — § 102(3)]; (2) a right to be consulted regarding particular decisions; and (3) a right to receive information promptly about particular decisions after they are made. An example of the latter two participatory rights would be the statutory obligation of the employer to inform the work council of the planning for plant construction, technical equipment, the work process, and jobs, and to consult with the work council regarding the effects of these changes on work and the demands on employees. BetrVG § 90.

352. There must be a gross violation for such an order to be issued. BetrVG § 23(3). An individual cannot obtain this relief.
tection and accident prevention and to support the local authorities and vocational insurance associations through suggestions, consultation, and information.\textsuperscript{585} Conversely, these agencies and the employer are required to seek participation of the plant council or its members in connection with inspections, accident investigations, and other questions concerning labor protection and accident prevention.\textsuperscript{584}

3. Individual Employee Rights.—The German Civil Code\textsuperscript{585} prescribes the duty of an employer to operate workplaces, machines, tools and services in such a way that the individual is protected against danger to life and health so far as the nature of the work permits.\textsuperscript{586} This provision cannot be displaced by contrary collective bargaining agreements.\textsuperscript{587}

In practice, individual relief is difficult to obtain under the Civil Code,\textsuperscript{588} collective labor law, or the Workplace Constitution Law,\textsuperscript{589} because individual rights are generally subordinated to the institutions of participation. However, the employer must inform, hear and discuss with the individual employee matters that affect the employee personally.\textsuperscript{590} The employee may see his personal file and may complain (beschweren) to the appropriate office in the plant when he feels disadvantaged, unjustly treated or otherwise injured.\textsuperscript{591}

Generally, individual remedies are slowly entering German occupational safety and health law. The new Dangerous Substances Regulation (Gefahrstoffverordnung) is the first to include participatory and individual employee rights in enforcing occupational health law. Under this regulation, affected employees and the work council have the right to be heard by the employer on the results of

\textsuperscript{353} Id. §§ 80(1)(1), 89(1).
\textsuperscript{354} Id. § 89(2). The employer must give copies of all labor protection and accident prevention orders and accident reports to the plant council. Furthermore, the employer must timely inform the plant council in sufficient detail to enable the plant council to fulfill its responsibilities. Id. §§ 89(4), 89(5), 80(2).
\textsuperscript{355} Bürgerliches Gesetzbuch [hereinafter BGB], 1986 RBB1.195 (as amended), printed in H. Schoenefelder, Deutsche Gesetze (German Laws).
\textsuperscript{356} Id. § 618(1). Section 618 equates with accident prevention regulations and labor protection regulations. For example, in several cases the Bundesarbeitsgericht (BAG) has held that the provision of safety shoes at company expense is required by section 618 of the Civil Code where accident prevention regulations require employees to wear safety shoes. Judgment of Aug. 21, 1985, BAG No. 7 AZR 199/183; Judgment of Aug. 18, 1982, 40 BAGE 52 (1984); Judgment of Mar. 10, 1976, BAG 5 AZR 34/75 (copies on file with author).
\textsuperscript{357} Section 619 voids agreements that limit or remove the employer's obligations under Section 618 in advance. Individual agreements that employees must pay for safety shoes have been voided under BGB § 619. Id.
\textsuperscript{358} BGB § 618(1).
\textsuperscript{359} The few sections of the Workplace Constitution Law [BetrVG] that recognize rights of individual employees are weak and do not refer expressly to labor protection or accident prevention.
\textsuperscript{360} BetrVG §§ 81-82.
\textsuperscript{361} BetrVG §§ 83-84.
chemical measurements in the plant and the conditions of personal protective equipment when it is necessary to use such equipment. The regulation also gives individual employees protection when complaining to the authorities and provides them with an express right to refuse dangerous work.

Although individual legal remedies are evolving, many provisions may be ineffective in reality. The comments of the Bundesrat on the draft regulation state candidly that employees, particularly in small enterprises where the source of complaint is easily discovered, have experienced disadvantages and even termination for reporting conditions to the administrative authorities. Furthermore, "even when a plant council exists, it cannot be excluded that it may represent the interests of the employees only halfheartedly (bedingt)."

4. Safety and Medical Services.—The Law concerning Occupational Doctors Safety Engineers and Other Professionals engaged in Workplace Safety (Gesetz ueber Betriebsaerzte, Sicherheitssingenieure und andere Fachkraefte fuer Arbeitssicherheit) was passed by the Bundestag in 1973. This law, also called the Work Safety Law, requires employers to have doctors and professionals concerned with workplace safety available to employees. The consent of the work council is needed for the hiring or dismissal of occu-

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362. GefahrstoffVO § 21(1), see supra note 244. For example, any excess of the MAK, TRK or threshold value, together with a statement of reasons, is to be communicated without delay to the affected employees and the work council. Id. § 21(1). Copies of the chemical measurements are to be available to the work council and to be given to them on request. Id. § 21(3). The regulation contains a right of the work council to suggest to the employer protective measures to remove health damage in addition to those in the regulation. Id. § 21(4).

363. This section, similar to the new right of suggestion discussed above, was added by the Bundestag. Where the chemical concentrations (MAKs or BATs) or tolerance values (TRKs) are not met and the employee attempts, without success, to seek relief promptly within the establishment through complaints (Beschwerde) the individual employee may turn directly to the competent supervisory authorities. Where a direct danger to life or health exists by reason of the above deficiencies, the individual has the right to refuse work. No disadvantage may result to the employee for exercising either of these rights. GefahrstoffVO § 21(6).

364. GefahrstoffVO. See supra note 244.


366. Id.

367. Arbeitssicherheitsgesetz (ARBEITSSICHERHEITSG), printed in Nipperdey II, supra note 207.

368. In addition to doctors, the Work Safety Law requires three types of safety professionals: engineers, technicians (Techniker), and safety experts (Sicherheitsmeister). Id. § 5. The employer may use a contracting service. Id. § 19. The Work Safety Law states that doctors and safety professionals at the plant level are not subject to the instructions of the employer. They may submit their suggestions over the head of the plant management directly to the employer or competent member of the legal entity of the employer. Rejection of such a suggestion must be in writing and with reasons given, with a copy sent to the work council. ArbeitssicherheitsG § 8.
pational doctors and safety professionals. When the work council and employer are unable to agree on the hiring or dismissal of an occupational doctor or safety expert final determination will rest with the Conciliation Committee (Einigungsstelle). When it comes to contracting with or dismissing non-plant medical or safety services, the work council must be heard.

Conversely, occupational doctors and safety professionals are required to cooperate with the work council, to inform it of important matters regarding labor protection and accident prevention, and to advise it on request. Where doctors or safety technicians are employed directly by the plant, a safety and health committee (Arbeitsschutzausschuss) must be established. Such committees include the employer or a representative, two work council members selected by the work council, the doctors, safety professionals, and safety stewards (Sicherheitsbeauftragte). Meetings of the committee must be held at least quarterly.

C. Vocational Insurance Associations

1. In General.—The vocational insurance associations in Germany (Berufsgenossenschaften) are organized regionally and industrially, as are the labor unions. Unlike the employees' voluntary membership, however, employers are required to join and fund the appropriate vocational insurance association. The vocational insurance associations provide money to the injured employee and family after an occupational accident and they provide rehabilitation assis-

369. Note that this is a broader authority than the work council's right to refuse consent to hiring and dismissal of other persons for reasons specified by statute. Id. § 9(3); Cf. BETRVG § 99(2).
371. ARBEITSSICHERHEITSG § 9(3).
372. Id. § 9(2).
373. RVO § 719, see supra note 44, requires one or more safety stewards in plants with 20 or more employees. The work council participates in their selection. Safety stewards are obligated to support the employer in the enforcement of accident prevention, in particular by testing continually the existence and regular use of required safety measures. They may not be disadvantaged for performing their duties. RVO § 719(1)-(3). Where three or more safety stewards are appointed, they form a safety committee, unless a safety and health committee already exists. The employer or his representative are required to hold monthly meetings with the safety stewards, safety and health committee (if one exists), and the work council. Id. § 719(4). The number of safety stewards is set by the vocational insurance associations. Id. § 719(5). In addition to safety stewards, there are stewards to be appointed for radiation protection, water protection, sanitation, air emission protection, data protection, and handicapped workers. See Radiation Protection Regulation §§ 29-31 (Strahlenschutzverordnung), Verordnung ueber den Schutz vor Schaeden durch ionisierende Strahlen, 1976 BGBl.1 2905, amended 1977 BGBl.I 184, 269; Water Resources Law §§ 4,21a (Wasserhaushaltsgesetz) [WHG] 1976 BGBl.1 3017; Waste Disposal Law (Abfallbeseitigungsgesetz) [AbFG] 1977 BGBl.1 41, ber. 288 § 11a; Federal Emissions Law §§ 53,55 (Bundesimmissionsschutzgesetz) [BlmSchG] 1974 BGBl.I 721, ber. 1193 §§ 53, 55; Disabled Persons Law § 25 (Schwerbehindertengesetz) [SchwBG] 1986 BGBl.1 1421, ber. 1550.
374. ARBEITSSICHERHEITSG § 11, see also RVO § 719(4).
tance to the injured employee. The decisions on pension claims due to occupational illness are determined by a committee with equal representatives of employers and employees. These associations are also entrusted with preventing occupational accidents and insuring first aid by all appropriate means. The Insurance Code authorizes vocational insurance associations to issue regulations on these matters.

Accident prevention regulations are issued by each insurance association. Absent statute, direct administrative regulation, or adoption by all of the ninety-odd accident insurance carriers, the regulation is mandatory only for the employer members of the association or associations that issued it. The vocational insurance associations also train persons who enforce labor protection and accident prevention in the enterprises and place member employers and insured employees in training programs.

General regulations have been adopted by all vocational insurance associations acting in concord. Generally, these regulations impose obligations on the employer to make arrangements, issue orders, and undertake measures for the prevention of occupational accidents. All measures must correspond to the generally recognized technical safety and occupational medical rules. Adherence to the general regulations and other applicable accident prevention regulations is also required.

The employer may deviate from the generally recognized rules only insofar as the same degree of safety is achieved. A variance permits an employer to deviate from particular accident pre-

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375. RVO § 537.
376. Id. § 546(1).
377. RVO. See supra note 44.
378. Specifically, vocational insurance associations are authorized to issue regulations under the Insurance Code in four areas:
   (1) measures to be taken by employers to prevent occupational accidents, including delegation of the employer’s duties to other persons;
   (2) behavior that insured persons are to observe to prevent occupational accidents;
   (3) medical examinations to be given to insured persons before employment that is connected with unusual dangers of accident or health for them or third persons;
   (4) measures that the owner is obligated to take under the Work Safety Law.
379. See supra text accompanying note 189.
380. Transportation, lodging and direct training costs are underwritten by the vocational insurance association for training programs; the employee retains his pay for work time lost because of participation. Id. § 720(1)-(3).
381. General Regulations I, § 2(1) (Allegemeine Vorschriften) [VBG 1], printed in Nipperdey II, supra note 207.
382. Id.
383. Id. § 3(2). Instructions of the employer that are contrary to safety (sicherheitswidrig) are not to be followed. Id. § 14.
384. The employer must apply to the vocation insurance association for a variance (Aus-
vention regulations, as long as the opinion of the plant representative institution\textsuperscript{386} is submitted by the employer. A variance is granted either when the employer takes an equally effective measure, or when enforcement of the regulation would be disproportionately difficult to observe and the deviation is reconcilable with protection of the insured.\textsuperscript{386}

Consistent with many other accident prevention regulations, the general regulations are accompanied by enforcement advice (\textit{Durchfuehrungsanweisungen}). The enforcement advice states that occupational diseases (\textit{Berufskrankheiten}) are to be included under work accidents (\textit{Arbeitsunfaellen}). In many instances, enforcement advice specifically refers to technical rules developed by private standard-setting organizations.\textsuperscript{387} The enforcement advice also contains references to other accident prevention regulations, to circulars (\textit{Merkblaetter}) issued by the Federal Ministry of Labor and Social Affairs and to administrative regulations such as the Workplace Facilities Regulation (\textit{Arbeitsstaettenverordnung})\textsuperscript{388} and the Dangerous Substances Regulation (\textit{Gefahrstoffverordnung}).\textsuperscript{389}

Each vocational insurance association has set forth the minimum number of safety stewards (\textit{Sicherheitsbeauftragte}), organized according to the number of plant employees.\textsuperscript{390} Safety stewards have the right to request and obtain results of plant inspections and accident investigations.\textsuperscript{391} The enforcement advice states that managers and plant officials are not to be appointed as safety stewards. Neither may safety technicians or those who have employer responsibilities delegated to them be appointed as safety stewards.\textsuperscript{392} The employer is thus obligated to facilitate participation in training programs by the persons responsible for accident prevention enforcement in the establishment.\textsuperscript{393}

2. Health.—The Regulation on Occupational Medical Care\textsuperscript{394} was adopted by nearly all vocational insurance associations in 1984, under the authority of the Work Safety Law (\textit{Arbeitssicherheitsgesetz}). It occupied the central role of defining the obligations of all

\textsuperscript{385} Usually this is the work council.
\textsuperscript{386} Id. § 3(1).
\textsuperscript{387} E.g., Deutsches Institut fuer Normung (DIN) and the Verein Deutscher Elektrotechniker (VDE).
\textsuperscript{388} See supra note 314.
\textsuperscript{389} See supra note 245.
\textsuperscript{390} VBG I Appendix.
\textsuperscript{391} Enforcement Advice (\textit{Durchfuehrungsanweisungen}) VBG I § 9(2).
\textsuperscript{392} Id. § 9(1).
\textsuperscript{393} RVO § 720.
\textsuperscript{394} \textit{Arbeitsmedizinische Vorsorge [VBG 100], printed in Nipperdey II, supra note 207.}
employers and employees in the occupational medical field until the advent of the new Dangerous Substances Regulation in 1986 (*Gefahrstoffverordnung*). The administrative Dangerous Substances Regulation, by requiring tougher standards, in many instances supersedes this regulation of the vocational insurance associations. Under the Regulation on Occupational Medical Care, medical examinations of employees before and during employment are required where a specified effect (*Einwirkung*) or activity is to be expected. The employer bears the cost of the examination.

The occupational medical care regulation defines the effects of medical examinations on future employment of the examined worker. Upon demand, the examining doctor must instruct the employee of the results of the examination. Where doubts about the employee’s health exist due to endangering workplace conditions, the doctor must make a written recommendation to the employer requesting an investigation of the workplace. When the danger can be addressed by medical measures, the employee is to be advised in writing of the appropriate measures to undertake.

The examining doctor may withhold issuance of a health doubts

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395. The frequency of medical examinations is prescribed in the appendix to VBG 100.  
396. VBG 100 § 2(2). Where the employee has followed instructions of the employer, the Enforcement Advice indicates that travel and salary for lost time are to be included in the costs of the examination. Enforcement Advice VBG 100 § 2(2). However, the *Bundesarbeitsgericht* declined to require an employer to pay an employee his salary for the period of a required medical hearing test conducted in the employee’s free time, although the test was at the direction of the employer. The court regarded the examination as serving primarily the employee’s own interest and not as constituting performance of work for the employer. BAG, April 20, 1983, No. 5 AZR 624/80 (copy on file with author).  
397. VBG 100 § 10.  
398. VBG 100 § 7(1)[1].  
399. *Id.* § 7(1)[2][a].  
400. *Id.* The doctor’s finding of health doubts has great significance for the individual employee and the employer. Where the doctor expresses health doubts and recommends a workplace investigation, no employee may remain at the workplace until the investigation has been completed and the employees can be “protected sufficiently” through measures that accord with VBG 1. *Id.* § 10(1). Where the doctor expresses health doubts and recommends medical treatment for the examined employee, the employee may not work at the endangered job until the doctor confirms that the danger has been remedied by medical measures. *Id.* § 10(2). Where medical measures cannot remove the health danger, the employee may no longer work further at the endangered job. *Id.* § 10(3).

Some accident prevention regulations take even stricter approaches to employment in the absence of medical examinations. The accident prevention regulation on noise of the Machinery Construction and Small Foundry Vocational Insurance Association, for example, prohibits further employment of the employee at his workplace if the employee refuses to be medically examined for the effects of occupational noise. However, the *Bundesarbeitsgericht* (BAG) has held that the employer’s welfare duty (*Fuersorgepflicht*) requires the employer to examine whether employment is possible at another workplace where the medical examination is not required. Judgment of Apr. 20, 1983, BAG, No. 5 AZR 624/80 (copy on file with author). The regulation prohibits further employment where an employee in a covered workplace has not been tested for three years for the effects of noise. *Unfallverhutungsvorschrift "Larm" der Maschinenbau-und Kleineisenindustrie-Berufsgenossenschaft.* (Accident Prevention Regulation on Noise, Machinery, Construction and Small Foundry Vocational Insurance Association), Dec. 1, 1974, *id.*
(gesundheitliche Bedenken) finding when, in a particular case, the intervals between medical examinations are shortened, the appropriate measures of technical labor protection are undertaken, or the proper personal protective equipment is used. When a report expressing health doubts has been issued — and even when one has been withheld under the circumstances described above — notice must be given to the work council.

Upon request of the employee or employer, the vocational insurance association decides whether to review the examining doctor’s results. If a review is recommended, the costs of the second doctor’s review are borne by the employer if the association does not cover them. The decision of the association then replaces the examining doctor’s initial report.

Additionally, special medical record retention rules exist under the Regulation on Occupational Medical Care for carcinogenic work substances. Basically, the vocational insurance association must be informed of the type of exposure, the start and end of exposure of the individual employee, and the occupational medical care provided when an employee is exposed to cancer-producing substances for six months or more.

VI. Procedures for Setting Standards

A. Establishing Standards

1. Technical Standards Set by Private Groups.—The largest standard-setting private group in West Germany is the German Institute for Standardization (DIN). It conducts activities through expert committees with representatives of manufacturers, users, academic experts, and inspectors from the vocational insurance association and public authorities. Occasionally, union representatives will participate. In contrast to the American National Safety Institute (ANSI), there is no requirement that a member of an expert committee be affiliated with a DIN member.

DIN’s expert committees are required to follow certain proce-
The setting of standards by DIN may not lead to a special economic advantage for an individual. Items protected under a trademark or otherwise subject to potential objection based on unfair competition concerns may be adopted as a standard only via exception with cause. In setting standards, DIN's committees are directed to consider not only the perpetually developing fields of science and technology as well as international and European harmonization, but also the economic feasibility of the proposed technical rules.

Anyone may request that DIN develop a standard. Acceptance or rejection of a request is published in the DIN-Anzeiger magazine. Publication of a draft standard, however, may be bypassed by an accelerated procedure (Kurzverfahren). The accelerated procedure is generally used only to revise existing standards. Publicized requests receive comments. Committees review comments on proposed standards within three months after the comment period ends, and commenters are invited to attend the session. If they do not attend, they are sent the committee's evaluation of their comment.

Any person can request conciliation (Schlichtung) from the head of the committee within one month of rejection of their comment or proposed standard. Further appeal for conciliation may be made within two months thereafter to the management of DIN (Geschäftsleitung). The Praesidium of DIN, composed of thirty to forty-five persons elected by the membership, can be requested to establish an arbitration committee if no agreement is reached by the management within two months. The decision is usually rendered by the arbitration committee within three months.

Draft Standards may not remain in draft form for longer than two years. Regular standards are to be reviewed every five years.

408. See DIN Norm 820.
409. DIN Norm 820, Teil 1 ¶ 2.
410. Id. ¶ 5.10.
411. Id. ¶¶ 5.2, 5.7.
412. Proposals accepted by a DIN committee as draft standards are published in the DIN-Anzeiger for a four month comment period. Announcement of the draft standard is also made at professional meetings. The comment period may be reduced to two months if the standard is the product of a regional or international standards organization.
413. DIN's rules require publication of intent to so proceed for two months in the DIN-Anzeiger and in the general newsletter, DIN-Mitteilungen. All interested constituencies (Kreise) are to participate in the initiating committee.
414. The arbitration committee consists of a chairman appointed by the DIN Praesidium, two members selected by the complainant, and two members appointed by the affected committee. No members of either the committee or the complainant may serve as arbitrators. DIN Norm 820, Teil 4, ¶ 2.4.7.
415. DIN Standard 820, Part 1 ¶ 5.3; Part 4 ¶¶ 2.13, 2.4.3, 2.4.5, 2.4.7, 3.2 (Jan. 1986).
416. Id. Part 4, ¶ 2.4.9. Instead of issuing a draft standard, DIN may issue a pre-standard (Vornorm). A pre-standard is used where reservations on content exist or a nonconforming procedure is used. It is to be reviewed every three years. Id. ¶ 3.1.
for conformance with the state of technology.\textsuperscript{417} Standards must be retracted when their continued existence is not justified by science, technology, or practicality. The intent to retract along with the reasoning must be published for comment for two months in the DIN-Anzeiger.\textsuperscript{518}

Although DIN is a private organization, it obligated itself, by an agreement with the federal government (\textit{Normenvertrag}), to consider the public interest in its standards work\textsuperscript{419} and in particular to develop standards that can be used as a description of technical requirements for legislation, administration and business.\textsuperscript{420} The agreement provides that public officials may participate in DIN.\textsuperscript{421} In addition, DIN agrees to give priority to the federal government's requests for standards and to refrain from issuing standards that conflict with a rule issued by the federal government.\textsuperscript{422}

2. \textit{Technical Standards Set by Public Committees}.—Many statutes and regulations provide that publicly-appointed committees may decide that technical standards are to be treated as generally accepted rules of technology.\textsuperscript{423} These committees consist of representatives from technical as well as social fields. There are committees for dangerous substances and for each of the six regulations concerning technical installations. The Committee on Dangerous Substances,\textsuperscript{424} for example, has thirty-six members, appointed by the Minister of Labor and Social Order with the consent of the Minister of Youth, Family and Health. Members are to represent science,\textsuperscript{425} labor unions,\textsuperscript{426} employers,\textsuperscript{427} the competent authorities of the \textit{Laender},\textsuperscript{428} accident insurance carriers,\textsuperscript{429} and consumers.\textsuperscript{430} In the cases of science, employers, and consumers, particular organizations are frequently named which then select their representatives. The

\begin{itemize}
\item \textsuperscript{417} \textit{Id.} \textsuperscript{3} 3.4.5.
\item \textsuperscript{418} \textit{Id.}
\item \textsuperscript{419} DIN Standard 820 binds DIN organs as a result of a resolution of the Praesidium; the \textit{Normenvertrag} nevertheless reiterates that Standard 820 and the guidelines for expert committees bind the organization.
\item \textsuperscript{420} The \textit{Normenvertrag} was prompted by a study in 1973 that suggested more public legitimation of technical standards would be attainable through cooperation with the government in standards development. \textsc{W. Ernst}, \textit{supra} note 115. DIN's executives viewed this as a way to reduce the fear that special interests control standardization. Federal funds provide about 15\% of DIN's budget. \textit{54 DIN-Mitteilungen} 361-67 (1975).
\item \textsuperscript{421} \textit{Normenvertrag} \textsuperscript{4} 1(2).
\item \textsuperscript{422} \textit{Id.} \textsuperscript{4} 3, 2(2).
\item \textsuperscript{423} \textit{See infra} notes 228-40.
\item \textsuperscript{424} It is appointed by the Minister of Labor and Social Order with consent of the Minister for Youth, Family and Health.
\item \textsuperscript{425} Three representatives.
\item \textsuperscript{426} Seven representatives.
\item \textsuperscript{427} Nine representatives.
\item \textsuperscript{428} Fifteen representatives.
\item \textsuperscript{429} Three representatives.
\item \textsuperscript{430} One representative.
\end{itemize}
committee elects a chairperson who must be approved by the two federal ministers.

The sessions of the committee are not open to the public and their deliberations are not published. Because the members serve in a representative capacity, they have a duty to communicate with their individual organizations. Therefore, the work of the committee is usually known to experts in the relevant fields as well as organized lobby groups. Moreover, the federal ministers and competent highest authorities of the Laender can send representatives who are entitled to speak at the sessions.431

In some instances, committees will issue technical standards regarding matters not addressed by technical standards issued by private organizations. This occurs most frequently in the field of dangerous substances, where tolerance values for carcinogens (technische Richtkonzentration or TRKs) are set by the Committee on Dangerous Substances.432 Other public committees often adopt privately-set technical standards without change.

3. Guidelines and General Administrative Regulations.—Guidelines (Merkblaetter) and general administrative regulations (allgemeine Verwaltungsvorschriften) issued by the Ministry of Labor and Social Order are usually prepared by a technical standards committee. The vocational insurance associations also issue guidelines prepared by an expert committee (Fachausschuss). Expert committees have representatives from member employers, unions, public inspectors, practicing professionals, and the relevant vocational insurance associations.433 Guidelines need not be approved by individual insurance associations.434

4. Accident Prevention Regulations.—Each vocational insurance association issues its own accident prevention regulations (Unfallverhuetungsvorschriften or UVV). In reality, these regulations are centrally drafted by one of the expert committees, in cooperation with the Central Office for Accident Prevention of the vocational in-

431. GEFahrstoffVO § 44, supra note 244.
432. The German Labor Confederation, a participant on the Committee, emphasizes that these tolerance values represent "political values which in no way protect against cancer." Deutscher Gewerkschaftsbund, Stellungnahme zum Entwurf einer Verordnung ueber gefaehrliche Stoffe 6 (Feb. 28, 1984) (copy on file with author). In 1985, there were 21 substances with TRK values; 10 others on the category I cancer list were to be handled so that employees are not exposed to them. Schuetz, MAK-Werte und TRK-Werte gefaehrlicher Arbeitssstaffe und ihre Bedeutung fuer die Arbeitssicherheit, 38 Sichere Arbeit 10, 12 (1985).
433. Complaints are made by some Laender that their interests are not sufficiently represented in the insurance associations' expert committees. Union or employee participation is also infrequent.
urance associations. The assembly of each insurance association, composed of an equal number of employer and employee representatives, approves the accident prevention regulations, usually verbatim. The Ministry of Labor and Social Order approves each accident prevention regulation after consultation with the Laender.

5. Federal Regulations.—The Basic Law requires that federal regulations (Rechtsverordnungen) which the Laender enforce on behalf of itself or the federal government have the consent of the Federal Council, the Bundesrat. The Bundesrat has a veto right over such federal regulations; in essence, the states also possess this veto right by virtue of their direct representation in the Bundesrat. Nevertheless, the Bundesrat has never declined its consent to a federal regulation in the technical labor protection field. The procedure for approval of a regulation is neither lengthy nor complicated. The Ministry of Labor and Social Order usually drafts the proposed regulation with the assistance of the relevant advisory committees.

For major regulations such as the Dangerous Substances Regulation, brief meetings may be held by the Ministry to which concerned states presented motions (Anträge) to alter the government's draft. For example, Hessen, one of the Laender, proposed to make tests obligatory under section 16(2) to find substitutes for dangerous substances so long as no disproportional difficulty existed. Hessen also sought to permit authorities to prohibit the use of dangerous substances when a less dangerous substitute was available. The Bundesrat emphasized that the use of substitutes for dangerous substances is "the most effective protection measure" against endangering health effects, and organizational circumstances faced by the employer. To make sure that the employer fulfills this obligation, the Bundesrat added to the government's draft the requirement that the tests be made available to the competent authorities upon demand. The resolution (Beschluss) contains the revised text together with the justification for changes given by the committee or land whose proposals were successful.
groups are invited.

When the proposed regulation receives the consent of the Federal Chancellor, it is forwarded to the Bundesrat. The draft submitted to the Bundesrat is published as a document (Drucksache) and made available to the public for sale. The draft is assigned to one or more committees of the Bundesrat. The Bundesrat may make alterations in the draft, with the Federal Chancellor either accepting these alterations or submitting a new draft. The schedule set by the Bundesrat is generally adhered to. Throughout the process, there is no requirement that the general public be heard. In reality, however, letters from members of the public are considered, and pressure for desired changes is usually applied to the Laender or the Ministry of Labor and Social Order by the affected organized constituencies.

There is no separate review in the regulatory procedure for the economic utility of regulations. Such control would probably be

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441. The meetings are not open to the public and the results are not published.

442. In addition, since 1983, proposed regulations in the field of technical labor protection must be provided to the European Commission and member countries of the European Community one year in advance of their effective date in order to avoid potential trade barriers. European Community member states and the Commission have no veto right; they may, however, send comments to the federal government. EEC Council Directive No. 83/189 (Mar. 28, 1983).

443. In the case of the Dangerous Substances Regulation, six committees received the draft: labor & social policy, government, internal affairs, culture, law, and economics. The Dangerous Substances Regulation draft is one of the most complicated technical labor protection regulations to be considered by the Bundesrat, yet its deliberations were concluded in just four and a half months.

444. The most successful argument that the federal government made to avoid changes in the draft was to point out that a new notification to the European Commission would be required, and would set back the process three to twelve months. E.g., Bundesrat, Drucksache 211/86, at 97 Begründung zu § 123 (May 16, 1986).

In the case of the Dangerous Substance Regulation, instead of delaying the regulation by seeking stricter standards, the Bundesrat made numerous requests to the federal government for changes in the next modification of the regulation or Chemicals Statute. Id. ¶§ 111-27 at 89-102. The Bundesrat also indicated where forthcoming technical rules would tighten the regulation. For example, it stated in its comments that a technical rule for dangerous substances would be issued to provide the evaluation procedure and lists of substances which can synergetically interact with one other. It noted that dangerous substances in the air at the workplace can result without employing dangerous substances, such as gaseous aminos, (Aminen) and from storage of tires. Bundesrat, Drucksache 211/86, at 21, Begründung zu § 18(1) (May 16, 1986).

445. Laender, see supra note 8, often take their case to the press, particularly when they are politically outnumbered. E.g., Hessische Kritik an Arzneimittelgesetz, Frankfurter Allgemeine Zeitung, Jan. 23, 1986, at 1, col. 3.

446. In the case of the 1986 Dangerous Substances Regulation, the Bundesrat’s changes and proposals for future changes uniformly tightened the regulations, indicating the influence that the opposition Social Democratic Party had at the time in the Bundesrat through their control of five of eleven Laender, including two large Laender (Nordrhein-Westfalen and Hessen) with five votes each.

447. The published recommendations with their brief justifications indicate that the economic committee frequently raised objections to provisions of the draft regulation on dangerous substances, but that most of its recommendations were rejected. E.g., Bundesrat, Empfehlungen der Ausschusse zur Verordnung ueber gefaehrliche Stoffe (Recommendations of the Committees Concerning the Regulation of Dangerous Substances) Drucksache 211/86,
regarded with disfavor on the basis of past exploitation of centralized governmental authority. The general absence of concrete limitations in safety and health administrative regulations makes economic projections difficult.

The Basic Law, however, requires that the federal government and Laender consider the national economic balance (gesamtwirtschaftliches Gleichgewicht) in their budget policies. This goal concerns only public expenditures (Finanzwirtschaft), but it is often implied that the entire economic policy (Wirtschaftspolitik) has to direct itself towards this goal. The Stability Law, concretizing this goal, sets forth four goals to be simultaneously achieved: stability of prices, high employment levels, foreign trade balance, and constant, yet appropriate, economic growth. The relationship of these goals to noneconomic goals of regulation is not usually addressed, thus, leaving it up to the legislator or administrator to determine on an individual basis.

There is also an annual report to evaluate the general macroeconomic development in the country in the past year. Recommendations for particular economic and social measures are prohibited by law, although criticisms of existing programs are often made in the reports. The reports have no binding effect.

6. Statutes and Regulations of the Laender.—The Laender are permitted to pass statutes and regulations in the area of labor protection only where the federal government has not acted. In practice, the Laender do not assume a large role in occupational safety and health standard-setting.

7. Federal Statutes.—Periodic efforts are made to consolidate the various labor protection statutes into one code. Such efforts

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448. Grundgesetz art. 109(2), see supra note 8.
450. Id. § 1.
451. This report (Jahresgutachten) is issued by an independent commission of five economists.
452. Law for the Formation of an Expert Council to Evaluate the National Economic Development (Gesetz ueber die Bildung eines Sachverstandigenrates zur Begutachtung der gesamtwirtschaftlicher Entwicklung), 1963, BGBI.1 685, amended by 1966 BGBI.1 633.
453. Grundgesetz art. 74.
454. An exception exists in the field of social labor protection, especially regarding limitations on working time and shop closing hours, where varying rules exist depending on the type of enterprise and the Land. Technical labor protection is generally considered by the Laender enforcement authorities and Laender ministries of labor to require action at the federal level or at least on the industrial level by the vocational insurance associations.
455. E.g., in 1929 and in 1982.
have not succeeded, and the range of related laws continues to be extremely broad despite the lack of a law concerned specifically with occupational health protection.

Legislation can be initiated by the federal government, by any Bundestag representative, or by the Bundesrat itself. Since the Bundestag elects the federal chancellor, the chancellor always commands a majority of the Bundestag, and thus is always able to pass a bill in the Bundestag. Laws on labor protection, however, also require the consent of the Bundesrat. If a majority of the votes in the Bundesrat are controlled by the opposition party, it is possible to block a proposed law, although the same party that controls the Bundestag usually controls the Bundesrat as well.

8. Labor Agreements.—Collective agreements are negotiated over specific subjects on industrial and regional levels. They sometimes include clauses on working time limits but rarely include other subjects of labor protection. Agreements may not reduce statutory protections. As a formal matter, individual labor contracts are always permitted to set a more favorable standard (das Günstigkeit-}

456. The Bundestag comprises 518 elected representatives. One half (259) are elected by geographical districts directly, one half are selected by parties. Thus, each voter has two votes: one for a district representative and one statewide vote for a party, which selects its candidates in ranking order. The party list must be published at least thirty-four days before the election and the ballot must contain the names of the first five party candidates. 30 Bundeswahlgesetz (Federal Election Law) §§ 1, 4, 28(3), 1975 BGB.I 2325, amended by 1985 BGB.I 521.

457. Grundgesetz art. 76(1). Most of the labor protection statutes have been planned by the federal government for a long period or were party platforms prior to proposal. Bills are often subjected to extended debate in the media and at party meetings before approval by the cabinet and consideration by the Bundestag.

458. Provided that the coalition partner, if any, consents. The chancellor usually can rely on his party colleagues because party loyalty or discipline is much stronger in West Germany than in the United States.

459. Most legislation is approved solely by the Bundestag, with the Bundesrat having a limited veto power (Einspruchsgesetz). Where the Bundesrat vetoes a bill with a majority vote, the Bundestag can also override the veto with a majority vote, too. Grundgesetz art. 77(4). A two-thirds veto by the Bundesrat can be overridden only by a two-thirds majority in the Bundesrat. Id.

Legislation for which the Basic Law expressly requires consent of the Bundesrat is treated differently. In such cases, the Bundesrat must give its consent (Zustimmungsgesetze). Grundgesetz art. 78. Consent is defined as an absolute majority of votes. Geschäftsordnung des Bundesrates § 30, 1966 BGB.I.347, printed in Sartorius I, supra note 449. The Basic Law states that federal laws which the Laender enforce as their own affair are subject to consent of the Bundesrat. Grundgesetz art. 84(1). The general rule is that the Laender enforce federal laws as their own affair, Grundgesetz art. 83, and labor protection is no exception. More than fifty percent of federal laws now require consent of the Bundesrat. H. ERICHSEN, STAATSRAT UND VERFASSUNGSGERICHTSBAKKE 63 n.9 (Juristischer Studienkurs 2d ed. 1979).

460. E.g., The IG Metall (Industrial Metalworkers' Union) recently concluded a wage and salary framework agreement (Lohn- und Gehaltsrahmentarifvertrag) with the metal industry association of Baden-Wuerttemberg. Other collective agreements cover vacations (Urlaubsabkommen), and overall framework agreements (Manteltarifvertrage). Regelungen fuer Qualifizierung der Arbeitnehmer, Frankfurter Allgemeine Zeitung, Feb. 13, 1988, at 11, col. 3.
sprinzip). A few large companies sign company-wide agreements along with or in place of the more common employer association collective agreements.\textsuperscript{461}

B. Challenging the Validity of Standards

1. Administrative Review.—Once a technical rule is approved by a private standard-setting organization, it may be informally reconsidered by the same organization.\textsuperscript{462} There is no procedure to challenge the legal validity of the rule before administrative authorities, however, since the rule has no legal effect. Similarly, guidelines and regulations of the Ministry of Labor and Social Order and the vocational insurance associations, as well as technical rules approved by public advisory committees, may be changed upon renewed consideration, but there is no procedure for challenging them administratively.

2. Judicial Review.—German law separates a direct independent challenge to the Law (\textit{abstrakte Normenkontrolle})\textsuperscript{463} from the raising of a defense of validity in an enforcement action (\textit{konkrete Normenkontrolle}).\textsuperscript{464} Direct review of regulations is extremely limited.

a. Direct.—The Administrative Court Code\textsuperscript{465} permits only municipal ordinances (\textit{Satzungen}) and regulations (\textit{Rechtsverordnungen}) under the Federal Building Laws (\textit{Bundesbaugesetz}) and \textit{Laender} regulations as determined by \textit{Laender} laws to be the subject of direct judicial review. The administrative court of appeals (\textit{Oberverwaltungsgericht}) hears these cases in the first instance. When the matter has fundamental importance, or the court intends to deviate from the decision of another administrative court of appeals, the court must send the legal question to the highest administrative court for decision.\textsuperscript{466}

In order to obtain direct review, the plaintiff must have suffered a disadvantage or expect one in the foreseeable future.\textsuperscript{467} The de-

\begin{itemize}
\item \textsuperscript{461} Supra note 334.
\item \textsuperscript{462} Interview with E. Budde, Legal Department DIN, in Berlin, (April 15, 1986).
\item \textsuperscript{463} This means direct review of the validity of a regulation without waiting for an enforcement proceeding. Thus, it is akin to a declaratory judgment proceeding.
\item \textsuperscript{464} This review arises in the context of appeal in an enforcement proceeding in which the overall validity of the regulation is raised.
\item \textsuperscript{465} \textit{Verwaltungsgerichtsordnung} [VwGO] § 47(1), 1960 BGB.I 17, as amended, printed in Satorius I, supra note 449.
\item \textsuperscript{466} Id. § 47(5), (6). However, the parties cannot appeal judgments of the administrative court of appeals concerning the validity of regulations. E. \textit{EYERMANN} \& L. \textit{FROEHLER}, \textit{VERWALTUNGSGERICHTSORDNUNG KOMMENTAR} 422 (8th ed. 1980); H. Wolff \& O. Bachof, \textit{Verwaltungsrecht III} 464 (4th ed. 1978).
\item \textsuperscript{467} Public officials are not subject to this limitation.
\end{itemize}
fendant is the state or public body issuing the regulation. Labor protection regulations are not included and are thus not subject to challenge in an independent proceeding.468

Direct judicial review does not fit comfortably into a system of nonbinding case jurisprudence because civil law courts are not supposed to make law. Nevertheless, the invalidation of the regulation has general binding effect, as does the holding that a certain interpretation is impermissible.469 The upholding of a norm is not in and of itself generally binding, although it has a strong de facto effect, especially on administrative authorities. Technical standards that are published by public authorities as “generally accepted rules of technology” are not within the direct review permitted for building regulations because they do not constitute legal standards.470

Direct or abstract constitutional challenges to governmental reg-

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468. Some commentators urge section 47 as a model for other courts such as the social and financial courts, and urge its application to all federal law. Bavaria is the only state (Land) that subjects all of its legal norms to abstract norm control. Five other Laender have provided for abstract review of more limited scope.

469. E. EYERMANN & L. FROEHLER, supra note 466 at 422.

470. A rare example of a decision involving direct review of an accident prevention regulation occurred when a bank filed a complaint before a social court (Sozialgericht) to declare illegal a regulation requiring bulletproof cashier windows in banks. The court stated that administrative review of accident prevention regulations was limited to determining whether the regulation fulfills the statutory purpose of prevention of work accidents and to make sure such regulations do not conflict with administrative labor protection regulations. The court stated that judicial review was limited to examining whether the procedural requirements had been complied with and whether they were in harmony with administrative and constitutional law. The content and appropriateness of accident prevention regulations were not reviewed by the court because of the principle of self-administration (Selbstverwaltung) of the vocational insurance associations. Judgment of Jan. 14, 1970, Landessozialgericht Darmstadt, docket No. L3/U-685/69 (copy on file with author).

In 1985, judicial intervention occurred for the first time with regard to publication in the Federal Labor Gazette of the annual list of chemical concentration values: an administrative appeals court enjoined the Minister of Labor and Social Order from publishing the chemical concentration values for two substances (dust from oak and beech trees) on the 1985 list of cancer-producing substances. (Other wood dust was listed as having an established suspicion of potential to cause cancer.) Technische Regeln fuer gefaehrliche Arbeitsstoffe (TRGA 980) Bundesarbeitsblatt 84, 88 (Dec. 1985).

Advocates of abstract judicial review of technical standards refer to the courts' treatment of product testing by the Product Testing Foundation (Stiftung Warentest), a well-known consumer organization. Misleading tests and consciously false tests, courts have held, interfere with the business of the manufacturer under Section 823(1) of the Civil Code. Judgment of Dec. 1975, Oberlandesgericht Muenchen, 21 U5546/85 and 21 U5690/85, reported in Gericht wirft 'Warentest' Irrefuehrung vor, Frankfurter Allgemeine Zeitung, Dec. 24, 1985, at 13, col. 6. Section 823(1) provides, “whoever illegally and intentionally or negligently injures the life, body, health, freedom, property or other particular right of another, is obligated to that person for replacement of the damage that results.” As early as 1975, the civil chamber of the highest court of ordinary jurisdiction (Bundesgerichtshof [BGH], Zivilkammer) reviewed the organization's tests to ensure they were “neutral, objective and expert.” The court defined objectivity not by the test results but by the organization's efforts to ensure correctness of the results. Judgment of Dec. 9, 1975, Bundesgerichtshof [BGH], 65 BGHZ 325, 328; Neue Juristische Woche [NJW] 620 (1976).

Commentators who urge more direct review suggest higher court filing fees and reduced controls on attorney fees for such complaints to discourage spurious litigation. (Court costs in the social, administrative and finance courts are slight in comparison with the percentage tax levied on the amount claimed in cases in the ordinary civil courts.)
ulations and statutes are possible through a constitutional complaint (Verfassungsbeschwerde). Any person may file such a complaint before the Federal Constitutional Court (Bundesverfassungsgericht), alleging that he has been injured by public authority (die öffentliche Gewalt) in a fundamental right (Grundrecht) or other specified constitutional right. Review occurs only after official enforcement action and other legal recourse has been exhausted. Furthermore, the challenged statute must currently and directly interfere with the legal position of the plaintiff.

A second means of direct constitutional review permits the federal government, a state government, or one-third of the Bundestag to bring disputes concerning the federal constitutionality of a proposed law or compliance of state law with federal law to the Federal Constitutional Court. Thus, an opposition party in power in a state or an opposition party that has at least one-third of the Bundestag seats can test the constitutionality of a proposed statute.

b. Indirect.—The validity of a technical standard issued by a private organization may not be directly contested; however, application of the rule may result in liability of the standards issuer or user. A standards issuer may be liable when a carelessly prepared and defective standard results in an injury because of the standard’s defects. The remedy is a delictual claim under the Civil Code for which proof of fault is required. Some commentators, advocate a negligence standard of review for such claims: the standard’s issuer must have had knowledge of the inappropriateness or danger of the rule and, even with that knowledge, must have failed to warn or comment.

A standards user may arguably be liable if he misuses a valid rule to injure competitors. In Germany, personal or comparative

471. If the complaint concerns state (Land) law, it is brought before a state constitutional court if one exists.
472. As set forth in the Grundgesetz. arts. 1-19, supra note 8.
473. Id. art. 93(1)(4a).
474. In Bavaria, any person can challenge the constitutionality of a state law without the need to show direct injury.
475. Grundgesetz art. 93(1)(2).
476. This provision has not been used for laws concerning labor protection.
477. See Civil Code § 823(1), supra note 470. A user may also be held liable under Section 823(1) for an unsatisfactory rule whose defect could have been discovered with ordinary care.
478. Id.
479. Tilmann, Zum Rechtsschutz gegenüber Veroeffentlichungen der MAK-Werte-Kommission, 19 DER BETRIEBSBERATER, [BB] 521 (1981). A possible defense would be section 676 of the Civil Code, which exempts the giver of advice or recommendations from liability in the absence of a contractual relation or delictual act. Organizations in the form of an association (Verein) carry a greater liability under section 31 of the Civil Code because experts who are their agents are held to a special duty of care.
480. 54 BGHZ 188, 190 (general public is protected from excess [Auszuechen] of
advertising, even if true, can result in liability. This rule extends logically to technical standards, too. Such action might violate the general clause of the Law Against Unfair Competition or constitute a boycott under the Law against Limits on Competition. The remedy under both is a prohibitory injunction and damages.

As previously noted, technical rules by public committees, guidelines from administrative and insurance authorities, and general administrative regulations rely on "the generally accepted rules of technology" (die allgemeinen anerkannten Regeln der Technik). This makes uniform treatment of challenges to their legal validity impossible. The formula of "generally accepted rules of technology" obligates the authorities and courts to interpret its meaning in each case, giving to the technical standards contained in the rule the weight deemed appropriate.

The concept of "generally recognized rules of technology" represents, in a broad sense, a statutory delegation of self-control to industry. Since the employer can always deviate from the generally accepted rule if he provides the same protection through other means, there is less incentive to challenge the validity of the recommended rules.

Thus, the key question is not the validity of the recommended rule, but whether the authorities or the courts will apply it. Regulatory enforcement actions occur before practically every type of court — administrative, social, labor, and both the criminal and civil branches of the ordinary courts. Within each court, permanent panels hear the same type of cases, thereby acquiring specialization in their field. Nevertheless, criticism that judges usurp the experts' opinions and lack sufficient training in technical matters is frequently heard.

The presumption that technical standards constitute generally accepted rules of technology may be refuted by the age of the standard, subsequent change in technical development, or the priority of an economic or legally binding regulation. However, a decision declining to apply a technical standard is extremely unusual.

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competition); P. Marburger, Die Regeln der Technick 574-75 (1979).

481. 49 BGHZ 325, 328.

482. Gesetz gegen den unlauteren Wettbewerb § 1, 1909 RGBI. 499, as amended.


484. Furthermore, until recently, the regulations have usually omitted specific limits in the case of chemical exposure.


486. In one civil case for damages resulting from the faulty construction of a house, the Cologne Court of Appeals refused to apply a DIN Standard on soundproofing (Schallschutz), which was 18 years old and out-of-date with current technology. Judgment of Sept. 23, 1980.
The decision to seek expert affidavits and the court’s determination of the weight to be given to it conclude whether or not the recommended technical rule will be applied. The Administrative Court Code (Verwaltungsgerichtsordnung), supplemented by the Civil Procedure Rules (Zivilprozessordnung), determines the parameters for the taking of evidence (Beweisaufnahme). The principles that the judge— not the parties— has the investigative duty and that the judge evaluates the evidence according to free discretion are overshadowed by the practice of relying on the expert’s affidavit.

The court usually appoints the expert to advise the court directly. Case law indicates that a judge must request an expert if difficult technical questions are presented. While the court has discretion to require the appearance of an expert to explain the affidavit, when the parties orally request to question the expert, the court must summon him. The decision to seek further expert affidavits is left to the investigating judge. According to judicial practice, further affidavits are required only where the first affidavit has obvious deficiencies, unsolvable contradictions, uses incorrect factual assumptions, or there is cause to doubt the qualifications or neutrality of the expert. Experts, like judges, may be rejected on grounds of prejudice. After reasonable evaluation of all the circumstances, there must be objective grounds to doubt the neutrality or impartiality of the expert. Prior testimony by the same expert in another administrative proceeding involving the same issues is generally not sufficient, unless the expert prepared the affidavit for one of the parties, rather than for the decisionmaker. The highest administrative court stresses that the court must evaluate the expert’s affidavit using its own expert knowledge of the subject and general experience. Courts may not rely on legal conclusions of experts. Nevertheless, a lower
court's deviation from an expert's affidavit must be convincingly supported.492

Technical standards issued by public committees, administrative guidelines, and general administrative regulations are treated as "anticipatory" expert affidavits (antizipiertes Sachverstaendigenurteil) by administrative courts where the group issuing the standard is expert, representative, and independent.493 In addition, in order to be treated as "anticipatory," there must have been procedural openness in the development of the rule, and the rule must be sufficiently concrete and recent so as to be a basis for the particular case. The court also may seek an expert affidavit concerning the applicability of the technical standard to the case.494

Technical rules, guidelines, and general administrative regulations are applied in the first instance by the enforcement authorities. The enforcement authorities must respect compliance with general administrative regulations but can permit deviations. Thus, the advocates of a stricter standard will not be able to challenge the legal validity of technical rules, guidelines, or general administrative regulations. The advocates of a weaker standard will be subject to enforcement actions yet may claim that the generally accepted rule of technology diverges from the written regulation. If a court upholds this latter view, it will not strike the written standard down as invalid, but rather will define the generally accepted rule differently from the technical standard.

Accident prevention regulations and their interpretation by the vocational insurance associations may be tested in the Social Court (Sozialgericht) for compliance with relevant statutes. This is predominantly relevant to the Work Safety Law (Arbeitssicherheitsgesetz), under which the vocational insurance associations set the required numbers of doctors, safety engineers, and other safety experts in the establishment.495 Most other accident prevention regulations derive their authority from the very broad delegation in the Social Insurance Code,496 which authorizes the associations to pass regulations to prevent accidents.

The highest social court (Bundesozialgericht or BSG) requires

\[\text{hold a truckdriver's license. The court held that the experts should not have answered the legal question in the case. Bundesverwaltungsgericht (BVerwG) Buchholz 310 No. 72 of } \text{§ 86(I)} \text{ Verwaltungsgerichtsordnung, cited in id. at 248.} \]

492. Id.
496. RVO § 708.
accident prevention regulations to comply with statute and higher ranking law.\(^{497}\) Furthermore, it requires that the insurance association not abuse its discretionary authority.\(^{498}\) This court has held that separating enterprises into two groups for purposes of calculating the required number of hours that occupational doctors must be available is a proper exercise of the insurance association’s discretion.\(^{499}\) The insurance association’s interpretation of an accident prevention regulation, which required an insured employer to obtain the highest possible rebate over the last three years for safe workplaces before being eligible for reduced number of hours of service of occupational doctors, was found to be unjustified.\(^{500}\) Another accident prevention regulation that based the required number of safety engineers and safety experts on total enterprise employment was struck down by the highest social court as inconsistent with the Work Safety Law’s emphasis on workplace rather than enterprise.\(^{601}\) Challenges to other accident prevention regulations are rare; as for technical standards, their case-by-case application makes general challenges difficult.

The highest administrative court (Bundesverwaltungsgericht) gives administrative authorities a broad range of discretion in the setting of technical standards. In an environmental case challenging general administrative regulations that set specific air emission limits under the Federal Emissions Protection Law,\(^{602}\) the court noted that the current state of medical and biological knowledge did not permit a precise conclusion as to the amount of emission or pollution of the air that results in the onset of a damaging environmental effect.\(^{603}\) Nevertheless, the regulation was upheld.

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497. E.g., the Grundgesetz, supra note 8.
500. Such an interpretation included all establishments of the employer in calculating the extent of a rebate, and an individual establishment of the employer might otherwise have been eligible if considered separately. Id.
501. Judgment of May 8, 1980 Bundessozialgericht. (BSG), No. 8a RV 44/79 (copy on file with author). The appendix to the regulation provided that where the minimum number of employees in an establishment for appointment of such experts (240 employees) was not reached, distant and unrelated establishment “parts” would be included. The court ruled that the Work Safety Law focuses on establishment, not enterprise, that labor protection by its nature is related to the worksite, not to the economic or organizational form of an enterprise, and that the rule was inconsistent (sachwidrig) since enterprises with less than 240 employees in one plant but more in another plant would be required to hire safety engineers and experts regardless of the lack of connection of the two plants to one another. An oral interpretation by another vocational insurance association similar to the invalid regulation was likewise held invalid: the establishments were organizationally independent and geographically distant from one another and were not to be counted together for determining the number of hours of service required by a doctor in the workplace. Judgment of June 26, 1980, Bundessozialgericht (BSG), No. 8a RV 106/79 (copy on file with author).
502. Bundesimmissionsschutzgesetz [BIMSchG].
Regulations, statutes, and their interpretation can be challenged in enforcement proceedings on constitutional grounds. The court usually favors the broadest interpretation that would uphold the constitutionality of the regulation. When the matter concerns a violation of federal constitutional law, any court that considers unconstitutional a statute passed after the date of the Basic Law (1949) — where the decision depends on such determination — must stay the proceeding and seek the determination of the Bundesverfassungsgericht. If the matter concerns violations of a state constitution, the state supreme court, if one exists, has jurisdiction (Verfassungsbeschwerde). Where the court considers that the claim lacks merit, the aggrieved party may raise the question at the end of the proceedings by way of a constitutional complaint. Challenges to the constitutionality of statutes and the statutory and constitutionality conformity of regulations in the field of technical labor protections, however, are rare. Another type of judicial review of job safety and health provisions occurs in the labor courts, which review the substantive contents of workplace agreements (Betriebsvereinbarungen) for equitable fairness (Billigkeitskontrolle).

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504. Grundgesetz, art. 100(1). See supra note 8.
505. Id. art. 93(1)[4a].
506. For example, the Bundesverfassungsgericht reviewed a constitutional complaint challenging RVO § 551(2). This section of the code permits accident insurance carriers, on the basis of new knowledge, to compensate persons suffering from an occupational disease that is not included in the Occupational Disease regulation as a recognized occupational disease. The case concerned a woman who ran a metal welding shop for ten years and then had to stop because of repeated operations for Scheidensenkung, a disease not listed in the appendix to the Occupational Disease Regulation. Her insurance association refused to give her a disability pension. The social court (Sozialgericht) denied her complaint, stating that the disease was not on the compensation list. The appellate social court (Landessozialgericht) obtained a medical affidavit stating that there was a probable connection between her illness and occupational activity, and that this medical knowledge existed prior to revision of the compensable list of occupational diseases in 1976. The Ministry of Labor and Social Order answered the court's request in the negative as to whether the disease had been considered in the preparation of the compensable list. The appellate social court decided that the knowledge was not new because it could have been considered in preparation of the list. The highest social court denied certiorari for lack of a legal question of basic importance.

The plaintiff's constitutional complaint alleged that her fundamental rights of equality [Grundgesetz, art. 3(a) see supra note 8], free development of her personality [id. art. 2(1)], and guarantee of a social state [id. art. 20] were violated because the Insurance Code ignored a disease when knowledge existed at the time of adoption of the official list, yet was excluded from consideration. The Bundesverfassungsgericht, however, interpreted Section 551(2) to avoid violation of the principle of equality: the difference that one occupational disease was scientifically known at the time of promulgation of the last edition of the compensable list and that another was unknown, did not justify a difference in the protection of statutory accident insurance. The Bundesverfassungsgericht cited cases of the highest social court ruling that so long as the occupational disease regulation did not consciously reject putting an illness on the list, the "new knowledge" provision of section 551(2) could apply. Thus, the court granted plaintiff the relief she sought by interpreting the statute and avoiding the constitutional questions.

507. This review appears most frequently in reviewing compensation agreements for plant employment reductions (Sozialpläne). A few decisions have concerned occupational safety and health. For example, the highest labor court invalidated part of a workplace agreement that required employees who remained for less than one year to reimburse the company
3. Preemption.—Preemption rules concerning state and federal legislation are stated in the Basic Law. Where there is concurrent legislative jurisdiction, the Laender may legislate so long and so far as the federal government has not done so. There has been little initiative by the Laender to add to the predominantly federal legislation and regulations. Rather, the trend is for federal regulation to expand to areas once regulated by the Laender. In contrast, there is no general rule of preemption concerning regulation by the state and the vocational insurance associations. Both entities frequently issue overlapping regulations and guidelines, often when referring to the same technical rules. Labor law contains at least three preemption rules. First, a workplace agreement (Betriebsvereinbarung) is preempted if a collective agreement (Tarifvertrag) already exists or commonly exists on the subject. Second, an employer is always permitted to provide greater protection than that required by statute, regulation, or collective agreement. Third, a collective agreement may not change the terms of a statute or regulation for safety shoes at the rate of one-twelfth of the cost for each month of employment. Judgment of Aug. 18, 1982, Bundesarbeitsgericht. (BAG), No. 5 ARZ 493/80, at 4, 6 (copy on file with author). The court stated that the prohibition of individual waiver of rights in section 619 of the Civil Code applied to workplace agreements as well as individual contracts and that the expense of safety shoes was part of the employer’s general cost of business. The court recognized that employees could voluntarily keep the shoes for private use and legally agree to pay in part for them.

508. See Grundgesetz arts. 70(1) (residuary jurisdiction rests with Laender); 71, 73 (rules and subjects of exclusive federal jurisdiction); 72, 74, 74a (rules and subjects of concurrent jurisdiction).

509. Labor protection (Arbeitsschutz) is a matter of concurrent jurisdiction. See Grundgesetz, art. 74(12) (concurrent jurisdiction extends to “labor law, including workplace governance (Betriebsverfassung), labor protection and job placement as well as social insurance and unemployment insurance”).

510. Id. art. 72(1).

511. For example, the new Gefahrstoffverordnung (Dangerous Substances Regulation) replaces some twenty-one police law regulations of the Laender in the fields of poisons, pest control and fertilizers, but leaves them standing insofar as they set rules for expert knowledge, notification, and permits regarding bringing permissible pesticides into commerce. Gefahrstoffvo, § 47(6), (12), (14).

512. E.g., overlapping rules for medical surveillance in accident prevention regulation VBG100 and the Dangerous Substances Regulation. See supra text accompanying notes 395-405. The Work Safety Law is an exception. It grants to the vocational insurance association the first opportunity to pass implementing regulations while prohibiting the Federal Ministry of Labor from acting on a subject in which an accident prevention regulation already exists. Arbeits sicherheitsG § 14(1).

513. The Workplace Constitution Law authorizes agreements in the field of labor protection that elaborate, inter alia, on administrative and accident prevention regulations. BetrVG § 87(1)[7]; supra note 349.

514. BetrVG § 76(3). However, the workplace agreement will not be preempted if the collective agreement expressly authorizes workplace agreements. Id.

515. Günstigkeitsprinzip. This rule is a judicial construction. See supra text accompanying note 461. It stands in contrast to the American doctrines of duty of fair representation and exclusive bargaining, which expressly prohibit employers from reaching preferential individual employment contracts and uphold collective agreements that displace terms of individual employment contracts.
4. Requiring Issuance.—As the constitutional complaint is only a recent procedure, it is not surprising that an injunction requiring issuance of administrative regulations is generally rejected by the courts and treated gingerly by commentators. Courts have not compelled administrators to define more precisely the indefinite legal concepts frequently used in occupational safety and health norms. According to a growing minority of commentators, however, the state must be able to define legal obligations and should not leave the entire decision to the experts. One supporter of a new cause of action to require regulatory action writes:

In the social state under law (sozialer Rechtsstaat) of the present, the citizen is no longer an object of state decisionmaking, but a partner in a dialogue before the final decisionmaking, in which the arguments for and against the decisional alternatives are to be weighed.

As with direct judicial review, the danger exists that the courts would thereby create law, which is contrary to the nature of a code-based legal system. In practice, political pressure to issue regulations is asserted through the federal government and not through indirect channels like the courts.

516. This is a general proposition that is also valid in the field of labor protection.
517. It was introduced in 1969.
520. Such action nevertheless is warranted in some writers' views because of the requirement to conform interpretation of the laws with the Constitution, the necessary adherence by the executive (Verwaltung) to the Constitution, and by the democratically legitimated law or regulation itself. Id.
521. The labor courts, however, are continually asked to define the scope of various codetermination and information rights of the plant council regarding labor protection issues. Where the court finds a right of codetermination, this has the effect of forcing the agreement or issuance of some rule because of the provision for the plant conciliation committee (Einigungsstelle).

A case brought by the enterprise-wide work council (Gesamtbetriebsrat) of Pan American Airlines provides an example of how labor courts handle preemption and affirmative injunctions. The work council sought a workplace agreement concerning the introduction of video display terminals in the workplaces of Pan Am offices in West Germany. The highest labor court held that no codetermination right to propose a clause prohibiting pregnant women from working at video display terminals existed under Section 81(1) of Workplace Constitution Law because the field was already covered by the Mother Protection Law, which authorizes the Federal Minister of Labor to issue regulations to avoid health dangers for pregnant and nursing women. The absence of such a regulation did not allow the work council a right of determination in this case, as the statute left action in this field to the labor minister to be active. Conversely, the court found that the absence of laws or regulations on the general subject of video display terminals in workplaces did not imply a right of codetermination under the Workplace Constitution Law to fill out existing laws or regulations. See generally H. Ehmann, Arbeitsschutz und Mitbestimmung bei neuen Technologien (1981).
VII. Enforcement of Standards

A. Public

1. Laender.—For historical reasons, the Federal Republic of Germany shuns federal enforcement authority as much as possible. As in other areas, the Laender enforce federal occupational safety and health law through their own agencies; there is no direct federal enforcement apparatus for occupational safety and health matters. In most Laender, the occupational inspectorate (Gewerbeaufsicht) undertakes this function. Part of the inspectors’ time is spent enforcing environmental and social labor protection laws. The inspectors are divided according to the size of the enterprise they inspect. The most senior inspectors are responsible for large enterprises, the middle level for middle-sized enterprises, and the lowest level for small enterprises.

Since Bismarck’s time, the occupational inspectorate has focused on consultation, rather than coercive measures such as orders, fines and criminal penalties to enforce standards. Thus, enforcement measures are viewed as a last resort to be used after consultation fails. This is true because the occupational inspectors are responsible for enforcing many different laws and regulations and are often not technically qualified in every area for which they are responsible.

The information and consultation right of the work council regarding the form and organization of work in section 90 of the Workplace Constitution Law did not provide the enterprise work council with a right of codetermination, according to the court. The employer and work council must give consideration to reliable ergonomic findings (gesicherte arbeitswissenschaftliche Erkennnisse), but such principles, which have not yet become legal norms, are not subject to a mandatory codetermination right. Id.

The Workplace Constitution Law further provides a right of codetermination if the work obviously contradicts reliable ergonomic findings, and employees are thereby burdened in particular ways. BetrVG § 90. The court recognized that individual employees were burdened by the way in which they worked with video terminals, but refused to convert this partial burden into a right to enforce rules concerning the work of all employees at such terminals. Rather, the court limited the right of codetermination to the affected individual workplaces.

522. The occupational inspectorates are usually under the supervisory authority of the State Department of Labor. They had 3,042 inspectors in 1984, nearly half of them (1,257) in the most populous state, Nordrhein-Westfalen. Accident Prevention Report (Unfallverhuetungssbericht) 1985 (Report of the Federal Government of the State of Accident Prevention and Accident Events in the Federal Republic of Germany), Deutscher Bundestag, Drucksache, 10/4601, at 44 (Dec. 19, 1985).

523. There is no separation into health inspectors and safety inspectors, although a separate and very small staff of ninety-four public occupational doctors exist. Id. at 45. The signature of one of these public occupational doctors (Gewerbeaerzte) is necessary for compensation in an occupational disease claim. The public occupational doctor prepares an affidavit based upon examination by himself or other doctors on the question of the occupational illness.

524. Consistent with German regulations and laws, criminal penalties and fines — punishment for “violations of order” — (Ordnungswidrigkeiten) are separated from other parts of each regulation. Obligations punishable by criminal punishment or by fines are itemized specifically and always require negligent or willful behavior. See, e.g., GEFSTOFFVO §§ 37-43.

525. Moreover, the budget for occupational inspectors varies by Land. Support staff is frequently lacking, and as of 1983 only a few Laender had begun to computerize their occupa-
In 1984, the occupational inspectorates made 838,995 inspections of establishments, construction sites, and technical equipment in some 376,898 enterprises. The high number of inspections of workplaces may give a false impression of workplace security; problems may be covered up at the establishment since most inspectors give notice before they arrive.

Although there are regional occupational inspectorate offices, there is little exchange of staff within each office. The result is that inspectors are personally acquainted with conditions and staff at most of the enterprises in the size category for which they are responsible in their area. Relations with many plant managers are close enough that the inspectors orally indicate corrections to be made and leave it to plant management to prepare the written report of the inspection and the list of items to be corrected.

For the foregoing reasons, the number of coercive measures is miniscule in comparison to the number of inspections and violations. Orders to undertake certain action may be issued by the inspectorates only after the period for repairing the violations has elapsed. Moreover, fines are not considered a productive instrument of enforcement in occupational safety and health matters.

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526. This represented 27% of their total jurisdiction of 1,389,208 enterprises. A total of 1,470,678 violations (Beanstandungen) were noted during these visits. Accident Prevention Report 1985, supra note 522, at 47-48. However, it is difficult to determine the nature and scope of these inspections. A survey of occupational inspectors found that only three percent of inspection time concerned dangerous work substances. Bundesanstalt fuer Arbeitsschutz und Unfallforschung, Forschungsbericht No. 232, 2 Arbeitsschutzsystem: Untersuchung in der Bundestepublik Deutschland 501, 518 (1980), (Federal Institute for Labor Protection and Accident Research, Research Reports, Labor Protection System: Investigation in the Federal Republic of Germany) [hereinafter 2 LABOR PROTECTION SYSTEM].

527. Some inspectors favor notice because they say it makes the inspection more detailed and thorough than one without notice. LABOR PROTECTION SYSTEM, supra note 526, at 630.

528. The Ford plant near Cologne, for example, has never had a fine imposed in thirty-three years. Interview with Professor M. Seeger, Chief Safety Engineer, Ford plant, Cologne (April 23, 1986). See, e.g., JAHRESBERICHT DER ARBEITSKAMMER SAARLAND (ANNUAL REPORT OF THE CHAMBER FOR EMPLOYEES IN SAARLAND) 195 (1984). Bremen and Saarland are the only two Laender that retain a statewide council of employees. It is a vestige of the demand for regional councils in the early days of the Weimar Republic. Supra note 30.

529. In 1984, 7,604 enforceable orders (Anordnungen), that is, orders to undertake a certain action, were issued by the occupational inspectorates in the field of accident prevention and health protection. ACCIDENT PREVENTION REPORT 1985, supra note 522, at 53.

530. In dangerous situations, occupational inspectors may issue an immediate order.

531. In occupational safety and health matters a fine is a minor offense (Ordnungswidrigkeit, or a violation of order), records of which are destroyed after five years. The actual level of fines is much lower than the maximum permitted fine of 20,000 DM (about $13,300 at
They are permitted only after an order has been issued and has become enforceable. In most cases they are issued only to repeat violators. Criminal prosecution after serious injuries or fatalities is similarly unusual.

Violations discovered during an inspection are detailed in a correction notice (Revisionsschreiben) which by itself is not enforceable. The notice simply advises the employer of the results of the inspection. It establishes no legal duties and therefore cannot be contested.

An order (Anordnung), however, has legal mandatory effect. It is an administrative act (Verwaltungsakt). An order can be appealed in a two-step process: first a reply (Widerspruch) is made before the administrative authorities; then a second judicial action seeking nullification of the decision is presented before the adminis-

present exchange rates) per violation.

Occupational inspectors indicate in a 1980 survey that their fines were frequently reduced or cancelled by the courts upon judicial contest. Some gave this as a reason for why they avoided imposing fines. 2 LABOR PROTECTION SYSTEM, supra note 526, at 647-48.

532. Some 1,200 fines were issued by the occupational inspectorates in 1984, most of them against operators of long distance hauling trucks.

533. See Strafgesetzbuch (Criminal Code) § 330, supra note 203. About 100 criminal charges (Strafanzeigen) were filed by the public prosecutor's office (Staatsanwaltschaft) in 1984 on behalf of the occupational inspectorate. The public prosecutor has discretion whether to investigate fatal occupational accidents to determine if there was criminal endangerment or criminal negligence by the employer or some other person that caused the accident. One such investigation, conducted after a 1979 dust explosion in a Wupperthal welding firm killed eight persons (seven of whom were Italian guestworkers), found no proof of negligence or fault by the employer or anyone else. verfuegung der staatsanwaltschaft wuppertal, No. 26.15492/79 (June 23, 1980) (copy on file with author). This report implicitly raised the question of how many occupational fatalities are suffered by foreign guest workers in West Germany. It is probable that fewer occupational precautions are taken by and for foreign guestworkers than German workers. On the other hand, it is probably also true that guestworkers tend to work in the dirtiest, more dangerous jobs, making them more susceptible to fatal accidents. In one case described by union officials, after a metal worker claimed occupational illness due to exposure to tetrachlorethane in a cleaning solution, the firm subcontracted cleaning of the equipment to an outside company. Kaiser & Konstanty, aspekte betrieblicher und ueberbetrieblicher mitbestimmung der arbeitnehmer im kampf fuer gesundheit in der arbeitswelt, 34 SOZIALE SICHERHEIT: (ZEITSCHRIFT FUER SOZIALPOLITIK 72, 73 (1985). Foreign guestworkers are more likely to be employed by small, outside subcontractors and are less likely to file claims.

Courts handed down criminal penalties in fifty cases during 1984 in occupational safety and health matters. ACCIDENT PREVENTION REPORT 1985, supra note 522. Most of these probably were fined for the use of long distance truck drivers on double shifts without the required rest periods. In one such case, a freight forwarding manager was given a jail sentence for ordering the driver of a long-distance truck to stay on the road despite knowledge of the driver's exhaustion and his necessity to violate speed limits and working hour limitations in order to accomplish his instructions. Judgment of December, 1985, Bundesgerichtshof (BGH), No. 578/85, cited in Speditionsleiter macht sich strafbar, FRANKFURTER ALLGEMEINE ZEITUNG, Dec. 20, 1985, at 11, col. 6.


535. The Federal Administrative Procedure Law (Verwaltungsverfahrensgesetz) defines an administrative act as "every disposition (Verfuegung), decision, or other sovereign measure, which an official takes to regulate a single instance in the area of public law and which is aimed at direct external legal effect." Verwaltungsverfahrensgesetz § 35, 1976 BGBl.I 1253.

536. See Verwaltungsgerichtsordnung, VwGO §§ 68-73 (Administrative Court Code).
An order, like a fine, must be based on a legal standard and not on a general administrative regulation, technical rule, or enforcement advice.

If the order is a final one, but is not complied with, the administrative execution laws of the Laender offer three types of coercive remedies: substitute performance (Ersatzvornahme); money coercion (Zwangsgeld), and direct force (unmittelbarer Zwang). The substitute performance remedy enables the occupational inspectorate to cause a third party to undertake the required task at the offender's cost. The second method allows the administrative court to levy a fine, similar to American civil contempt citations, to coerce future behavior.

If neither of the first two methods bring results, the administrative court can impose incarceration as a substitute for coercion (Er satzzwangshaft). The occupational inspectorate can also apply direct force itself when an inspector observes a machine whose operation presents acute life-threatening danger. In such a case, the administrative execution laws of some Laender permit the inspector to halt the unsafe operation immediately, even without issuing an oral order. In other Laender, the local police (Polizeivollzugsdienst kraefte) must carry out the order. Because the reply (Widerspruch) acts as a stay of the order, these prejudgment execution remedies are used only in exceptional cases. The usual method of execution is by sheriff (polizeiliche Amtshilfe) after affirmance of the order.

The imposition of a fine (Bussgeld) is reviewable by the criminal branch of the ordinary civil court (Amtsgericht, Strafkammer). Its primary purpose is to punish past conduct. The public prosecutor represents the occupational inspectorate when fines are contested. Criminal charges are issued and prosecuted by the public prosecutor and are filed with the criminal branch of the ordinary civil court.

The rules of procedures that govern the judicial review of orders, fines, and criminal charges differ from one another. Review of orders is governed either by administrative procedure statutes of the Laender if they exist, or otherwise by the federal administrative procedure statute. The state statutes are drawn on a uniform basis and

537. About forty percent of orders are contested. Some statutes provide for particular types of orders, such as a prohibition on distribution (Untersagungsverfuegung) in the Equipment Safety Law.


539. The number of coercive fines (Zwangsgeldmassnahmen) is not included in the statistics published by the Federal Ministry of Labor and Social Order.

540. E.g., VERWVOLLSTRG/NRW supra note 539, § 55(2).

541. R. HERZBERG, supra note 534, at 131.
contain virtually identical rules. Breaches of order (Ordnungswidrigkeiten) and criminal charges are governed by the federal Criminal Procedure Law (Strafprozessordnung or StPO) unless the Administrative Offenses Law (Ordnungswidrigkeitsgesetz) otherwise applies.¹⁴²

Unlike nuclear energy and environmental hazards, occupational safety and health laws have rarely been subject to public scrutiny and criticism in recent years.¹⁴³ A reason for this relative quiet on the judicial front is the nature of the process; decisions have a precedential effect only for the particular case. Thus, the potential conflicts in interpretation between the criminal and administrative courts do not arise in practice.

Although the administrative interpretation of undefined legal concepts has been held by the highest administrative court to be fully reviewable by the courts, the courts rarely deviate from the administrative interpretation and the technical rule relied upon by the inspectorate. Usually the courts rely on these technical rules, their publication by the federal minister of labor, and the legal standards as expert judgments determinative of the outcome.

Some commentators¹⁴⁴ advocate giving administrative authorities virtually unreviewable discretion in determining undefined legal concepts.¹⁴⁵ The highest administrative court has accepted this analysis only for a narrow range of administrative decisions, such as civil examinations and the decisions of experts or interest group representatives in independent committees.¹⁴⁶ The lower administrative courts are under no legal compulsion to follow the judgments of the highest administrative court in different cases, but in practice they follow this doctrine.¹⁴⁷ Although published case law is sparse, the few cases available indicate that the practice of the criminal branch of the ordinary courts generally follows the view of the highest administrative court. Usually experts are called to testify by the court only in nuclear plant licensing proceedings. The administrative courts carefully review orders of the occupational inspectorate.¹⁴⁸

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¹⁴² Ordnungswidrigkeitsgesetz § 46, 1987 BGBI.I 602.
¹⁴³ In contrast, the production or use of dioxin, formaldehyde, and other chemicals by factories has aroused controversy primarily because of the environmental effect on the surrounding community.
¹⁴⁵ Using concepts similar to American administrative law, they urge that agencies should be given a degree of free evaluation (Beurteilungsspielraum) or acceptance of any justifiable decision (Vertretbarkeitslehre). Id.
¹⁴⁷ H. MAUER, supra note 545, at 104.
¹⁴⁸ In a case involving dust in a furniture factory, the local inspectorate ordered a filter for air vacuuming that would reduce the dust level to .5 mg pro cbm. Judgment of Jul. 13, 1981, Verwaltungsgericht Minden, docket no. 5k 264/81 (copy on file with author). This fig-
2. *Vocational Insurance Associations.*—The vocational insurance associations fulfill their statutory duty to prevent occupational accidents and diseases by providing training to individuals in the workplace and by promulgating and enforcing accident prevention regulations. (*Unfallverhütungsvorschriften* or *UVV*) Because of their functional and regional organization, they are able to concentrate on particular occupational hazards and diseases that specifically affect their members. They undertake the largest role in medical disease prevention and monitoring outside of workplace institutions.649

The inspection strength of the vocational insurance associations is relatively high.650 Consultation is the first and primary means of achieving compliance after an inspection. As with the occupational inspectorate, there is no separation of personnel in consultation and other enforcement methods.651 In 1984, 1.5 million medical examina-

ure was .3 mg below a recent recommendation of the professional association of machinery and equipment constructors and more than four times lower than the existing chemical concentration MAK-value. The court was uncertain whether to find that no generally accepted technical rule had yet evolved or, in the alternative, that the recommendation of .8 mg constituted the generally accepted technical rule and the order fell short. The court therefore rested its decision on an abuse of discretion by the occupational inspectorate; the order stated it was “medically desirable” to reduce the dust level to .5 mg, but the court responded that the appropriate standard was not what is “desirable” but what is legally required.

549. Beginning in 1936, a regulation required insurance carriers to guarantee necessary medical treatment to an insured person and to prohibit him from working when the danger existed that, by further employment in the enterprise, an occupational disease would arise, recur or worsen. *Dritte Verordnung über die Ausdehnung der Unfallversicherung auf Berufskrankheiten, 1938 RGBI. 1117.*

Two examples of vocational insurance associations’ coordinated medical programs are those directed at silicosis and asbestosis. As a result of medical examinations in the mining and ceramic industries in the late 1950s, silicosis declined dramatically. Silicosis, however, still represents the second highest category of occupational illness pensions, though the number of filed claims (3,398) was less than 10% of total filed claims. In 1984, 891 pensions were awarded because of silicosis, comprising 20% of pensions given for occupational illness. *ACCIDENT PREVENTION REPORT 1985, supra note 522,* at chart 18. In 1972, a national clearing-house was established for asbestos-endangered employees, and medical records of employees with exposure rates were first kept by a single entity. Not until 1979, however, did a prohibition on asbestos spraying become part of an accident prevention regulation. *See Schutz gegen gesundheitsgefährdlichen mineralischen Staub* (Protection Against Health Endangering Mineral Dust) (accident prevention regulation), *cited in Konstanty, Berufsgenossenschaften und präventive Gesundheitspolitik, WSI Mitteilungen 193-94* (1985). No similar clearinghouse exists for other workplace cancers.

550. It consisted of 1,610 persons in 1984, all of whom were assigned to one of the statutory accident insurance carriers. *ACCIDENT PREVENTION REPORT 1985, supra note 522,* at 46. Approximately the same number of persons (1,464) are employed as support staff for the inspectors. *Id.* The insurance inspectors (*technische Aufsichtsbeamte*) are often more respected than the state occupational inspectors since the former are specialized by industrial function and are not burdened with enforcement of social labor protection or environmental laws.

551. Although the Occupational Disease Regulation obligates the accident insurance carriers to inform the state-employed industrial doctors (*Gewerbeärzte*) of preventive measures regarding occupational illness and to seek their opinions, according to one such doctor from Bremen, this hardly ever occurs; the exchange is limited to examinations for pension claims. *Gensch, Verwirklichen die Berufsgenossenschaften den präventiven Auftrag der Berufskrankheitenverordnung? Beobachtungen aus gewerbeärztlicher Sicht,* 34 Soziale Sicherheit: Zeitschrift fuer Sozialpolitik 170, 173 (1985).
tions were conducted by reason of the accident insurance carriers’ principles (Grundsätze). Almost half concerned noise.\textsuperscript{602} Other tests were for drivers.\textsuperscript{653} protective breathing equipment,\textsuperscript{654} and video display terminals.\textsuperscript{655} “Medical reservations,” which lead to automatic employment restrictions or changes in the workplace, were given in only one percent of the examinations.\textsuperscript{656}

The industrial and trade (gewerbliche) vocational insurance associations insure over 85% of the workforce.\textsuperscript{657} Their expenditures on accident prevention in 1984 totalled 384 million German marks.\textsuperscript{658} Training courses occupied a large percentage of their preventive activity in 1984. More than 60,000 persons participated in association-sponsored training courses lasting over three days.\textsuperscript{659}

Even allowing for frequently coordinated inspections with the state occupational inspectorate, the number of inspections by the vocational insurance associations remains substantial.\textsuperscript{660} Dangerous substances get slightly more attention in insurance carrier inspections than in state occupational inspections.\textsuperscript{661} The inspections in 1984\textsuperscript{662} covered about 20% of all insured workplaces.\textsuperscript{663}

The orders do not start off with a correction notice but directly with an enforcement order (Anordnung). Over 430,000 such orders were issued in 1984, of which total nearly half\textsuperscript{664} came from agricultural insurance associations. Unlike the occupational inspectorate, the technical inspection officials of the vocational insurance associations can issue immediately enforceable orders where there is danger in delay.\textsuperscript{665} Self-insurance carriers (Eigenunfallversicherungs-

\textsuperscript{552} Forty-two percent.
\textsuperscript{553} Ten percent—mostly long-distance truck drivers.
\textsuperscript{554} Eight percent.
\textsuperscript{555} Eight percent.
\textsuperscript{556} Limited reservations or no reservations under specific assumptions comprised almost 10 percent (9.6%) of the examinations. Statistics of the Landesverbaende der gewerblichen Berufsgenossenschaften, 33 Soziale Sicherheit: Zeitschrift für Sozialpolitik 70 (1985). Limited reservations require employees to take certain measures, such as using noise protection aids. See Raithel, Neue Unfallverhuetungsvorschriften — Unfallverhuetungsvorschrift "Arbeitsmedizinische Vorsorge" (VBG 100), 35 Zentralblatt für Arbeitsschutz, Prophylaxe und Ergonomie 1, 3 (1985).
\textsuperscript{557} Id. at 54.
\textsuperscript{558} Id. at 55. This is more than $125 million at 1984 exchange rates.
\textsuperscript{559} Sixty thousand took courses lasting two to three days, and eighty thousand took one day courses. Id. at 56-57.
\textsuperscript{560} There were 880,696 inspections in 562,096 enterprises in 1984. Id. at 50-51. This sum includes 300,524 inspections by agricultural insurance associations whose members are agricultural enterprises and farms. Id.
\textsuperscript{561} They still ranked extremely low at five percent of the total inspection time expenditure in 1980. 2 Labor Protection System, supra note 526, at 557.
\textsuperscript{562} The trades (gewerbliche) vocational insurance associations inspected 338,711 establishments out of a total of 1.6 million.
\textsuperscript{563} Accident Prevention Report 1985, supra note 529, chart 30, at 50-51.
\textsuperscript{564} Two hundred and one thousand. Id. chart 32 at 52.
\textsuperscript{565} Social Insurance Code § 714(1)[5]. Five thousand orders requiring immediate removal of accident dangers were issued in 1984. Accident Prevention Report 1985, supra
traeger), and carriers of federal, state, and some local governments lack the authority to issue orders or fines; they must rely on directives (Dienstanweisungen).

Negligent violations of accident prevention regulations, unlike administrative regulations which require international violation, may result in fines up to 20,000 German marks. Grossly negligent or intentional behavior must be fined.666 The vocational insurance associations cannot issue orders against nonmembers or noninsured employees. Therefore, the manufacturer of a dangerous substance or piece of equipment can only be reached by a referral to the state occupational inspectorate.

Actions to nullify (Anfechtungen) enforcement orders are filed before the social courts (Sozialgerichte). The procedure is governed by the Social Court Code (Sozialgerichtsgesetz). Unlike the state occupational inspectorate, the insurance carriers may fine and issue orders to employees based on the statutory authority to prevent occupational accidents.667 Another dissimilarity from the rules for the occupational inspectorate is that a reply to an order from a technical inspector does not stay the order. Coercive measures to enforce orders of insurance carriers are thus more common than they are with the state occupational inspectors. Having no police power the technical inspectors lack authority to shut down dangerous machines themselves and instead must rely on local police authorities to apply direct force.668

Contested fines are heard by the criminal branches of ordinary courts as are fines imposed by the occupational inspectorate. The federal Criminal Procedure Code (Strafprozessordnung or StPO) governs these proceedings.

The highest social court follows the doctrine of "free judicial evaluation of indefinite legal concepts." While stressing its independence from administrative interpretation of concepts such as the generally accepted rules of technology, this court nevertheless in practice defers to the privately set standards in defining the concept in the individual case.669

3. Federal Government.—The vocational insurance associa-
tions are public institutions, and the Social Insurance Code gives the Federal Ministry of Labor and Social Order (Bundesarbeitsministerium) inspection authority over them. This authority, however, is loosely exercised. The Federal Labor Ministry does not have the staff to engage in detailed auditing or control of the more than ninety accident insurance carriers. The Basic Law gives the federal government power to review enforcement of federal laws by the Laender. This rarely occurs in practice. Instead, the Laender confer among themselves regularly in order to establish common enforcement plans, usually with little effect. Thus, the federal government is much more involved in the law-creating process in occupational safety and health matters than in enforcement of those laws.

B. Private

1. Regional.—Enforcement by private organizations at the regional level is considerable, especially in the area of equipment testing. Product testing required by the Equipment Safety Law is conducted by a number of testing centers approved by the vocational insurance associations. Many private technical inspection associations (technische Uberwachungvereine) are active in testing products and in discovering environmental hazards. The biggest role of these private associations is the annual checking of automobile safety required for each vehicle registered in West Germany.

The role of private associations in inspections is growing. For example, the 1986 Dangerous Substances Regulation increased the environmental work measurements required of employers. Standards for private testing organizations (Messstellen) are issued by the Dangerous Substances Committee. Only organizations approved by the network (Arbeitskreis) of testing organizations of the Dangerous Substances Committee may carry out tests under the Dangerous Substances Regulation. Insurance associations also offer medical and safety services on a regional basis to small enterprises. The

570. RVO, see supra note 44.
571. In one instance, the Federal Labor Ministry ordered an insurance association to hire more technical inspectors and to perform more inspections. Such intervention is rare.
572. The Division of Labor Protection (Abteilung Arbeitsschutz) has less than twenty professional employees, of whom one is a lawyer in addition to the division chief. There are thirty six commercial and industrial (gewerbliche) vocational insurance associations, nineteen in the agricultural sector, and forty-odd governmental accident insurance carriers.
574. See Technische Regel (Technical Rule) 400.
575. The Committee requires an inspection visit by two members of the work group and information on the qualification of the director, the number and qualifications of the staff, the types of substances measured, equipment, organization of measurement taking, and experience of the organization. Schuetz & Blome, Messtechnische Uberwachung, Bundesarbeitsblatt 30 (1986). Some vocational insurance associations and government institutions also have approved testing facilities.
largest of these associations is the Vocational Insurance Medical Health Service.576

2. Workplace.—The greatest amount of private enforcement, however, occurs at the workplace level through the various bodies and posts statutorily entrusted with occupational safety and health duties. Although the qualifications of many occupational doctors are questioned by unions, their required presence at an establishment and the existence of safety engineers provides technical competence that would otherwise be left to the employers' discretion.577

Where a work council exists, it usually considers occupational safety and health issues and its members participate in hiring safety and health personnel.578 In the same manner, the statutory-mandated employer-employee safety committee is active in plant level supervision. The individual employee theoretically has an individually enforceable right to a safe and healthful workplace guaranteed by the Civil Code579 that permits him to refuse dangerous work and still claim wages.580 In practice, public inspections and plant level institutions supplant this right. Work councils, joint safety committees and their members are protected from lawsuit by a qualified immunity that does not extend to deliberately wrongful activity. Employees, work councils or unions with members in the affected plant may seek relief from the civil or labor courts to both force the employer to comply with his duty of welfare (Fuersorgepflicht),581 and

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577. Only the large enterprises are required to have fulltime occupational doctors and safety engineers.

578. See supra text accompanying notes 338-54.

579. BGB §§ 618, 273. The [BGB] theory on which recovery of wages is permitted is that the employer has delayed offering his part of the bargain: a safe and healthful workplace. Id.

580. Work council members are also protected from discharge during the terms of their service for all reasons except for deliberate misconduct or economic layoffs. G. Schaub, Arbeitsrechtshandbuch 869-77 (5th ed. 1983).

581. For example, where an employer had warned several times of deficiencies several times by officials, a labor court ordered the employer to take measures or issue instructions that would exclude further endangerment. Judges have sometimes shown hostility to individual workers who have sought relief from dangerous working conditions from persons outside the enterprise. These cases arise when the employer discharges the worker for disloyalty and the employee sues within three weeks, the period of limitations contained in the Dismissal Protection Law. In one case from 1976, a welder complained about skin, eye and nose irritation to his union regional office after having gotten no response from his company's engineer or the local public health office. The union contacted the occupational inspectorate, which resulted in the employer being cited for violation of safety and health regulations. The court upheld the dismissal because the determination of a safety and health citation inspired by an employee prevented further trustworthy (vertrauensvolle) cooperation in the labor relationship. Landesarbeitsgericht Baden-Wuerttemberg, [ArbG] No. 6 5a 51/76 (copy on file with author). With the creation of statutory protection for individual complaints, this attitude can be expected to change.

An interesting use of environmental law in the workplace setting occurred in permitting
in some instances, to obtain damages for the employee.

3. *Private Compensation Litigation.*—Accident insurance supplants the civil liability of the employer or other employees in the event of an occupational accident or disease unless the employer or work colleague intentionally caused the injury or was grossly negligent.\(^5\) In that rare event, the insurance carrier may raise a claim either as an original matter in a reverse claim (*Regressanspruch*)\(^6\) or by transfer of the claim as a statutory matter from the insured to the accident insurance carrier.\(^7\) The insured gets no extra benefits because the insurance carrier is entitled to obtain and keep the reimbursement of insurance payments.\(^8\) Damage compensation to the employee is unusual.\(^9\) Usually the lack of deliberate intent or gross negligence by the employer prevents liability for “positive contractual breach” (*positive Vertragsverletzung*) or defective performance of a contract (*Schlechterfuellung*). Delictual liability is excluded, even where the employer is at fault,\(^10\) except that the employer remains liable for negligence in choosing and supervising his assistants.\(^11\)

Pain and suffering compensation in delictual cases is contingent upon proof that the employer intentionally caused the injury and

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\(^{582}\) RVO §§ 640, 548, 550.
\(^{583}\) Id. § 1542.
\(^{584}\) Id. § 640.

\(^{585}\) Estimates of recoveries by the vocational trade and industrial insurance associations from such claims range from three to ten percent of their total compensation payments. Weyers, *Gutachten A zum 52. Deutschen Juristentag 1978* at A114, *printed in 1 Verhandlungen des zweitundfuenftigsten Deutschen Juristentages* (1978); the ten percent figure is cited in *Bundesarbeitgeberunfallversicherung 1977* in von Hippel, *Haftungspersatz durch Versicherungsschutz, Referat*, at 40.


\(^{587}\) This is due to the exemption for assistants. Section 831(1) of the Civil Code provides:

\[\text{Whoever hires someone to do something is obligated to replace the damage the employee illegally causes in carrying out the job. The duty to compensate does not exist when the employer, in the selection of the person and, insofar as he creates tools or performs work, in the performance or conduct of the work, observes the care required in commerce or when the damage even by application of this case would have arisen.}\]

\[^{588}\] BGB § 831(1).
both knew about and desired the accident. For these reasons, claims of compensation for pain and suffering (Schmerzensgeldansprüche) stemming from occupational accidents are rarely raised in the form of product liability actions and are even more rarely upheld.

Civil litigation against product manufacturers and distributors in both consumer and workplace injuries is increasing. The duty of "safety in dealing" (Verkehrssicherungspflicht) is often measured by compliance with guidelines and accident prevention regulations. Strict liability does not exist for injuries occurring in the workplace.

Technical rules provide the standard for the required care in dealing. Violation of these rules is negligence per se and the Civil Code provides a basis for recovery. Nevertheless, adherence to technical rules is not an absolute defense. The highest civil court recently ruled:

The rules of technology, as they find their shape in the standard [before the court], can be used to define the duties of safe dealing (Verkehrssicherungspflichten) and often represent a usable standard for the required duty of care, especially when they have been developed by expert commissions. Nevertheless they do not always determine the most that can be demanded in a particular case, but rather are supplementable.

Litigation against manufacturers or users may also arise under sales contracts (Kaufrecht) and service contracts (Werkvertragsrecht) in a claim for guarantee of performance or warranty (Gewährleistungsanspruch) by relying on a violation of either an accident prevention

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589. BGB § 847(1) provides: "In the case of injury of the body or of health as well as in the case of deprivation of freedom, the injured person can also demand a fair compensation in money for damages which are not intangible losses."

590. In these few cases, pain and suffering tables exist for judges to use which are considerably lower than the damage verdicts awarded in the United States. They are paid in the form of an annuity, not as a lump sum.

591. For example, the highest civil court held a boarding school delictually liable under section 832(1) of the Civil Code for failing to ensure that stair bannisters were slide-proof. A twelve year old boy slid down the bannister, slipped, and fell three floors. The court used guidelines issued by a vocational insurance association concerning school construction and equipment as the measure of the duty of safe dealing (Verkehrssicherungspflicht). The student's claims for damages for pain and suffering were upheld. (Medical costs are covered by social insurance and are not awarded when insurance applies.) Thus, the guidelines have become a compulsory measure of the duty of safe dealing. The court noted, however, that the guidelines would not be compulsory if shown in the particular case by an expert to be technologically unfeasible. Judgment of Mar. 11, 1980, Bundesgerichtshof, BGH, No. VI ZR 66/79, reprinted in Rundschreiben No. 53/80 of the Bundesarbeitsgemeinschaft der Unfallversicherungsträger der öffentlichen Hand e.V., Jul. 15, 1980 (copy on file with author).

592. See BGB § 276(1) for the definition of negligent conduct: "whoever lacks the necessary care in acting."

593. Id. § 823(1).

regulation or a guideline of an accident insurance association. Equipment testers may also be liable under delictual rules, although cases in practice are rare.

Two factors, however, curb private compensation litigation. The first is the system of legal fees. Legal fees in cases before the ordinary civil courts are limited according to the amount in controversy. In addition, the losing party pays part of all of the other party's legal fees depending on the outcome of the case. While the "losers pay" rule does not apply before the administrative, social, or labor courts, these courts do not handle damage suits. Therefore, limits on legal fees in cases before them are even more stringent.

The second factor dampening the urge to litigate under tort law is that insurance, pensions, and other benefits compensate most

595. The defect is measured by the average quality of an item or service, or the use prescribed by the particular contract. BGB §§ 459, 633. Average quality depends on the usage of dealing (Verkehrsanschauung), which in technical areas is governed largely by experts. Therefore, technical rules developed in a proper proceeding by experts appear often as the standard applied by the courts. In one case, the connection of water softener without the inclusion of an attachment for oxidation (Be- und Entlüftung) as prescribed by a DIN standard was held to be a defect in construction. See Betriebsberater (BB) 239 (1971).

In another, the failure to have a construction crane tested by an inspection association as required by an accident prevention regulation was sufficient to establish a defect (Sachmangel) in the sale. Judgment of Feb. 22, 1984, Bundesgerichtshof, BGH, 90 BGHZ 198 (1984).

An unusual attempt by a competitor of a manufacturer of pipe threading machines to use competition laws to enforce accident prevention regulations was confronted by the highest civil court in 1980. The competitor complained that the manufacturer failed to include a protective device with the sale of the machine, as was required by an accident prevention regulation. By selling and advertising the machine at a price that did not include the accessory, the competitor alleged that the machine violated the Law Against Unfair Competition. Section 1 of that law states that acts in commerce for purposes of competition that violate good morals (gute Sitten) can be enjoined, and compensation can be awarded for damages. Section 3 permits enjoining misleading statements by a person in business for purposes of competition.

The court declined to accept the invitation to expand occupational safety and health administrative protection through private competition law. First, it found the alleged violation of the accident prevention regulation lacked the clarity needed to constitute an offense against good morals (sittenwidrig). The threading machine could cut smaller pipes without the protective device that needed to be attached under accident prevention regulations. Second, the court separated the pipethread cutting machine from the protective device that is attached to the pipe to be cut, and stated that the machine could be used properly without the protective device, since the device is attached to the pipe and not the machine. The court's decision may be more easily explained on policy grounds. The complainant had contacted the occupational inspectorate about the situation before suing. For whatever reasons, the inspectorate apparently did not seek to prohibit sale of the machine. The court did not want to expand the enforcement of the Equipment Safety Law to include private parties, or to allow business competitors to use technical safety law as part of competition law.

598. The coverage and level of benefits is much higher in West Germany than in the United States. The principle of the "social state" is enshrined in the Constitution as a basic principle of the state along with the democratic and federal forms of government. Grundgesetz, art. 20, see supra note 8.

Among the general social benefits not unusual for Europe, but unknown in American statutory law, are the obligation of the employer to pay the first six weeks of sick leave at full pay, Lohnfortzahlungsgesetz § 1 (Salary Continuation Law) 1969 BGBl.I 946, as amended; benefits paid to young mothers together with four months of paid leave Mutterschutzgesetz, §
tangible losses caused by occupationally-related injury. The arena of dispute is thus transferred to the vocational insurance associations and social courts.

The insurance and pension scheme in occupational accident or illness is complicated. "Injury money" (Verletztengeld) is paid without time limit as a substitute for wages when the injured person either is incapable of performing his pre-injury work or upon so doing, risks worsening his health condition. The insured person is paid "transition money" (Uebergangs geld) during rehabilitation. "Transition benefits" (Uebergang leistungen) may be paid to persons who must give up their former occupation because of the danger of the existence, reoccurrence, or worsening of an occupational illness. Rehabilitation services are divided into medical and career services. The latter includes training for and adjustment to new professions. The insured person receives an "injury pension" (Verletzenrente) only when a reduction of employment capability of at least twenty percent still exists three months after the accident.

Occupational illnesses are compensated where they result either from one of the occupational illnesses recognized by regulation or from one treated "like an occupational illness" when the necessary

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11, 1968 BGBl I 315.; and benefits payable for children until they are eighteen years of age (Kindergeld). Health insurance is mandatory, and it pays for medical expenses where occupational benefits or services are denied for reasons of eligibility or causation. According to one commentator, health insurance rather than accident insurance is the primary rehabilitation and compensation carrier for most occupational illnesses. J. Spinnarke, Soziale Sicherheiten der Bundesrepublik Deutschland 89 (3d ed. 1985).

599. This type of benefit pays eighty percent of the injured person's salary. There is no limit to the amount payable other than that the person's net salary may not be exceeded. Since taxes are not paid on these benefits, most payments reach 100% of previous net compensation.

600. This comprises 65%-75% of the "injury money" benefits when the injured person has at least one child or lives with a spouse who cannot work, either because he cares for the injured spouse or he requires care himself.

601. These benefits last for five years and are paid at 100% of previous salary in the first year, declining 1/5th each year, with the maximum amount the full pension level, or 2/3s of annual compensation.

602. Everyone who has paid insurance contributions six times on a monthly basis in the past two years is entitled to medical rehabilitation. However, an injury pension or fifteen years' insurance contributions is required as a condition to eligibility for professional rehabilitation services.

603. RVO §§ 1236-1244. A full pension, payable upon 100% employment disability, is two-thirds of annual employment earnings. RVO § 580(1). It begins upon work incapability (Arbeitsunfähigkeit), and lasts until the death of the insured, regardless of whether the insured actually resumes employment or not. A supplement is paid for children under eighteen years of age with a disability of fifty percent or more. Id. § 581(1)[1]. A widow's pension is 30%-40% of the insured's annual employment earnings, depending on age and number of dependents. Id. § 583. A widower's pension is paid in the same amount, but only if the wife was the primary source of family support. Orphans' pensions range up to thirty percent for a full orphan, and are payable until the twenty-fifth year of age. Id. § 590. Lump sum payments are permitted only for pensions extending to a 25% permanent disability; pensions with a higher percentage of permanent disability may be converted to a five or ten year payout.

604. RVO § 551(1), (2).
causation becomes shown by new knowledge.  

In addition to the social insurance available from the accident insurance carriers, the general pension insurance scheme provides for a disability pension when the insured can earn less than half what a healthy person could earn. This pension may first begin five years after the occupational accident or onset of illness.

VIII. Recommendations

This article has described approaches adopted by West Germany to occupational safety and health problems. German and American approaches have in common the characteristic of externally directed behavior, mostly from the state in the United States and from incorporative associations in West Germany. Private and public standard-setting and enforcement, as well as state and federal activity are similar. Once differences in language, history and values are bridged, there is much that each country can learn from the other in the field of occupational safety and health regulation.

A. United States

The United States could strive to create a more comprehensive occupational accident and disease system that involves employers, employees, private industry, and all levels of government. To this end, the federal Occupational Safety and Health Act could be amended to permit concurrent federal and state enforcement. Conflicts could then be avoided by administrative cooperation. State and local public health agencies could also include federal OSHA regulations where possible in their enforcement and inspection activities. Cooperation and training of insurance companies, union stewards, plant workers and professionals in safety engineering and occupational medicine could be encouraged to complement administrative enforcement and to obtain maximum effectiveness in preventing job illness and injury.

A combination of private insurance companies that issue accident prevention regulations may run into antitrust problems absent legislative exemption. On the other hand, a requirement in state law that insurance companies provide certain types of services for their members would not exceed the states’ police powers nor delegate to private parties powers of public regulation.

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605. Id.; Berufskrankheitenverordnung (Occupational Disease Regulation) 1976 BGBL.1 721.

606. See supra note 7.

607. A link between accident insurance and prevention programs is not unique to West Germany. A survey of forty seven countries found that a legal requirement or permission for the insurance carrier of accident insurance to have functions of accident prevention is more the rule than the exception. The list includes France, Canada, Belgium and Spain. The survey
Regional workplace-oriented occupational safety and health services could be mandated by state or federal statute. The services could test workplaces on a continuous basis as part of a program of environmental measurement.

Compliance is a continual process and not merely the result of a singular inspection. Successful compliance is not shown by the maintenance of a certain threshold on a single day, but by a continual program of prevention. Requirements for regular measurements and document retention are therefore instruments to achieve self-regulation, not tools of government intervention. An initial first step towards drafting such legislation would be a review of existing company policies and union-employer committees in the United States.

Consultation and regular inspection could be combined without requirement to issue citations upon existence of a violation. The Occupational Safety and Health Act could be changed to make shutdown or affirmative injunctive orders simpler to obtain. Administrative agencies could then use this procedure where consultation fails. The number of inspectors and inspections could be vastly increased.

The belief that employers listen only to sanctions is not supported in practice. Reliance on voluntary standards for the vast majority of chemicals and voluntary policies for medical testing and safety engineering in the workplace bear this out. The general duty clause could incorporate voluntary technical standards. The same obligation that exists in the law post facto in product liability lawsuits could also be incorporated into preventive legal norms. Advisory committees could be given authority to promulgate standards with the agency retaining veto power.

Restrictions on litigation concerning workplace injury or illness could be coupled with occupational health insurance programs to ensure prompt, fair, and reasonable compensation and rehabilitation. Moreover, regional or workplace-centered participatory institutions for occupational safety and health could be required to be elected upon petition of a group of employees. These institutions could be concerned primarily with ergonomics.

B. West Germany

West Germany could strive to create individual incentives to ensure compliance with the bewildering array of institutions and concerns with job safety and health. Individual rights of redress on oc-

found that seventeen countries give the carrier of statutory accident insurance the authority to issue autonomous legal norms in the form of legal regulations, guidelines, or both. Report of the Tripartite Mission on the Effectiveness of Labor Inspection in the Federal Republic of Germany (I.L.O., 1984).

608. See supra note 7.
occupational safety and health measures within the plant establishment could be expanded to give the individual a remedy where collective institutions fail. It may be that the more benefits there are the less the individual initiative in preventing illness or injury. However, the West German example illustrates an occupational safety and health system that promotes both accident prevention and a high level of benefits.

Another goal could be to foster more open and public discussion of proposed occupational safety and health regulations, direct judicial review of their validity, and the possibility of obtaining judicial relief requiring administrative action or standard-setting in the event of administrative inaction.

Thirdly, there could be better data collection on enforcement programs, compliance evaluation, and epidemiology. More attention in inspections is due to health concerns. More occupational doctors for the occupational inspectorate and more technical inspectors with medical backgrounds are needed. Better coordination of data collection on occupational illnesses is needed, as well as greater attention in practice to engineering to prevent exposure to dangerous substances rather than relying on medical detection and treatment.

IX. Conclusion

Similar occupational safety and health problems pervade each state, yet comparative knowledge of their regulation remains sketchy. Eighty years ago Louis D. Brandeis submitted a 112-page brief to the Supreme Court of the United States, seeking to uphold for the State of Oregon a law establishing a maximum of ten hours' work per day for women employed in manufacturing. Two pages of Brandeis' brief contained legal argument, the remainder described similar state and foreign laws and reports on working conditions from around the world, including those of German occupational inspectorates. 609 No less than then, Brandeis' sociological method of jurisprudence is in order to persuade public institutions — particularly the legislatures in the United States and the courts in West Germany — to adopt policies to better safety and health at work.
