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SEX-BASED CONSIDERATIONS OF DIFFERENTIATION IN THE WORKPLACE: EXPLORING THE BIOMEDICAL INTERFACE BETWEEN OSHA AND TITLE VII

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Willow Island, W. Va., is a “wide place in the road,” says one man who knows the place. It’s a bleak spot in a depressed region, and one of the few local employers offering jobs at decent pay is the American Cyanamid Co. plant.

All of which had more than a little to do with the decision last year of [two women] [Betty] Moler and [Barbara] Cantwell to have themselves sterilized. . . .

[They were afraid] of losing [their jobs] in the [chemical] pigments division of the American Cyanamid plant, where a potential health hazard caused the company last year to restrict certain jobs to men or women not capable of child-bearing.¹ A disconcerting result was the decision of [Moler, Cantwell and three] other women workers to be sterilized.

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1. Contrary to reports, job restriction at American Cyanamid was based on the ability and desire to bear children, and applied to both sexes, not just women. [1979] OCC. SAFETY & HEALTH REP. (BNA) 466.

(239)
Their situation, and similar events involving women workers at Allied Chemical Corp., have dramatized an occupational health problem confronting corporations around the nation that deal with hazardous substances: the possibility of damaging the unborn child.2

*   *   *

Petrochemical companies have quietly tested thousands of American workers to determine if any of the genes they were born with are what industry doctors call "defective," making the employees especially vulnerable to certain chemicals in the workplace. The process is called genetic screening.

Employers say the purpose of the tests is to provide a protective barrier, keeping workers they term "hypersusceptible" away from industrial poisons. It is unclear if any workers have been denied employment because of their genes, but there is ample evidence that many workers have been transferred to other jobs.

Some scientists, union leaders and industrial hygienists reject assertions that the tests protect workers. Such critics regard genetic screening as a Brave New World nightmare, an Orwellian stew in which the victims of toxic chemicals will be blamed for having faulty genes.

They say that the genetic approach is indeed a barrier, but one that threatens workers with sexual, racial or ethnic discrimination. They oppose an employment philosophy that would label a particular group of people as unfit for certain jobs because of their genetic makeup. This approach, they say, thus shifts the focus of the problem to the genes of workers, rather than to the presence of industrial poisons in the workplace.3

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3. Severo, The Genetic Barrier: Job Benefit or Job Bias?, N.Y. Times, Feb. 8, 1980, §1, at 1, col. 1. For an opposing view on this issue, consider the following:

Recently the Coke Oven Standard Setting process disclosed that women workers are being hired into coke ovens as New Hires, even though it's been known for over 200 years that these ovens are cancer breeders in all humans and more recently that benzo(a)pyrene, a major coke oven pollutant, is transplacental to the unborn fetus. This cynical steel industry hiring policy which is being done in the name of equal employment must be terminated by immediate government action.

I. INTRODUCTION

DURING THE PAST DECADE, a substantial change has occurred in the employment of women in industry. A review of the hiring practices of many large industries shows that while many jobs were previously restricted to male workers, the present policy is to hire females for almost any job for which they are qualified. In fact, forty percent of the workforce in the United States today consists of women, who are entering the job market at a rate of almost two million per year. Some of these women have found employment in the chemical industry which has developed significantly in the past century due to mankind’s increased use of chemicals. Exposure to some of these chemicals has had unintentional, adverse, and occasionally chronic results, and has presented certain problems unique to the regulation of toxic materials in the workplace.

This article will discuss one of these problems — the potential conflict between occupational safety and health legislation, mainly the Occupational Safety and Health Act of 1970 (OSHA or the Act), and civil rights legislation directed at fair employment practices, mainly Title VII of the Civil Rights Act of 1964 (Title VII). The conflict between OSHA and Title VII arises because the conditions of employment in a particular workplace may require exposure to chemical agents that are either toxic to one sex and not to the other, toxic to the human reproductive process in

4. The increased employment of women has been due largely to the withdrawal of protective legislation. WOMEN’S BUREAU, U.S. DEP’T OF LABOR, STATE LABOR LAWS IN TRANSITION: FROM PROTECTION TO EQUAL STATUS 6 (1976).

5. Serevo, supra note 3, § 1, at 36, col. 6.

6. Pub. L. No. 91-596, 84 Stat. 1590 (most of the Act has been codified in 29 U.S.C. §§ 651-678 (1976)). This legislation, the result of over 20 years of debate and a concerted two-year effort to pass job safety and health legislation, authorizes the establishment, adoption, and enforcement of standards to protect employees from a variety of occupational hazards. See 29 U.S.C. §§ 655, 659 (1976). At the time of its passage, Congress noted that there were over 14,500 job-related deaths annually and an unknown number of illnesses and injuries resulting from or complicated by exposure to safety and health hazards, including toxic substances in the work environment. S. REP. No. 91-1282, 91st Cong., 2d Sess. 2, reprinted in [1970] U.S. CODE CONG. & AD. NEWS 5177, 5178 [hereinafter cited as Senate OSHA Report].

7. 42 U.S.C. §§ 2000e-2000e-17 (1976). Title VII prohibits discrimination by employers on the basis of sex, race, color, religion, or national origin. Id. § 2000e-2. While giving women the right to be hired on an equal basis with men, the legislation also permits women to be exposed to the same industrial hazards as men. Unfortunately for women, however, most of our present knowledge of occupational safety and health hazards is derived from experience with male workers. Warshaw, The Pregnant Worker, 20 J. OCC. MED. 211 (1978).
either sex, or toxic to the fetus but not to the adult. In such situations, employers who exclude susceptible men or women from the workplace in order to avoid exposing them to toxic agents, risk violating Title VII. The issue, then, is whether these employers should protect their employees and themselves by removing susceptible persons from certain jobs or by making the workplace risk-free by undertaking the economically and technologically difficult, and often infeasible, task of eliminating all toxic hazards.

The foregoing concerns raised with respect to sex may apply equally well to other suspect classifications — handicap, age, race, national origin — and, less well, to religion. Individuals in these "protected groups" may possess characteristics or traits that would render them particularly susceptible to health threats. The con-

8. Employers are subject to suits by employees and citations from OSHA.

9. Severo, supra note 3, § 1, at 1, col. 2.

10. A recent series of articles on genetic screening (cytogenetics) noted the existence of gene variations associated with sex, race, and ethnic background. See id. §1, at 36, col. 1. Some members of these groups have genetically caused blood disorders that may place them at special risk when working with many chemicals, e.g., benzene, nitrosoamines, nitrates, and lead. Id. Alcoholics and persons with breathing difficulties, such as asthma and emphysema, are very susceptible to exposures to chemicals in the workplace and arguably are protected as handicapped individuals under the Rehabilitation Act of 1973, 29 U.S.C. §§701-794 (1976), as amended by Rehabilitation, Comprehensive Services, and Developmental Disabilities Amendments of 1978, Pub. L. No. 95-602, 92 Stat. 2984-3001. A handicapped individual is defined as "any person who (i) has a physical or mental impairment which substantially limits one or more of such person's major life activities, (ii) has a record of such impairment, or (iii) is regarded as having such impairment." 29 U.S.C. § 706 (7)(B) (1976). The regulations further define major life activities to include caring for one's self, walking, seeing, hearing, breathing, speaking, and working. 45 C.F.R. § 84.3(j)(2)(ii) (1979) (emphasis added). These regulations imply that employers may have special obligations toward handicapped employees. See generally Guy, The Developing Law On Equal Employment Opportunity For The Handicapped: An Overview And Analysis Of The Major Issues, 7 U. BALT. L. REV. 183 (1978).

Hearing levels may differ significantly due to race and sex. In general, the black female population has the lowest, or most sensitive, hearing threshold, while the white male population has the least sensitive. The black male and white female populations' hearing thresholds fall between these two extremes and become similar as these populations age. The percentage of workers "potentially compensable" for hearing loss or affected by noise levels on the job is thus "strongly dependent" on the race and sex of the population. [1979] OCC. SAFETY & HEALTH REP. (BNA) 64.

Most cancers are strongly age-dependent. Cancer is a disease of old age "because natural selection would be expected to have led to the evolution of defense mechanisms that operate early in life . . . ." OSHA Final Rule on Identification, Classification and Regulation of Potential Occupational Carcinogens, 45 Fed. Reg. 5002, 5026 (1980) (codified in 29 C.F.R. § 1910 (1980)) [hereinafter cited as Carcinogen Standard]. Children of peripubertal ages are also extremely susceptible to the effects of exposure to toxic substances. See National Ass'n of Farmworkers Organizations v. Marshall, 628 F.2d 604, 607 n.6 (D.C.
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lict addressed in this article would occur any time that exposure to equal environments causes unequal physical and legal consequences. In this light, the problem is a manifestation of the same question that has haunted the legal system since the passage of the fourteenth amendment: to what extent does equal protection require equal treatment and to what extent equal results?

II. ARE ALL [WO]MEN CREATED EQUAL?

A. Differential Toxicity

The physiological, metabolic, and biochemical differences between men and women tend to be relatively minor. The main physical differences are in the area of gonadal function and place-

Cir. 1980) (prohibiting use of child labor to harvest crops sprayed with certain pesticides).

Another possible example of the conflict between particular classifications and employment practices appears in the Department of Transportation's Federal Highway Administration regulations on the Qualifications of Drivers, which provide that persons with certain "physical defects," including loss of foot, leg, hand or arm; diabetes; respiratory dysfunction; high blood pressure; epilepsy; alcoholism; and drug addiction, may not drive a motor vehicle. See 49 C.F.R. §§ 391.41-.49 (1980). It would appear that such regulations may place employers who follow them squarely in conflict with the Rehabilitation Act.

11. Toxicity is the inherent capacity of a substance to cause injury to biological tissue. "Hazard is a function of toxicity and exposure and is the probability that injury will result from the use of a substance in a given formulation, quantity, or manner." Florida Peach Growers Ass'n v. United States Dep't of Labor, 469 F.2d 120, 131 n.17 (5th Cir. 1974). Toxicology is the study of the noxious effects of chemical and physical agents. In order to understand how life can be maintained under conditions of exposure to toxic agents, toxicology requires an understanding of the concept of dose-response relationships. This most fundamental concept of toxicology states that a relationship exists between the dose of an agent and the response that is produced in a biological system. See N. PROCTOR & J. HUGHES, CHEMICAL HAZARDS OF THE WORKPLACE 4-6 (1978).

For many toxic substances, especially carcinogens, a relationship between dose and response exists. Three assumptions are made in determining the relationship: 1) the magnitude of the biologic response is a function of the concentration of the agent at the biologic site of action; 2) the concentration at the site of action is a function of the dose administered; and 3) the response and the dose are causally related. When the toxicity data is determined, a range of doses is found which results in some deaths and some survivals. See, e.g., Carcinogen Standard, supra note 10, at 5118-38; T. LOOMIS, ESSENTIALS OF TOXICOLOGY 63-75 (2d ed. 1974); Amdur, INDUSTRIAL TOXICOLOGY, in NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY & HEALTH, DEP'T OF HEALTH, EDUCATION & WELFARE, NIOSH PUB. NO. 74-117, THE INDUSTRIAL ENVIRONMENT — ITS EVALUATION AND CONTROL 6178 (1973). See generally L. CASARET & J. DOULL, TOXICOLOGY: THE BASIC SCIENCE OF POISON (1975). Unfortunately, however, present knowledge indicates that carcinogenic hazard does not disappear entirely with a diminishing dose, but rather becomes infinitely small. Individuals exposed to a carcinogen generally remain at increased risk of developing cancer even after exposure has ceased. See Carcinogen Standard, supra, at 5024-25; Legator, THE CHEMICAL ENVIRONMENT & MUTAGENESIS, in WOMEN AND THE WORKPLACE, supra note 8, at 5, 14.
ment. For toxicological purposes, however, the gonadal position is less important than the significant gonadal difference in metabolism. The testes are metabolically very active tissues, constantly in the process of producing sperm cells. Chemical damage is thus likely to be immediate and acute, but if sexual function survives at all, transient. By contrast, the ovaries are more quiescent. Oocyte production ceases at or before the time of birth, and metabolic activity thereafter is comparatively minor. Thus, chemical damage, if it occurs, is likely to be less severe in women, because a slowly metabolizing organ, having less need of nutrients, will tend to have less exposure to toxins in the blood. On the other hand, any resultant damage is more likely to be permanent.

The foregoing discussion may overstate the physiological and biochemical differences between men and women. Gonads of both sexes have the same embryonic origin and thus a similar biochemistry. Both perform important secondary functions as endocrine

12. The focus of this article's discussion is on physical differences which are significant toxicologically. Various other differences, however, can affect ergonomic considerations, that is those considerations which address the basic mechanics of bodily adaption to the workplace. See R. O'Connel, Women At Work (October 31, 1978) (paper presented at National Safety Congress—Health Hazards Affecting Pregnant Women in the Workplace). Women are statistically smaller and weaker than men and their muscle mass is generally less than in men. This may put women at a disadvantage in the tasks of lifting and moving. See Conibear, Women as a High Risk Population, in WOMEN AND THE WORKPLACE, supra note 3, at 168-70. The bone structure of women is lighter and more slender than men's and the angles and positions of some bones differ between the sexes, resulting in a somewhat different organ placement. R. O'Connel, supra, at 3. The woman's pelvis, of course, is physically larger for childbearing. Id. The practical effect is perhaps only to make women slightly more susceptible to low back injury and to internal injuries in cases of violent accidents. See Chaffin, Hazards Relating to Personal Physical Strengths, in WOMEN AND THE WORKPLACE, supra, at 174 (emphasizing that "strength is the attribute that discriminates here, not sex").

There are also definite soft tissue variations in the bladder, the reproductive organs, and the rectum. Childbirth can weaken the supports for these organs and adversely affect their functions. R. O'Connel, supra, at 3-6. Urinary difficulties, dropping of the uterus, and rectal protrusion are just a few examples of the difficulties that can arise as a result of childbirth. Id. Jobs that require heavy lifting, moving, or straining naturally may aggravate these anatomical abnormalities that follow childbirth.

Psychological considerations, including premenstrual irritability and menopausal depression, should also be considered. Id. In addition, women differ from men genetically in that they have two "X" chromosomes rather than one "X" and one "Y." In terms of certain industrial exposures, this may make women superior in resistance and susceptibility. See Discussion, in WOMEN AND THE WORKPLACE, supra, at 84 (statement of Dr. Charles Shaw).

13. Testes are more exposed to hazards than ovaries by virtue of their location, but this is less significant than the fact that sperm cells are always dividing and thus are more susceptible to mutations which frequently occur during cell division. Conibear, supra note 12, at 170.

glands, producing closely related populations of hormones. It appears that, excluding childbearing differences, men and women are more alike than different in terms of biochemical and physiologic processes.” Thus, a toxic substance that affects the gonads of one sex, a mutagen, probably will affect those of the other. The manifestations of disease may be different, but the underlying biochemistry is likely to be similar. For example, carbon disulfide

15. See notes 26-29 and accompanying text infra.

16. B. Patten, supra note 14. See also Severo, supra note 3, §1, at 36, col. 6.

17. Mutagenicity is the term applied to the alteration of germ plasma, in both males and females, which is induced by a variety of physical and chemical processes whereby future generations are impaired. The Carcinogen Standard reports that there is a close relationship between mutagenesis and carcinogenesis. The Carcinogen Standard, supra note 10, at 5120. A mutagenic substance damages genetic material and may also cause chromosomal damage. In terms of mutagenesis, science distinguishes between two types: one affects somatic (non-germ) cells of the exposed person and may cause malignancy; the other affects germ cells and is transmitted to future generations. For a discussion of chromosomal chemical mutagenesis, see Claxton & Barby, Chemical Mutagenesis, An Emerging Issue for Public Health, 67 AM. J. PUB. HEALTH 1037 (1977).

18. The problems are exacerbatated by the fact that awareness of parenthood does not occur until after a critical ontogenic period during which injury may already have occurred. D. Teitlebaum, Information and the Prevention of Genetic Injury 4-7 (October 15, 1979) (paper presented at a National Safety Congress Session). This is particularly important when one considers the mutagenic activity of certain substances which occurs before conception. The resultant cost of environmental genetic damage and birth defects is immense in both human and economic terms. The concentration on carcinogenesis as it relates to industry has often obscured the time extent of the economic damages caused by cancers which occur in an occupational setting. The immediate economic effects of cancers caused by the occupational environment are measurable and finite. The cancer dies with the employee. The effects of genetic damage, however, may persist for many generations. Immense costs are inflicted upon future generations which must provide care for the defective offspring of genetically damaged ancestors. For example, the cost of care for patients with 21-Trisomy (Down’s Syndrome, the disease commonly known as Mongolism), a disorder of chromosome structure, is over $4,000,000,000 per year in the United States alone. A few such mutations should convince us that prevention, even on the most conservative basis, is certainly justifiable on economic grounds alone.

Certain types of toxic substances other than mutagens also affect the gonads. A gametotoxic substance affects the egg or sperm cell and may limit fertility. A teratogenic substance is one which, although it may not affect the adult worker, may directly affect the fetus. Teratogens may cause structural malformations, metabolic or physiological dysfunctions, and psychological or behavioral alterations in infants, which become evident at birth or in the immediate postnatal period. If the change results in stillbirth or in-utero death, the effect is more properly called embryotoxic or fetotoxic. If a substance is strictly a teratogen, only women’s reproductive processes can be affected. Fetuses of wives of exposed male employees, however, may also be affected by teratogens. See generally A. Hucko, WORKING FOR YOUR LIFE: A WOMAN’S GUIDE TO JOB HAZARDS (1976); 2 G. Van Gelder, CLINICAL AND DIAGNOSTIC VETERINARY TOXICOLOGY (2d ed. 1978).
appears to interfere with gonadal endocrine function in both sexes, resulting primarily in male impotency but also, to a lesser extent, in female menstrual disorders. Little dose-response information exists, but it also would seem that these effects occur at about the same level of severity in males and females. Of course, this does not mean that there are no toxic substances that have sex-specific effects. On the whole, however, the reasoned hypothesis of special susceptibility because of sex is largely without basis.

A second reason for the relative lack of toxicological difference between the sexes is that those organs that are different are among those least likely to be poisoned. In the industrial environment, almost all toxic agents enter the body through inhalation. The lungs, therefore, are the first and most strongly exposed organs. After initially irritating contacted tissue, the toxin will be absorbed into the blood bringing about further distribution and possible systemic intoxication. In order to remain in the body, the substance must survive screening by the liver and the renal system, organs with large blood volume which are specialized for detoxification and excretion. As a result of this pattern, the disorders from exposure to toxic substances are usually pulmonary, hemotological, hepatic, and renal.

Finally, although some sex-specific reactions have been observed, these observations are difficult to confirm in the absence of


20. Recent data indicates, for example, that the only effect of exposure to certain toxic agricultural chemicals is male impotence. Warshaw, Non-Medical Issues Presented by the Pregnant Worker, 21 J. Occ. Med. 89, 91 (1979).

21. "There is very little scientific data to support this [hypothesis of special susceptibility], and . . . one must be careful not to attribute apparent differences to biochemical mechanisms until social conditions . . . have been ruled out." Conibear, supra note 12, at 170.

22. N. Proctor & J. Hughes, supra note 11, at 4. The second most prevalent route of entry is contact with the skin. Although the gastrointestinal tract is also a potential site of absorption, the ingestion of significant amounts of chemicals in this manner is rare in the industrial situation. See Carcinogen Standard, supra note 10, at 5109-10; Stokinger, Routes of Entry and Modes of Action, in Occupational Diseases, supra note 19, at 11.

23. Notable exceptions to this rule are those reagents that have specific affinities for certain molecules, for example, the well-known action of organophosphorous pesticides on the central nervous system. E. Ariëns, A. Simons & J. Offermeier, Introduction to General Toxicology 184-88 (1976). Although no known agents exist with this kind of specificity for gonadal tissues, any such substances would likely affect both sexes similarly because of the relative biochemical similarity of gonadal tissues.
a long-term sexually integrated workforce. The point here is that exclusion of only women from agents that affect reproductive capacity will not solve the problem of toxic effects. Male as well as female workers must be protected from these toxic agents either by engineering controls, work practice controls, personal protective equipment, or by removal from the workplace.

Although current knowledge clearly shows that, from a toxicological standpoint, women are not much more susceptible to work related exposures than their male counterparts, pregnancy changes this rough equivalence. In 1946, Anna Baetjer, in her classic treatise, Women in Industry: Their Health and Efficiency, concluded that normal women need no special restrictions but warned

24. An interesting study, for example, would be to ascertain whether paraffin causes lesions in females comparable to the scrotal carcinomas observed in males. OCCUPATIONAL DISEASES, supra note 19, at 131, 147-48. This example is of increasing significance due to the paraffin content of petroleum and especially shale oils.

25. In instances in which engineering technology cannot be applied to the control of environmental hazards, personal protective equipment and devices must be employed to shield workers from their effects. Since these devices are usually designed and sized to fit the standard male frame, however, they may not provide the desired protection for women. Poor fit can vitiate the protective effects of respirators and harnesses, while safety shoes and garments that are too large precipitate accidents. Women may have to be temporarily barred from tasks that require the use of personal protective equipment until a vendor who can supply properly fitting items can be located. Warshaw, Employee Health Services for Women Workers, 7 J. PREV. MED. 385, 387-88 (1978). See also Prieve, Job Placement of Women in the Lead Trades: A Worker's Position, in WOMEN AND THE WORKPLACE, supra note 3, at 251, 256-58.


27. A recent report outlined principles of preventing harm to the pregnant worker and the fetus. See AMERICAN COLLEGE OF OBSTETRICS AND GYNECOLOGISTS, GUIDELINES ON PREGNANCY AND WORK (1978) (published in conjunction with the National Institute of Occupational Safety and Health (DHEW Pub. No. 78-1978)). The report began with the premise that "a normal woman, with a normal pregnancy and normal fetus in a job presenting no greater hazards than those encountered in the daily life of the community may continue to work without interruption until the onset of labor and may resume working several weeks after an uncomplicated delivery." Id. at 3 (emphasis added). Exposure to toxic substances, however, presents greater hazards than those encountered in the daily life of the community. See Burwell v. Eastern Air Lines, Inc., 458 F. Supp. 474, 484 (E.D. Va. 1978), aff'd in part and rev'd in part, 633 F.2d 361 (4th Cir. 1980), cert. denied, 49 U.S.L.W. 3643 (1981).

that pregnant women might be adversely affected by exposures to toxic substances that would usually be safe. Some agents have toxic effects only on the embryo or the fetus during gestation and not on either the pregnant parent or the preconception viability of the nonparent. Other hazards which the normal, nonpregnant woman might tolerate with impunity will threaten the progress of the pregnancy and the development of the fetus. For example, the pregnant woman, her fetus, and the newborn infant are particularly vulnerable to the effects of low concentrations of carbon monoxide.\textsuperscript{29}

The preceding discussion is not to imply that sex-specific differences in exposure to toxic substances do not exist, but they appear to be quantitatively minor. They will assume importance only if occupational safety and health standards are set extremely low. If, for example, both sexes require personal protective equipment at an exposure of 100 parts per million (ppm)\textsuperscript{30} of substance \(x\), there may be both equal safety and equal treatment; but if the maximum allowable exposure is lowered to 10 ppm, only one sex, or the fetus, may still require protection. Thus one achieves a marginal gain in safety at the cost of unequal treatment and substantial economic inefficiency. At 1 ppm, no one may require protection and equal treatment is restored, but the cost may be absolutely prohibitive in terms of production and efficiency. Thus minor differences in exposure levels may cause serious legal conflicts that might not occur if the sex differences presented a clear-cut choice.

B. Differential Carcinogenicity

The 1979 edition of the Registry of Toxic Effects of Chemical Substances published by the National Institute for Occupational Safety and Health includes toxicological information on 39,221 different compounds.\textsuperscript{31} Not all toxic substances listed exhibit car-

\textsuperscript{29} Id. at 268.

\textsuperscript{30} A part per million (ppm) is one part of \(x\) in 999,999 parts of \(y\) on a weight/weight basis. Using metric units, one ppm is one milligram per 1,000,000 milligrams or, more simply, one ppm is equal to one milligram per kilogram. A part per billion (ppb), which is one part in 1,000,000,000 parts or 1 mg/1,000,000 g, is clearly an even smaller number, but it still means roughly 100 million trillion molecules of the carcinogen per liter of water or air.

cinogenic potential to animal or human populations. In fact most toxic substances do not cause cancer.

Cancer is a disease, in all probability of DNA, generally irreversible and autonomous in its natural course of development, and characterized in its advanced stages by the progressive growth of abnormal (immature) populations of cells. The early cellular events of the disease and the causative factors leading to initiation of the disease are poorly understood, but cancer apparently originates from cells that have been transformed by changes in or damage to genetic material. The characteristic toxicologic event in

32. Very simply put, the term carcinogenic means any substance which may produce cancer in humans or animals. Carcinogen Standard, supra note 10, at 5004, 5022-27. There are various definitions of a carcinogen set forth in the Carcinogen Standard, but the best and broadest definition is "an agent, process or habit that increases the risk of cancer among people of a particular age." Id. at 5022. Unfortunately, the definition of toxic substance and potential occupational carcinogen have been amalgamated into a single definition in the standard. Id. (codified in 29 C.F.R. § 1990.108 (1980)). According to OSHA, four distinctive features of carcinogenesis set it off from other types of toxicity and require it to be treated differently from a regulatory viewpoint: (1) cancers develop from a single transformed cell; (2) the irreversibility of carcinogenic effects; (3) most cancers are age-dependent; and (4) there is a long latent period between exposure and effect. Id. at 5022-27. See also INTERAGENCY REGULATORY LIAISON GROUP, DEP'T OF HEALTH, EDUCATION & WELFARE, REGULATION OF CHEMICAL CARCINOGENS 6 (1979) [hereinafter cited as IRLG REPORT]; Regulatory Council Statement of Government Policy for Regulation of Chemical Carcinogens, [1979] OCC. SAFETY & HEALTH REP. (BNA) 443 [hereinafter cited as Regulatory Council Statement].


34. IRLG REPORT, supra note 32, at 9; Regulatory Council Statement, supra note 32, at 443; Scientific Bases, supra note 33, at 246.

35. Carcinogen Standard, supra note 10, at 5016-17. According to OSHA, cancer accounted for more than 18% of deaths in the United States in 1975. Id. at 5015. Almost 400,000 Americans died of cancer in 1977, over one million are under treatment of the disease, and about 25% of the population ultimately will develop some form of cancer. Id. At the heart of the carcinogen standard is the classification of toxic substances into several categories based on the carcinogenicity of data on their carcinogenicity. See 29 C.F.R. 1990.112(a) (1980). Based upon this classification, carcinogenic toxic substances will be reviewed and regulated in different ways on the basis of human epidemiological studies or experimental carcinogenesis bioassays in mammals. Id. at 1990.141-147. The standard provides for future individual rulemakings for substances, combinations or mixtures thereof, or processes, and for selection of the most effective type of regulation to control human exposures thereto. Id.

carcinogenesis is a change in the regulatory mechanism of the target cells resulting in self-replicating target lesions, that is, modifying the genome or other molecular control mechanisms in the target cells that then can give rise to a progeny of permanently allied cells.\textsuperscript{37} Once the initial carcinogenic event has been triggered, the resulting aberrant cells invade normal tissue and spread through the body, even though the agent responsible for inducing the disease may no longer be present.\textsuperscript{38}

Cancer has several significant and distinguishing characteristics. One is that the carcinogenic process differs from other types of toxic effects in its irreversibility and individuals exposed to a carcinogen generally remain at increased risk of developing cancer even after exposure has ceased.\textsuperscript{39} Another important characteristic is that, contrary to popular thought, cancer is not organ or species specific.\textsuperscript{40} Finally, cancer is multi-stage and multi-causal.\textsuperscript{41}

The most prominent causes of cancer are believed to be genetic and environmental factors with perhaps sixty to ninety percent of all cancers related to environmental factors.\textsuperscript{42} While those states

\textsuperscript{37} Scientific Bases, supra note 33, at 245.

\textsuperscript{38} Carcinogen Standard, supra note 10, at 5016.

\textsuperscript{39} Id. at 5024-26. For this reason, OSHA recommends no threshold level of exposure in carcinogen standards. Id. at 5187. OSHA concluded that "even if [thresholds exist], there is no scientific way to establish what they are for any specific carcinogen and for any specific population." Id.

\textsuperscript{40} Id. at 5094-96. This means that "a positive result in one organ of one species would . . . be indicative of a potential risk to exposed humans regardless of the organ or site at risk in humans." Id. at 5094.

\textsuperscript{41} Id. at 5017-22. OSHA stated that cancer is a complex disease that characteristically progresses through a number of stages of development, and that a variety of different factors can act to initiate or accelerate its development at each stage. It follows from this proposition that most cancers would have multiple "causes" and that it therefore would be simplistic to assign to each a single causative agent.

\textit{Id.} at 5017. The development of cancer requires a latent period during which it may take from five to forty years before the disease progresses to the point where detection is possible. \textit{Id.} at 5026. Prior to or during the developmental period, the effects of continuous or occasional exposure to different carcinogenic agents may be either additive or synergistic. \textit{Id.} at 5020-21. For a discussion of these terms, see note 50 infra.

\textsuperscript{42} See Carcinogen Standard, supra note 10, at 5027-28; Weisburger, Environmental Cancer, 18 J. Occ. Med. 249, 252 (1976). This means, according to OSHA, that "occupational cancers may be preventable if the causative agents can be identified and human exposure to them eliminated or minimized." Carcinogen Standard, supra note 10, at 5028. One source has alleged that such an inference is "demonstrably wrong," since the most ubiquitous, prevalent, and significant cancer-causing factors are not industrial chemicals, but rather factors associated with the ordinary process of living, such as smoking, diet, and exposure to solar radiation. American Industrial Health Council, Recommended Alternatives to OSHA's Generic Carcinogen Proposal 32-39 (1978) [hereinafter cited as AIHC].
with the highest cancer rates are the more densely populated, urbanized, and industrialized, 43 "[t]his excess disease risk may be related to life style (urban dwellers use more tobacco, for example), to occupation (working with toxic substances), to the environment of cities (air pollution and water pollution), or to other factors as yet unidentified, as well as combinations thereof. 44  The incidence of cancer attributable to industrial or occupational use of toxic substances cannot be estimated with any precision. 45  But OSHA, in its generic carcinogen policy, asserts that occupational cancers may be preventable if the causative agents can be identified, their carcinogenicity determined, and hazardous human exposure to them eliminated or minimized. 46  

Differential carcinogenicity is a more common observation than differential toxicity, but because of the apparent variability in individual susceptibility, it is harder to explain. Individual response to carcinogens can vary greatly. 47  Age, sex, race, genetics, hormone status, life style, and diet all affect the varying individual susceptibility to a chemical carcinogen. 48  Some cases of differential carcinogenicity involve merely different or less virulent cancers at similar carcinogen levels. For example, N-nitrosodimethylamine, an industrial solvent used in the manufacture of rocket fuels, causes hepatomas and kidney tumors in both sexes of hamsters; however, males are more prone to liver cancer, whereas females are more prone to kidney cancer. The recently issued final standard for occupational exposure to lead echoes the fact that differential carcinogenicity means merely different types of cancers:

Exposure to lead results in decreased libido, impotence and sterility in men and decreased fertility, abnormal menstrual and ovarian cycles in women. The course of pregnancy is adversely affected by exposure to lead. There is

44. Id. Among other factors that influence cancer incidence are trauma, burns, diet, caloric intake, viruses, and hormones. Carcinogen Standard, supra note 10, at 5020.
45. The best estimate is that industrial chemicals have accounted for one to five percent of all cancers. See Carcinogen Standard, supra note 10, at 5030-31.
46. Id. at 5004.
47. Id. at 5020-27. Since carcinogenesis results from the interaction of a toxic material with a biological target, the effect is qualified by the susceptibility of various cell types, tissues or organs, and individuals. Id.
48. Id. at 5026; Conibear, supra note 12, at 171; Scientific Bases, supra note 33, at 247-49. Frequently the carcinogenic response to a chemical insult will be limited to a particular segment of the exposed population, for example, sex-specific or single sex.
conclusive evidence of miscarriage and stillbirth in women who were exposed to lead or whose husbands were exposed. Children born of parents either of whom were exposed to lead are more likely to have birth defects, mental retardation, behavioral disorders or die during the first year of childhood.⁴⁹

Apparently, differential carcinogenisis also may be caused by different personal habits, especially smoking. Because males, in particular blue collar males, statistically smoke more than females, they are more sensitive to those agents which cause lung cancer, all other things, including other cancers, remaining equal.⁵⁰ Concomitantly, women's risk of occupational disease would decrease.


OSHA's conclusions concerning the hazards to the reproductive capacity of male workers are based on a single study of Rumanian workers by Iona Lancranjan. Even apart from the unreliability of Lancranjan's raw data (which she claimed were Rumanian state secrets and could not be examined), her study did not show at what blood-lead levels an effect on sperm count and motility occurs. Nor did it show whether the observed effects affected fertility other than in a group of lead poisoned workers with blood-lead level concentrations ranging far above levels permitted by current industrial practices. Indeed, Lancranjan's study was so materially flawed that the Chairman of the recent International Amsterdam Conference of Industrial Hygienists warned that standards for occupational lead exposure cannot be based upon the effects described in Lancranjan's study.

Brief for Petitioners at 63, United Steelworkers v. Marshall, 8 OSHC 1810 (D.C. Cir. 1980). Another commentator, Dr. Jeanne Stellman of the Women's Occupational Health Resource Center at Columbia University, doubts that lead has transplacental effects, for there is not one clear-cut experiment establishing lead as a teratogen. Sevoro, supra note 3, § 1, at 36, col. 6.

⁵⁰. Carcinogen Standard, supra note 10, at 5020-84. OSHA's position is that regulation of cigarette smoking, even though smoking is a major cause of cancer, would go beyond the purview of the Act. Id. at 5033. The American Cancer Society estimates that smoking cigarettes may account for as much as 80% of lung cancers, the leading cause of cancer deaths in males in the United States. American Cancer Society, Lung Cancer—Cigarette Smoking Causes at Least 80% of Lung Cancer, in Cancer Facts and Figures 5 (1977). See also Report of the Surgeon General, Dept. of Health, Education & Welfare, Smoking and Health (1979). The 1979 Report of the Surgeon General found that the risk of developing lung cancer increased with age, was higher in whites than non-whites, and bore a dose-response relationship to cigarette smoking. The report also stated that there is interaction between smoking and occupational exposures which increases the risks to workers, that is, tobacco products may serve as vectors by becoming contaminated with toxic agents found in the workplace. This facilitates entry of the chemical agent by inhalation, ingestion, or skin absorption. Public Health Service, Dept. of Health, Education & Welfare, Report of the Surgeon General 7-5 (1979).

Smoking can cause a variety of other harmful effects. Smoking may transform workplace chemicals into more harmful agents, such as those which caused...
In sum, there seems to be little evidence of any significant difference between the sexes with respect to a carcinogenic response to chemical exposure. The empirical data, however, is in general so scanty, especially for women — knowledge of health hazards is principally derived from experience with men — that it is impossible to be certain.

C. Embryofetotoxic and Teratogenic Agents

Embryofetotoxic or teratogenic agents\(^\text{51}\) are those agents that cross the placenta (transplacental) and are toxic to embryos, almost always at concentrations that would have no effect on the male or female adult.\(^\text{52}\) The question, therefore, is not whether the female

outbreaks of polymer fume fever in workers exposed to polytetrafluoroethylene. Certain toxic agents in the workplace also may occur in tobacco products or cigarette smoke, resulting in increased exposure to an agent. Finally, smoking may cause an additive biological effect by contributing to an effect comparable to that which can result from exposure to toxic agents found in the workplace, such as the additive effects of smoking and exposure to coal, cotton dust, beta radiation, chlorine, and exposures among firefighters. A synergistic effect (an interaction in which the total effect of two chemicals may be greater than the sum of the effects of the individual chemicals) much more profound than that anticipated from the separate influences of the toxic agent and smoking may be caused when smoking acts in conjunction with toxic agents. An example of a synergistic interaction is benzo(a)pyrene and benzo(a)anthracene, which are carcinogenic on mouse skin but whose potency is increased a thousandfold in the presence of n-dodecane, which is noncarcinogenic by itself. See Carcinogen Standard, supra note 10, at 5020-21.

51. An embryofetotoxin is defined as a chemical that manifests an effect upon the conceptus from the point of fertilization until birth. This definition, which does not include in-uterine-induced carcinogenicity and mutagenic-induced abnormalities, is consistent with the EPA's definition of a teratogen set forth in 40 C.F.R. § 162.3 (mm) (1980). Such toxins may induce death, anatomical malformations, metabolic or physiological dysfunction, or behavioral alteration either at birth or in the postnatal periods.

52. Rice, An Overview of Transplacental Carcinogens, 8 Teratology 113 (1973). Exceptions, however, do exist. During pregnancy, the concentration of red cells in the blood (and, therefore, hemoglobin) falls because of the increase of plasma. This is commonly referred to as physiological anemia of pregnancy. If there is an exposure to benzene or lead during this time, the problem is compounded because both of these chemicals affect the blood forming mechanism. See National Institute for Occupational Safety & Health, Dep't of Health, Education & Welfare, Human Health and the Environment—Some Research Needs 315-29 (1977); National Academy of Sciences, Environmental Chemicals as Potential Hazards to Reproduction, in Principles for Evaluating Chemicals 156 (1975).

This toxic differentiation is not limited to fetuses. Certain agents are also more toxic to children than to adults. The hazards to the children are greater because their bodies are developing and are more susceptible to health effects. A 1977 amendment to the Child Labor Laws permits, upon waiver by the Secretary of Labor, ten- and eleven-year-old children to work on farms picking crops. See Fair Labor Standards Act, 29 U.S.C. §§ 201-219 (1976), as amended by Fair Labor Standards Amendments of 1977, Pub. L. No. 95-151, 91 Stat.
employee is more susceptible, or is at a greater risk of adverse health effects from preconception exposure, than the male employee. The problem is rather the in-utero exposure of the fetus during gestation and the female is involved only because she is uniquely capable of bearing children. Protection or removal of the female from exposure to such agents should not be characterized, then, as an issue of discrimination against the female employee because she is female. The problems related to the right of women to continue working until term and the recent amendment to Title VII which regards pregnancy as a disability are overshadowed by the dilemmas inherent in attempting to protect unborn children from exposure to toxic substances in the workplace.

The potential of some chemical substances to cause damage to a developing embryo has long been recognized. For example, lead served as an abortifacient many years ago. In the early 1900's, the decreased fertility and increased abortion rate of women in the lead pottery industry led to the widespread enactment of labor codes forbidding the employment of women in industries where lead was a hazard.

1245, 1250-51 (1977). These crops may be sprayed with pesticides which are known to cause cancer, birth defects, and genetic mutations. Both OSHA and EPA have warned that there are no criteria which can be used to establish tolerance limits for working children. Epidemiological information on the effects of toxic agents on children in prepubertal ages is nonexistent. [1978] OCC. SAFETY & HEALTH REP. (BNA) 1125. Recently two United States Courts of Appeals ruled that the Secretary of Labor cannot waive regulations prohibiting the use of 10- and 11-year-olds to harvest agricultural crops until objective data is developed providing absolute proof that pesticide exposure will not result in adverse health effects. See National Ass'n of Farmworkers Organizations v. Marshall, 628 F.2d 604 (D.C. Cir. 1980); Washington State Farm Bureau v. Marshall, 625 F.2d 296 (9th Cir. 1980). The United States Court of Appeals for the District of Columbia Circuit also determined that the appropriate notice-and-comment rulemaking had not taken place regarding the regulation prohibiting employment of 10- and 11-year-olds and enjoined further waiver under the regulation until there had been compliance with the proper procedure. National Ass'n of Farmworkers Organizations v. Marshall, 628 F.2d at 622-23. For a discussion of the rulemaking procedure, see notes 113-15 and accompanying text infra. In response, the Department of Labor reassessed and republished a final rule. See 45 Fed. Reg. 55,175 (1980). That rule requires the party seeking a waiver either to state that no pesticides or other chemicals will be used or to submit data from which the Secretary can determine that there is no danger to the children involved. Id. at 55,177. At present, this apparently is an impossible burden since none of the comments submitted in response to the proposed rule was able to demonstrate absolute safety. Id.


55. WOMEN AND THE WORKPLACE, supra note 3, at 246.
Perhaps the most dramatic incident involved the ingestion of Thalidomide, a tranquilizer used in Europe for several years.\textsuperscript{56} The drug caused tragic malformations in children delivered by women who had taken it during their pregnancy. A new class of physical and chemical agents, which might be termed embryocarcinogens, are only now being discovered. These agents create cancers in the fetus, which can manifest their effects as late as twenty years after birth.\textsuperscript{57}

One cannot overstate the sensitivity of the developing human embryo in utero, particularly during the first trimester of pregnancy. While there is little gain in size during this time, an incredibly intricate series of biochemical events occurs, involving both rapid cell division and differentiation.\textsuperscript{58} These processes are highly interdependent. If one step is delayed, even slightly, relative to others, the result can be a drastic change in the overall developmental pattern. Agents may have a pronounced effect on the infant during organogenesis (formation of organs), as was the case with Thalidomide. Because development is from relatively undifferentiated cells to a large number of specialized types, the earlier the embryo is exposed to a toxin, the more serious the result. Furthermore, differentiation begins within a few days of conception, so that irreversible damage can occur long before pregnancy is clinically detectable.\textsuperscript{59} Because most toxic molecules are able to pass from the mother’s blood to the embryo by simple diffusion, there is a potential for fetal damage if the mother is exposed to toxic

\textsuperscript{56} Another disturbing example is Minamata disease, a neurological disorder detected in Japan in 1956. See Smith, \textit{Congenital Minamata Disease: Methyl-Mercury Poisoning and Birth Defects in Japan}, in \textit{Women and the Workplace}, supra note 10, at 75-76. The disease developed because mercury was dumped into a river that emptied into Minamata Bay, where finfish and shellfish were harvested and subsequently ingested. Investigations determined that if a woman’s methyl-mercury intake was great enough, she would become acutely ill and unable to conceive. If she ingested less of the compound, she could become pregnant but the child would be born dead or would be aborted spontaneously. Finally, if a still smaller dose was ingested, a child would be born with the characteristic symptoms of neurological damage due to mercury. See generally P. D’Itri & F. D’Itri, \textit{Mercury Contamination: A Human Tragedy} (1977).

\textsuperscript{57} Agents that are apparently nontoxic to the fetus in utero because they have been detoxified by the mother may nevertheless be toxic to the newborn infant if it is born with the agent in its body tissues. The infant may not have the enzyme system or complex metabolic mechanism to detoxify it.

\textsuperscript{58} Differentiation is the process whereby a cell becomes characteristically a specific kind, for example, a muscle cell.

\textsuperscript{59} The latency period between exposure to a carcinogen and the onset of cancer is often shortened by transplacental exposure. McLachlan, \textit{Male as well as Female are Affected by In Utero Exposure to Diethylstilbestrol}, in \textit{Women and the Workplace}, supra note 10, at 92.
materials through ingestion, skin absorption, or inhalation. In addition, since the embryo's organ systems are not developed, they lack the compensatory and homeostatic mechanisms that can control or negate toxicity in adults. Thus, not only is the embryo affected more drastically, it is also sensitive at much lower levels. The list of embryotoxic agents is endless, but recognition of the number of sources involved still may understate the scope of the problem. Even sub-critical exposures to toxic agents may decrease the developmental potential of the child, for example, by lowering intelligence and decreasing overall health. The problem is further complicated by the fact that identification of the worker contemplating parenthood is beyond the scope of current regulatory competence. In addition, there is no reliable method of ascertaining human pregnancy prior to three weeks after conception, and many women are pregnant for four to six weeks before they know it. Thus, the awareness of pregnancy (or fatherhood) often does not occur until after a critical ontogenic period during which injury of an irreversible nature may occur. This is important when one considers the mutagenic activity of certain substances, which occurs before conception, as opposed to developmental embryofetotoxic effects that occur later in pregnancy. The simplistic approach of protecting the fetus by removing the woman from the workplace after confirmation of pregnancy is not the answer. A woman will not and cannot know that she is pregnant early enough to prevent fetal damage. Action must be taken prior to that time.

Even if very early pregnancy detection were possible, the problem presented by the fertile woman in the workplace would not be resolved. The body deals with cumulative toxins by storing them in various metabolically inert locations such as bone (lead) or fat (DDT), whereupon they are slowly released at levels manageable to the adult organism. Unfortunately, this means that exposure of potential parents weeks or even years prior to conception can do significant damage to the toxically sensitive embryo.

III. The Problem of Differentiation: A Solomon's Solution?

In a recent series of policy pronouncements, OSHA has expressed grave concerns about the workplace exclusion of women

60. Krause, Pregnant Women in the Workplace, A Company Program to Control Toxic Exposures, Nat'l Safety News 52 (Feb. 1979); Panel Discussion, in Women and the Workplace, supra note 3, at 327, 332.
61. See text at pages 315-16 infra.
exposed to toxic hazards. The concerns, however, are not addressed to the health and safety of female workers, but rather to the problem of discrimination which may result from the exclusion. 62  In a letter sent in the spring of 1978 to approximately four hundred company doctors, Eula Bingham, then Assistant Secretary of Labor for Occupational Safety and Health, suggested that employers should make the workplace safe by reducing or eliminating dangerous exposures to toxic substances, not by excluding certain workers. 63  At an AFL-CIO workshop in the fall of 1978, Robert Jennings, of OSHA's policy office, encouraged women who have been told that they must change jobs because they are of childbearing age to file discrimination complaints with OSHA, the EEOC, and the Office of Federal Contract Compliance Programs (OFCCP). 64

OSHA's anti-discrimination policy culminated in the issuance of a citation and proposed $10,000 penalty against American Cyanamid Company. 65  The company allegedly developed a policy of requiring female employees to be sterilized in order to continue working in areas of its Willow Island, West Virginia chemical plant where the women would be exposed to certain toxic substances, principally lead. 66  OSHA asserted that this policy constituted a willful violation of section 5 (a) (1) of the Act, 67  which requires employers to provide employment free from recognized hazards likely

62. Problems with respect to the failure or refusal to hire persons identified as "hypersusceptible" also may be evidenced, for when genetic screening is utilized in pre-employment testing, it has the potential for becoming a discriminatory tool. Severo, supra note 3, § 1, at 1, cols. 1-2 and § 1, at 56, cols. 1-2. Severo stated that:

"There is mystery about the Federal Government's role. A regulation, well known to industry, exists in rules promulgated by the Occupational Safety and Health Administration. To industry, the regulation is a mandate for genetic screening, but key people in OSHA were either unaware of its existence or unable to explain it.

Id. § 1, at 36, col. 1. The regulation in question prescribed the medical surveillance requirements of the 1974 Carcinogen Standard, 29 C.F.R. 1910.1004 (g)(1)(i) (1980). OSHA later stated that the regulation was not intended to be used to exclude the hypersusceptible from employment, even though the regulation recognizes that there are persons identified as being more prone to development of cancer due to genetic factors. [1980] OCC. SAFETY & HEALTH REP. (BNA) 859. See also OSHA Instruction STD 1-23.4 (Aug. 22, 1980) (workplace health standards which mention genetic factors in review of employee medical histories do not require genetic testing).


64. Id. at 519.


66. Id.

to cause death or serious physical harm. According to OSHA, the company's policy, which became effective in October 1978, resulted in five female employees undergoing sterilization to retain their jobs in lead exposure areas.

The problem, however, is not just exposure of the female workers, but possible fetal toxicity caused by the blood lead levels that the women tolerate. This compounds the problem, because many standards, and in particular the lead standard, do not adequately protect the fetus. The final lead standard established a permissible exposure limit (PEL) of 50 μg/m³ averaged over an eight-hour period, the lowest level for which there is evidence of feasibility. OSHA stated that compliance with the standard would ensure equal employment for both men and women. In truth it will ensure only equal carcinogenic exposure. In order to provide necessary protection against the effects of lead exposure, the blood lead level of workers in the lead industry must be set below 40 μg/100g. Although the standard's 50 μg/m³ PEL may improve industrial conditions and provide some protection for workers who do not plan to become parents, this standard will not achieve the goal of maintaining the blood lead levels in all occupationally exposed workers below 40 μg/100g.

Moreover, OSHA stated that the blood lead level of men and women who plan pregnancies should be maintained at less than 15 μg/100g.

On September 11, 1980, OSHA charged in a similar citation that Bunker Hill Company of Kellogg, Idaho willfully adopted and administered a corporate policy requiring women employees to undergo sterilization in order to be eligible to work in areas of the plant where they would be exposed to lead. The Company responded that although it has a written policy that it will not employ women capable of bearing children in areas where they would be exposed to lead, that policy does not mention sterilization. [1980] Occ. SAFETY & HEALTH REP. (BNA) 397. Documents from OSHA and the EEOC reportedly reveal that complaints are pending against several other companies including Allied Chemical, B.F. Goodrich, and General Motors. Severo, supra note 5, §1, at 36, col. 5. These complaints could be affected by the recent decision of an administrative law judge vacating the willful violation of §5(a)(1) of the Act by American Cyanamid Co. On April 27, 1981, after an expedited review before the three-member Commission, the vacation of the citation was upheld by the Commission on the basis that the citation failed to allege a violation cognizable under the general duty clause of the Act. [1981] DAILY LAB. REP. (BNA) No. 84.

70. Id. at 52,966.
71. Id. at 52,963.
72. Id. OSHA predicted that "29.3 percent of exposed lead workers will have [blood lead levels] about 40 μg/100g at any one time when uniform compliance with 50 μg/m³ PEL is achieved." Id.
30 μg/100g during this period. The lower level is also necessary to protect the fetus, which is particularly susceptible to neurological damage in any level above 30 μg/100g. As stated in the standard, "[t]here is conclusive evidence that lead crosses the placenta of pregnant women and enters the fetal tissues." OSHA specifically recognizes that the standard of 50 μg/m³ PEL will not protect either the fetus or the worker planning a pregnancy. The only way in which the standard proposes to protect these two categories of susceptible persons is to establish a 30 μg/100g action level and possibly to remove workers who wish to plan pregnancies or who are pregnant when exposures reach that level. By suggesting removal, OSHA specifically recognizes that the lead standard cannot feasibly protect either fetuses or workers who plan pregnancies.

More importantly, the standard provides and confirms that particular classes of employees are more susceptible than others and require a higher level of protection against a toxic substance than do the rest of the workforce. In an anomaly, however, OSHA states in the standard that there is "no basis whatsoever for the claim that women of childbearing age should be excluded from the workplace in order to protect the fetus or the course of pregnancy." Apart from dealing with the problem of inconsistencies within OSHA concerning the removal of workers from the workplace, employers

73. Id.
74. Id. at 52,966. The Center for Disease Control, the Toxicology Committee of the National Academy of Sciences, and the EPA recommend that blood lead levels of children also be kept below 30 μg/100g. Id. OSHA recognizes that blood lead levels of persons planning pregnancies or pregnant women should be maintained below 30 μg/100g. Id. at 52,960. Certainly the fetus and newborn should be similarly protected. Id. at 52,966. When compliance with the standard is achieved, the mean blood lead level for a population of lead workers will uniformly be 35 μg/100g. Id. At this level neither reproduction nor the fetus will be protected.

75. Id. at 52,965.
76. Id. at 52,966.
77. Id.
78. Id. In the preamble to the lead standard, OSHA states that considering groups of individuals who may exhibit a greater susceptibility is appropriate. Id.

79. Id. A lack of knowledge about reproductive toxicology has resulted in an emphasis on workplace exposures of women, but such an emphasis fails to recognize the effects of paternal exposure. Prohibition of the exclusion of women does not recognize that males are at risk from exposure and that male exposures can result in defective sperm, which may lead to birth defects. The major problem facing both industry and regulatory agencies is limited knowledge about reproductive hazards, in particular what levels of exposure may cause harm to a developing fetus, even if the mother and father are safe.
who do not remove susceptible employees from exposure also face conflicts with the discrimination laws.

In an attempt to resolve the problem of fair and equitable treatment of the employment rights of women when there is exposure to hazardous substances, the Equal Employment Opportunity Commission (EEOC) and the Office of Federal Contract Compliance Programs (OFCCP) issued draft interpretive guidelines.\(^80\) The guidelines were premised on the assumption that laws prohibiting discrimination in employment are consistent with those laws designed to assure a workplace free of conditions that threaten the health or safety of employees.\(^81\)

The proposed guidelines stated that some employers have adopted policies of either not hiring women of childbearing capacity for jobs in which there is exposure to alleged reproductive hazards or terminating or transferring women to lower paying jobs.\(^82\) In the opinion of the EEOC and OFCCP, these policies have been developed without apparent regard to whether exposure of the father can also result in harm to the unborn child.\(^83\) Title VII and Executive Order No. 11,246,\(^84\) according to the guidelines, require that enforcement agencies closely scrutinize the exclusion of a sex-based class from consideration for employment.\(^85\) Such exclusions are per se violations of Title VII, because "the exclusions are expressed or implemented in terms of membership in a class protected by Title VII."\(^86\) The guidelines pointed out that as a result of the Pregnancy Discrimination Act,\(^87\) women affected by pregnancy, childbirth, or related medical conditions constitute a protected class and for employment-related purposes must be treated the same as other persons not so affected.\(^88\)

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80. Interpretive Guidelines on Employment Discrimination and Reproductive Hazards, 45 Fed. Reg. 7514 (1980). OSHA did not join in the issuance of the draft guidelines; its basic role was defined as one of "consultation and coordination." Id. The EEOC and OFCCP "especially" noted that the proposed guidelines do not attempt to implement or enforce OSHA policies related to health and safety. Id. The task of assuring a workplace free of conditions that threaten the health or safety of employees remains with OSHA. Id.

81. Id.

82. Id. at 7514-15.

83. Id. at 7515.


86. Id.


Employers could establish neutral policies under the guidelines to protect all employees from workplace hazards.\textsuperscript{89} If such policies had an adverse impact on one sex, however, they would have to be justified in accordance with relevant legal principles.\textsuperscript{90} Thus, when an employer seeks to determine hazardous reproductive effects from exposure to a certain substance or condition, he must determine the effects on males and nonpregnant females, as well as pregnant women, from that exposure.\textsuperscript{91} If the hazard is known to affect the fetus through either parent, the excluded class cannot be limited to women alone, and, if the hazard is known to affect the fetus through women only, the excluded class must be limited to pregnant women, not to all women of childbearing capacity.\textsuperscript{92}

The EEOC and the OFCCP recognized that there may be situations where an employer has scientific evidence of reproductive harm to only one sex-based class and no evidence regarding the other sex-based class.\textsuperscript{83} Under those circumstances, the guidelines would have permitted a “temporary emergency exclusion” policy protecting the endangered sex-based class, provided that the policy was “(a) narrowly tailored to those individuals to whom harm is indicated, (b) reflect[ed] consideration and adoption of suitable alternatives, and (c) provide[d] for timely completion of research on

\textsuperscript{89} Id.


In determining whether an employer’s conduct is nondiscriminatory, the draft guidelines state that the following factors are among those which may be considered: (1) whether the reproductive policy is applied consistently to employees and applicants of both sexes, and to all recognized reproductive hazards in the workplace; (2) whether information obtained from the OSHA or other governmental authorities shows that the employer has not complied with applicable occupational safety and health laws; (3) whether the employer has investigated the effects of all recognized reproductive hazards present in the workplace on those classes adversely affected by the policy and those not adversely affected; (4) whether the employer had excluded the adversely affected sex from the same employment opportunities prior to the adoption of the policy; (5) whether the hazard is significantly greater for or confined to the class excluded than for the class not excluded; (6) whether the class adversely affected by the policy is narrowly tailored to the type of hazard posed; (7) whether the hazard poses a significant health risk to body systems other than the reproductive system for the class not excluded; (8) whether the employer has investigated alternatives to the exclusion of adversely affected employees from the workplace and adopted the alternative means where feasible; and (9) whether the employer is monitoring scientific research and technological developments which may affect the appropriateness of its policy. 45 Fed. Reg. 7516-17 (1980).

\textsuperscript{91} 45 Fed. Reg. 7515 (1980).

\textsuperscript{92} Id.

\textsuperscript{93} Id.
the other sex-based class." 94 Finally, an employer was permitted
to temporarily remove employees of both sexes from work areas
containing reproductive hazards, if such employees declared an
intention to parent children and voluntarily requested such exclu-
sions.95

The guidelines seem to be a step in the right direction, for the
EEOC and the OFCCP apparently are concerned about the repro-
ductive health of parents and the effects of exposure to toxic sub-
stances on the fetus. The guidelines also seem to recognize that
there may be situations justifying exclusion of certain classes of
persons from the workplace. OSHA and at least one employee
union, however, criticized the draft interpretive guidelines, con-
sidering them to be a real setback.96 Partially as a result of this
criticism and OSHA's failure to join in their issuance, the proposed
guidelines were withdrawn.97 The agencies involved concluded
that the most appropriate method of eliminating differentiation in
the workplace where there is potential exposure to reproductive
hazards is through investigation and enforcement of the law on a
case by case basis.98

The Environmental Protection Agency (EPA) has also
expressed its concern with the health of the fetus and particularly
with the exposure of fertile females to ferriamicide which contains
MICEX, a fetotoxic agent in a pesticide used against fire ants.99
Invoking its authority under the Toxic Substances Control Act
(TSCA),100 the EPA prohibited women of childbearing age from
using the pesticide under any circumstances.101 The EPA stated

94. Id.
95. Id. at 7516.
96. [1980] OCC. SAFETY & HEALTH REP. (BNA) 804. OSHA stated that the
guidelines caused it great concern because of the temporary removal provisions
therein. Id. The Oil, Chemical, and Atomic Workers Union suggested that
the guidelines might result in workers being worse off than they are presently.
Id. For a summary of other comments on the proposed guidelines, see id. at
91-92.
98. Id.
99. See [1979] OCC. SAFETY & HEALTH REP. (BNA) 1481. See also 44 Fed.
Reg. 66,616 (1979). Proposed rules issued by the Food and Drug Administra-
tion recognize that the pregnant woman, human embryo, and fetus are par-
ticularly susceptible to a variety of chemicals, drugs, viruses, and other physical
agents, and therefore propose recommendations to reduce and minimize the
radiation of the human embryo and fetus from diagnostic X-ray procedures.
that although it did not favor actions that might result in limiting jobs available to women, the trade-off was essential.102

TSCA has only recently come into full operation, and its full impact on this area has yet to be realized. Nevertheless, TSCA appears to clearly expand existing federal authority to regulate the chemical industry by granting the EPA authority to compel testing of chemicals and to regulate their production, use, and disposal.103 The House Report in support of TSCA states that “the overriding purpose of the bill is to provide protection of health and the environment through authorities which are designed to prevent harm.” 104 Congress’s concern was generated by the “vast volume” of chemicals that have become a “pervasive and enduring part of our environment . . . [and] have, for the most part, been released into the environment with little or no knowledge of their long-term health or environmental effects.” 105

Is it not OSHA’s purpose, as it is TSCA’s, to prevent harm, or is it rather to regulate job security under the guise of an anti-discrimination policy?108 If the former is the case, should it take

102. Id. EPA Administrator Barbara Blum explained:
We share your concern about sex-based distinctions in regulatory decisions. In some cases, however, such distinctions are justifiable. In the case of ferriamicide, the decision to prohibit females of child-bearing age was based on test data showing that mirex, the principal ingredient in ferriamicide, caused adverse effects in the offspring of treated animals. EPA toxicologists interpreted this data as indicating that pregnant women who are exposed to ferriamicide may have abnormal children. In fact, we tried to find a way to provide protection for pregnant women, which would not affect nonpregnant women’s employment. The obvious ways, such as not excluding those either permanently or temporarily sterile, would result in impossible legal and administrative problems. How, for example, would an employer assure itself to avoid subsequent liability that the employee on birth control pills had remembered to take them? Would the company physician be required to subject women employees to routine pelvic examinations, and if so, how often? I can’t imagine that requirements like that would not be considered an unacceptable invasion of personal privacy. One might also permit women who would assert that they are not pregnant to waive the prohibition by consent, since it is for their protection. The consensual waiver would also insulate the employer from liability for claims asserted by the employee. The rights of an injured child, however, cannot and indeed should not be waived.

Id. at 1482.

105. Id. at 3. TSCA provides an opportunity to depart from the traditional modes of regulation by authorizing the control of substances according to categories of chemicals. Maugh, Chemicals: How Many are There?, 199 SCIENCE 162 (1978). Under § 8(b)(1) of TSCA, EPA must “compile, keep current, and publish a list of each chemical substance which is manufactured or processed in the United States.” 15 U.S.C. § 2607(b)(1) (1976).
106. See Taylor Diving & Salvage Co. v. United States Dep’t of Labor, 599 F.2d 622, 625 (5th Cir. 1979) (stating that OSHA may not regulate job security).
precedence over Title VII's purpose of providing equal employment opportunity? The next sections of the article will set out the ramifications of this conflict.

IV. THE RAMIFICATIONS OF DIFFERENTIATION FROM THE OCCUPATIONAL SAFETY AND HEALTH PERSPECTIVE

A. Duties of Employers and Employees

In 1970, Congress declared that its purpose in enacting OSHA was "to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve health." 29 U.S.C. § 658(b)(1) (1976) (emphasis added). In order for the § 4(b)(1) exemption to apply, the other federal agency with jurisdiction over the employer must not only have statutory authority to adopt regulations affecting job safety and health, but must actually exercise that authority. Predictably, the issue of what constitutes an actual "exercise of authority" by another federal agency over safety and health conditions of employees has produced much litigation. A large number of federal agencies have promulgated safety and health standards covering employees in various industries and thus have come into conflict with OSHA. The most frequent conflict is between OSHA and the Department of Transportation. See, e.g., Marshall v. Northwest Orient Airlines, Inc., 574 F.2d 119 (2d Cir. 1978); Baltimore & Ohio R.R. v. OSHRC, 548 F.2d 1052 (D.C. Cir. 1976); Southern Pac. Transp. Co. v. Usery, 539 F.2d 386 (5th Cir. 1976), cert. denied, 434 U.S. 874 (1977). Other federal agencies also have come into conflict with OSHA. See, e.g., Organized Migrants in Community Action, Inc. v. Brennan, 520 F.2d 1161 (D.C. Cir. 1975) (Environmental Protection Agency); Aluminum Co. of America v. Morton, 3 OSHC 1624 (D.D.C. 1975) (Mining Enforcement & Safety Administration, Dep't of Interior); Mangus Firearms, 3 OSHC 1214 (1975) (Bureau of Alcohol, Tobacco, and Firearms, Dep't of the Treasury); Gearhart-Owen Indus., Inc., 2 OSHC 1568 (1975) (Dep't of Defense).

The Occupational Safety and Health Review Commission has set up a three-part guideline to determine whether the exemption provided by § 4(b)(1) of the Act is operative: the sister agency must have statutory authority to regulate the specific working condition (the environmental area where an employee goes about his daily tasks); the sister agency must have actually exercised its authority to prescribe and enforce safety and health standards; and the policy or purpose of the enabling legislation of the sister agency must be to assure safe and healthful working conditions for the benefit of employees. See Hermann Forawrding Co., 3 OSHC 1253, 1254 (1975).

If the other agency has not met the guidelines, then the § 4(b)(1) exemption is not operative, and OSHA may exercise its authority. Some agencies specifically provide in their own regulations for deferral to OSHA because of its primary authority to regulate safety and health conditions of employees. For example, the Consumer Product Safety Commission is required to defer to OSHA. See 43 Fed. Reg. 25,660 (1978).

108. One aspect of the conflict that is not within the scope of this article is the potential cause of action that either the mother of a malformed or still-born child, or the child itself, might have under relevant state law. Such an action is maintainable in about half the states. See Note, Employment Rights of Women in The Toxic Workplace, 65 Calif. L. Rev. 1113, 1192 nn.79 & 80 (1977).
published its intentions in the Federal Register as a "Notice of Proposed Rulemaking" or often as an earlier "Advance Notice of Proposed Rulemaking." 118 The notice includes the terms of the rule and provides a specific time (at least thirty days from the date of publication, but occasionally sixty days or more) for the public to respond. 114 Interested parties who submit written arguments and pertinent evidence may request a public hearing on the proposal when none has been announced in the notice. 115

In promulgating standards dealing with toxic materials or harmful physical agents, the Secretary of Labor is required under the Act to "set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life." 116 The validity of any OSHA standard promulgated under the toxic materials section of the Act is subject to pre-enforcement judicial review.

110. Id. § 654.
111. Id. § 654(a)(2). These specific standards are intended to be the primary method of compliance with OSHA objectives. Enforcement is carried out through inspections, citations, and penalties. See id. §§ 657-659.
112. Id. § 652(8).
113. Id. § 655(b)(2).
114. Id.
115. Id. § 655(b)(3). OSHA must schedule such a hearing if requested, and must publish in advance the time and place for the hearing. Id. OSHA does not explicitly refer to or provide for adherence to the provisions of the Administrative Procedure Act; instead, the Act provides for a hybrid of informal and formal rulemaking in its promulgation procedure. A pre-promulgation hearing is required if requested and is conducted under the substantial evidence rule traditionally applied to formal rulemaking. See Industrial Union Dep't v. Hodgson, 499 F.2d 467, 472-74 (D.C. Cir. 1974).
review. Any person who is adversely affected by an OSHA standard may file a petition challenging its validity in the appropriate United States Court of Appeals at any time prior to the sixtieth day after issuance, promulgation, or modification. Bases for review are specifically provided for in the Act. Thus, section 6(e) of the Act states that "[w]henever the Secretary promulgates any standard, . . . he shall include a statement of the reasons for such action, which shall be published in the Federal Register." 119

117. Id. § 655(f).

118. Id. The affected person must have participated in the administrative proceedings. See Aqua Slide 'N' Dive Corp. v. Consumer Prod. Safety Comm'n, 569 F.2d 831, 839 (5th Cir. 1978). Unless otherwise ordered, the filing does not operate as a stay of the standard. 29 U.S.C. § 655(f). See Florida Peach Growers Ass'n v. United States Dep't of Labor, 489 F.2d 120, 126 (5th Cir. 1974). OSHA has authority to grant an administrative stay under § 10(d) of the Administrative Procedure Act, 5 U.S.C. § 705 (1976); the courts, a judicial stay under the Federal Rules of Appellate Procedure. See Fed. R. App. P. 18. The application for a stay must first be filed with the agency; then, in order to obtain a temporary stay from a court, a petitioner must show that: (1) he is likely to prevail on the merits; (2) he will be irreparably injured without a stay; and (3) a stay would not cause substantial harm to the public interest. United Steelworkers v. Marshall, 8 OSHC 1810 (D.C. Cir. 1980). OSHA temporarily postponed the lead standard to facilitate judicial consideration of motions to stay the standard pending full judicial review.

119. 29 U.S.C. § 655(e) (1976) (emphasis added). The Court of Appeals of the District of Columbia Circuit has given an excellent summary of what the "statement of the reasons" should contain:

What we are entitled to at all events is a careful identification by the Secretary, when his proposed standards are challenged, of the reasons why he chooses to follow one course rather than another. Where that choice purports to be based on the existence of certain determinable facts, the Secretary must, in form as well as substance, find those facts from evidence in the record. By the same token, when the Secretary is obliged to make policy judgments where no factual certainties exist or where facts alone do not provide the answer, he should so state and go on to identify the considerations he found persuasive.

Industrial Union Dep't v. Hodgson, 499 F.2d 467, 475-76 (D.C. Cir. 1974). In reviewing standards under § 6(f) of the Act, the courts have concentrated on assuring that OSHA's statement of reasons gives a rational explanation of the conclusions it has reached and that the statement indicates the available facts, the areas of uncertainty and dispute, the alternative resolutions of those areas, and the policies used to choose between alternatives. See, e.g., Synthetic Organic Chemical Mfrs. Ass'n v. Brennan, 503 F.2d 1155, 1157 (3d Cir. 1974), cert. denied, 420 U.S. 973 (1975); Florida Peach Growers Ass'n v. United States Dep't of Labor, 489 F.2d 120, 124 (5th Cir. 1974); Associated Indus., Inc. v. United States Dep't of Labor, 487 F.2d 342, 354 (2d Cir. 1973). Section 6(f) of the Act further provides that "[t]he determinations of the Secretary shall be conclusive if supported by substantial evidence in the record considered as a whole." 29 U.S.C. § 655(f) (1976). The substantial evidence test provides for more rigorous scrutiny of the promulgated standard than the usual arbitrary and capricious test applicable to informal administrative rulemaking. Under the substantial evidence test, a court must provide a careful check on the agency's determinations without substituting its judgment for that of the agency. The legislative history of the Act indicates, however, that standards were intended to be promulgated pursuant to informal rulemaking procedures and then reviewed by the less demanding "arbitrary and capricious test." Subcomm.
The second responsibility of the employer under the Act, which applies in all cases not covered by specific standards, is a general duty to "furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm." The phrase "causing or are likely to cause" has been construed to refer to an accident likely to result in death or serious physical injury, not to the likelihood of an accident's occurrence. This obligation, which is known as the "general duty clause," was

ON LABOR OF THE SENATE COMM. ON LABOR AND PUBLIC WELFARE, 92d CONG., 1st SESS., LEGISLATIVE HISTORY OF THE OCCUPATIONAL SAFETY AND HEALTH ACT 1189 (Comm. Print 1971) [hereinafter cited as LEGISLATIVE HISTORY].

In view of this conflict between the apparent intent of Congress and the clear language of the Act, courts have been forced to fashion their own tests for determining the validity of standards. A blanket arbitrary and capricious test has been rejected because of the express language in § 6(f). See, e.g., Associated Indus., Inc. v. United States Dep't of Labor, 487 F.2d at 947-48; cf. Florida Peach Growers Ass'n v. United States Dep't of Labor, 489 F.2d at 129 (even under substantial evidence standard, court's task is to determine reasonableness of Secretary's action). But the courts have also generally applied something less than an across-the-board substantial evidence test. See, e.g., American Iron & Steel Inst. v. OSHA, 577 F.2d 825, 830-31 (3d Cir. 1978), cert. dismissed, 101 S. Ct. 38 (1980); Synthetic Organic Chemical Mfrs. Ass'n v. Brennan, 503 F.2d 1155, 1159-60 (3d Cir. 1974), cert. denied, 420 U.S. 973 (1975); Industrial Union Dep't v. Hodgson, 499 F.2d 467, 475 (D.C. Cir. 1974). In American Iron & Steel, the court, in deciding a challenge to the coke oven emissions standard, stated: "As we examine the regulation at issue in this case, it is imperative to distinguish between determinations bottomed on factual matters, and non-factual, legislative-like policy decisions. It is only the former that we subject to the 'substantial evidence' test." 577 F.2d at 831.

Thus, the various courts of appeals, faced with the conflict between § 6(f) of the Act and the apparent intent of Congress to relax formal rulemaking requirements, have essentially adopted a hybrid scope of review. The Secretary's policy determinations, which must be substantiated by a detailed statement of reasons, are subject to the test of reasonableness. In reviewing determinations other than factual findings, such as legal consequences, the scope of review is generally "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," as set forth in the Administrative Procedure Act, 5 U.S.C. § 706(2)(A) (1976). See RMI Co. v. Secretary of Labor, 594 F.2d 566, 570 (6th Cir. 1979); Titanium Metals Corp. of America v. Usery, 579 F.2d 556, 540 (9th Cir. 1978); Marshall v. Cities Serv. Oil Co., 577 F.2d 126, 130-31 (10th Cir. 1977); Marshall v. Knutson Constr. Co., 566 F.2d 596, 600 (8th Cir. 1977); Brennan v. OSHRC (Hanovia Lamp Div.), 502 F.2d 946, 951 (3d Cir. 1974). The Second Circuit, however, has articulated that the scope of review is whether OSHA's decision is unreasonable and inconsistent with the purpose of the regulation in question. General Elec. Co. v. OSHRC, 583 F.2d 61, 64 (2d Cir. 1978).

121. Titanium Metals Corp. of America v. Usery, 579 F.2d 536, 543 (9th Cir. 1978); Usery v. Marquette Cement Mfg. Co., 568 F.2d 902, 910 (2d Cir. 1977).
122. The aspects of the general duty clause are: (a) failure of the employer to render his workplace free from a hazard; (b) which is recognized either by the custom and practice in the industry to which the employer belongs or by the employer's actual knowledge; (c) to cause or likely to cause death or serious bodily harm; and (d) which is preventable in the generic, not the particular,
incorporated into the Act in order to cover the wide variety of hazardous employment situations that fall outside the scope of specific standards. The general duty obligation is not designed, however, to impose absolute liability for the idiosyncratic behavior or negligence of employees. The obligation requires only that the employer do all it can feasibly do to eliminate hazardous conditions and hazardous conduct of employees. The Act states this purpose in its "so far as possible" wording, which is used in the preamble. As interpreted by the courts, this phrase denotes a goal capable of achievement; it does not require the elimination of all occupational hazards. Thus, the Secretary of Labor has the burden of showing by substantial evidence that specific, feasible measures would reduce the likelihood that injury from the hazard would have occurred. In order to prove a violation of the general


123. While general safety standards quite likely cover most conditions addressed by the specific standards, fairness to the employer requires the promulgation of specific safety standards where feasible. Senate OSHA Report, supra note 6, at 5184. See Arkansas-Best Freight Sys., Inc. v. OSHRC, 529 F.2d 649, 656 (8th Cir. 1976). Lacking the omniscience to perceive the myriad conditions in which specific standards might be addressed, however, the Secretary of Labor must at times resort to the general duty clause. See Senate OSHA Report, supra note 6, at 5185-86. Citations based on the general duty clause are limited to serious, including willful or repeated, violations. But where a standard covers a particular condition, the general duty clause should not be used as a basis for citation. See American Smelting & Ref. Co. v. OSHRC, 501 F.2d 594, 512 (8th Cir. 1974).

124. See, e.g., Schriber Sheet Metal & Roofers, Inc. v. OSHRC, 597 F.2d 78, 79 (6th Cir. 1979); Titanium Metals Corp. of America v. Usery, 579 F.2d 536, 543 (9th Cir. 1978); Getty Oil Co. v. OSHRC, 530 F.2d 1143, 1145 (5th Cir. 1976). The clause was designed and intended to require "a good faith effort to balance the need of workers to have a safe [sic] and healthy work environment against the requirement of industry to function without undue influence." LEGISLATIVE HISTORY, supra note 119, at 485 (Remarks of Senator Williams).

125. 29 U.S.C. § 651(b) (1976).

126. See, e.g., Brennan v. OSHRC (Hanovia Lamp Div.), 502 F.2d 946, 951 (3d Cir. 1974); REA Express, Inc. v. Brennan, 495 F.2d 822, 826 (2d Cir. 1974); National Realty and Constr. Co. v. OSHRC, 489 F.2d 1257, 1266 n.35 (D.C. Cir. 1973).

127. See, e.g., Champlin Petroleum Co. v. OSHRC, 598 F.2d 687, 640 (5th Cir. 1979); Titanium Metals Corp. of America v. Usery, 579 F.2d 536, 544 (9th Cir. 1978); National Realty & Constr. Co. v. OSHRC, 489 F.2d 1257, 1268 (D.C. Cir. 1973). The National Realty court reasoned that

because employers have a general duty to do virtually everything possible to prevent and repress hazardous conduct by employees, violations exist almost everywhere, and the Secretary has an awesomely broad discretion in selecting defendants and in proposing penalties. To assure that citations issue only upon careful deliberation, the Secretary must be constrained to specify the particular steps a cited employer should have taken to avoid citation, and to demonstrate the feasibility and likely utility of those measures.

489 F.2d at 1268.
duty clause, therefore, substantial evidence must show that a reasonably prudent employer in the industry would have known that a particular condition was required and that abatement was feasible.\footnote{128}

The general duty clause obligation has been applied to employee exposure to differentially toxic agents without requiring a conflict with a specific standard.\footnote{129} A hazard detectable only by a testing device or instrument and not simply by human senses also has been held to fall within the scope of the general duty requirement.\footnote{130} This does not mean, however, that the employer is a strict liability insurer or guarantor, for the obligation imposed by the general duty clause must be capable of achievement.\footnote{131}

In several cases construing the obligations imposed by the general duty clause, the courts have found that the employer must attempt to prevent hazardous conduct by employees through the feasible precautions of training, supervising, and disciplining.\footnote{132}

\begin{itemize}
\item \footnote{128} See General Dynamics Corp. v. OSHRC, 599 F.2d 453, 465 (1st Cir. 1979).
\item \footnote{129} See American Smelting & Ref. Co. v. OSHRC, 501 F.2d 504 (8th Cir. 1974) (airborne lead).
\item \footnote{130} See American Smelting & Ref. Co. v. OSHRC, 501 F.2d 504, 511 (8th Cir. 1974). \textit{But see} Statement of Representative Steiger on December 17, 1970, just prior to the House roll call on enacting OSHA:
\begin{quote}
The conference bill takes the approach of this House to the general duty requirement that an employer maintain a safe and healthful working environment. The conference-reported Bill recognizes the need for such a provision where there is no existing specific standard applicable to a given situation. However, this requirement is made realistic by its application only to situations where there are "recognized hazards" which are likely to cause or are causing serious injury or death. Such hazards are the type that can readily be detected on the basis of the basic human senses. Hazards which require technical or testing devices to detect them are not intended to be within the scope of the general duty requirement. . . . It is expected that the general duty requirement will be relied upon infrequently and that primary reliance will be placed on specific standards which will be promulgated under the act.
\end{quote}
\footnote{131} See, \textit{e.g.}, Brennan v. Butler Lime & Cement Co., 520 F.2d 1011, 1017 (7th Cir. 1975); National Realty & Constr. Co. v. OSHRC, 489 F.2d 1257, 1265-66 (D.C. Cir. 1975).
\item \footnote{132} See, \textit{e.g.}, I.T.O. Corp. v. OSHRC, 540 F.2d 543, 546 (1st Cir. 1976); Atlantic & Gulf Stevedores, Inc. v. OSHRC, 534 F.2d 541, 547 (3d Cir. 1976);
\end{itemize}
Moreover, even if the employer has established rules against recognized hazards, it must also assure that such rules are effectively communicated to its employees. It can be argued, therefore, that the Act mandates the employment of safe employees as well as safe employment.

By virtue of this obligation, OSHA can, must, and does regulate the employment of "safe" employees, for safe working conditions cannot coexist with unsafe working conduct. In terms of safety, studies have shown that the safest workers are experienced, white, and about forty years old. Thus, even without biochemical considerations, OSHA by regulating for safe employees arguably requires discrimination against blacks, most fertile women, the handicapped, and both older and younger workers. When consideration of exposure to toxic chemical agents is added, the Title VII problem becomes acute. Although this obligation may not conflict with Title VII to any great degree on an individual basis, in terms of idiosyncratic or susceptible groups, such as pregnant women or employees of childbearing age, the problem is more difficult, and the obligation may conflict with Title VII.

Under OSHA, the employer and the employees must share responsibility for this problem and cooperate in increasing the safety of working conditions. This purpose is set forth in section 2 (b) (2) of the Act, which provides "that employers and employees have separate but dependent responsibilities and rights with respect to achieving safe and healthful working conditions." Employees, in fact, are expressly required to comply with all standards, rules, regulations, and orders issued pursuant to the Act that are applica-

Horne Plumbing & Heating Co. v. OSHRC, 528 F.2d 564, 569 (5th Cir. 1976); Brennan v. Butler Lime & Cement Co., 520 F.2d 1011, 1018 (7th Cir. 1975); Brennan v. OSHRC (Hanover Lamp Div.), 502 F.2d 946, 952 (3d Cir. 1974).

133. General Dynamics Corp. v. OSHRC, 599 F.2d 453, 465 (1st Cir. 1979); Champlin Petroleum Co. v. OSHRC, 593 F.2d 637, 640-41 (5th Cir. 1979).

134. Danco Constr. Co. v. OSHRC, 586 F.2d 1243, 1247 (8th Cir. 1978); Getty Oil Co. v. OSHRC, 550 F.2d 1143, 1146 (5th Cir. 1976); Brennan v. Butler Lime & Cement Co., 520 F.2d 1011, 1018 (7th Cir. 1975); REA Express, Inc. v. Brennan, 495 F.2d 822, 826 (2d Cir. 1974); National Realty & Constr. Co. v. OSHRC, 489 F.2d 1257, 1266-67 & n.37 (D.C. Cir. 1973).


ble to their own actions and conduct;\textsuperscript{138} in theory, they could be cited for working under hazardous conditions.\textsuperscript{139} In spite of the Act's imposition of duties upon employees they are not now subject to legal sanctions or penalties for their noncompliance.\textsuperscript{140}

Since the enforcement scheme of the Act sanctions only the employer, the employer has the double responsibility of complying with the Act and assuring compliance by its employees, for the refusal of employees to fulfill the Act does not automatically absolve the employer of liability.\textsuperscript{141} This does not mean that employees need not comply with their responsibilities and obligations under the Act, however, for an employer can bargain in good faith with representatives of its employees for the right to discharge or discipline any employee who disobeys an OSHA standard, since occupational safety and health would seem to be subsumed within the subjects of mandatory collective bargaining (wages, hours, and conditions of employment) under the National Labor Relations Act (NLRA).\textsuperscript{142} Consistent with its duty to bargain in good faith, the employer can insist to the point of impasse upon the right not only to promulgate enforceable safety and health rules, but also to discharge or discipline disobedient, unsafe, or hazardous employees.\textsuperscript{143}

It must be noted in this respect that employees are by regulation given the right to refuse to work under hazardous conditions which they reasonably believe present danger of death or serious injury.\textsuperscript{144}

\textsuperscript{138} Id. § 654(b).
\textsuperscript{139} Marshall v. Whirlpool Corp., 593 F.2d 715, 722 n.8 (6th Cir. 1979), aff'd, 445 U.S. 1 (1980).
\textsuperscript{140} Atlantic & Gulf Stevedores, Inc. v. OSHRC, 534 F.2d 541, 553 (3d Cir. 1976) (relying on Secretary of Labor's opinion letter). \textit{See also} Senate OSHA Report, \textit{supra} note 6, at 5187. In this regard, compare OSHA with the Federal Mine Safety and Health Act of 1977, which provides for civil penalties against miners as well as employers for violation of certain mandatory health or safety standards embodied in the Act. 30 U.S.C. § 820 (a), (d), (g) (Supp. III 1979).
\textsuperscript{141} I.T.O. Corp. v. OSHRC, 540 F.2d 543, 546 (1st Cir. 1976); Atlantic & Gulf Stevedores, Inc. v. OSHRC, 534 F.2d 541, 555 (3d Cir. 1976).
\textsuperscript{143} Atlantic & Gulf Stevedores, Inc. v. OSHRC, 534 F.2d 541, 555 (3d Cir. 1976). In Atlantic & Gulf, the court reasoned that occupational health and safety was a mandatory collective bargaining subject under § 158(d) of the National Labor Relations Act, 29 U.S.C. § 158(d) (1976). 534 F.2d at 555.
\textsuperscript{144} \textit{See} Whirlpool Corp. v. Marshall, 445 U.S. 1 (1980). In Whirlpool Corp., the Supreme Court upheld a Department of Labor regulation which specifically permits an employee to refuse to work under hazardous conditions that he reasonably believes present a real danger of death or serious injury. The regulation provides:

(b)(l) On the other hand, review of the Act and examination of the legislative history discloses that, as a general matter, there is no
Susceptible employees conceivably could utilize this right, with OSHA approval, to refuse to expose themselves to toxic agents in the workplace by refusing to work. Because employees are permitted to take this action, it apparently would not be a violation of the Act for the employer to respond to their objective concern regarding exposure to a toxic hazard by removing them from the workplace. Strictly speaking, the employer could be in violation of the anti-discrimination provision of the Act if it took any adverse action with respect to the employees who exercised this right.\footnote{145}

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right afforded by the Act which would entitle employees to walk off the job because of potential unsafe conditions at the workplace. Hazardous conditions which may be violative of the Act will ordinarily be corrected by the employer, once brought to his attention. . . .

(2) However, occasions might arise when an employee is confronted with a choice between not performing assigned tasks or subjecting himself to serious injury or death arising from a hazardous condition at the workplace. If the employee, with no reasonable alternative, refuses in good faith to expose himself to the dangerous condition, he would be protected against subsequent discrimination. The condition causing the employee's apprehension of death or injury must be of such a nature that a reasonable person, under the circumstances then confronting the employees, would conclude that there is a real danger of death or serious injury and that there is insufficient time, due to the urgency of the situation, to eliminate the danger through resort to regular statutory enforcement channels. In addition, in such circumstances, the employee, where possible, must also have sought from his employer, and been unable to obtain, a correction of the dangerous condition.


Thus, employees may withdraw from a workplace to avoid hazardous conditions. However, as the Court noted, the regulation does not, as Congress did not, require employers to pay workers who refuse to perform their assigned tasks in the face of imminent danger. Whirlpool Corp. v. Marshall, 445 U.S. 1 (1980). An employer discriminates against an employee only when he treats that employee less favorably than he treats other employees similarly situated.

145. Section 11(c)(1) of OSHA provides:

No person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to this Act or has testified or is about to testify in any such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this Act.

29 U.S.C. § 660(c)(1) (1976). OSHA regulations set up a mechanism for the redress of any discrimination against an employee that was occasioned by the employee's exercise of any right afforded by the Act, "'[i]f [the] protected activity was a substantial reason for the [discrimination or the discriminatory] action would not have taken place 'but for' [the] engagement in protected activity.'" 29 C.F.R. § 1977.6(b) (1980). Cf. 29 U.S.C. § 157 (1976) (preventing the refusal of employees, under the NLRA, to work in abnormally dangerous conditions from being considered a strike. For application of §143, see Gateway Coal Co. v. UMw, 414 U.S. 368, 385-87 (1974).
The Act did not, however, guarantee job security. Thus, with or without approval of the employees' collective bargaining representative (or unilaterally if the employees are not represented), an employer has the authority and the obligation to enforce compliance with OSHA safety and health standards and to insist that only safe employees be permitted to work.

Since the Act is a remedial and safety statute, limited or narrow construction is to be eschewed. It must be interpreted in light of its primary purpose, the preservation of human life and the assurance of safe and healthful working conditions. The Act does not permit employers to force workers to labor under imminently hazardous conditions. OSHA's requirements may conflict, however, with either the NLRA or Title VII. When safety and health activities under OSHA and the NLRA conflict with one another, OSHA and the National Labor Relations Board (NLRB) have agreed that OSHA's interest is paramount. The agencies have reasoned that safety and health are specifically and primarily the purpose of OSHA and are only generally included in the broader right to engage in concerted activities under the NLRA. In fact, NLRB jurisdiction only takes precedence where necessary to maintain the preeminence of safety and health conditions, prevent violation of safety and health laws, or prevent employee exposure.

146. See Taylor Diving & Salvage Co. v. United States Dep't of Labor, 599 F.2d 622, 625 (5th Cir. 1979) (invalidating a regulation promulgated by the Secretary of Labor which gave OSHA the final say on the medical fitness of an employee).


148. See notes 109-12 & 120-24 and accompanying text supra.

149. In 1975, the NLRB General Counsel and the Labor Department Solicitor entered into a memorandum of understanding for the procedural coordination of litigation concerning complaints filed under § 11(c) of OSHA and § 8 of the NLRA. 40 Fed. Reg. 26,083 (1975). The OSHA/NLRB understanding is intended to provide explicit procedures for avoiding conflict and duplicative litigation without diminishing employee rights under either Act. Id. Because employee rights to engage in health and safety-related activities are more specifically protected by OSHA, the understanding provides for the deferral or dismissal of an NLRB charge when the factual matters and issues alleged in the charge are the subject of a complaint under § 11(c). Id. The NLRB General Counsel will, where appropriate, notify employees who have filed an unfair labor practice charge of the right to file a complaint under OSHA. Id. at 26,084.

150. Id. at 26,083.
sure to hazards in the workplace. Is this not the route that the EEOC should also take, for are safety and health not paramount to equal employment opportunity?

B. Feasibility Considerations

Various federal laws require that regulatory decisions be based solely or primarily upon the feasibility of controlling the release of or human exposure to toxic or cancer-causing substances. OSHA is such a law. Congress mandated in the Act that any severe risk to employee health and safety must be eliminated if feasible means exist.\textsuperscript{151} This calls for a two step analysis of OSHA: (1) determining whether a material health impairment is threatened by the suspect substance; and (2) determining whether the selected method of protecting workers from this risk is technologically and economically feasible.\textsuperscript{152}

The Act mentions feasibility only once, as a factor relevant in the formulation of permanent standards for toxic materials and harmful physical agents.\textsuperscript{153} The Secretary of Labor is required to promulgate a health and safety standard “which most adequately assures, to the extent feasible, on the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life.”\textsuperscript{154} In attaining the highest degree of feasible health and

\textsuperscript{151} The House Report concluded that “even the price of one life is too expensive when a meaningful occupational safety and health law could save many lives . . . . The well-being of every American working man and woman is an essential human right which we no longer deny.” H.R. Rep. No. 91-1291, 91st Cong., 2d Sess. 35 (1970), \textit{reprinted in Legislative History, supra} note 119, at 864. \textit{See also} Senate OSHA Report, \textit{supra} note 6, at 5222.

\textsuperscript{152} Material impairment of health is not defined in the Act. In the cotton dust case, however, the court, while not deciding what constitutes material impairment, found that all parties conceded that byssinosis causes material impairment in its \textit{chronic} stage. AFL-CIO v. Marshall, 617 F.2d 686 (D.C. Cir. 1979), \textit{cert. granted}, 101 S. Ct. 56, 68 (1980) (petitioners granted certiorari separately). In that case, the textile industry’s argument rested on the claim that the agency need not guard against the \textit{acute} but \textit{reversible} symptoms of byssinosis (brown lung disease), because they do not themselves constitute a material impairment of health. 617 F.2d at 654. The court found that OSHA’s mandate does not restrain it from acting to prevent \textit{reversible} health damage until workers actually suffer the \textit{early} symptoms of byssinosis but rather it is a mandate to reduce the risk of \textit{irreversible} damage, especially for those workers who have regular exposure to the causal agent, cotton dust. \textit{Id.}

\textsuperscript{153} \textit{See} 29 U.S.C. \textsection 655(b)(5) (1976).

\textsuperscript{154} \textit{Id.} The phrase “to the extent feasible,” which has taken on judicial significance, was added by Senator Jacob Javits who stated:

\textit{As a result of this amendment the Secretary, in setting standards, is expressly required to consider feasibility of proposed standards. This}
safety protection for the employee, other factors to be considered are the latest available scientific data in the field and experience gained under this and other health and safety laws. Even in the sensitive and fright-laden matter of cancer, in which courts have recognized the need for action based upon lower standards of proof than are otherwise applicable, evidence of feasibility still will be required.

Neither the statute nor the legislative history, however, defines feasibility or explains how the required limitations on safety and health are to be determined. These determinations have been left to administrative and judicial development. According to the courts, feasibility considerations include both economic and technological factors. Thus, the overall feasibility issue to be determined by courts and administrative agencies is whether the safety and health protection that a standard is designed to afford warrants the required technological difficulty and economic cost of compliance in general, and under what circumstances a particular employer's technological and economic hardship is entitled to consideration.

1. Economic Feasibility

While some observers have suggested that the Act was intended to protect workers regardless of the economic impact on

is an improvement over the Daniels bill [House bill] which might be interpreted to require absolute health and safety in all cases, regardless of feasibility, and the Administration bill which contains criteria for standards.


157. See cases cited in note 156 supra. See also Reserve Mining Co. v. EPA, 514 F.2d 492 (8th Cir. 1975).


employers, the prevailing interpretation of the feasibility limitation is that a standard that is prohibitively expensive is not "feasible." As the District of Columbia Circuit stated in *Industrial Union Department v. Hodgson*, 160 "Congress does not appear to have intended to protect employees by putting their employers out of business — either by requiring protective devices unavailable under existing technology or by making financial viability generally impossible." 161 On the other hand, "[s]tandards may be economically feasible even though, from the standpoint of employers, they are financially burdensome and affect profit margins adversely." 162 Implementation of the standard must approach "massive dislocation" or adversely affect the competitive structure of the industry in order to be characterized as economically infeasible.163

Most of the cases that have addressed the economic aspect of feasibility have focused solely on the employer's cost in meeting the standards requirements. In *Atlantic & Gulf Stevedores, Inc. v. OSHRC*, 164 the United States Court of Appeals for the Third Cir-

160. 499 F.2d 467 (D.C. Cir. 1974).
161. Id. at 478. *Accord, AFL-CIO v. Brennan*, 530 F.2d 109, 122-23 (3d Cir. 1975). The considerations involved in making such a determination were discussed in the *Industrial Union Dep't* decision:

This qualification of economic feasibility is not intended to provide a route by which recalcitrant employers or industries may avoid the reforms contemplated by the Act. Standards may be economically feasible, even though, from the standpoint of employers, they are financially burdensome and affect profit margins adversely. Nor does the concept of economic feasibility necessarily guarantee the continued existence of individual employers. It would appear to . . . envisage the economic demise of an employer who has lagged behind the rest of the industry in protecting the health and safety of employees and is consequently financially unable to comply with new standards as quickly as other employers. As the effect becomes more widespread within an industry, the problem of economic feasibility becomes more pressing. For example, if the standard requires changes that only a few leading firms could quickly achieve, delay might be necessary to avoid increasing the concentration of that industry.

499 F.2d at 478 (footnote omitted).

162. Industrial Union Dep't v. Hodgson, 499 F.2d at 478.

163. *Id.* In *American Iron & Steel Inst. v. OSHA*, 577 F.2d 825 (3d Cir. 1978), *cert. dismissed*, 101 S. Ct. 38 (1980), the court found that the coke oven emissions standard met the economic feasibility test (in part because of the strong support of the United Steelworkers Union for the standard) of § 6(b)(5) because it was "not persuaded that its implementation would precipitate anything approaching the massive dislocation which would characterize an economically infeasible standard." 577 F.2d at 836 (citation omitted).

164. 554 F.2d 541 (3d Cir. 1976). The employers contended that the long-shoring hardhat standard, as applied to them, was economically infeasible, and hence invalid, because attempts at enforcement would provoke a wildcat strike by employees. *Id.* at 545, 552. The court found that the employers had failed to establish the infeasibility of the challenged regulation, because they did not show that they had taken steps to discipline or discharge employees who defied
circuit was the first federal court to consider the question of economic feasibility in conjunction with the question of reasonable necessity, noting that in a section 6(f) proceeding, the Secretary of Labor has an affirmative burden to demonstrate the reasonableness of an adopted standard.

The Fifth Circuit recently expanded upon this relationship between the reasonable necessity and economic feasibility requirements set forth in the Act, holding that OSHA must determine that a standard is not only feasible but also reasonably necessary. Analogizing to its earlier decision in Aqua Slide 'N' Dive Corp. v. Consumer Product Safety Commission, the court in American Petroleum Institute v. OSHA asserted that, in promulgating the benzene standard, OSHA failed to assess the benefits to be achieved by the action in light of the expected costs of compliance — that is, "the benefits expected from the standard [must] bear a reasonable relationship to the costs imposed by the standard." The ap-

the standard. Id. at 555-56. Furthermore, according to the court, the employers had several other legal remedies available to them. Id. 165. Id. at 548 (Secretary's rule-making duty "comprehends weighing the competing considerations of economic burden and improvement of safety"). 166. Id. at 551. Section 652(8) of OSHA codifies the balancing concept of reasonableness in its definition of "occupational safety and health standard" as one "reasonably necessary or appropriate to provide safe or healthful employment and places of employment." 29 U.S.C. § 652(8) (1976).


168. 569 F.2d 831 (5th Cir. 1978) (interpreting the reasonable necessity criterion of the Consumer Product Safety Act as requiring the Consumer Product Safety Commission to take a hard look not only at the nature and severity of the risk but also at the potential the standard has for reducing the severity and frequency of injury and the effect the standard would have on the utility, cost and availability of the product).


170. 581 F.2d at 503 (citation omitted). The employers in this case argued that by defining an "occupational safety and health standard" as one requiring conditions "reasonably necessary" to provide safe or healthful places of employment, . . . Congress recognized that safety and health resources are not unlimited and required OSHA somewhere in its decision-making process to (1) attempt to determine the extent to which its standards will benefit workers, and (2) decide whether the projected benefits justify the costs of compliance with the standard. Only if all standards are subjected to such assessment, . . . , can OSHA assure maximum benefit from the finite amount industry can expend on safety and health and thus carry out Congress' overriding policy "to assure so far as possible every working man and woman in the Nation safe and healthful working conditions."

Id. at 501 (citations omitted).

OSHA denied that the "reasonably necessary" language imposed any substantive obligation on it in promulgating standards, distinguishing Aqua Slide
peals court stated that although the Act mandates a goal of attainment of the highest degree of protection for employees' health and safety, "it does not give OSHA the unbridled discretion to adopt standards designed to create absolutely risk-free workplaces regardless of cost." 171 Rather, standards must be feasible, and in determining feasibility the costs of proposed standards must be balanced against the proposed benefits flowing therefrom in order that resources can be allocated in priority of the degree of harm stopped.

In two other recent cases, the issue of costs and benefits has also been addressed with divergent results. In RMI Co. v. Secretary of Labor,172 the Sixth Circuit affirmed a finding of the Occupational Safety and Health Review Commission of technological feasibility of noise controls, but remanded the case for consideration of the economic feasibility of those controls in terms of the costs and benefits.173 Although the court did not discuss specifically the relationship between economic feasibility and reasonable necessity, it found that "[i]n order to justify the expenditure, there must be a reasonable assurance that there will be an appreciable and corresponding improvement in working conditions." 174 While the court declined to adopt a rigid formula for conducting a cost-benefit analysis, it did say that OSHA must weigh the costs of compliance against the expected benefits in order to determine whether a pro-

171. 581 F.2d at 502 (emphasis added). The Court held that before OSHA regulates, it "must show that a hazard exists and that its regulation will reduce the risk from the hazard, for 'no [occupational safety and health] standard would be expected to impose added costs or inconvenience . . . unless there is reasonable assurance that the frequency or severity of injuries or illnesses will be reduced.'" Id. at 502-03, quoting Aqua Slide 'N' Dive Corp. v. Consumer Prod. Safety Comm'n, 569 F.2d at 839. Addressing the specific standard involved in the case, the American Petroleum court indicated that until OSHA could demonstrate that reducing the benzene exposure limit from 10 ppm to 1 ppm bore a reasonable relationship to the costs imposed by the reduction, it could not show that the standard was reasonably necessary to provide safe or healthful workplaces. 581 F.2d at 504.

172. 594 F.2d 566 (6th Cir. 1979).

173. Id. at 569-73. See also Turner Co. v. Secretary of Labor, 561 F.2d 82 (7th Cir. 1977).

174. 594 F.2d at 573.
posed remedy is economically feasible.\textsuperscript{175} Since the paramount objective of the statute is to enhance the health and safety of employees, the court reasoned that the benefits to employees should weigh heavier on the scale than the costs to employers.\textsuperscript{176} Accordingly, controls will not necessarily be economically infeasible merely because they are expensive; however, they will not necessarily be economically feasible "merely because the employer can easily (or otherwise) afford them."\textsuperscript{177}

In \textit{AFL-CIO v. Marshall},\textsuperscript{178} the United States Court of Appeals for the District of Columbia Circuit, dealing with an industry challenge to the cotton dust standard, rejected the assertion that under economic feasibility considerations OSHA must demonstrate that the benefits of the standard are in proportion to the costs it imposes.\textsuperscript{179} The court held that the Act constrains OSHA's regulation of dangerous substances "only by the limits of feasibility;" that a formal cost-benefit analysis, while encouraged, is not required in the Act; and that no additional constraint is imposed by the Act's definition of a health or safety standard as reasonably necessary.\textsuperscript{180} According to the court, by excluding "unreasonable risk" language from OSHA but including it in the Consumer Product Safety Act (CPSA), Congress had drawn the sensible conclusion that consumers may be in a better position than workers to evaluate, estimate, and avoid risks.\textsuperscript{181} If this is the case, what then of

\begin{itemize}
\item \textsuperscript{175} Id.
\item \textsuperscript{176} Id.
\item \textsuperscript{177} Id. at 573-75.
\item \textsuperscript{178} 617 F.2d 636 (D.C. Cir. 1979), cert. granted, 101 S. Ct. 56, 68 (1980) (petitioners granted certiorari separately).
\item \textsuperscript{179} 617 F.2d at 662-66. In rejecting the textile industry's argument that OSHA must conduct a formal cost-benefit analysis, the court found no reference to a cost-benefit analysis in the Act's legislative history. \textsl{Id.} at 664. Rather, Congress struck the balance between costs and benefits in the mandate of \textsection{6(b)(5)} of the Act, which directs OSHA to "set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity." \textsl{Id.} at 663-64, quoting 29 U.S.C. \textsection{665(b)(5)} (1976) (emphasis added). The court contrasted OSHA with other statutory schemes which explicitly require particular kinds of analysis. \textit{See}, e.g., the Clean Air Act, 42 U.S.C. \textsection{1857f-6c(c)(2)(B)} (1976) (requiring the EPA to perform a cost-benefit analysis before prohibiting the manufacture or sale of fuel); the Federal Environmental Pesticide Control Act of 1972, 7 U.S.C. \textsection{136(bb)} (1976) (requiring consideration of "economic, social, and environmental costs and benefits"); the Federal Hazardous Substances Act, 15 U.S.C. \textsection{1261(a)} (1976) (requiring "unreasonable risk of personal injury or illness"); the Toxic Substances Control Act, 15 U.S.C. \textsection{2605(a)} (requiring the chemical to present unreasonable risk of injury or health to the environment).
\item \textsuperscript{180} 617 F.2d at 664.
\item \textsuperscript{181} Id. at 665 n.169.
\end{itemize}
the purpose of the CPSA to protect consumers from hazards in the market place where they are unaware of the dangers posed and thus are unable to make their own decisions about whether to assume the risk. 182 Is the worker's awareness of risks in the workplace really more limited than that of most consumers?

The expected resolution of the divergent opinions relative to the requirement of conducting a cost-benefit analysis did not materialize in the Supreme Court's review of American Petroleum Institute. 183 While a plurality of the Court accepted the Fifth Circuit's reasoning that OSHA, before issuing any standard, must determine that it is reasonably necessary and appropriate under Section 3 (8) of the Act to remedy a significant risk of material health impairment, the Court's plurality opinion then stated:

Only after the Secretary has made the threshold determination that such a risk exists with respect to a toxic substance, would it be necessary to decide whether § 6 (b) (5) requires him to select the most protective standard he can consistent with economic and technological feasibility, or whether . . . the benefits of the regulation must be commensurate with the costs of its implementation. Because the Secretary did not make the required threshold finding in this case, we have no occasion to determine whether costs must be weighed against benefits in an appropriate case. 184

Referring, however, to the fact that sections 6 (g) and 6 (b) (8) of the Act require the Secretary to undertake some cost-benefit analysis before promulgating a standard, the Court stated that Congress intended at a minimum that the Secretary of Labor find "a significant risk of harm and therefore a probability of significant benefits before establishing a new standard." 185 Justice Powell

184. Id. at 2863.
185. Id. at 2865. OSHA has implemented two changes in its permanent Cancer Policy standard in response to the Supreme Court's decision in Industrial Union Dep't v. American Petroleum Inst., 100 S. Ct. 2844 (1980). First, in order to conform with the Court's mandate that OSHA consider the significance of the risk before regulating a toxic substance, OSHA deleted the provisions of the Cancer Policy which required the automatic setting of the lowest feasible level of exposure. See 46 Fed. Reg. 4889, 4890 (1981). Second, OSHA published proposed amendments to the Cancer Policy. Id. at 7402. The agency stated that the proposed amendments are intended to comply with the Supreme Court's interpretation of the Act as requiring that

a determination of the significance of the risk be made prior to the issuance of a carcinogen Standard, that the exposure limit be set at the
alone took a partial step toward approving the Fifth Circuit's position on cost-benefit comparison.\textsuperscript{186} The Court will, however, address the question anew in its 1981 term.\textsuperscript{187}

Regardless of what form of cost-benefit analysis the Secretary of Labor must undertake before a standard is promulgated, it seems clear that to some extent it must quantify and compare benefits with risks in order to show that a standard is feasible. The term feasibility, moreover, should be interpreted according to its ordinary and common meaning, that is, practicable.\textsuperscript{188} This means that the relative cost of implementing engineering controls should be compared with the cost and effectiveness of instituting administrative controls and utilizing personal protective equipment. Possibly on this basis, OSHA must suppress its stated disdain for such means of employee protection.\textsuperscript{189}

2. \textit{Technological Feasibility}

In setting permanent standards dealing with toxic substances, the Act, as interpreted by the courts, requires that OSHA evaluate technological feasibility.\textsuperscript{190} Thus, in establishing exposure levels, the lowest feasible level which is reasonably necessary or appropriate to eliminate significant risk, and that OSHA must consider all relevant evidence in making these determinations.

\textit{Id.} at 7402-09.

\textsuperscript{186} 100 S. Ct. at 2877 (Powell, J., concurring in part and in the judgment). Justice Powell asserted that even if OSHA met its burden of proof on the threshold question, it would still have to demonstrate that there was a reasonable relationship between the economic effects and the expected benefits of the standard. \textit{Id.}


\textsuperscript{188} \textit{See} Turner Co. v. Secretary of Labor, 561 F.2d 82, 83 (7th Cir. 1977).

\textsuperscript{189} \textit{See} Industrial Union Dep't v. American Petroleum Inst., 100 S. Ct. 2844, 2863-64 \& n.46 (1980); note 246 and accompanying text \textit{infra}.

the Secretary of Labor must consider whether the companies affected are able to reduce the levels of exposure to those required through feasible engineering means.\textsuperscript{191} The Secretary is not restricted, however, to the status quo. In holding that the vinyl chloride standard was feasible, the Second Circuit did not constrain OSHA to promulgate standards only achievable by existing technology, but rather permitted the agency to require improvements in existing technology or the development of reasonably achievable new technology.\textsuperscript{192} OSHA may thus be viewed, at least to a limited extent, as a technology-forcing piece of legislation: standards do not necessarily become infeasible because they force the development of new technology, impose substantial research and development costs on industry, or even force some employers out of business.\textsuperscript{193}

Courts have not construed OSHA in so “procrustean” a fashion that the result of the promulgation and application of a standard is the elimination of all affected businesses and jobs.\textsuperscript{194} Although the most certain way to eliminate industrial hazards from toxic substances is to eliminate industry, the congressional statement of findings and declaration of purpose and policy in the Act\textsuperscript{195} show that upgrading of working conditions, instead of completely eliminating hazardous occupations, was the intention.\textsuperscript{196}

\begin{enumerate}
\item[194.] AFL-CIO v. Brennan, 530 F.2d 109, 121 (3d Cir. 1975).
\item[195.] Section 651 of OSHA reads in relevant part:
\begin{enumerate}
\item[(a)] The Congress finds that personal injuries and illnesses arising out of work situations impose a substantial burden upon, and are a hindrance to, interstate commerce in terms of lost production, wage loss, medical expenses, and disability compensation payments.
\item[(b)] The Congress declares it to be its purpose and policy, through the exercise of its powers to regulate commerce among the several States and with foreign nations and to provide for the general welfare, to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources . . . .
\end{enumerate}
\item[29.] U.S.C. § 651 (1976).
\item[196.] AFL-CIO v. Brennan, 580 F.2d 109, 121 (3d Cir. 1975).
\end{enumerate}
In enacting OSHA, Congress did not intend to impose strict liability on employers for unavoidable or unsolvable occupational hazards. The Act only requires new and innovative controls in production techniques that might be obtained through developments presently unforeseeable.

The possibility exists that a particular safety and health standard previously considered technologically feasible will be determined to be technologically infeasible or otherwise unreasonable after employers have made a good faith effort to comply. If the exposure limit cannot be met after engineering controls and work practices are implemented, the Act establishes procedures for obtaining a variance from the standard. A variance relieves certain employers from compliance with the standards regulating exposure to toxic substances and permits them, as an alternative to compliance, to exclude susceptible persons from the workplace. If the technological capabilities and advances in the state of the art are not available or feasible for the industry as a whole, however, individual variance proceedings would not be applicable. In

197. Brennan v. OSHRC (Hanovia Lamp Div.), 502 F.2d 946, 951 (3d Cir. 1974). The Third Circuit stated in this regard that there are industrial activities involving hazards so great and of such little social utility that the Secretary would be justified in concluding that their total prohibition is proper if there is no technologically feasible method of eliminating the operational hazard. But although Congress gave the Secretary license to make such a determination in specific instances, it did not direct him to do so in every instance where total elimination of risk is beyond the reach of present technology.

[We agree with the Second Circuit . . . that OSHA is to be viewed as a technology-forcing piece of legislation. Thus the Secretary would not be justified in dismissing an alternative to a proposed health and safety standard as infeasible when the necessary technology looms on today's horizon. . . . [But here] compliance . . . is not technologically feasible in the "near future." ] This finding necessarily implies consideration both of existing technological capabilities and imminent advances in the art. We do not believe that the Act imposes any heavier obligation.

530 F.2d at 121-22 (citations and footnotes omitted).


199. See Atlantic & Gulf Stevedores, Inc. v. OSHRC, 534 F.2d at 550.

200. See 29 U.S.C. § 655(d) (1976). Subsection (d) states that "[a]ny affected employer may apply to the Secretary for a rule or order for a variance from a standard promulgated under this section." Id.

201. Rather than permit higher exposure levels, § 655(d) requires that the employer seeking a variance demonstrate that "the conditions, practices, means, methods, operations, or processes used or proposed to be used . . . will provide employment and places of employment . . . which are as safe and healthful as those which would prevail if he complied with the standard." Id.
such a case, the standard as a whole would not be feasible, or at least the lower standard required for certain susceptible groups would not be feasible. Under these circumstances, removal of susceptible persons from the workplace is mandated, or an industry-wide variance must be granted until technology catches up.

Lack of feasibility was specifically recognized in the lead standard in which OSHA stated that the proposed PEL would not protect the fetus or workers who plan pregnancies. OSHA was forced to include the removal action in the lead standard because it is required to regulate on the basis of knowledge rather than on the unknown. Accordingly, conclusions concerning the technological feasibility of a standard must be based on evidence, not speculation. Technological feasibility required by the Act does not include technologies which might never be developed or which, at best, would not be available for several years. Congress recognized, however, that conclusive medical and scientific evidence, including causative factors, epidemiological studies, or dose-response data, may not exist for many toxic agents, and therefore, mandated that standards should not be postponed because definitive medical and scientific evidence is currently unavailable.

These considerations are particularly relevant to those situations in which OSHA standards regulating exposures to hazardous or potentially hazardous agents are set so low that an employer is faced with wholesale violations of Title VII in order to comply with OSHA. Title VII has no cost defense similar to that permitted under OSHA, however, and fair employment liability will be incurred and ordered remedied regardless of employer cost. Conversely, because cost is a consideration and a defense under OSHA, the likelihood and expense of Title VII liability, if it amounts to a possibility of putting employers out of business, should be a defense to OSHA violations.

202. See notes 73-78 and accompanying text supra.
203. See note 77 and accompanying text supra.
204. Marshall v. West Point Pepperell, Inc., 588 F.2d 979, 983-85 (5th Cir. 1979); AFL-CIO v. Brennan, 530 F.2d 109, 121-22 (3d Cir. 1975). Cf. ASG Indus., Inc. v. Consumer Prod. Safety Comm'n, 598 F.2d 1323, 1334 (D.C. Cir.), cert. denied, 444 U.S. 864 (1979) ("the Commission's authority to predicate a finding of unreasonable risk on the projection of technological advance occurring in the future requires that the agency have some basis in its records and files supporting the projection as meaningful and reasonable, as contrasted with mere speculative desire").
Similarly under the general duty clause, preventing the "hazardous conduct exposure" of members of the sex at risk arguably ceases to be "capable of achievement," due to the illegality under Title VII of preventing such persons from being exposed to the hazard. Rationally, contrary law should be as much a part of a consideration of feasibility as is expense or technology.

In order to avoid this conflict, would it be possible for the Secretary of Labor simply to stay his authority in promulgating or enforcing standards that require employers to provide safe and healthful employment and working conditions? The District Court and the Court of Appeals for the District of Columbia are battling over the extent of the Secretary's discretion to avoid setting standards. In National Congress of Hispanic American Citizens v. Dunlop, the members of El Congresso brought an action seeking the promulgation of various standards for migrant farm workers. The district court initially held that the Secretary, once petitioned, must promulgate a standard within the time limits specified in the Act. The district court's decision was reversed and remanded by the court of appeals, which held that the Secretary has discretion to promulgate or not to promulgate a standard. Upon remand, the district court essentially reiterated its initial position, stating that while it recognized that the setting of rule-making priorities is a matter within the Secretary's discretion, no criteria were established to enable the court to determine whether he had acted rationally. On appeal, the District of Columbia Circuit again reversed the decision of the lower court, stating that "[s]o long as his action is rational in the context of the statute, and is taken in good faith, the Secretary has authority to delay develop-

207. See note 120 and accompanying text supra.


209. 425 F. Supp. at 902. Section 655(b) of OSHA contains various time frames for recommendations, comments, objections, and hearings on proposed standards. See 29 U.S.C. § 655(b)(1-4) (1976). The Secretary, arguing that the time limits were discretionary, relied on § 655(g) which states in pertinent part: "In determining the priority for establishing standards under this section, the Secretary shall give due regard to the urgency of the need for mandatory safety and health standards for particular industries, trades, crafts, occupations, businesses, workplaces or work environments." 425 F. Supp. at 902 & n.1, quoting 29 U.S.C. § 655(g) (1976).


ment of a standard at any stage as priorities demand.” 212 The determination of criteria were found to be rational and reasonable, but the appeals court again remanded, requiring the Secretary to fulfill his good faith duty by submitting a timetable regarding his expectation as to when a standard would be issued. 213 For both political and legal reasons, it would have been unlikely that the Secretary would claim, and the court would approve, criteria which would lead to a decision to decline to promulgate and enforce a regulation because of Title VII considerations. A recent decision from the Fifth Circuit confirmed this conclusion in another context by holding that OSHA is authorized to act for the sole purpose of protecting employee safety and health, not to regulate job security. 214 Regulating or failing to regulate in deference to Title VII considerations, apparently would so protect employees in their choice of occupation as to be considered a regulation of job security, and thus be outside the scope of OSHA’s authority.

C. Acceptable Risk

When dealing with toxic or cancer-causing substances, human activity will always and unavoidably involve risks. If a statute or standard required the elimination of all risk, it could be complied with only by eliminating human exposure. Accordingly, society must be willing to evaluate relative risk and accept some degree of risk, a concept commonly regarded as acceptable risk. 215

In enacting OSHA and giving the Secretary the authority to promulgate standards dealing with toxic materials, Congress explicitly recognized in its “feasibility” requirement the impos-

213. Id. at 890-91.
214. Taylor Diving & Salvage Co. v. United States Dep’t of Labor, 599 F.2d 622, 625 (5th Cir. 1979).
215. In society, the principle of acceptable risk is well established. The fact is inherent in any endeavor. The laws under which OSHA operates also recognize the idea of acceptable risk. We do not and cannot have a risk-free society, and it is not useful to propose regulation rooted in such an idea. Acceptance of the reality of risk is not, however, without reluctance. The most absolute requirement of OSHA providing a safe and healthy workplace for every worker is unachievable. As we move from the implausible, however, to the feasible, an inevitable set of choices appears—how much risk is reasonable, how much is acceptable? See W. Lowrance, Of Acceptable Risk: Science and the Determination of Safety (1976); Singer, How to Reduce Risks Rationally, 51 The Public Interest 99 (1978); Sowby, Radiation and Other Risks, 11 Health Physics 879 (1965); Rothschild, Coming to Grips with Risk, Wall St. J., March 13, 1979, at 22, col. 4.
216. See notes 151-59 and accompanying text supra.
sibility of assuring American workers a risk-free workplace or of protecting workers by putting them out of work. In fact, with regard to carcinogens, existing scientific knowledge indicates that zero risk, although an appropriate regulatory goal for some substances, is not achievable without zero exposure.217 Moreover, carcinogens occur in so many different consumer products, industrial raw materials, and commercial or industrial wastes that completely eliminating exposure, even if possible, would in many cases have unacceptable economic, social, and even health impacts.218 In this respect, therefore, the congressional mandate quite properly was limited to adequately assuring, as far as possible, that workers do not suffer from a “material impairment of health or functional capacity.” 219

Various formulations have been used to define acceptable risk. It is sometimes defined in terms of risks that people are observed to accept. One problem with this is that risk and degrees of risk, as well as safety and degrees of safety, evolve according to individual perceptions and social standards of acceptability. One commentator has suggested that there are natural boundaries to risk, delineated by the high risk of communicable disease mortality and the low risk of natural disaster mortality, between which people accept exposure in daily life.220 Economists have suggested that premiums for hazardous occupations define acceptable risk.221 In order


218. IRLG REPORT, supra note 32, at 15; Regulatory Council Statement, supra note 34, at 15.

219. 29 U.S.C. § 655(b)(5) (1976). Section 6(b)(5) as originally proposed would have required OSHA to assure that “no employee will suffer any impairment of health.” LEGISLATIVE HISTORY, supra note 119, at 367. Even the sponsors of the legislation, such as Senator Dominick, realized that this requirement was inherently unrealistic because it could be read to give OSHA the authority to regulate or “ban all occupations in which there remains some risk of . . . impaired health.” Id. Senator Dominick therefore urged that the requirement be eliminated, explaining, “the difficulty of the language I am . . . trying to delete is the requirement that . . . [OSHA], in establishing standards must assure that there will not be any risk at all.” Id. at 481. In response to an amendment proposed by Senator Dominick, the original language was deleted, and § 6(b)(5), including the word “material,” was revised in the form ultimately approved by both houses. Id. at 502-03. Thus, the upgrading of working conditions, not the complete elimination of hazardous occupations, was the dominant intention of Congress.

220. See W. Lowrance, supra note 215.

221. Our reality is a mixture of wage premiums based on an implicit degree of hazard and the acceptance of risks as a fact of life among multiple other risks, both voluntary and imposed. Economists have found that workers
for implicit or explicit risk markets to work well enough to define acceptable risk, however, the nature of the risks must be understood, and their acceptance must indeed be voluntary.222

Any assessment or determination of a health risk must take into account the toxicity or carcinogenicity of a substance and the level and means of exposure to the substance.223 Even in the emotional context surrounding cancer, sound public policy must take into account the inevitability of some risk and the necessity of evaluating such risk, not only against alternative risk but also in light of the economic and social costs and benefits of the substance being regulated.

The Food and Drug Administration (FDA) historically has considered it inappropriate to balance the risk of cancer that may be associated with the use of an agent against the benefits that may be derived from the agent's use. In a recently published proposal,224 receive a greater percentage of hazard premiums in industries where the accidental death rate is twice that of industries requiring comparable skills. Starr, Benefit Costs Studies and Sociothechnical Systems, in Perspectives on Benefit Risks Decision Making 38 (1972).

While efforts must be made to preclude danger rather than provide hazard premiums, the imperfection of our world means that all risks cannot be eliminated. The determination of risk acceptability is a two-step process, consisting of the objective process of risk assessment followed by the normative-subjective social determination of safety. The decision to accept job-connected risks demands that those put at risk be given a full and complete review of the risk assessment process. Attempts must be made to relate the degree of risk with the risks of other life activities, voluntary and imposed. While the difficulties in making such a comparison will be taxing, there is no other readily accessible or acceptable approach. See Oi, On the Economics of Industrial Safety, 38 L. & Contemp. Prob. 669, 699 (1974); What Price Safety? The Zero-Risk Debate, 114 Dun's Rev. 49 (1979) (physical risk to life from various hazards can be quantified, by using complex mathematical formulas known collectively as risk-benefit analyses, an accurate determination can be made as to whether a given safety program is worth the money it costs).

222. Human exposure in the workplace is controllable and voluntary. Understanding the degree and nature of the potential exposure permits some measure of control of risks associated with a chemical that has intrinsic toxic potential. After assessing the toxic potential of the chemical, the potential for human exposure, and the risk, an acceptable exposure level should be estimated taking into consideration the degree of confidence in the data and the variability of the population at risk. A zero-risk exposure level is not useful public policy. A country that accepts 200,000 deaths per year associated with smoking and 20,000 deaths from not buckling seatbelts will not and, to be consistent, should not pursue to extremes risks posed by environmental contaminants.

In the setting of the workplace, Dinman suggests that imposition of a risk, on other than a voluntary basis, would be unacceptable. Complete disclosure of risks is a sine qua non. Full disclosure should also be understood to include an exposition of what is not known or unclear, for the picture changes when the risks are less certain. See Page, A Generic View of Toxic Chemicals and Similar Risks, 7 Ecology L.Q. 207, 215 (1978).


however, the FDA became the first governmental agency to suggest an acceptable lifetime cancer risk level set at one in one million, a substantial reversion downward from the prior one in 100 million level, which was felt to be unduly limiting without substantial compensation in terms of public health. This is a similar approach to that adopted earlier by the EPA in the Toxic Substances Control Act, the purpose of which is to control "unreasonable risks" of chemicals and chemical mixtures. Similarly, the Consumer Product Safety Commission (CPSC) is directed to promulgate only standards that are reasonably necessary to prevent or reduce an unreasonable risk of injury. The recent judicial decisions which emphasize a cost-benefit analysis under OSHA also support an acceptable risk formulation with its correlation of economic feasibility to reasonable necessity. The promulgation and enforcement of a standard, therefore, will depend upon a proper balance between the protection afforded by the requirement and the effect upon economic and market conditions in the industry.

(1979). See also FDA Procedures To Minimize Medical X-Ray Exposure of the Human Embryo and Fetus; Recommendations for Medical Radiation Exposure of Women of Childbearing Potential, 44 Fed. Reg. 66,616 (1979) (risk due to radiation exposure cannot be reduced to zero).

226. 15 U.S.C. §§ 2601-2629 (1976). See Slesin & Sandler, Categorization of Chemicals Under the Toxic Substances Control Act, 7 Ecology L.Q. 359 (1978). In general, a determination that a risk associated with a chemical substance or mixture is unreasonable involves balancing the probability that harm will occur along with the magnitude and severity of the harm against the effect of the proposed regulatory action on the availability of the benefits of the substances or mixture to society. H.R. Rep. No. 94-1351, 94th Cong., 2d Sess. 13-15 (1976). The balancing process does not require a formal cost-benefit analysis under which a monetary value is assigned to the risks associated with a substance and to the cost to society of proposed regulatory action on the availability of such benefits. Id.

228. See notes 167-77 and accompanying text supra. The Supreme Court recently indicated that the Act's requirement that workplaces be safe is not the equivalent of making them risk-free:

If the purpose of the statute were to eliminate completely and with absolute certainty any risk of serious harm, we would agree that it would be proper for the Secretary to interpret §§ 3(8) and 6(b)(5) in this fashion. But we think it is clear that the statute was not designed to require employers to provide absolutely risk-free workplaces whenever it is technologically feasible to do so, so long as the cost is not great enough to destroy an entire industry. Rather, both the language and structure of the Act, as well as its legislative history, indicate that it was intended to require the elimination, as far as feasible, of significant risks of harm.

Industrial Union Dep't v. American Petroleum Inst., 100 S. Ct. 2844, 2864 (1980).

229. See, e.g., Ethyl Corp. v. EPA, 541 F.2d 1 (D.C. Cir.), cert. denied, 426 U.S. 941 (1976); Reserve Mining Co. v. EPA, 514 F.2d 492 (8th Cir. 1975). In
Any attempt to quantify and incorporate the idea of acceptable risk into the Act must first define the risk. A quantitative risk assessment must take into account the toxicity or carcinogenicity of a substance and the level and means of exposure, and must include qualification in light of the identifiable biologic and toxicologic differences presented in the exposed human population. Risk-benefit, a variation of the cost-benefit analysis, must then be utilized to present a full set of choices with appropriate data on costs, benefits, and hazards attendant to each option. Acceptable risk will vary with the benefit anticipated and the problem perceived. Once an acceptable risk is established, voluntary acceptance thereof must be mandated. People appear willing to accept voluntary risks about 1000 times greater than they would tolerate involuntary risks that provide the same level of benefit. Acceptable risk, therefore, may depend greatly on the way in which relevant information is presented and perceived. Efforts should be made to increase workers' rights to know about chemical hazards. Effectively presented, scientifically accurate information about the toxic substances with which one works, including known or potential deleterious genetic effects, will motivate the workers who are contemplating parenthood or who are pregnant to give some thought to their placement and job categories.

Reserve Mining, the court, reviewing evidence on the potential carcinogenic effect of the discharge of taconite tailings into Lake Superior, was unable to find that the “probability of harm [was] more likely than not.” 514 F.2d at 520. In Ethyl Corp., the court upheld EPA's regulation of leaded gasoline based on the determination that lead posed a “significant risk” to public health and rejected arguments that proof of either actual or probable harm was necessary. 541 F.2d at 14. See also Federal Environmental Pesticide Control Act, 7 U.S.C. § 136(bb) (1976) ("unreasonable risk to man or the environment" includes consideration of "economic, social, and environmental costs and benefits of the use of any pesticide").


231. The following actions should be considered: (1) employees who may be affected should be informed of the possible consequences of exposure to toxic substances and appropriate safe handling procedures; (2) engineering controls, augmented by administrative controls, should be used to reduce and maintain exposure to toxic substances at acceptable levels; (3) whenever engineering and administrative controls are not practical to keep exposures at or below acceptable levels, the use of personal protective equipment should be required; (4) when there is a potential for exposure to a toxic substance for which an acceptable exposure level cannot be established due to inadequate data, economic cost, or technological infeasibility, women and men of reproductive potential should be excluded from the work area; and (5) when engineering and administrative controls augmented by personal protective equipment are inadequate to insure acceptable levels of exposure to toxic substances, women and men of reproductive potential should be excluded from the work area.


233. Scientific Bases, supra note 33, at 249.
It may be argued, however, that this approach would not, could not, and should not be extended to the fetus, due to a lack of jurisdiction. OSHA's mandate is to assure safe and healthful working conditions for persons covered under the Act, that is, "every working man and woman" in the workplace. This may not include a fetus, for a fetus is not a worker and, at least prior to viability, is not a person. The Supreme Court's decision in *Roe v. Wade* may be interpreted to indicate that an embryo could be thought of as part of the mother and, therefore, regulable as part of her health, but a more accurate reading may be that the embryo is a "potential life," not simply a maternal organ. The mother has exclusive power over that potential life by virtue of her privacy interest, at least to the end of the first trimester. Precisely because her right stems from the protected right of privacy, OSHA may be without constitutional authority to regulate in this area, except perhaps to mandate informed consent on the part of the mother.

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234. The term "person" is defined in § 3(4) of the Act, as "one or more individuals, partnerships, associations, corporations, business trusts, legal representatives, or any organized group of persons." 29 U.S.C. §652(4) (1976).

235. 410 U.S. 113 (1973). The Constitution does not define person although the term is used in numerous places. Id. at 157. "But in nearly all these instances, the use of the word is such that it has application only post-natally. None indicates, with any assurance, that it has any possible pre-natal application." Id. at 157 (footnote omitted). The word person as used in the Constitution does not include the unborn. Id. at 162. One could argue, however, by virtue of the Court's acceptance of a legal standard focusing on viability (that state of fetal development when the life of the unborn child may be preserved indefinitely outside the womb by natural or artificial life support apparatus), that at that moment the fetus becomes a person. Planned Parenthood v. Danforth, 428 U.S. 52, 63 (1976); Roe v. Wade, 410 U.S. at 160. The problem is that the time for viability cannot be set in precise terms; it is usually placed at about seven months but may occur as early as 24 weeks. 410 U.S. at 160.

236. In *Roe v. Wade*, the Court stated, however, that the pregnant woman cannot be isolated in her privacy. 410 U.S. at 159. The situation is not absolute and "it is reasonable and appropriate for a State to decide that at some point in time [as the woman approaches term] another interest, that of health of the mother or that of potential human life, becomes significantly involved." Id. The Court concluded that the state's interest in potential life did not become compelling until viability. Id. at 163. Possibly at this point in time, OSHA may regulate fetal exposure to toxic substances. The problem is that by then the damage may have already occurred. See notes 60-61 and accompanying text supra.

237. See Planned Parenthood v. Danforth, 428 U.S. 52 (1976). In *Danforth*, the Court held that a state may not constitutionally require the consent of the spouse as a condition for abortion of the mother during the first trimester of pregnancy, reasoning that the state cannot delegate veto power to prevent abortion, when the state itself lacks that right. Id. at 69-70. A requirement that a woman certify in writing her knowledge of, and consent to, the abortion procedure, however, was held to be constitutional. Id. at 65-67.
exposure of the fetus, particularly in the first trimester, may be viewed in the same manner as a state's attempt to forbid abortion, and thus, might be expressly outlawed by *Roe v. Wade*.

### D. Access and Removal

1. **Access**

   In many respects, the conflict between OSHA and Title VII centers around the OSHA definition of a serious violation. The source of this definition is the general duty clause, which enjoins the creation of “hazards that are causing or likely to cause death or serious physical harm.” To an accident need not be likely in order for the violation to be serious. The operative consideration is whether, given the accident, death or serious physical injury is likely to result. The same test has been applied to violations of specific standards, presumably because employers must be held to the same standard of care under both subsections of the Act. In addition, the Secretary must prove that the specific standard applies to the particular employer, that the employer failed to comply, and that employees had access, meaning exposure, to the hazard.

   In cases of differential susceptibility to exposure, the only way an employer may be able to comply with the Act without prohibitive expense is to exclude fertile or pregnant workers, that is, those susceptible, from the workplace. The employer then may claim that there is no violation because there is no employee exposure to the hazard. The access defense against an OSHA standard is

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240. Atlantic & Gulf Stevedores, Inc. v. OSHRC, 531 F.2d at 547.


242. American Petroleum Inst. v. OSHA, 581 F.2d at 506; Marshall v. Knutson Constr. Co., 566 F.2d 596, 599 (8th Cir. 1977). In rebutting the lack of employee exposure defense to OSHA citations, the Secretary of Labor need not prove actual exposure to a hazard, but he must show that employee access to the hazard was reasonably foreseeable or predictable because employees passed within the zone of danger in the course of normal work assignments. B.F. Goodrich Textile Prosds., 5 OSHC 1438 (1977); Zwickler Elec. Co., 5 OSHC 1338 (1977). The risk of exposure must be more than speculative when employees are not observed working in the area; it must be shown that employees pass through the area in the course of their work. J.R. Simplot Co., 6 OSHC 1992 (1978); Frank C. Gibson, 6 OSHC 1557 (1978); Illinois Bell Tel. Co., 5 OSHC 1884 (1977).
clearly legitimate, despite some occasionally confusing dicta. The importance of this scenario should not be underestimated. Perhaps a million embryos are potentially exposed to hazardous toxins in workplaces every year. Even in the absence of OSHA liability, the potential tort liability is astronomical, let alone the disastrous medical consequences. If one tenth of one percent of these children is incapacitated, the annual cost would run into the billions. Even if this were practical from an economic standpoint, it would not be acceptable to society. On the other side, the cost of obtaining zero exposure from a technological standpoint would perhaps be higher, even assuming it were possible.

If we envision a situation, perhaps quite common, in which differential toxicity exists and engineering exposure controls are not feasible, but personal protective apparatus, such as respirators and protective clothing is available, a practical solution is possible. The protective equipment isolates the employee from the hazard and thus eliminates access. At least two difficulties need to be over-
come, however, in order to implement this relatively simple solution. The first is OSHA policy. OSHA has determined that since control methods which "depend on the vagaries of human behavior" are "inherently less reliable," respirators may not normally be used to comply with OSHA standards. Perhaps one can be forgiven for thinking of this attitude as a variety of the unfortunate and illegal "romantic paternalism" decried by the Supreme Court, combined with excessive reliance on machines. Even the most naive "worst-case" safety analysis would reveal that the damage from mechanical failure, without respirators, is likely to be more severe than the damage from individual carelessness, if safety standards are enforced properly. If they are not enforced, either alternative is an exercise in futility, and a serious or even willful violation in itself. The second difficulty is OSHA jurisdiction. As discussed above, OSHA might not have the power to regulate on the basis of harm to the fetus or potential embryos.

If these problems can be overcome, personal protection may be the best approach. At least one court already has demanded that OSHA compare personal and engineering protection on a cost-benefit basis. Another court has asked OSHA to consider the possibility that not all workers require the same level of protection. Under Title VII, this approach would succeed if one were able to analogize to a corporate dress and grooming code. The general rule applied to dress codes is that differential dress requirements are permissible as long as they do not interfere with job opportunities. Therefore, a successful analogy might depend on the onerousness of the personal protective equipment. For example, a half-face mask presents a much less serious obstacle to normal behavior than a full-face mask with protective clothing and supplemental oxygen. On the other hand, a company cannot burden women with a difficulty that men need not suffer, in the absence of compelling business necessity.

248. See notes 234-37 and accompanying text supra.
249. Turner Co. v. Secretary of Labor, 561 F.2d 82, 85-86 (7th Cir. 1977) (noise standard).
250. United Parcel Serv. v. OSHRC, 570 F.2d 806, 812-15 (8th Cir. 1978).
2. Removal

The final lead standard issued by OSHA includes a provision entitled Medical Removal Protection (MRP), which is a protective, preventive health mechanism integrated with the medical surveillance provisions of the standard.\(^{253}\) MRP provides temporary removal from the workplace of workers discovered to be at a health risk from continued exposure to lead.\(^{254}\) It also provides temporary economic protection by requiring the employer to maintain the worker's earnings, seniority, and other employment rights and benefits during removal as though the worker had not been removed.\(^{255}\)

Temporary medical removal is mandated for any worker having a blood level at or about 60 \(\mu g/100g\) of whole blood, for any worker having a blood level at or above 50 \(\mu g/100g\) of whole blood

\(^{253}\) Lead Standard, supra note 49, at 52,972.

\(^{254}\) Id.

\(^{255}\) Id. Extended discussion of rate retention is beyond the scope of this article. It appears, however, to be illegal, in direct conflict with an express provision of the Act, and at odds with national labor policy. OSHA only has authority to mandate practices that are reasonably necessary or appropriate to provide safe and healthful employment and places of employment. Standards that serve to lessen or eliminate a hazard, to decrease exposure to a hazard, to warn of the existence of a hazard, to monitor the existence or effect of a hazard, or to keep records of employee exposure to a hazard may be valid because they lead to safe employment and safe places of employment. Rate retention is different as it is nothing more than a subsidy imposed on employers to induce their employees to obey the law. It mandates job security, which is not the purpose of the Act. See Taylor Diving & Salvage Co. v. United States Dep't of Labor, 599 F.2d 622 (5th Cir. 1979). Moreover, if a woman were transferred at protected pay and seniority levels to another job, could not a man earning less than the transferred woman at the same job sue for equal pay? An appropriate analogy may be to employment of the handicapped under the Vocational Rehabilitation Act, 29 U.S.C. §§ 701-794 (1976). Under this law, an employer is expected to make reasonable modification in order to employ the handicapped. This modification does not include pay for a job the employee is unable to perform. Despite these arguments, the United States Court of Appeals for the District of Columbia Circuit recently approved the rate retention aspects of the cotton dust standard. AFL-CIO v. Marshall, 617 F.2d 656 (D.C. Cir. 1979), cert. granted, 101 S. Ct. 56, 68 (1980) (petitioners granted certiorari separately).

The removal and protection requirements could have a dramatic impact on collective bargaining. By imposing through regulatory fiat what the unions have been unable to obtain at the bargaining table, OSHA has intruded improperly into the area of collective bargaining. The well-established national labor policy of encouraging employers and the representatives of employees to establish through negotiation their own charter for the ordering of industrial relations, and thereby to minimize industrial strife without concerning the government with the terms upon which the parties have agreed, has been ignored by mandating rate retention. See Local 24 v. Oliver, 358 U.S. 283 (1959). Rates of pay and seniority of workers transferred to jobs other than their usual positions have long been recognized as mandatory subjects of collective bargaining. Ford Motor Co. v. Huffman, 345 U.S. 330 (1953). Proper balancing requires OSHA to leave such matters to the collective bargaining process. Emporium Capwell Co. v. Western Addition Community Organization, 420 U.S. 50 (1975).
averaged over a previous six-month period, and for any worker found by a medical determination to be at risk of sustaining material impairment to health.\textsuperscript{256} Workers are to be returned to their former job status when removal is no longer necessary to protect the worker's health.\textsuperscript{257}

There is no time limit specified for the temporary medical removal of a worker found to be at a risk of sustaining material impairment to health. Thus, removal from the workplace to protect workers' health is approved by OSHA, which states in the standard that a fraction of workers will not be adequately protected even if an employer fully complies with all provisions of the standard.\textsuperscript{258} Specifically, OSHA states that temporary medical removal may in particular cases be needed for workers desiring to parent a child in the near future or for particular pregnant employees. Some males may need temporary removal so that their sperm can regain sufficient viability for fertilization; some women may need temporary removal to slightly lower their blood lead levels so that prior lead exposure will not harm the fetus.\textsuperscript{259}

Finally, the standard indicates that some segments of the lead industry will take many years to completely engineer out excessive plant air lead emission.\textsuperscript{260} During this time, reliance will have to be placed on respiratory protection supplemented by temporary medical removal when necessary.\textsuperscript{261} Conceivably, then, removal from the workplace, while anticipated to be used for a maximum of eighteen months, could last several years.

\textsuperscript{256} Lead Standard, \textit{supra} note 49, at 52,972. The standard also cautions that lead poisoning may occur below the blood lead level of the removal criteria, and that a non-work-related medical condition may be worsened by lead exposure. \textit{Id.}

\textsuperscript{257} \textit{Id.}

\textsuperscript{258} \textit{Id.} at 52,973.

\textsuperscript{259} \textit{Id.} at 52,974 (emphasis added).

\textsuperscript{260} \textit{Id.} at 52,973.

\textsuperscript{261} \textit{Id.} OSHA delayed from March 1, 1981 to April 1, 1981 its implementation of the third year trigger levels for medical removal protection under the lead standard which require removal at 60 \textmu g/100g and return at 40 \textmu g/100g. 46 Fed. Reg. 14,897 (1981). The one month delay was to facilitate submission and evaluation of comments by employers and unions on the feasibility of the new levels. \textit{Id.} Various employers, which have petitioned for a one-year delay, have indicated that the new levels are infeasible at present and would require removal for lengthy periods of many skilled employees. \textit{Id.} In response, several unions have opposed any delay which is not limited to those employers which have demonstrated serious feasibility problems. \textit{Id.}
The lead standard is not the only standard in which OSHA recognizes and requires differentiation on behalf of a particular group which may have special susceptibility to a toxic substance and which cannot be protected, even temporarily, by the use of respirators. In the cotton dust standard, handicapped persons, meaning those who are at increased risk due to diminished pulmonary function, are earmarked for special protection. In the event an employee is unable, because of his or her handicap, to wear a respirator, permanent medical removal, with wage and benefit retention, is provided.262

In two recent decisions, the Court of Appeals for the District of Columbia Circuit has upheld both the lead and the cotton dust removal provisions.263 In the cotton dust decision, the court held that the provision comes within OSHA's authority under section 3(8) of the Act to include in its standards such practices, means, methods, operations, and processes that are reasonably necessary or appropriate to provide a safe or healthful place of employment and necessary to protect workers from losing their jobs.264 In approving the lead standard's MRP, the court found the provision to be well within the general scope of OSHA's power, and a reasonable exercise of that power.265 The District of Columbia Circuit's approval

262. The relevant removal provision states:
Whenever a physician determines that an employee is unable to wear any form of respirator, including a power air purifying respirator, the employee shall be given the opportunity to transfer to another position which is available or which later becomes available having a dust level at or below the PEL. The employer shall assure them [sic] an employee who is transferred due to an inability to wear a respirator suffers no loss of earnings or other employment rights or benefits as a result of the transfer.


265. United Steelworkers v. Marshall, 8 OSHC 1810, 1841-42, (D.C. Cir. 1980). In approving the MRP, the court rejected the industry's argument that the provision authorized a "strike with pay" situation contrary to congressional intent. The court also rejected arguments that the MRP violates the Act's prohibition in § 4(b)(4) of affecting state workmen's compensation laws and
of these job security provisions is directly in conflict with the purpose of the Act as defined by the Fifth Circuit in *Taylor Diving & Salvage Co. v. United States Department of Labor*.

The "Summary and Explanation" section of the cotton dust standard also recognizes, in the section on pulmonary function testing, that ethnic and racial differences exist in lung volumes and functions, which may affect susceptibility to byssinosis. In an attempt to avoid inadvertently fostering discrimination in hiring practices, OSHA requested information on formulas that could be used for evaluating results of pulmonary function among ethnic groups in order to provide a proper interpretation of spirometry measurements for blacks. Based on the information received, a 0.85 adjustment factor was incorporated into the final standard to compensate for the racial differences in lung function.

The above examples demonstrate that OSHA has taken into account the inherent differences in susceptibility to exposure to toxic or hazardous substances in certain groups who thereby would be at increased risks. Due to the susceptibility of these groups — be it based on sex, race, ethnic background, or physical handicap — OSHA has mandated specific affirmative action on the part of employers, requiring, in large measure, removal of the employees from the area in which the hazardous substances exist. In doing so, OSHA specifically relied on its mandate to assure that no employee will suffer material impairment of health or functional ca-

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266. The court was aware that, absent these provisions, some employees were likely to lose their jobs, noting that

certain employees will be incapable of even wearing a PARP [powered air purifying respirator]. An employee under such circumstances, in the absence of some opportunity to transfer to a position where a respirator need not be worn, might very well be discharged, or otherwise sustain economic loss, due to his or her inability to wear a respirator.


267. 599 F.2d 622, 625 (5th Cir. 1979) (sole purpose of OSHA is protecting the health and safety of workers, not regulating job security).


269. *Id.*

270. *Id.* (codified in 29 C.F.R. § 1910.1043(h)(2)(iii) (1980)).
Thus, employers who comply with the Act by discriminatory standard-setting arguably violate Title VII. In addition, private parties may be entitled to injunctive relief.\footnote{272}

V. THE RAMIFICATIONS OF DIFFERENTIATION FROM THE VANTAGE POINT OF TITLE VII

The preceding sections of this article have focused primarily upon the safety and health aspect of employment differentiation on the basis of sex. Such differentiation, of course, need not be undertaken solely in response to government fiat. Indeed, for whatever motive, employers have justified and probably will continue to justify treating females differently on the basis of safety and health considerations. This article will now examine the two major aspects of employment differentiation under federal discrimination laws. First, a substantial discussion will be undertaken of the use by employers of safety and health considerations to justify sex differentiation, in the absence of federal safety and health standards. As will become apparent, the legality of such differentiation is a relatively straightforward proposition.

The second aspect of an employer's decision to differentiate for safety and health reasons, when a federal standard exists, is significantly more troublesome. To illustrate, assume that a federal official, such as the Secretary of Labor under OSHA, has promulgated standards that, as written or applied, require employers to differentiate on the basis of sex. In such a case, the employer would appear to be faced with a dilemma. The employer may either violate the safety and health standard by not discriminating, or violate discrimination laws by following the safety and health standard. The latter part of this section of the article will discuss the extent to which the apparent dilemma can be circumvented through various legal doctrines, including the right of privacy, agency-level cooperation between OSHA and the EEOC, and affirmative defenses such as the bona fide occupational qualification.

\footnote{272} See 42 U.S.C. § 2000e-5(g) (1976); Laffey v. Northwest Airlines, Inc., 567 F.2d 429, 454-55 & n.171 (D.C. Cir. 1976); Oshiver v. Court of Common Pleas, 469 F. Supp. 465, 648 (E.D. Pa. 1979). OSHA may also be liable to private parties under the equal protection clause of the Fifth Amendment. Discussion of the latter possibility must be deferred. It is worth noting, however, that it has been held in a recent case that no private right of action exists under OSHA. Taylor v. Brighton Corp., 616 F.2d 258, 264 (6th Cir. 1980). Further, the Secretary of Labor cannot be sued for negligence under the Federal Tort Claims Act, because his duties are sui generis and do not resemble those of a private person. Davis v. United States, 536 F.2d 758, 759 (8th Cir. 1976), \textit{affirming} 395 F. Supp. 793 (D. Neb. 1975).
A. Ramifications of Sex Discrimination in the Workplace Under Title VII in the Absence of Federal Safety and Health Regulations

1. Whether Employment Differentiation on the Basis of Sex is Covered Under Title VII

The most significant federal proscription of sex discrimination in employment is Title VII.273 Overt sexual discrimination is unlikely to be justified by employers on the basis of safety and health considerations. For example, a company that utilizes toxic substances generally is not going to restrict better paid, but more dangerous, positions to males on the grounds of safety and health. Such a blatantly discriminatory restriction would almost surely be unlawful under Title VII, absent extreme circumstances. More likely, the company would exclude pregnant women or workers with reproductive capacities from these positions, claiming that this specific trait, rather than sex per se, is what requires protection on safety and health grounds.

Legal analysis of differentiation on the basis of pregnancy or reproductive capacity has evolved rapidly since the enactment of Title VII. A discussion of the topic can be divided into three distinct time periods. The dividing line between the first and second periods occurred on December 7, 1976, the day the Supreme Court announced its decision in General Electric Co. v. Gilbert,274 an opinion which marked a significant departure from prior decisions on the legality of differentiation on the basis of pregnancy under Title VII. The third period began on October 31, 1978.

273. 42 U.S.C. §§ 2000e-2000e-17 (1976). Government classifications based upon sex can also violate the equal protection clause of the fourteenth amendment to the United States Constitution. Frontiero v. Richardson, 411 U.S. 677 (1973); Reed v. Reed, 404 U.S. 71 (1971). Classifications based upon pregnancy, however, absent a showing of pretext "designed to effect an individual discrimination against the members of one sex or the other," do not violate the equal protection clause. Geduldig v. Aiello, 417 U.S. 484, 496 n.20 (1974). Moreover, the Supreme Court has recently held that § 1985(e) of the Civil Rights Act of 1871 may not be relied upon to remedy employment discrimination on the basis of sex. Great Am. Fed. Sav. & Loan Ass'n v. Novotny, 442 U.S. 366 (1979). Section 1983 of the Civil Rights Act of 1871, however, can sometimes be utilized by individuals claiming sex discrimination. See, e.g., Cleveland Bd. of Educ. v. LaFleur, 414 U.S. 632 (1974). Finally, in addition to anti-discrimination laws, relief may sometimes be obtained under the grievance and arbitration procedures of a collective bargaining agreement. See, e.g., Olin Corp., 73 Lab. Arb. & Disp. Settl. 291 (1979) (Knudson, Arb.) (company did not violate collective bargaining agreement by excluding women from a job that involved exposure to lead, where lead posed a danger to pregnant employees).

274. 429 U.S. 125 (1976).
the day President Carter signed a bill amending Title VII, which in part overruled the Gilbert decision, by prohibiting employment discrimination "on the basis of pregnancy, childbirth or related medical conditions . . . ." 275

Prior to Gilbert, a disability plan's exclusion of pregnancy-related disabilities violated Title VII, pregnancy discrimination being equated with sex discrimination.276 Gilbert, along with a second major Supreme Court decision on the issue, Nashville Gas Co. v. Satty,277 rejected the earlier lower court decisions and established a highly uncertain standard by which to determine whether pregnancy differentiation constitutes unlawful sex discrimination under Title VII.278

The Gilbert Court addressed the legality of a disability plan that covered nonoccupational sicknesses and accidents for all employees but excluded all disabilities arising from pregnancy.279 Relying primarily on its prior decision in Geduldig v. Aiello,280 which arose under the fourteenth amendment rather than Title VII, the Supreme Court upheld the legality of the disability program,281 a result that was directly contrary to both "the unanimous conclusion of all six Courts of Appeals that had addressed this question," 282 and an EEOC guideline.283 The Court, in an opinion

279. 429 U.S. at 128-29.
280. 417 U.S. 484 (1974). Geduldig involved a disability insurance program that was administered by the State of California for the benefit of persons in private employment. Id. at 486.
281. 429 U.S. at 128.
282. Id. at 146-47 (Brennan, J., dissenting). Moreover, "[a] number of state courts have held that health and welfare plans which exclude pregnancy benefits violate state fair employment practice laws." Siegel & Ayres, Book Review (A. Larson, EMPLOYMENT DISCRIMINATION), 1977 DUKES L.J. 287, 291 n.19.
283. The guideline which was promulgated in 1972 was codified at the time of the decision in Gilbert in 29 C.F.R. § 1604.10(b) (1975). The guideline was not given controlling effect for two reasons. First, it was promulgated eight years after the enactment of Title VII and thus was not a "con-
authored by Justice Stewart, first held that "an exclusion of pregnancy from a disability-benefits plan providing general coverage is not a gender-based discrimination at all." 284 In other words, because "[t]here is no risk from which men are protected and women are not . . . [and] no risk from which women are protected and men are not," 285 pregnancy differentiation was held not to be the equivalent of sex differentiation. The Court acknowledged that the program would have been illegal had the exclusion of pregnancy disability benefits been a pretext for discriminating against women. 286 The Gilbert decision held, however, that such a pretext could not be inferred from the simple fact that coverage excluded pregnancy. 287 Noting further that the plaintiff had not even attempted to introduce evidence of a violation of Title VII under the doctrine that a violation occurs if "the effect of an otherwise facially neutral plan or classification is to discriminate against members of one class or another," 288 the Court stated that "[a]s there is no proof that the package is in fact worth more to men than to women, it is impossible to find any gender-based discriminatory effect in this scheme simply because women disabled as a result of pregnancy do not receive benefits." 289

The second Supreme Court decision construing the legality of pregnancy differentiation under Title VII is Nashville Gas Co. v. Satty. 289 In Satty, a company required pregnant employees to take an unpaid leave of absence and eliminated all accumulated job seniority for those employees returning to work from the forced

temporaneous interpretation" of Title VII. 429 U.S. at 142. Second, earlier opinion letters issued by the General Counsel of the EEOC contradicted the guideline. Id. at 142-43.

284. 429 U.S. at 136.
285. Id. at 138.
286. Id. at 135.
287. Id. at 136. The Court concluded that pregnancy was "significantly different" than the covered diseases and disabilities, and thus the question of excluding a disease or disability which was confined to the members of one race or sex was not present. Id.


289. 429 U.S. at 138. The Supreme Court has subsequently stated that the Gilbert "holding rested on the plaintiff's failure to prove either facial discrimination or discriminatory effect." City of Los Angeles v. Manhart, 435 U.S. 702, 716 n.29 (1978).

leave of absence.\textsuperscript{291} At the same time, the company offered paid leave for non-occupational disabilities other than pregnancy and retained seniority for persons returning to work from such absences.\textsuperscript{292} The Court struck down the company's policy of eliminating seniority \textsuperscript{293} and remanded the cause for further findings on the issue of whether the unpaid maternity leave, while facially neutral, constituted a pretext for sex discrimination.\textsuperscript{294}

The seniority policy was not struck down because it was per se unlawful, but because it had a discriminatory impact \textsuperscript{295} under the rationale previously employed in \textit{Griggs v. Duke Power Co.}\textsuperscript{296} Thus, the Court was persuaded that the Nashville Gas Company had “not merely refused to extend to women the benefits that men cannot and do not receive, but ha[d] imposed on women a substantial burden that men need not suffer.”\textsuperscript{297} \textit{Gilbert} was distinguished on the ground that the plaintiff in that case had made no showing of discriminatory impact.\textsuperscript{298} With respect to the policy of unpaid maternity leave, the Court cited \textit{Gilbert} in support of the proposition that this type of disability policy is not a per se violation of Title VII.\textsuperscript{299} As in \textit{Gilbert}, differentiation on the basis of pregnancy was held not to constitute differentiation on the basis of sex,\textsuperscript{300} and the petitioner's unpaid sick-leave plan was held

\begin{itemize}
\item \textsuperscript{291} \textit{Id.} at 137. The effect of the company's policy is to make permanent job positions available to returning employees only if no presently employed person applies for the position. \textit{Id.}
\item \textsuperscript{292} \textit{Id.} at 139.
\item \textsuperscript{293} \textit{Id.} at 141-43.
\item \textsuperscript{294} \textit{Id.} at 148-46.
\item \textsuperscript{295} \textit{Id.} at 141.
\item \textsuperscript{297} 484 U.S. at 142. The Court reasoned that the elimination of accumulated seniority for employees returning from pregnancy leave deprived those employees of job opportunities. \textit{Id.} at 141. The respondent in \textit{Satty} had been forced to accept temporary work at a lower salary upon returning from leave, and subsequently was denied three positions that she would have qualified for had she been credited with the lost seniority. \textit{Id.} at 139.
\item \textsuperscript{298} \textit{Id.} at 141.
\item \textsuperscript{299} \textit{Id.} at 143.
\item \textsuperscript{300} \textit{Id.} This holding in \textit{Gilbert} and \textit{Satty} was the point of departure for the later Supreme Court decision in \textit{City of Los Angeles v. Manhart}, 435 U.S. 702 (1978). In \textit{Manhart}, the Supreme Court struck down a pension plan that required women to contribute more than men, finding the requirement to constitute per se unlawful “facial discrimination” on the basis of sex, as opposed to \textit{Gilbert} and \textit{Satty} which involved the sex-linked factor of pregnancy. \textit{Id.} at 714-16. This distinction between sex discrimination and differentiation on the basis of a sex-linked factor, such as pregnancy, was an important one. The \textit{Manhart} Court observed:
\end{itemize}
not to have a discriminatory effect. Because the lower courts had not considered whether the pregnancy differentiation was a mere pretext for sex discrimination, however, the Court, once again following the lead of Gilbert, remanded the cause for further consideration.

Congress reacted quickly to the Gilbert decision. Legislation aimed at overruling Gilbert was introduced in both the House of Representatives and the Senate within approximately three months of the Supreme Court’s decision. The bills were designed to amend the definition of sex discrimination in order to prohibit “discrimination on the basis of pregnancy, childbirth, or related medical conditions.” While enactment took more than nine-

effect of the practice on women as a class was discriminatory, that evidence does not defeat the claim that the practice, on its face, discriminated against every individual woman employed by the Department.

Id. at 716 (footnote omitted). Accord, EEOC v. Colby College, 589 F.2d 1159, 1145-46 (1st Cir. 1978); In re Consolidated Pretrial Proceedings, 582 F.2d 1142, 1145 (7th Cir. 1978). Of course, the sex-linked factor analysis is subject to a wide range of interpretations. As Justice Blackmun pointed out in Manhart, the pension plan could be regarded as involving the sex-linked factor of longer female life expectancy, rather than sex per se. 435 U.S. at 724 (Blackmun, J., concurring in part). Justice Blackmun could see no legal distinction between these two sex-linked factors, and hence concluded that Manhart cut back substantially on the holding in Gilbert “and, indeed, makes the recognition of [that case] as continuing precedent somewhat questionable.” Id. at 725 (Blackmun, J., concurring in part).

301. 434 U.S. at 145.

302. Id. at 145-46. On the same day that Satty was decided, the Court remanded for further consideration in light of Gilbert and Satty a decision of the Ninth Circuit which had struck down a school district’s policies of requiring pregnant teachers to stop working at a predetermined time before the expected date of delivery and denying sick-pay to such teachers. Richmond Unified School Dist. v. Berg, 434 U.S. 158 (1977). The Ninth Circuit had held that pregnancy differentiation constituted sex discrimination, and consequently, the school district’s policies violated Title VII. Berg v. Richmond Unified School Dist., 528 F.2d 1208 (9th Cir. 1975), remanded, 434 U.S. 158 (1977). Both policies are now unlawful under the recent amendment to Title VII. See 42 U.S.C. § 2000e(k) (Supp. III 1979). For the pertinent text of the amendment, see note 305 and accompanying text infra. Accordingly, because the relief sought in Berg was injunctive, the teacher should prevail on remand with respect to these two policies, to the extent that the issues are not already moot.


teen months, the final legislation went far beyond the scope of the Gilbert decision in terms of impact upon pregnancy differentiation in the workplace.306

The amendment to Title VII that Congress eventually enacted modified the definition of sex discrimination to include discrimination on the basis of "pregnancy, childbirth, or related medical conditions." 306 While the impetus for the amendment was provided by the decision in Gilbert and its effect upon pregnancy benefits, legislative history compels the conclusion that the prohibition against sex discrimination under Title VII now "extends to the whole range of matters concerning the childbearing process."307

The legislative history of the amendment further emphasizes that equality of treatment is the touchstone and that disability pro-

Williams further asserted that "by concluding that pregnancy discrimination is not sex discrimination within the meaning of title VII, the Supreme Court disregarded the intent of Congress in enacting title VII . . . [which was] to protect all individuals from unjust employment discrimination, including pregnant women." Id.

305. See Pub. L. No. 95-555, § 1, 92 Stat. 2076 (1978) (codified in 42 U.S.C. § 2000e(k) (Supp. III 1979)). The substantive section of the amendment provides as follows:

The terms "because of sex" or "on the basis of sex" include, but are not limited to, because of or on the basis of pregnancy, childbirth, or related medical conditions; and women affected by pregnancy, childbirth, or related medical conditions shall be treated the same for all employment purposes, including receipt of benefits under fringe benefit programs, as other persons not so affected but similar in their ability or inability to work, and nothing in section 2000e-2(h) shall be interpreted to permit otherwise. This subsection shall not require an employer to pay for health insurance benefits for abortion, except where the life of the mother would be endangered if the fetus were carried to term, or except where medical complications have arisen from an abortion; Provided, That nothing herein shall preclude an employer from providing abortion benefits or otherwise affect bargaining agreements in regard to abortion.

Id.

The Senate version passed without difficulty on September 16, 1977. See 123 Cong. Rec. 29664 (1977). The House version, however, had a much more tumultuous chronology, attributable, in large part, to the issue of how abortions should be treated under Title VII. Even with the utilization of a procedural tactic to avoid full debate on the House floor, the House version was not passed until July 18, 1978. See 124 Cong. Rec. H6862-70, 6878, 6880 (daily ed. July 18, 1978). Predictably, House and Senate conferees disagreed over the abortion issue, the House version having provided, unlike the Senate bill, that abortions need not be covered under benefit plans unless necessary to save the mother's life or contained in a collective bargaining agreement. In an eleventh hour compromise, the Senate conferees agreed on an abortion provision on October 13, 1978—two days before Congress was to have adjourned for the year. See 200 Daily Labor Rep. (BNA) A-11 (Oct. 16, 1978). Finally, on October 31, 1978, President Carter signed the new amendment into law. See 212 Daily Labor Rep. (BNA) A-15 to A-17 (Nov. 1, 1978).

grams or funds covering pregnancy need not be established if no programs exist for any employees. Moreover, even when fringe benefit programs are in existence, employers are not required to pay for health insurance benefits for abortions, unless the mother’s life would be otherwise endangered or unless medical complications arise from an abortion.

Since enactment of the 1978 amendments, any employment differentiation on the basis of pregnancy or reproductive capacity constitutes sex discrimination per se under Title VII, unless the employer can establish an affirmative defense. Thus, if a company excludes pregnant women or workers with reproductive capacities from better paying, but more dangerous, positions, it can no longer claim that the exclusion is based upon the specific trait of pregnancy, rather than upon sex per se. The next subsection will discuss the extent to which companies may be able to establish an affirmative defense to an allegation of unlawful overt sex differentiation or discriminatory impact under Title VII.

2. The Availability of Affirmative Defenses to a Charge of Sex Discrimination

The most significant affirmative defenses in Title VII disputes are the bona fide occupational qualification (BFOQ) defense and the business necessity defense. In their pristine form, the two defenses are mutually exclusive; in recent years, however, they have tended to merge. The BFOQ defense, which is statutory,


[T]he treatment of pregnant women in covered employment must focus not on their conditions alone but on the actual effects of that condition on their ability to work. Pregnant women who are able to work must be permitted to work on the same conditions as other employees; and when they are not able to work for medical reasons, they must be accorded the same rights, leave privileges and other benefits, as other workers who are disabled from working.

Id.

309. For the relevant text of the amendment, see note 305 supra. The final proviso of the new amendment prohibited employers from complying with the amendment until October 31, 1979, by reducing the monetary benefits or compensation of any employee. See Act of Oct. 31, 1978, Pub. L. No. 95-555, § 2, 92 Stat. 2076. In other words, benefits had to be increased for woman rather than decreased for men. If the costs of any benefits were apportioned between the employer and employees, any increased expenses related to compliance had to be divided in the same proportion. Id.


is based upon section 703(e) of Title VII which states that "it shall not be an unlawful employment practice for an employer . . . [to differentiate on the basis of sex] where . . . sex . . . is a bona fide occupational qualification reasonably necessary to the normal operation of that particular business or enterprise . . . ." 312 The business necessity defense, on the other hand, is entirely a judge-made doctrine.313 The BFOQ defense arises after the plaintiff has made a showing of overt discrimination, whereas the business necessity defense is applicable only after a plaintiff has made a showing that a particular employment practice, while facially neutral, has a disparate impact upon a group protected under Title VII.314

Some commentators have argued that the BFOQ defense was intended by Congress to be a rather broad one.315 The Supreme Court, however, has interpreted the defense as an "extremely narrow exception" to the general proscription against sex discrimination in Title VII.316 The Supreme Court first addressed the BFOQ defense in Phillips v. Martin Marietta Corp.,317 which involved a company's policy of refusing to hire women with preschool-age children.318 While the Court of Appeals had held that this policy did not constitute sex discrimination, the Supreme Court reversed in a per curiam opinion.319 The case was remanded, however, to determine whether a BFOQ could be established from the fact that conflicting family obligations for women with preschool-age children might be more relevant to job performance than for men.320

316. Dothard v. Rawlinson, 433 U.S. 321, 334 (1977). The Court relied on the restrictive language of the section, the relevant legislative history, and the interpretation of the EEOC. Id. at 344.
318. Id. at 543. The company did employ men with preschool-age children, as well as women without preschool-age children. Id.
319. Id. at 544.
320. Id. In a concurring opinion, Justice Marshall argued that the BFOQ exception should not be construed so broadly as to encompass "ancient canards" about the role of women in providing child care. Id. at 545 (Marshall, J., concurring).
The second Supreme Court decision construing the BFOQ defense was Dothard v. Rawlinson.\textsuperscript{321} Dothard involved a challenge to a state regulation that prohibited women from holding "contact positions" as correctional counselors in maximum security penal institutions.\textsuperscript{322} Contact positions were defined as those that required "continual close physical proximity to inmates of the institution." \textsuperscript{323} While this regulation overtly differentiated on the basis of sex, the State of Alabama argued that sex was a BFOQ for that particular position.\textsuperscript{324} In reversing a three-judge district court panel, the Supreme Court held that the regulation was valid on the basis of the BFOQ defense.\textsuperscript{325}

The Dothard court first discussed various tests for the BFOQ defense used by courts of appeals.\textsuperscript{326} The Court concluded that the lower federal courts had agreed that discrimination in hiring based on "stereotyped characterizations of the sexes" was impermissible.\textsuperscript{327} Notwithstanding a determination that the BFOQ exception was extremely narrow,\textsuperscript{328} the Court held that sex was a BFOQ for "contact positions," on the basis of substantial evidence that the use of women prison guards in contact positions in Alabama maximum security male penitentiaries would pose a security risk, directly linked to the sex of the guard.\textsuperscript{329}

In contrast to the BFOQ, the business necessity defense is available only in discriminatory impact cases. The complaint to which the business necessity defense is asserted does not challenge an employment practice because it overtly discriminates against women but rather because the practice, although neutral on its face, has

\begin{itemize}
  \item \textsuperscript{321} 433 U.S. 321 (1977).
  \item \textsuperscript{322} Id. at 326.
  \item \textsuperscript{323} Id. at 325.
  \item \textsuperscript{324} Id. at 332-33. Because of the regulation, only 25\% of the correctional counselor jobs were available to women. Id. at 332 & n.16.
  \item \textsuperscript{325} Id. at 336-37.
  \item \textsuperscript{326} The Court quoted from two decisions of the Court of Appeals for the Fifth Circuit. Id. at 333, quoting Diaz v. Pan Am. World Airways, Inc., 442 F.2d 385, 388 (5th Cir.), \textit{cert. denied}, 404 U.S. 950 (1971) ("discrimination based on sex is valid only when the essence of the business operation would be undermined by not hiring members of one sex exclusively") (emphasis in original); Weeks v. Southern Bell Tel. & Tel. Co., 408 F.2d 228, 235 (5th Cir. 1969) (BFOQ defense available only when an employer "had reasonable cause to believe, that is, a factual basis for believing, that all or substantially all women would be unable to perform safely and efficiently the duties of the job involved").
  \item \textsuperscript{327} 433 U.S. at 333.
  \item \textsuperscript{328} Id. at 334. \textit{See} note 316 and accompanying text supra.
\end{itemize}
a discriminatory impact upon women. A good illustration is employer imposed minimum height standards. Since women statistically are not as tall as men, such height restrictions necessarily have an adverse impact upon female applicants. Under the approach first approved by the Supreme Court in Griggs v. Duke Power Co., 330 such a discriminatory impact would render the height restriction unlawful unless it were job-related or justified by legitimate business necessity. As the Supreme Court explained in Dothard, "[t]he touchstone is business necessity . . . ; a discriminatory employment practice must be shown to be necessary to safe and efficient job performance to survive a Title VII challenge." 331

In Dothard, female applicants challenged a statutory height and weight requirement for all prison guards in addition to the overt prohibition against women holding contact positions. The opinion set forth the typical "discriminatory impact" scenario in the following fashion:

[T]o establish a prima facie case of discrimination, a plaintiff need only show that the facially neutral standards in question select applicants for hire in a significantly discriminatory pattern. Once it is thus shown that the employment standards are discriminatory in effect, the employer must meet "the burden of showing that any given requirement [has] . . . a manifest relationship to the employment in question." If the employer proves that the challenged requirements are job related, the plaintiff may then show that other selection devices without a similar discriminatory effect would also "serve the employer's legitimate interest in 'efficient and trustworthy workmanship.'" 332

Applying the above test, the Dothard Court found that the height and weight restrictions excluded many more women than men. 333 In the hope of establishing a business necessity defense, the State of Alabama argued that height and weight requirements were job-

330. 401 U.S. 424 (1971). Griggs involved the discriminatory impact of requiring a high school education for employment in or transfer to certain jobs in which the requirement was not related to job performance. Id. at 425-26. The Court held that the educational standard violated Title VII because of its discriminatory impact on black applicants and employees. Id. at 436.
331. 433 U.S. at 332 n.14 (citation omitted).
332. Id. at 329 (citations omitted).
333. Id. at 329-30. Alabama's standards were found to exclude 41.13% of the female population and less than 1% of the male population. Id.
related for prison guards, as these requirements related to strength—an essential quality for a prison guard.\textsuperscript{334} Alabama, however, produced no evidence “correlating the height and weight requirements with the requisite amount of strength thought essential to good job performance.” \textsuperscript{335} Moreover, even if such a correlation had been present, the Court reasoned that the same purpose could have been better achieved “by adopting and validating a test for applicants that measures strength directly.” \textsuperscript{336} Accordingly, the Court held that Alabama had not established a business necessity defense, and therefore had violated Title VII by using height and weight requirements.\textsuperscript{337}

Assume that an employer excluded pregnant women or women with reproductive capacities from certain positions on safety and health grounds. How would the BFOQ and business necessity defenses operate if the exclusion were challenged under Title VII? For acts occurring prior to the effective date of the 1978 pregnancy amendments to Title VII, a rule that pregnant employees could not hold certain positions would not constitute overt discrimination because, under \textit{Gilbert}, pregnancy differentiation does not, per se, equal sex discrimination.\textsuperscript{338} Under \textit{Satty}, however, such a rule would constitute “a substantial burden [for women] that men need not suffer.” \textsuperscript{339} Accordingly, the rule would have a discriminatory impact,\textsuperscript{340} thereby triggering the business necessity defense. Because employment differentiation on the basis of pregnancy or reproductive capacity now constitutes overt discrimination under Title VII, employers will more frequently raise the BFOQ defense.

Under either analysis, the precise factual situation is of crucial importance. For example, suppose that a pregnant employee, when exposed to a certain chemical, becomes particularly susceptible to spontaneous abortion. If the only risk in such a situation were to the aborted fetus, the employer would have difficulty establishing a BFOQ or business necessity defense,\textsuperscript{341} even if the unborn fetus

\textsuperscript{334} \textit{Id.} at 331.
\textsuperscript{335} \textit{Id.}
\textsuperscript{336} \textit{Id.} at 332 (footnote omitted).
\textsuperscript{337} \textit{Id.}
\textsuperscript{338} See notes 277-89 and accompanying text \textit{supra.}
\textsuperscript{339} 434 U.S. at 142. See notes 290-302 and accompanying text \textit{supra.}
\textsuperscript{341} See \textit{In re National Airlines, 434 F. Supp.} 249, 259 (S.D. Fla. 1977) (“the question of harm to the fetus is basically a decision to be made not by this court, but by the mother of the fetus”).
were to have a wrongful death or birth action against the employer. 342 This is because Title VII does not contain a cost-justification defense, and additional expense alone is not likely to establish a BFOQ or business necessity defense. 343 If the well-being of the pregnant employee were also jeopardized by exposure to the chemical, this result probably would not change. Normally, "the argument that a particular job is too dangerous for women may appropriately be met by the rejoinder that it is the purpose of Title VII to allow the individual woman to make that choice for herself." 344

If a pregnant employee's exposure to a chemical substance threatened the well-being of other employees, customers, or the general public, however, different issues would arise with respect to the BFOQ or the business necessity defense. For example, someone with a heart condition probably should not be an airline pilot. 345 Correspondingly, a pregnant employee who is more likely to become incapacitated than non-pregnant employees and whose incapacity is likely to expose other employees or members of the public to possible harm should not be permitted to operate a mechanical device near a chemical substance. 346 Similarly, assume that a pregnant construction worker is responsible for carrying material along the girders of the twentieth floor of a skeletal structure. If the employer were to show that pregnant employees are more susceptible to dizziness when exposed to heights and that members of the public walking on the sidewalk below the construction site suffer greater


344. Dothard v. Rawlinson, 433 U.S. at 335 (footnote omitted). See also Burwell v. Eastern Air Lines, Inc., 458 F. Supp. 474, 496 (E.D. Va. 1978), aff'd in part and rev'd in part, 633 F.2d 361 (4th Cir.), cert. denied, 49 U.S.L.W. 5643 (1980). In addition to distinguishing the theories of discrimination by disparate treatment and discrimination by disparate impact, and the applicable defenses, BFOQ and business necessity respectively, the Court of Appeals rejected Eastern's contention that its consideration for the safety of the pregnant flight attendant and her unborn child should be an element of business necessity. The Fourth Circuit stated: "If this personal compassion can be attributed to corporate policy it is commendable but in the area of civil rights, personal risk decisions not affecting business operations are best left to individuals who are the targets of discrimination." Id. at 371. See generally Note, Employment Rights of Women in the Toxic Workplace, 65 Calif. L. Rev. 1113, 1130-31 (1977).

345. See Airline Pilots Ass'n v. Quesada, 276 F.2d 892 (2d Cir. 1960).

risk of being injured by material dropped by dizzy employees, he would have a strong argument in favor of a BFOQ or business necessity defense. 347 Non-pregnancy, in other words, would be "reasonably necessary to the normal operation of that particular business or enterprise" with respect to that particular position.

As the above examples illustrate, one can imagine numerous factual situations in which an employer could establish a BFOQ or business necessity defense in order to justify an exclusion of pregnant employees or workers with reproductive capacity from particular positions. The employer would still violate Title VII, however, if a BFOQ or business necessity defense were established, if the stated reason for the exclusion were a mere pretext for sex discrimination. In a disparate impact case, the female employee might show that reasonable alternatives were present that would permit the pregnant employee to perform the job, without exposing others to harm. Perhaps the employer could equip the mechanical device referred to in the earlier example with a safety feature that automatically shut off the machine when an employee, whether pregnant or otherwise, became incapacitated. In the overt discrimination context, the possibilities for proving pretext are perhaps even stronger. If an employer exposed males with reproductive capacities to one toxic substance but simultaneously excluded women with reproductive capacities from positions exposing them to a different deleterious chemical, the employee probably would have a successful pretext claim. In other words, if an employer wants to exclude women from a particular position for concededly legitimate job-related reasons, that employer must treat similarly situated males in the same manner in order to avoid committing sex discrimination under Title VII.

B. Ramifications of Sex Differentiation Under Title VII When Federal Safety and Health Regulations, as Written or Applied, Require Employers to Differentiate on the Basis of Sex

As has been discussed previously in this article, certain working conditions pose greater hazards for pregnant employees or female employees with reproductive capacities than for males. Other working conditions pose greater risks for males with reproductive

capacities than for women. These limited situations are appropriately termed "sex-specific." The first portion of this section assumed that no federal safety and health regulations existed for these sex-specific working hazards. The following discussion will examine the situation in which a federal agency, usually the Department of Labor under OSHA, has promulgated regulations which take these sex-linked hazards into account. Indeed, under the general duty clause obligation imposed in OSHA, the situation examined in this section could arise even in the absence of precise regulations. Assume that such regulations require employers to differentiate in the workplace on the basis of sex, either by requiring an employer to refrain from promoting a pregnant employee to a hazardous position or by requiring medical removal of the employee from such a position. In such a case, the employer would appear to be placed in a dilemma. Either he could violate the regulation by not differentiating on the basis of sex, or he could violate discrimination laws by following the safety and health regulation and refusing to expose the pregnant employee to the sex-linked hazard. Methods may exist, however, to avoid this dilemma.

1. The Female Employee's Right of Privacy and its Effect Upon the Constitutionality of Safety and Health Regulation

One possible argument concerning an OSHA standard that requires an employer to differentiate on the basis of sex is that the standard, by violating the employee's right of privacy, is unconstitutional. If the argument was successful, the dilemma between Title VII and OSHA would be circumvented.

The constitutional right of privacy, whatever its textual source, encompasses a myriad of concepts. One recurring con-

348. In addition to the right of privacy, a constitutional challenge to a sex-specific standard would be possible under the equal protection component of the fifth amendment's due process clause. Davis v. Passman, 442 U.S. 228 (1979). To withstand such a challenge, "classifications by gender must serve important governmental objectives and must be substantially related to achievement of those objectives." Califano v. Webster, 430 U.S. 313, 316-17 (1977), quoting Craig v. Boren, 429 U.S. 190, 197 (1976). Given that employee safety and health is an important governmental objective, and safety standards are a reasonable means to achieve that objective, such a challenge would probably not succeed even if pregnancy classification is the equivalent of sex classification under equal protection analysis.

349. See Griswold v. Connecticut, 381 U.S. 479 (1965). In Griswold, various theories were espoused for the existence of a right of privacy. Justice Douglas relied on penumbral and peripheral rights which emanated from the specific guarantees of the Bill of Rights. Id. at 484. Justice Goldberg argued that the concept of liberty in the due process clause of the fourteenth amendment, combined with the ninth amendment's evidence that rights existed beyond those
cept, however, is in the area of childbirth. The Supreme Court has articulated the concept as follows: "If the right of privacy means anything, it is the right of the individual, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a child." That decision, however, is not absolutely protected against all governmental intrusion. The state possesses certain important interests in this area, which must be balanced against, and which can outweigh, the individual's right to decide whether to have a child. These include the state's interest in protecting the health of the pregnant woman and the potential life of the fetus and in encouraging normal childbirth. The state may also have "legitimate demographic concerns about its rate of population growth."

With these competing interests in mind, an OSHA standard that precluded a male or female worker with reproductive capacities from performing a particular job might violate that worker's constitutional right of privacy, at least if the only effect of the workplace hazard was to sterilize that worker. Prior to pregnancy, there is no state interest in potential life which needs to be protected. Granted, a woman who loses her ability to reproduce frustrates the state's interest in "encouraging normal childbirth" and controlling "its rate of population growth." However, persons who are voluntarily sterilized and couples who exercise birth control also frustrate these state interests. The Supreme Court has established that a state cannot constitutionally regulate an individual's access to abortion.


353. In Roe v. Wade, the Court stated that since a fundamental right was involved, only a compelling state interest could overcome the right of privacy. Id. at 155-56.

354. See id. at 162.


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to and use of contraceptives. Were a state to outlaw voluntary sterilization, such a statute would unquestionably be deemed unconstitutional as well. Correspondingly, if a woman wants to risk losing her ability to reproduce in order to earn a living, that should be her constitutional prerogative.

Suppose, however, that rather than simply sterilizing a female employee, a chemical substance increased the likelihood of birth defects in the event that the women did become pregnant and carry the fetus to term. The state interest "in encouraging normal childbirth" would increase dramatically. Whether this state interest would be sufficient to overcome a woman's right of privacy, however, is an open question.

The seminal decision in this area is Roe v. Wade, which challenged a Texas statute that banned abortion unless necessary to preserve the life of the mother. The Supreme Court, in holding the statute unconstitutional, concluded "that the right of personal privacy includes the abortion decision, but that this right is not unqualified and must be considered against important state interests in [protection of health, medical standards, and prenatal life]." The impropriety of governmental intrusion into the pre-conception decision to risk birth defects through exposure to workplace hazards at first glance seems stronger than in the case of abortion. In cases subsequent to Roe v. Wade, however, the Supreme Court repeatedly has focused upon "the central role of the physician, both in consulting with the woman about whether or not to have an abortion, and in determining how any abortion


359. Id. at 154. Elaborating upon this latter theme, the Court outlined three regulatory stages:

(a) For the stage prior to approximately the end of the first trimester, the abortion decision and its effectuation must be left to the medical judgment of the pregnant woman's attending physician.

(b) For the stage subsequent to approximately the end of the first trimester, the State, in promoting its interest in the health of the mother, may, if it chooses, regulate the abortion procedure in ways that are reasonably related to maternal health.

(c) For the stage subsequent to viability, the State in promoting its interest in the potentiality of human life may, if it chooses, regulate and even proscribe, abortion except where it is necessary, in appropriate medical judgment, for the preservation of the life or health of the mother.

Id. at 164-65.
was to be carried out."

A physician typically would not be consulted concerning the decision to increase the likelihood of birth defects as a result of the woman's working environment. This absence of the physician from the decision-making process may dictate that the woman's privacy interests should not outweigh the state's interest in minimizing birth defects. In other words, while a woman probably has a right to risk her capacity to reproduce and has the right to sterilize herself to obviate the increased risk of birth defects from a sex-linked workplace hazard, the state probably has the right to promulgate safety standards in order to preclude women with reproductive capacity from exposing themselves to workplace hazards that significantly increase the risk of birth defects, even before a child is conceived.

In addition to the issue of pre-conception damage, the situation in which a chemical substance increases the possibility of harm to either the employee after she becomes pregnant or the fetus must be considered. Once again, the state has a significant interest in the potential life of the fetus as well as in the pregnant employee. That interest may be outweighed at times in the abortion context, where a physician is very much a part of the decision making process. In the context of workplace exposure to a chemical that could harm the fetus or its mother, however, there is no role that the physician could meaningfully play. Consequently, the state's interest in protecting the health of the mother probably would prevail over the mother's right of privacy, for the same reason that the state has the right to enact legislation aimed at protecting any employee, male or female. Moreover, under these circumstances, the state's interest in the unborn child most likely will prevail over the mother's right to make decisions relating to childbirth, such that an OSHA standard limiting exposure of pregnant employees to a chemical that threatens the life or health of the fetus probably would not infringe upon constitutional rights of privacy.


361. Of course, once the employee is pregnant, she and her physician could decide, in accordance with the guidelines set forth in Roe v. Wade, that the employee should have an abortion. In this limited sense, the physician would play a meaningful role, because the pregnant employee could have an abortion in order to obviate the risk of workplace exposure to a chemical that could harm the fetus. This is far different, however, from consulting with a physician in the first instance to decide whether to expose the fetus to the harmful chemical.

362. See note 359 and accompanying text supra.
2. Agency-Level Cooperation Between OSHA and EEOC — Particularly With a View Toward Uniform Guidelines

Since both OSHA and EEOC have a recognized interest in sex-linked workplace hazards, cooperation between the two agencies may be the best way of preventing a conflict between discrimination laws and safety and health laws. This article previously discussed the draft interpretive guidelines issued by the EEOC and the OFCCP, and criticized by OSHA. These agencies should continue in their efforts to enlist OSHA cooperation and to develop final uniform guidelines in the area of sex-linked workplace hazards — much as the EEOC, the Civil Service Commission, the Department of Justice, and the Department of Labor have developed the Uniform Guidelines on Employee Selection Procedures in the employment discrimination context. Continued efforts are important because if such guidelines were developed and became effective, they would most likely be authoritative. Agency guidelines, particularly those promulgated by the EEOC, ordinarily are “entitled to great deference” by the courts. Of course, the degree of deference varies, depending upon “such factors as the timing and consistency of the agency’s position, and the nature of its expertise.” But if the agencies have collaborated to develop one consistent interpretation, “the principle of administrative deference intensifies.”

The proposed guidelines, however, do not attempt to implement or enforce federal policies related to health and safety; they only affirm Title VII’s goal of assuring equality of employment opportunity. The task of assuring a workplace free of condi-

363. See notes 80-96 and accompanying text supra. The guidelines were issued by the EEOC and the OFCCP, but not by OSHA. The basic role of OSHA set forth in the guidelines was one of consultation and coordination that was to be carried out in part through a letter of agreement among the agencies. Unfortunately, however, the withdrawal of the guidelines moots OSHA’s involvement.


368. See note 80 supra. One final point should be noted. The draft guidelines stated that the bona fide occupational qualification exception would not
tions that threaten the health or safety of employees remains with OSHA, the federal agency specifically given that responsibility. Thus a potential for conflict remains, especially in light of OSHA's statement that the guidelines are a cause for concern. In spite of this, the draft guidelines, if they become effective, may help to clarify the sex-linked hazard aspect of Title VII for employers.

3. Compliance With An OSHA Standard As An Affirmative Defense To A Sex Discrimination Charge Under Title VII

Assume that an OSHA standard requires an employer to ban pregnant women from working near a given toxic substance after a certain point in their pregnancy. Could an employer that followed the standard claim that its compliance constituted an affirmative defense against a female employee who subsequently filed a sex discrimination charge with the EEOC under Title VII?

An employer might claim that the OSHA standard established non-pregnancy as a bona fide occupational qualification for the position in question, or that following the OSHA standard is a business necessity, and any discriminatory impact upon women resulting from the employment practice in question is not unlawful under Title VII. Little or no authority exists on this issue. As is generally the case with these two defenses, however, any success that an employer might have will turn very much on the facts involved, especially with respect to a possible showing of pretext by the employee or the availability of alternatives for the employer. For example, an employer cannot vigorously enforce OSHA standards against women while ignoring comparable standards with respect to men.

Section 4(b)(1) of OSHA also plays an important role in this analysis. That section provides, in pertinent part: "Nothing in this [Act] shall apply to working conditions of employees with respect to which other Federal agencies . . . exercise statutory authority to prescribe or enforce standards or regulations affecting apply to the situations covered by the guidelines. That narrow exception pertains only to situations where all or substantially all of a protected class is unable to perform the duties of the job in question. Such cannot be the case in the reproductive hazards setting, where exclusions are based on the premise of danger to the employee or fetus and not on the ability to perform. See note 90 and accompanying text supra.

369. See notes 314-29 and accompanying text supra.
370. See notes 330-37 and accompanying text supra.
371. See notes 341-44 and accompanying text supra.
occupational safety or health." 372 If the EEOC falls within this classification, then the OSHA standard would be pre-empted by Title VII, and the employer could not rely upon it as an affirmative defense under the analysis described above. 373

While the issue has not been addressed in the courts or by any agency, Title VII almost certainly does not authorize the EEOC to prescribe or enforce standards or regulations affecting occupational safety and health. Neither the explicit language of Title VII nor its legislative history evidences any attempt on the part of Congress to affect occupational safety or health. Indeed, since equality of treatment is the touchstone under Title VII, an employer could expose women to the worst possible workplace hazards without violating Title VII, so long as males were treated the same way. Accordingly, as long as the OSHA regulation is valid, it would not be preempted by Title VII and could be relied upon by the employer as a defense under Title VII.

VI. CONCLUSION

The foregoing analysis demonstrates the lack of clarity concerning evidence of sex-specific susceptibility to toxic substances in the workplace. Moreover, uncertainty exists as to which toxic agents affect reproductive capacity, and for those for which there is certainty, the levels to which exposure must be reduced to obviate such effects. Add to this the problems generated by the presence of the fetus in the workplace, the multiplicity of government agencies involved, and the lack of direction among them, 374 and the confusion quickly becomes chaos: Further, exclusion of one sex from the workplace clearly will not solve the problems.

OSHA has regulatory authority to protect workers from occupational hazards. Employers have the obligation to protect employ-

374. Under TSCA, the EPA is required to ban or restrict the use of any chemical presenting an unreasonable risk to health or the environment. A generally accepted definition of unreasonable risk has yet to emerge. The EEOC does not appear to be the proper agency to solve the problem either, for ridding the workplace of hazards clearly is not EEOC's purpose. Since the main problem is dealing with toxic substances in the workplace, not regulating the exclusion of the employee from the workplace, EEOC cannot do OSHA's job through the back door.
ees from the hazardous workplace. Both OSHA and employers, however, are handicapped severely by feasibility considerations. In addition, employers are being whipsawed by a Catch-22 situation in which they are subject to complaints no matter what policy they establish. If employees are excluded for health and safety reasons, the employers may be subject to charges of discrimination by individuals or classes of individuals under Title VII. The OFCCP, the agency responsible for enforcing nondiscriminatory restrictions on government contracts, may also initiate compliance investigations of the employers. If employees are not excluded, NIOSH may decide to conduct health hazard investigations and epidemiological studies at the operating locations. The employer also risks personal injury actions by affected employees.

The only practicable way to handle the problem is for employers to use the EEOC's Draft Interpretative Guidelines on Employment Discrimination and Reproductive Hazards as a starting point since the "problem" will be handled on a case by case basis until effective and uniform involvement of the agencies concerned results in the issuance of definitive administrative guidelines. In the interim, employers should consider establishing the following program aimed at minimizing workplace hazards: (1) adopt and consistently apply a facially neutral workplace policy concerning exposure to toxic agents in the workplace; (2) adequately investigate, identify, monitor, and, where feasible, control all toxic substances in the workplace; (3) identify the toxic or carcinogenic effects of those substances; (4) continue to research and monitor technological developments concerning the identified substances and the continued application of the policy; (5) identify on the basis of reputable scientific evidence those groups of workers who are particularly susceptible to hazards of particular toxic substances; (6) inform those workers of the harmful possibilities posed by exposure to the toxic substances in the workplace; (7) advise them of the known or potential deleterious effects and risks resulting from exposure to the toxic substances on the job; (8) suggest alternatives if feasible and give the workers the ability to make an informed choice concerning their actions with respect to such exposure; (9) require susceptible workers who voluntarily choose to remain in the workplace to sign a release of liability (on behalf of themselves and, if applicable, the fetus) after consultation with a physician; and (10) where necessary upon request of the employee or upon failure of the employee to execute such a release or as required by an OSHA directive or standard, re-
move susceptible workers from exposure. Exclusion from the workplace on any other basis probably will not be supportable, for the basic framework in this area is straightforward — sex-based differential treatment without solid and neutral factual support and compelling necessity will most likely violate Title VII.

Real health threats from which fetuses, women, and men of reproductive capacity must be protected do exist in the workplace. The ideal solution, of course, would be to make the workplace safe for all workers, but as has been demonstrated, this is a purely theoretical solution given the present state of even the most modern industrial plant. Economic impracticability and technological impossibility bar the way to reducing ambient concentrations of toxic agents in the workplace to levels low enough to protect everyone, male, female, and the fetus. Clearly, mandating a zero-risk workplace is not feasible. Other than employing only hermaphrodites (persons with both male and female reproductive organs), there seems no clear way to avoid or resolve the conflict between OSHA and Title VII. One statutory mandate must take precedence; it should be safety and health.

One possible avenue of relief from these conflicting regulations was addressed in Sears, Roebuck & Co. v. Attorney General of the United States. In that case, relief was sought from the various officials and agencies of the federal government that created a morass of regulations and failed to coordinate federal enforcement activity, causing Sears to be faced with conflicting compliance requirements resulting in discrimination against employees. As the history of that case revealed (the court dismissed Sears' claim), however, employers apparently have no right to consistency in government regulation. For the present time, the only possible approach to the problem presented in this article is one of “advise and consent,” with apologies to Allen Drury. The only alternative, it seems, would be a benign twist on the plot of Aldous Huxley's 1932 novel “Brave New World” in which workers were trained to tolerate toxic chemicals.

376. Id. The court's dismissal was based on its conclusion that Sears had failed to present a justiciable case or controversy. Id.
377. Severo, supra note 3, § 1, at 1, cols. 1-2.