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Equity and the Eco-System: Can Injunctions Clear the Air?

On April 22, 1970, a number of private groups in the United States sponsored “Earth Day,” an attempt to turn the attention of the population to matters of environmental concern. The dramatically favorable response to the idea of “Earth Day” suggests the extent to which more and more persons are becoming worried about ecological destruction. One of the methods of preventing that destruction, the obtaining of injunctions against industrial polluters, is the subject of this Comment. The central focus of this Comment is upon the injunction as a means of preventing air pollution, but most of the substance is equally applicable to the obtaining of injunctions against other forms of pollution.

It is clear that the injunction is not a panacea and that there are some important philosophical objections to the use of injunctions as a weapon against pollution. The injunction is not a panacea because it cannot effectively be used to combat problems of widespread concern. The problems of “thermal pollution,” for example, are caused by all of the machines which operate in the world; the changes in climate which may result from thermal pollution and other by-products of technological “progress” simply cannot be reversed by an injunction. Similarly, the use of injunctions to attack toxic forms of air pollution results in an episodic form of attack upon the problem. Some industrial polluters are identified and required to alter their manufacturing processes while others are not given this burden. Thus, legislative action is necessary for the elimination of some environmental problems and is probably the most desirable type of response to all problems of industrial air pollution. In the absence of legislation, however, litigation is preferable to inaction. Successful litigation can alleviate the harm caused by some forms of industrial air pollution, and can also serve as a catalyst for a more widespread legislative response. Even unsuccessful litigation can serve to provide important publicity. It is for these reasons that the injunction can be a worthwhile method of attacking air pollution.

It is, of course, true that courts may respond to actions for in-

2. The recent development of concern for environmental quality has not, of course, been limited to the problem of air pollution. The Sub-Mariner, for example, has recently declared war against the surface world for polluting his oceans. 25 Prince Namor, The Sub-Mariner 11 (May 1970), at 17-18.
3. See Murdock & Connell, supra note 1, at 61.
junctions in ways that are repugnant to the majority of the people. The historical background of the National Labor Relations Act presents one instance in which that result occurred. But the response of Congress to those injunctions against unions that were obtained before that Act was passed presents an example of the reason that actions for injunctive relief against polluters are important. Whether or not the court decisions are right, the existence of court decisions increases the likelihood of a legislative decision. To the extent that the court decisions are in accord with the will of the majority, there can be little objection to the principle of obtaining injunctions against those industries which contribute to toxic air pollution.

I. THE NATURE OF THE AIR POLLUTION PROBLEM

Air pollution has been recognized as a problem for centuries, but its crisis proportions have been seen in the United States only in the last decade. Now that air pollution is so extensive, many contemporary scientists are exceedingly pessimistic about the prospect for clean air in the future.

Throughout the past decade, scientists have assimilated a vast amount of data that exemplifies the pervasive nature of the air pollution menace. It is now apparent that air pollution damages plant
and animal life and interferes with hemispheric weather patterns. Air pollution also creates a number of distinctly human problems. It impairs the enjoyment of recreational activities and daily offends the senses of residents of urban areas. In addition, reduced visibility attributable to dirty air makes air travel and other forms of transportation more hazardous. These adverse effects of air pollution have been thoroughly analyzed. Dr. William Stewart, while Surgeon General of the Public Health Service, declared that contaminated air is "unquestionably a factor in the development of not one, but many diseases affecting literally millions of our people." Moreover, air pollution can impair personal efficiency through its psychological effects and can directly affect perception and reaction time. Although it is difficult, if not impossible, to measure the adverse effects of air pollution in monetary terms, the cost in terms of personal suffering, necessary medical treatment, and rehabilitation is staggering.

Some of the damage caused by air pollution is more susceptible to monetary measurement. The annual loss to agriculture as a result of contaminated air has been extensive in recent years, and the amount of that loss is rapidly increasing; advanced industrial processes are producing a variety of new contaminants which cause more extensive damage than the pollutants that have been dis-

10. Anderson 142, 145; A STUDY OF POLLUTION 18-19. It is important to remember that man's tolerance level may be higher than that of other animal species or of vegetation. But since all groups must interact in the environment, emissions which affect one will affect all others eventually. Anderson 158-59.
13. This safety hazard is especially significant for air travel. In examining a sample of air disasters in 1962, the Civil Aeronautics Board tied poor visibility caused by air pollution to six crashes in that year alone, and estimated that as many as fifteen to twenty air accidents might have been attributable to such pollution-caused poor visibility. Id. at 21; Anderson 157.
14. Hearings on S. 780 Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works, 90th Cong., 1st Sess. pt. 3, at 1131 (1967). There is strong evidence that air pollution is associated with a number of respiratory ailments including lung cancer, bronchial asthma, pulmonary emphysema, chronic constrictive ventilatory disease, chronic bronchitis, and nonspecific infectious upper-respiratory-tract diseases, including the "common cold." A STUDY OF POLLUTION 14-15. See generally Lewis 135-50, for a discussion of the health studies that have been done concerning pollution and health. It is also notable that specific instances of severe pollution in a number of cities have been responsible for illness and death to thousands. See Anderson 144; Lewis 18-20; Cassell, The Health Effects of Air Pollution and Their Implications for Control, 33 LAW & CONTEMP. PROB. 197, 201 (1968).
15. Lewis 143-44; A STUDY OF POLLUTION 22.
17. The damage caused to health and related forms of injury are far more costly, by any measure, than all other types of damage combined. A STUDY OF POLLUTION 13.
charged into the air in the past.\textsuperscript{18} The dollar amount of this loss to agriculture is estimated to be hundreds of millions of dollars annually.\textsuperscript{19} A great deal of nonagricultural property loss is also attributable to air pollution.\textsuperscript{20} Polluted air has been found to injure trees and other nonagricultural vegetation, to speed the corrosion of metals, and to increase the rate of deterioration of rubber, building stone, and other materials.\textsuperscript{21}

Thus, the present dimensions of air pollution are extremely severe.\textsuperscript{22} Unfortunately, there is reason to believe that the problem will become even more serious. The ever-increasing consumer demand for better consumer goods—a demand that expands in direct proportion to continuing urbanization, the population explosion,

\begin{itemize}
  \item \textsuperscript{18} Certain contaminants have been known to affect vegetation more than 100 miles from their point of origin. \textit{A Study of Pollution} 18.
  \item \textsuperscript{19} National Conference on Air Pollution, Report from the Panel on Agriculture, Natural Resources, and Economic Considerations 19 (1962). Smog damage to agriculture has been observed in at least twenty states. In New Jersey, for example, damage has been observed in every country and has involved 36 commercial crops. \textit{N.Y. Times}, April 2, 1970, at 16, col. 3.
  \item \textsuperscript{20} A figure once developed by the Department of Health, Education, and Welfare is $\$5$ per person per year or about $\$1$ billion annually for the nation. \textit{A Study of Pollution} 20. Many recent articles suggest that the costs may be much higher. See, e.g., \textit{J. Bregman & S. Lenormand, The Pollution Paradox} 65 (1966); Wolozin, \textit{The Economics of Air Pollution: Central Problems}, \textit{33 Law & Contemp. Probs.} 227, 228-29 (1968).
  \item \textsuperscript{21} See \textit{U.S. Dept. of HEW}, \textit{See also A Study of Pollution} 20-21 for an analysis of the costs to stores, hospitals, hotels, and the like for repairs and replacements—costs often running in the millions of dollars. As a result of the increased rate of deterioration of building materials that is caused by air pollution, real-estate values in the United States are estimated to drop two hundred million dollars per year. \textit{Lewis} 115. In the San Bernardino Valley near Los Angeles, 1,000 acres of ponderosa pines have been fatally afflicted by smog from the city. \textit{N.Y. Times}, April 2, 1970, at 16, cols. 1-2.
  \item \textsuperscript{22} Some feeling for the dimensions of the problem of air pollution in the United States can be obtained by examining the number of people affected:

<table>
<thead>
<tr>
<th>City</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City</td>
<td>12,000,000</td>
</tr>
<tr>
<td>Chicago</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>2,000,000</td>
</tr>
</tbody>
</table>

In over 300 cities, a total of more than 43 million people live under an air pollution hazard that the Public Health Service calls major.

In addition, some 30 million other people (about 15 per cent of the nation) live in 850 other cities with air contamination that is somewhat less severe but too serious to be classified as minor.

\textit{Lewis} 2. "About 7,300 places, housing 60 percent of the population, are confronted with air pollution problems of one kind or another." \textit{A Study of Pollution} vii.

It is also interesting to view the degree of pollution in terms of the amount of pollutant material that is discharged into the air. The average fallout of solid material in New York City, for example, is about 60 tons per square mile per month; in Chicago's Loop, as much as 120 tons have fallen on a square mile in a month. \textit{J. Bregman & S. Lenormand, supra} note 20, at 54-58. That article includes tonnage estimates of both particulate and nonparticulate pollutants for a number of cities as well as for the nation as a whole. In New York City, the annual emission of sulfur dioxide from the combustion of fuels is estimated to be in excess of 1.5 million tons. Katz, \textit{Nature and Sources of Air Pollution}, in \textit{The Pollution Reader} 163, 167-76 (1968). A medium-size copper smelter emits 1,500 tons of sulfur dioxide per day, an oil refinery 450 tons, and a coal-fired power plant 300 tons; a cement plant may emit as much as 150 tons of dust a day. \textit{Lewis} 43-44, 59. The Lewis book includes examples from other sources and estimates for various cities.
and income growth—and the resultant increase in industrial production, will cause the types and amounts of contaminants in the air to multiply unless the problem is vigorously attacked.23 Of course, even vigorous action cannot achieve absolute purity of the air, but a substantial reduction in the amount of pollutants being discharged is technologically feasible.24 Most observers agree that pollution control cannot be achieved through reliance upon voluntary efforts by those who pollute.25 Thus, the extent to which technology will be used to combat air pollution depends largely on the willingness of the public to act through their governments.26 Accordingly, most of the discussion in the pertinent literature centers on the question whether direct governmental regulation is a better method of control than economic incentive.27 Those persons who urge direct governmental control have been successful advocates: with the exception of nuisance actions brought by private plaintiffs, virtually all of the recent attempts to deal with air pollution have been in the form of regulatory statutes, ordinances, or administrative rulings.28 Despite some criticism,29 this type of direct regulation will probably be used in the future.30


24. A single pollution control device on one smoke stack can remove as much as 28 tons of particles each day that would otherwise go into the air. Detroit Free Press, Jan. 27, 1970, at 8.

Since the passage of the Clean Air Act in Britain in 1956, 4 & 5 Eliz. 2, c. 52, London has reduced its industrial smoke by 88% and sulfur-dioxide output has declined 28%, merely as a result of smoke control. Des Moines Register, March 23, 1970, at 15, col. 2-3. For a description of the operation of Britain's Clean Air Act, see J. Garner & R. Crow, Clean Air—Law and Practice (1964, Supp. 1967).


27. Some suggested economic incentives include effluent fees, effluent payments, and equipment tax credits.


29. For an indication of possible adverse effects from too strict an application of uniform pollution regulations, see Hagevick, Legislating for Air Quality Management: Reducing Theory to Practice, 33 LAw & CONTEMP. PROB. 369, 376-77 (1968); Stepp & Macaulay, supra note 23, at 17-21, 37, 40-43.

30. Havighurst, supra note 8, at 196; Wolozin, supra note 20, at 232; Gerhardt, supra note 9, at 366.

The Air Quality Act of 1967, 42 U.S.C. §§ 1857-571 (Supp. IV, 1965-1968), settled the question of alternatives to direct regulation. It operates mainly through the use of emission standards; ultimate control resides in air quality regions, and HEW has the power to approve individual state control programs. The use of localized standards meets some of the criticisms of strict regulations, because it allows consideration of such matters as ambient air quality and the economics of limited geographic areas, before emission levels are set. For a general discussion of the 1967 Act, see Martin & Symington, A Guide to the Air Quality Act of 1967, 53 LAw & CONTEMP. PROB. 239 (1968); O'Fallon,
II. THE ROLE OF PRIVATE LITIGATION

In spite of the trend toward governmental regulation as the primary means for combatting air pollution, private litigation does have an important role in the fight to obtain clean air. Govermental enforcement agencies have not been particularly successful in the past in reducing pollution, and it is unlikely that they will improve their performance significantly in the near future. The ineffectiveness of the regulatory agencies responsible for controlling

Deficiencies in the Air Quality Act of 1967, 33 LAW & CONTEMP. PROBS. 275 (1968). The usual regulation governs the permissible levels of pollutant emissions and the like, but many also directly control the use of particular equipment or fuels. Most regulations are promulgated by commissions that have been established pursuant to state law and which usually have a great deal of discretion as to what type of regulation they may issue. See, e.g., Mich. Comp. Laws Ann. § 336.15 (1967).

One example of a multifaceted control approach is found in New York City where there are regulations dealing with emissions, fuel types, equipment, and the competency of equipment operators. Cousins, New York's Fight Against Pollution, SUNDAY REV., March 7, 1970, at 53. Pittsburgh is another city with a very comprehensive set of air pollution regulations. See Allegheny County Health Dept. Rules & Regs., Air Pollution Control, art. XVII (Jan. 1, 1970). The federal government has also recognized the need for a variety of control methods to limit emissions from federal buildings and facilities. 42 C.F.R. § 76 (1970).

Injunctions are increasingly being sought to thwart the application of air pollution regulations. In New York City, for example, about 400 landlords have individually enjoined the city's efforts to enforce air pollution controls on apartment incinerators. N.Y. Times, Feb. 22, 1970, at 61. In New Jersey, DuPont and Company has filed suit against the state claiming that the imposition of a prohibition against the burning of fuel containing more than one per cent sulfur is an unconstitutional deprivation of the company's property. SATURDAY REV., May 2, 1970, at 60. In the State of Washington, two citizens' groups, the Washington Environmental Council and Clean Air for Washington, are seeking in a class action to intervene in a suit brought by owners of a copper smelter against the Puget Sound Air Pollution Control Agency. The copper owners claim that when the regulations dealing with sulfur-dioxide emissions are applied to their smelter, they are unconstitutional. The citizens' groups base their claim for intervention partially on a contention that the National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852, creates a statutory right to a healthful environment and that this is enforceable in court by private citizens. 2 AIR & WATER NEWS, Feb. 11, 1970, at 1-2.

31. In commenting on the many recently filed environmental suits, Professor Joseph L. Sax stated that "[i]f there's a theme to all these suits, it's an attempt to circumvent relatively ineffective regulatory agencies." Wall St. J., March 26, 1970, at 1, col. 6. See also Hill 61, col. 4, for a discussion of recent reports by federal and state pollution control officials. For an interesting example of the frustrations which may arise in dealings with balky pollution control agencies, see Boyle, My Struggle To Help the President, SPORTS ILLUSTRATED, Feb. 16, 1970, at 32 (water pollution).

32. The importance of a private action varies inversely with the amount of governmental action. The condition of the environment has recently become a major political issue, and consequently it may be hoped that there will be a rapidly rising governmental commitment accompanied by meaningful action. It has been suggested, however, that much of the recent emphasis on environment is only rhetoric. See, e.g., Kenworthy, Nixon's Pollution Policy, N.Y. Times, Feb. 12, 1970, at 42, col. 1. See also Hill 61, at cols. 1, 3, suggesting that many pollution control boards are dominated by representatives of the very industries that they are supposed to be regulating.
air pollution is, in most cases, the result of a low budget,\textsuperscript{33} a lack of personnel,\textsuperscript{34} and weak or nonexistent enforcement powers.\textsuperscript{35} As a result of these agency difficulties, public enforcement in the air pollution field must be selective, and is unlikely to be directed at local, sporadic, or nonflagrant violations.\textsuperscript{36} Accordingly, private actions may be necessary if such violations are to be attacked.

It is, of course, entirely possible that private legal action will never have a significant effect on air pollution. But fear that the method will not be successful should not discourage its use, for it certainly will do no harm. There are a number of functions which may be served by private suits. First, private actions may be used in cases involving certain rather significant types of pollution that simply are not covered by existing statutes.\textsuperscript{37} Second, private actions may be used to fill gaps in an existing governmental regulatory structure. The latter purpose is likely to become particularly important in the near future when the problem of air pollution may well become so severe that the government will be unable to cope with it effectively. In that event, private suits will provide a means for attacking pollution violations that are ignored by governmental agencies either because those agencies are too overburdened with work to prosecute all offenders or because the particular pollutant discharges are considered too insignificant to warrant official attention. There may, for example, be an instance of pollution that is minor in comparison with the emissions of major polluters, but which is nevertheless injurious to persons residing in the area affected by the

\textsuperscript{33} In 1966, for example, the total budget for all governmental air pollution control programs combined was $20 million; the estimated need was $72 million. See U.S. DEPT. of HEW 21-28, 25.

\textsuperscript{34} Hill 61, at cols. 2-3. The Department of Air Pollution Control in New York City alone receives over 50,000 complaints a year. Hagevick, Legislating for Air Quality Management: Reducing Theory to Practice, 33 LAW & CONTEMP. PROB. 269, 385 (1968).

In 1965 there were approximately 1,200 trained persons working in the field of air pollution, but 7,000 persons were needed. Existing training programs are thoroughly inadequate to the task of supplying the number of professionals required to meet demand. U.S. DEPT. of HEW 25.

\textsuperscript{35} Hill 61, at col. 1. In the rare circumstances in which money, personnel, and available sanctions have all been adequate—as in the City of Los Angeles—significant control of industrial pollution has been shown to be feasible. Id. at col. 2.

\textsuperscript{36} Id. at cols. 2-3 (citing examples of limited action by control agencies in a number of cities and states).

\textsuperscript{37} For example, although the 1967 Air Quality Act authorized the Secretary of HEW to establish air quality regions and ambient air standards, very little progress has yet been made in establishing adequate regulations. In his message to Congress on pollution, President Nixon indicated a recognition of the problems in the 1967 Act and he proposed amendment to it. Notwithstanding this request, comprehensive legislation seems a long way off. For the text of the President's message, see N.Y. Times, Feb. 11, 1970, at 32, col. 1. The difficulties of establishing a comprehensive scheme are intensified by the proliferation of groups and programs concerned with the environment. There are now thirteen congressional committees involved, 90 separate federal environmental programs, 26 quasi-governmental bodies, and fourteen interagency committees. NEWSWEEK, Jan. 26, 1970, at 38.
pollution; in such cases, overworked state or federal agencies may not consider it appropriate to direct enforcement efforts to the solution of the problem. The availability of private relief in such a case would provide the aggrieved residents with a means of redress for the injuries which they are suffering. Moreover, such private actions would help to enforce governmental policy, and would relieve some of the burden on governmental officials, thereby speeding the process of effective pollution abatement. Indeed, several states have recognized the utility of private injunction suits to protect against public nuisances and have passed statutes specifically authorizing such suits.

Private actions may also serve a significant purpose in situations in which there are existing statutes prohibiting the kind of pollutant discharges involved and in which there are governmental agencies willing to enforce those statutes. In such situations, enforcement by private suits may be preferable to blanket administrative enforcement of a statutory scheme. Present knowledge about the ill effects of air pollution is still far from complete, and some writers fear that if a solely regulatory approach were taken to the problem of air pollution, then quality standards would be likely to become entrenched in the law, and would be difficult to change even if new evidence were produced that would justify raising the quality standards or even if improved technology were to make more efficient pollution control economically feasible. The ability of courts to hear new evidence and to shape remedies in light of that evidence, particularly in equity actions, leads to the conclusion that courts may be more responsive than legislatures and administrative agencies to

38. On March 14, 1970, Trout Unlimited, a national conservation organization, sponsored a conference on water pollution, held at the Student Union of Michigan State University. At that conference, representatives of the Michigan Attorney General's office raised the problem discussed in the text, when they commented that the office's limited resources and manpower made necessary a highly selective approach to the prosecution of violators of the Michigan antipollution laws.

39. An analogy might be drawn to the encouragement of private enforcement actions that is found in the antitrust laws, although the incentive of treble damages is clearly absent in the environmental-law field. In the area of water pollution control, however, the Federal Refuse Act, 33 U.S.C. §§ 407, 411 (1964), passed in 1899, allows one-half of the fine collected from a polluter to be paid "to the person or persons giving information which shall lead to conviction of this misdemeanor."

40. E.g., Wis. Stat. Ann. § 280.02 (1958); Fla. Stat. Ann. § 60.05 (1969). Some legislatures currently have bills pending which would allow citizen suits brought specifically to protect the environment. See note 93 infra and accompanying text.

41. See note 29 supra.

42. Anderson 158. The same problem arises if an industrial defendant can defend on the grounds that statutory standards are being complied with. Traditionally, however, an action for an injunction against conduct which violates criminal laws will be entertained only if the plaintiff has a personal interest different from the public interest. See Goose v. Commonwealth ex rel. Dummit, 305 Ky. 644, 205 S.W.2d 526 (1947); text accompanying notes 140-47 infra. Accordingly, there would be no purpose in allowing the statutory standards to constitute a defense, for those standards necessarily represent the public's needs, not the plaintiff's needs.
rapidly changing knowledge concerning the dangers of air pollution and to improved control techniques that make stricter emissions standards reasonable. 46 Finally, private litigation may serve a publicity function—especially in cases involving many plaintiffs and important defendants. In such cases, private suits provide a forum for the advocacy of new legal theories for controlling polluters, provide a means of informing the public about the facts of air pollution, and perhaps may help to generate pressure for new and stricter air quality laws. 44

III. PREREQUISITES FOR INJUNCTIVE RELIEF

In private suits against industrial contributors to air pollution, plaintiffs usually seek only injunctive relief, although in some cases a request for an injunction is coupled with a demand for damages. 45 Damages alone are seldom requested, for such an award does not prevent the continuation of the harmful practice of discharging contaminants, which in most cases is the primary concern of the plaintiff. 46 Indeed, if a recovery of damages would be sufficient to compensate a plaintiff, injunctive relief might well be unavailable. 47

The continuing nature of the harm is not, however, the only factor that makes the damage action inappropriate for most cases. Damage action is also unlikely because of the difficulties that confront a plaintiff in attempting to sustain a claim for monetary relief. In the typical air pollution case, damages are difficult both to measure and to disperse fairly among the victims of the pollution. 48

43. In fact, Professor Eric J. Cassell suggests that it may be necessary to return to a sophisticated and broadly based nuisance law approach if progress in abatement is to occur. He feels that statutory control by dealing with one pollutant at a time is inadequate. Cassell, supra note 14, at 197. Stepp and Macaulay, however, seem to believe that the best use of pollution control resources requires a more systematic scheme for abatement than nuisance law would provide. Supra note 23, at 29-30.

44. An example of this type of suit might be the 1969 class action brought on behalf of all the residents of Los Angeles County against virtually every corporate polluter in that county. In that action, damages totalling approximately $500 billion dollars were sought, in addition to other remedies. Diamond v. General Motors Corp., No. 947, 429 (Super. Ct., Cal., filed April 15, 1969). The case was so large that it probably was not taken seriously by the court (the judge who dismissed the suit called it "Diamond vs. The World"), yet it generated a great deal of publicity and may have helped to educate the public as to the widespread nature of the sources of pollution.


46. If the pollution is allowed to continue, the payment of damages by the polluter makes no real sense. Unlike the water pollution situation—in which purifying the water is possible and is measurable in terms of costs, and in which the plaintiff, at least in theory, could use the monetary damages to help in purifying the water that he wishes to use—the inestimable health effects of foul air will continue to effect the plaintiff regardless of whether damages are paid.

47. See text accompanying notes 124-36 infra.

48. See notes 9-17 supra and accompanying text.
Moreover, damages are difficult to attribute to a particular defendant because, except in rare cases such as poisoning by a single pollutant from a single source, it is impossible to isolate completely the effects of one contaminating discharge from those of another. Thus, when a damage action is brought, a court is faced with the request that it make an award of damages in an amount that is subject to much dispute and against a particular defendant who cannot be singled out as the party causing the plaintiff's injury. A court will be hesitant to make a damage award under those circumstances. But this hesitance is not likely to exist when the plaintiff requests injunctive relief, since it is usually demonstrable that the polluter is causing some harm and that the plaintiff has suffered some injury.

Because an action for damages is usually clearly inadequate, equitable relief should generally be available in air pollution cases unless an equitable defense is applicable. In practice, however, the extreme nature of the burden that has been placed upon the plaintiffs in most cases of this type has prevented success in suits against all but the most blatantly culpable polluters. But today, the growing information about the harmful effects of air pollution, the burgeoning public concern for a clean environment,

49. This is especially true for health effects because individuals are subject to many kinds of contaminants for long periods of time at varying exposures. Lewis 142; Cassell, supra note 14, at 197. The major contaminants and their basic sources are known, however, and some attempt at cataloging their individual effects has been made. These basic contaminants include carbon monoxide, sulfur oxides, nitrogen oxides, hydrocarbons, photo-chemical smog, and particulate matter. For explanations of their sources and effects, see generally U.S. Dept. of HEW; Anderson 148-53; Lewis 1-114 (pollutants and sources listed); Cassell, supra note 14, at 201 (emphasis on the effects of sulfur dioxide). The difficulty of isolating the effect of a specific pollutant is compounded by the existence of synergistic effects which occur when certain types and concentrations of two or more pollutants exist in the air simultaneously, often reacting with the sun.

Most of the preceding discussion has dealt with the problems of pollution in the aggregate. At any particular time and place, however, the seriousness of the problem is dependent upon a number of variables. These include the type and quality of pollutant, wind speed and direction, topography, sunlight, precipitation, and decrease or increase of air temperature. The effect of pollution on an individual is a function of concentration and exposure time. In any given suit to enjoin air pollution, it is necessary to become well versed in the relationship among these variables and the geographic locale of the suit. It would be particularly important to understand the major types and sources of pollution in the area and the effects that could be attributed to them.

50. The adequacy of the legal remedy, and the requirement that for equitable relief to be available there must be no adequate legal remedy, is discussed in the text accompanying notes 124-56 infra.

51. The various equitable defenses are examined in the text accompanying notes 124-53 infra.

52. E.g., Gerring v. Gerber, 28 Misc. 2d 271, 219 N.Y.S.2d 558 (1961) (injunction denied when odor from defendant's cleaning establishment was no more than what is to be expected from that type of business). See note 179 infra.
and the liberal development of the rules of equity all suggest that a trend of greater success in actions for injunctions against air polluters will soon emerge. The nature of that trend can best be seen by an examination of the basic elements of such an action.

A. Justiciability

Article III of the United States Constitution limits the power of the judiciary to deciding “cases or controversies,” and many state courts require similar grounds of justiciability. Such limitations mean, in essence, that courts may entertain only justiciable controversies that are based upon the alleged denial of some recognized legal right. They also mean that courts may adjudicate only genuine disputes based upon specific demands for relief by parties who claim to have been aggrieved, and that courts may not entertain collusive actions. Furthermore, the article III provision of the federal constitution has been held to preclude the rendering of advisory opinions at the federal level.

Since the scope of equitable jurisdiction defines the justiciability of various claims in equitable actions, the question of justiciability of air pollution claims can best be evaluated by considering the traditional limitations on equitable jurisdiction. One of the principles of equity that has traditionally been stressed, although with some exceptions, is that an injunction will issue only when the plaintiff has alleged an invasion of property rights. Today, that view is probably in the minority, and most courts recognize that an injunction may issue to protect some purely personal rights. Nevertheless, there is still a greater hesitancy to protect personal rights than there is to protect property rights. In air pollution cases that hesitancy is likely to be particularly pronounced since the plaintiffs

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54. U.S. CONST. art. III.
59. See, e.g., Chappel v. Stewart, 82 Md. 523, 33 A. 542 (1896). The property damage attributable to air pollution, however, should mean that even this strict requirement is met in most air pollution suits.
60. Injunctions 999.
in such cases will probably not be able to demonstrate the egregious type of invasion of personal rights that has led many courts to reject the doctrine that equity protects only property rights. Rather, the plaintiffs may have to rely on an indirect threat to health or the more amorphous injuries to aesthetic and other intangible interests. The burden on the plaintiffs is clearly lighter when an actual or threatened economic loss or a direct damage to health is at issue than when such factors are not present.

One reason that equity courts may be hesitant to intervene to protect interests in environmental quality is that such interests traditionally have not assumed a position of high priority in the hierarchy of human values, and the degree of protection that equity will afford to a particular interest invariably corresponds to the position of that interest in the value hierarchy. Because of the loosely defined character of equitable doctrines and procedures, courts of equity are particularly sensitive to the value structure and are responsive to changes that occur within it. The premise of equity—that no wrong should be without a remedy—seems to presuppose this sensitivity, since what constitutes a “wrong” at any given point in time is in large part determined by the contemporaneous value orientation of the society. Thus, while courts of equity have become increasingly willing to intercede to prevent injury to highly regarded personal interests such as privacy and personal security, they have not been as willing to use equitable remedies to redress injury to less highly valued personal interests, such as the desire for environmental quality. Fortunately, however, values in

61. See, e.g., Hawks v. Yancey, 265 S.W. 233 (Tex. Ct. App. 1924), in which the defendant interfered with the plaintiff’s privacy in several ways, including listening to her private conversations, making false charges against her to public officials, and causing her employer to dismiss her. Under these circumstances, the court was willing to issue an injunction.

62. The reason for this difference in burdens is clear. Equity courts traditionally did not accept jurisdiction unless property rights were involved, and although the courts of equity have, in their evolution, disregarded the traditional per se rule, they have retained part of the effect of the historical rule. Thus, it can fairly be said that there exists a continuum, and that as the rights involved become more “personal,” and less tangible, the likelihood of equitable relief declines.

64. See generally notes 59-62 supra and notes 67-69 infra and accompanying text.
65. H. McClintock, Principles of Equity § 1 (1948) [hereinafter McClintock].
66. Id. § 29.
68. While courts often enjoin pollution when specific property damage is shown, they have seldom considered the more amorphous idea of damage to the environment in general. Rather, they usually seem to accept a “Smoky City” as an inevitable consequence of economic well being [Elliott Nursery Co. v. Duquesne Co.,
America are currently undergoing a dramatic restructuring which is likely to elicit a response from courts of equity. America is beginning to undergo the evolution of its "land ethic" and to recognize that the health hazard caused by air pollution, albeit indirect in most cases, is very significant indeed. As the nation is becoming more affluent, production and consumption are becoming less important and the importance of environmental values is increasing. Increases in wealth are leading to a substitution of leisure for work and to a corresponding concern with the environment in which that leisure will be enjoyed.

The first definite indication of a court's willingness to respond to this change in the value hierarchy came in the recent case of Scenic Hudson Preservation Conference v. FPC. In that case, a conservation group challenged a decision by the Federal Power Commission (FPC) to grant an electric-utility company a permit to construct a power plant on Storm King Mountain in New York State. The conservation group originally sought to intervene before the FPC to prevent the erection of the power plant. After failing in that attempt, the group petitioned the United States Court of Appeals for the Second Circuit to set aside the utility company's permit because the FPC had not satisfied its statutory duty to consider alternative plans that would not adversely affect the scenic beauty of the mountain. The court of appeals held that the group was competent to make such a demand:

In order to insure that the Federal Power Commission will adequately protect the public interest in the esthetic, conservational, and recreational aspects of power development, those who by their activities and conduct have exhibited a special interest in such areas, must be held to be included in the class of "aggrieved" parties under [the statute]. We hold that the Federal Power Act gives petitioners a legal right to protect their special interests.

The United States Supreme Court recently indicated its support for this reasoning in Association of Data Processing Service Organizations v. Camp. The Court, referring to aesthetic, conserva-

tional, recreational, and spiritual interests, stated in dictum that "we mention these noneconomic values to emphasize that standing may stem from them as well as from . . . economic injury." 74 Although Scenic Hudson and Data Processing are both cases of highly limited applicability, they may be indicative of a trend in the courts toward a recognition of the increased public interest in environmental quality. To the extent that these two cases are representative, it is becoming increasingly likely that courts of equity will be willing to consider issuing injunctions in cases involving only environmental interests.

Another reason why equity courts may not be willing to entertain conservation suits is that suits challenging pollution—particularly air pollution—involve a variety of interests that are public, rather than purely private in nature. Judicial tribunals have historically been charged with the responsibility of alleviating disputes and settling controversies between individuals; 75 when conduct affecting the public interest is at issue, legislative and executive institutions have been thought of as the appropriate mechanisms for redress. 76 The traditional view has been that such public controversies involve broad questions of policy and are therefore more appropriately dealt with through governmental regulation than through adjudication. Yet important societal problems, such as those posed by air pollution, may well deserve judicial attention, especially if the other branches of government neglect them, or decline to act. As Archibald Cox has written: "If one arm of government cannot or will not solve an insistent problem, the pressure falls upon another . . . . [T]he need for judicial action is strongest in the areas of the law where political processes prove inadequate, not from lack of legislative power but because the problem is neglected by politicians." 77

74. 397 U.S. at 154.
75. The United States Constitution, for example, speaks mainly of the judicial power extending to controversies involving individual citizens. Art. III, § 2.
77. Cox, Foreword: The Supreme Court—1965 Term, 80 Harv. L. Rev. 91, 122 (1966). Professor Cox also comments that "[i]n the long run the actual response of Congress to the Court's invitation is likely to have more influence upon the course of decisions than the bare clarification of its authority . . . ." Id. This indicates once again the importance of the publicity function which is served by court actions. Of course, Professor Cox's approach would engender a wave of criticism from the local critics of "activism" by the Supreme Court. See Beaney, The Warren Court and the Political Process, 67 Minn. L. Rev. 345, 348-52 (1963). The notion that citizens should be permitted to bring private actions against polluters in order to redress wrongs to purely public interests is a novel one; and, in the absence of statutory authorization, "[c]itizens or taxpayers have not to date been permitted to bring an action against a public nuisance as such, and it has been held, for example, that the device of a class
Indeed, there is reason to suspect that the current wave of governmental activism against polluters may waver somewhat and that even the present inadequate level of regulation may be tempered as the conservation movement begins to interfere more significantly with American industry, for American governmental institutions are resistant to changes which encroach upon powerful vested interests.  

The American system is a hybrid democratic process which exalts interest groups rather than individuals. For most purposes this political arrangement is thoroughly satisfactory, but it becomes ineffective when any particular interest group obtains a disproportionate amount of power. At the present time, it is arguable that a disproportionate amount of power is held by interest groups that are deeply imbued with the production-consumption concept of economic value. It is true that other, less tangible values are being championed with increasing vigor by growing segments of the population; but in order to succeed in any effective way, these groups must somehow influence the entrenched bases of power. Equity courts may provide one means for achieving that success; and the magnitude of the pollution menace is such that they should not be hesitant to exert influence, especially if the other branches of government neglect that menace or decline to act.

If, however, the plaintiffs in an injunction action base their claim on the general nature of the pollution menace, it is clear that the action is based upon the notion of obtaining an injunction against a public nuisance. Accordingly, it is likely that some difficulty will be presented by the equitable rule that although injunctions will issue to prevent a public nuisance, the injunction must be

action will not permit them to bring a suit which they could not bring as individuals. Jaffe, Standing To Sue in Conservation Suits, Sept. 11-12, 1969 (a paper given before the Conference on Law and the Environment, Airlie House, Warrenton, Va.). However, Professor Sax of the University of Michigan, in an explanatory memorandum attached to the proposed Natural Resource Conservation and Environmental Protection Act which he drafted for the West Michigan Environmental Action Council, states that:

The idea of citizens suing to protect the public interest is not a novelty at all. Michigan itself has long permitted citizens to sue “in the name of the State of Michigan” on behalf of the public nuisances. Michigan Compiled Laws Annotated (MCLA) 600.3805. That particular statute is limited to such nuisances as houses of prostitution and gambling dens, but the principle of the public suit is well established and it might well be asked whether the principle might not more needfully be applied to the conservation of our resources than to prostitutes and gamblers.

Indeed, such suits are permitted to be brought to enjoin a wide range of improper conduct in many states. At least a dozen states have statutes like Michigan’s, and Wisconsin (WSA 280.02) and Florida (60.05) permit private citizens to sue on behalf of the public to enjoin public nuisances—itself a rather broad concept—generally.

78. See Hill 61, at col. 1, suggesting that the vested interests of polluters are difficult to overcome.

requested by a governmental agent rather than by a private interest group. In many respects, this principle is analogous to the general hesitance of courts to determine matters of public policy through private adjudications. If, in a particular case, the general hesitance can be overcome for the reasons suggested above, then it is entirely possible that the rule concerning injunctions against public nuisances will also be overcome. Nonetheless, it is important to keep in mind that plaintiffs in injunction actions involving air pollution will encounter serious difficulties with both the reluctance of courts to recognize the public interest in a healthy environment, and the hesitance of courts to issue injunctions which have a serious effect on public policy.

Fortunately, however, most injunctive actions against air polluters will not be grounded solely upon an alleged injury to intangible interests. As has been stated, the bulk of the cases concerning toxic air pollution will now involve alleged injuries to property and health as well as to conservational values. Thus, if a plaintiff in an air pollution suit is to present a justiciable claim, it will be most advantageous for him to demonstrate that he has been deprived of some right protected by statute or common law. If deprivation of a private right can be shown, the need to rely upon the public-nuisance theory can be averted.

Furthermore, the maxim that equity follows the law—that a plaintiff must have a recognized legal right before an injunction will be available—makes it important that pertinent private rights be examined. There are a number of theories under which a plaintiff may assert that he has rights which are being infringed by air pollution. The oldest and most common theory which may be advanced is that of private nuisance. An individual has the right to enjoy his property free from the encroachment of nuisances created by other persons or institutions. That right includes the right to be free from unwarranted interferences with reasonable comfort and convenience in the occupation of the property. Thus, air pollution constitutes a nuisance if it lowers the value of his

81. See also W. Prosser, Law of Torts 625 (3d ed. 1964).
82. See 4 J. Pomeroy, Equity Jurisprudence 1388 (6th ed. 1941) [hereinafter Pomeroy].
83. See Chafee, Does Equity Follow the Law of Tort?, 75 U. Pa. L. Rev. 1 (1926). Chafee rightly considers the rule to be unsound, but it cannot be ignored.
84. See generally W. Prosser, supra note 81, §§ 87-92.
85. Id. at § 90.
86. Id.
property or offends his sensibilities to the extent that it seriously interferes with his right to the quiet enjoyment of his property.\textsuperscript{87}

The real problem with the application of nuisance law to air pollution suits lies in defining the scope of the term “nuisance.” As one commentator has noted, our society is dedicated to growth and progress and so not every encroachment upon existing values and utilities should be considered a nuisance.\textsuperscript{88} Accordingly, the costs and benefits flowing from an alleged nuisance must be measured and weighed. Some relatively slight infringements will clearly be permissible and some relatively severe infringements will clearly constitute nuisances. There can be no precise formulas for drawing the necessary distinctions; but the expanding body of information concerning the effects of air pollution and the increasing recognition in the law that noneconomic values are worth protecting suggest that it would be wise as a matter of policy to expand the nuisance concept so that it includes a number of the harmful results of toxic air pollution. Such an approach to the concept of nuisance would not involve any reform of the concept itself. Rather, it would involve recognition of the fact that the harm which is now known to result from toxic air pollution is very similar to the types of harm that have traditionally given rise to a cause of action for nuisance.\textsuperscript{89}

In recent years, there has been a substantial amount of writing concerning the relationship between air pollution and traditional concepts of private nuisance.\textsuperscript{90} Although there is disagreement as to the importance of applying nuisance law in this area, there appears to be a consensus that it is the most appropriate basis for a claim in some kinds of cases.\textsuperscript{91}

In certain cases a plaintiff will have a statutory right to seek an injunction against an air polluter causing a public nuisance.\textsuperscript{92} Bills


\textsuperscript{88} Krutilla, Conservation Reconsidered, 57 AM. ECON. REV. 777 (1967).

\textsuperscript{89} See generally W. PROSSER, supra note 81, at 594-605.


\textsuperscript{91} See note 90 supra. Since legal and equitable claims may be combined, a plaintiff may be able to obtain a jury determination of his right to damages. But see Harden Chevrolet v. Pickaway Grain, 27 Ohio Op. 2d 144, 194 N.E.2d 177 (Ohio 1961) (no jury allowed when damage claim only incidental to request for an injunction). While a finding by a jury that defendant's conduct constitutes a nuisance would not require the judge to enjoin that conduct [Storey v. Central Hide & Rendering Co., 148 Texas 599, 228 S.W.2d 615 (Tex. 1950)], it might very well make it more difficult for him to refuse to do so.

\textsuperscript{92} See note 49 supra and accompanying text.
have recently been introduced at both the federal and state level which would grant plaintiffs the right to bring a private action to enjoin an act of pollution, and these statutes eliminate the need to rely upon public-nuisance law theories. Moreover, in those jurisdictions which have no statute specifically granting a right to an injunction, it is arguable that private citizens have an implied right to such a remedy. That right may be found in the general policy, implicit in regulatory acts governing pollution, that condemns pollutant-discharges above a certain level. There is no compelling reason why such statutes should be read to grant exclusive enforcement rights to governmental agencies, unless such exclusivity is explicitly provided for in the statute; indeed, the policies underlying such regulatory statutes will probably be better served if private citizens are permitted to enforce the statutory standards. The rule that courts will not enjoin criminal acts may, however, lead to a hesitancy to enjoin acts which come within a regulatory statute. But if the statute is construed merely as a legislative recognition that certain acts constitute nuisances, an injunction should be available. The mere existence of a statute will not prevent the issuance of an in-


94. It has been suggested by Professor David Currie, for example, that even in the absence of specific statutory authority, federal standards can be enforced by private action. Supra note 90, at 23. The existence of statutory standards could, however, have a limiting effect on private action either because such suits might be barred as attempts to remedy a public nuisance (see notes 140-50 infra and accompanying text), or because it might be held that meeting the standards constitutes an absolute defense. The existence of standards and of an agency to enforce them could also cause judges to require exhaustion of administrative remedies before allowing a court suit. Such a requirement would cause little hardship to plaintiffs if the agency were to act quickly and firmly, but past performance by most agencies suggests that delay and equivocation are more likely. Lewis 254-55.

The reason given for introduction of a New York bill (see note 93 supra) allowing private suits to protect the environment was that state agencies had failed to enforce the laws adequately. N.Y. Times, Feb. 18, 1970, at 1, col. 4. The proposed bill in the Michigan Legislature (see note 93 supra) allows the court in which an environmental protection action is brought to remit the parties to the appropriate agency, but it does not require the court to follow that procedure.


95. See text accompanying notes 140-47 supra.
junction that would be proper in the absence of the statute. The essence of such an argument is that the injunction operates to put an end to the nuisance which the activities themselves constitute, and that the statute is important only as an indication that those activities do constitute a nuisance.

If a governmental body is itself the polluter—through, for example, a municipally-owned coal-burning power plant, citizens affected by that pollution may claim that the government has denied them life, liberty, or property without due process of law. Such an argument appears specious, however, and should probably not be advanced. Nonetheless, there is an advantage to the assertion of a constitutional basis for relief, because some cases suggest that if a court accepts such an argument, an injunction will issue as a matter of right.

Another potential basis for relief is contained in the argument that air pollution constitutes a violation of the public trust. The essence of such an argument is contained in the theory that certain environmental rights are held in common by the entire body politic. These reserved rights are limited, but they do include an interest in the preservation of a viable biosphere. Since the government is the trustee of the public interest, it has a duty “in equity and good conscience . . . to act in good faith and with due regard to the interests of those reposing the confidence.” If such an approach is accepted, it may easily be concluded that the government has breached its duty, for the smog in major cities and the growing evidence of the serious threat presented by pollution indicate that the government has been at best a negligent guardian and at worst a fraudulent fiduciary.

If a court accepts this general public-trust notion, it will probably be willing to give a private plaintiff some means of making the government a more responsible and zealous trustee. One manner in which this result might be accomplished is by allowing private citizens to bring mandamus actions to compel governmental officials to perform their statutory duty to take action against offending polluters. Such a cause of action has been advocated by at least one

97. The argument is that the governmental unit is creating unjustifiable risks of serious harm. Currie, Trail Blazer-at-Law, supra note 90, at 23. Professor Currie also suggests substantive due process may be used as a theory on which to attack pollution. Id. Others have suggested the ninth amendment’s reservation of power to the people might serve as a constitutional basis for fighting pollution. N.Y. Times, Sept. 14, 1969, at 78, col. 4.
98. Cf. Sax, supra note 90, at 553 n.248.
99. But see Injunctions 1007, suggesting that courts adopt a balancing approach even when constitutional rights are violated.
100. See generally Sax, supra note 90, at 556-57.
noted commentator, and one state court has ruled that a mandamus action of this type is judicially cognizable. Another approach would allow private plaintiffs to circumvent the governmental agen-

102. Professor Jaffe has concluded that twenty-nine states allow any citizen to test the legality of official conduct by seeking a writ of mandamus to compel the official to perform statutory duties. Standing To Sue in Conservation Suits, Sept. 11-12, 1969 (a paper given before the Conference of Law and the Environment, Airlie House, Warrington, Va.).

Under federal law, § 1361 of the 1962 Mandamus and Venue Act, 28 U.S.C. (1964), allows a plaintiff to bring an action for mandamus in a district court "to compel any officer or employee of the United States or any agency thereof to perform a duty owed to the plaintiff." The traditional rule concerning the availability of the writ of mandamus to compel public officials to perform their administrative duties is that a court will mandate an official to perform only duties that are ministerial in character. Accordingly, courts will not mandate officials to perform discretionary duties. See Parker v. Kennedy, 212 F. Supp. 594, 595 (S.D.N.Y. 1963); Byse & Flocca, Section 1361 of the Mandamus and Venue Act of 1962 and "Nonstatutory Judicial Review of Federal Administrative Action", 81 HARV. L. REV. 308 (1968). Thus, the question whether a writ of mandamus may be obtained by private citizens seeking to compel public officials to take action against polluters depends upon whether the official's authority is deemed ministerial or discretionary.

In a recent Minnesota case, Sierra Club v. Minnesota Pollution Control Agency and Commissioner of Conservation, No. 662,008 (Cir. Ct., Minn. Oct. 3, 1969), two conservation groups sought a writ of mandamus to compel the Minnesota Pollution Control Agency to hold hearings to determine whether Reserve Mining Company's permit to discharge wastes into Lake Superior should be revoked on the ground that the Company had exceeded permissible levels of pollution discharge. The conservation groups contended that the agency had a statutory duty to hold hearings to determine whether the Company was violating the conditions of the permit. The agency answered that it could not be compelled to hold a hearing since such an order would be tantamount to ordering it to perform a discretionary function. The court rejected the agency's argument and reasoned that the plaintiffs were not seeking to control the agency's exercise of discretion, but were simply requesting the agency to carry out its statutory duty to hold a hearing. Thus the court held that a writ of mandamus could issue to compel the agency to hold hearings concerning the Company's violation of its permit.

This case illustrates at least one situation in which private citizens may mandate public officials to perform their public duties, and it suggests a means by which plaintiffs may avoid the rule that courts will not mandate officials to perform discretionary tasks. The standing of the conservation groups in the Minnesota case was premised on the statutory provisions requiring public hearings for the revocation of an effluent discharge permit. The court stated that

"It cannot be denied that the public generally has a vital interest in preserving the quality of the waters of this state and that the public hearing provisions of the permits are also for the protection of the public. A public right has been created and can be enforced by the public generally."

At the federal level, a number of attempts have been made to use § 1361 to compel officials to initiate judicial or administrative proceedings. Those attempts have been rejected on the ground that a court may not compel an administrator to perform discretionary duties. In Byse & Flocca, supra at 348-49, for example, the authors review prior cases and state that:

"In each of these cases a plaintiff attempted to coerce the exercise of a power which in our legal system is, without question, broadly discretionary; and in none of them did he advance a convincing argument ... that in some other statute Congress had limited that traditional prosecutor's discretion. Thus the court properly refused to order a United States Attorney to institute proceedings to prevent and restrain alleged violations of the anti-trust laws [Parker v. Kennedy, 212 F. Supp. 594 (S.D.N.Y. 1963)] ... or to order the Federal Communications Commission either to conduct a hearing to revoke the permit of a Chicago television station [In re James, 241 F. Supp. 558 (S.D.N.Y. 1965)] or to issue a cease and
cies and to file private actions directly against polluters, if the government neglects or refuses to take action.103

Finally, a number of traditional tort theories might serve as bases for injunctive suits against air polluters. For example, the emission of contaminants into the air might be considered to constitute a nontrespassory invasion104 of the rights of citizens affected by the contaminants. Indeed, it is arguable that the doctrine of strict liability should apply to the emission of hazardous substances into the atmosphere.105 Although the notion of strict liability is not specifically applicable in equitable actions, it is likely that an injunction would be easily available if the nature of the defendant’s act were thought to give rise to strict liability. A plaintiff might also claim that the act of discharging contaminants into the air violates the duty of care which the polluter owes to the public.106 Moreover, some courts have accepted the argument that an instance of heavy pollution amounts to an actual trespass.107

The attempt by a plaintiff to solve the novel legal problems of obtaining an injunction against air pollution with existing legal doctrines may not be a simple task, at least when there is no clear nuisance upon which he may rely, and no statute to which he may refer. But the very novelty of the issues suggests that courts should not adopt a rigid, doctrinaire approach to the determination of the question of justiciability. The nature of the injuries that result from various types of pollution indicates that traditional legal theories, designed primarily to redress purely personal grievances, do not take into account the full legal significance of a suit to enjoin abuse of the environment. Moreover, weighty policy considerations suggest that courts should refrain from the incongruous practice of recognizing a wrong only when there is some technical legal doctrine that precisely applies to it. In the air pollution field, expediency

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103. See note 93 supra and accompanying text.
104. RESTATEMENT OF TORTS § 822 (1939).
105. E.g., Susquehanna Fertilizer Co. v. Malone, 73 Md. 258, 20 A. 900 (1890); Holman v. Athens Empire Laundry Co., 149 Ga. 345, 100 S.E. 207 (1919). See generally W. PROSSER, supra note 81, § 77.
106. RESTATEMENT OF TORTS § 286 (1934).
should be the goal of courts of equity, and ingenuity should be the means for achieving that goal.\textsuperscript{108}

B. Standing

In conjunction with the notion that only genuine disputes are justiciable, the United States Supreme Court has consistently adhered to the doctrine that a party, in order to present a justiciable claim, must have "such a personal stake in the outcome of the controversy as to assure that concrete adverseness which sharpens the presentation of issues upon which the Court so largely depends for illumination of difficult . . . questions."\textsuperscript{109} Thus, the mere fact that a right exists does not mean that it may be asserted by every person; the standing doctrine, which is a loosely defined and flexible\textsuperscript{110} concept, allows the assertion of a particular right only by a person who is in some way aggrieved by the denial or threatened denial of the right.\textsuperscript{111}

The individual plaintiff who is able to show that pollution will cause actual or threatened economic loss to him or damage to his health, will not face difficulty in establishing that he has standing.\textsuperscript{112} But in cases instituted by plaintiffs such as conservation groups, who must rely on amorphous injuries to intangible interests, the standing issue poses a real obstacle to successful litigation. Yet even in those cases, it is arguable that the standing doctrine should not prevent a conservation group from obtaining equitable relief. It cannot be denied that most conservation groups have a fervent and an earnest interest in the values which they represent, and so actual or threatened injury to those values seems to give such groups a significant stake in the outcome of an injunctive suit against a polluter.\textsuperscript{113}

\textsuperscript{108} When discussing new theories as possible bases for relief, many writers suggest a caveat: that no one cavalierly bring suit based on a new theory. These writers fear that the decision in a badly prepared case could set very undesirable precedent. In fact, Donald Harris, chairman of the Sierra Club's legal committee, believes the two worst problems in environmental litigation are the use of "half-baked" theories and poorly prepared cases. Not only do such ineptitudes result in losing actions, they also lessen the credibility of other suits, use up time and resources, and often create bad law. Address at the Univ. of Michigan, March 10, 1970.


\textsuperscript{111} See D. Currie, Federal Courts 59-60 (1968).

\textsuperscript{112} In most private litigation, the plaintiff's interest in the relief sought is obvious. \textit{See} H. Hart & H. Wechsler, The Federal Courts and the Federal System 174-75 (1953); C. Wright, Federal Courts § 13 at 36 (1963).

\textsuperscript{113} See Scenic Hudson Preservation Conference v. FPC, 354 F.2d 608 (2d Cir. 1965), \textit{cert. denied}, 384 U.S. 941 (1966). Noneconomic values, including aesthetic, conservation, and recreational ones, were recently mentioned by the Supreme Court as pos-
The application of the standing doctrine cannot, however, be analyzed solely by reference to the rule that a plaintiff must have a stake in the outcome of the controversy. One of the reasons for the existence of that rule is the desire of courts to ensure that the plaintiff in any particular case will be a representative advocate of the rights he is attempting to assert. In purely personal suits, the plaintiff may be presumed to be a fit advocate since his interest in the outcome of the litigation is clear. Moreover, in such suits the fitness of the plaintiff is not a particularly important consideration, since other individuals will not be significantly affected if the plaintiff is less than a vigorous advocate.

But in actions which are of a public character, it can be expected that courts will pay close attention to the question of fitness. If such a "public suit" is permitted, the problem arises that any person will have the ability to force a defendant to appear in court or suffer a default judgment. When the remedy sought is an injunction, that problem is particularly troublesome since a failure to appear might lead to eventual imprisonment for contempt. Moreover, in the context of an air pollution suit, it can be anticipated that certain industrial defendants who receive disproportionate amounts of publicity will be subjected to severe harassment through the courts. Accordingly, it is desirable to place some limitations on the ease with which public suits may be brought. The requirement that the plaintiff have some minimal personal interest is no real safeguard, for everyone has some personal interest in eliminating toxic air pollution. Similarly, actions for malicious prosecution or the assessment of attorneys' fees against plaintiffs who bring spurious suits are not likely to be effective deterrents, for experience teaches that the use of such measures will be too sparing to be effective.

Thus, the choice must be made from among three possibilities: the concept of a public suit may be abandoned, at least with respect to cases involving toxic air pollution; all public suits may be permitted; or public suits may be permitted only when it appears that the plain-

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114. Most obvious denials of standing occur when the plaintiff is not likely to argue the case vigorously. D. CURRIE, supra note 111, at 65.


116. The severe limitations on the freedom of an individual to disobey an invalid injunction are important in this regard. Those limitations were established in United States v. United Mine Workers, 330 U.S. 258 (1947), and were reaffirmed in Walker v. Birmingham, 388 U.S. 307 (1967). But see In re Green, 369 U.S. 689 (1962).


118. See generally W. PROSSER, supra note 60, at 870-75.


120. See C. WRIGHT, supra note 112, at 96 (1963).
tiffs will be effective advocates of the interests which they claim to represent. It is likely that courts will opt for the last of these alternatives, since that is the option which permits courts to proceed with the greatest degree of flexibility. The decision as to fitness cannot, of course, be made in isolation; it will generally be true that the more meritorious a position is, the more easily it can be advanced. Accordingly, the difficulty which the fitness standard will impose can be expected to vary inversely with the apparent merits of the case.

The language of recent cases suggests that courts will, and should, be willing to make this judgment of fitness. But it is not easy to make such a discrimination among plaintiffs, and no more concrete rule can be stated than that a court should carefully examine the question whether a particular plaintiff will be an inappropriate advocate and should therefore be denied standing. Such an appraisal will probably have little effect upon the ability of conservation groups to bring injunctive actions, for such groups will often be the most apt parties for litigating questions involving conservation values. They will usually possess the expertise and the financial resources necessary to conduct a vigorous legal assault, and are likely to represent public conservationist sentiment accurately, since they are composed of a number of citizens.

If a conservation organization wishes to minimize the likelihood that standing will be denied, there are a number of preparatory steps which the organization might take. In many cases, conservation groups can avoid the standing problem entirely by locating a person who is directly and significantly affected by the pollution in question and then assisting in a suit filed in his name.

A final consideration which indicates that organizations will be able to avoid standing problems is that such organizations are likely to adopt a strategy of concentrating on a few carefully selected cases in order to establish meaningful precedents in the air pollution field. Such cases, which will invariably involve major polluters and serious actual or potential damage to the environment, will be characterized by sharply defined issues and vigorously contesting parties, and are therefore the kind of cases least likely to raise difficult standing questions.

123. Although such an approach might once have been thought to be ethically improper and perhaps illegal, it appears to be permissible within the language of the Supreme Court in NAACP v. Button, 371 U.S. 415, 429-30 (1963): "However valid may be Virginia's interest in regulating . . . barratry, maintenance and champerty, that interest does not justify the prohibition disclosed by the record. . . . Malicious intent was of the essence of the common law offenses . . . ." See also ABA CODE OF PROFESSIONAL RESPONSIBILITY AND CANONS OF JUDICIAL ETHICS, CANON 2, at 2-3 (1970): "The giving of advice that one should take legal action could well be in fulfillment of the duty of the legal profession to assist laymen in recognizing legal problems."
Thus, it is likely that in at least some cases it will be held that an injunctive action against an air polluter is justiciable and that conservation organizations have standing to bring the action. Traditional principles would not have dictated that result, for the doctrines of justiciability and standing have customarily been used by courts to implement general policies of judicial restraint. But recent Supreme Court pronouncements advance the theory that those doctrines do not have clearly defined limits. Moreover, policy considerations enter into deliberations about justiciability and standing, and cases involving pollution are likely to receive sympathetic attention by courts in light of the current fervor over environmental quality.

G. The Inadequacy of the Remedy at Law

If a plaintiff in an air pollution suit is able to satisfy a court as to his standing and as to the justiciability of the issues he is raising, two other prerequisites to the availability of equitable relief will become pertinent: there must be no adequate remedy at law, and the plaintiff cannot have delayed unreasonably in bringing the case to court. It is unlikely that either of those doctrines would prevent a decision on the merits in an air pollution case, but it is necessary to discuss them since it may be necessary to demonstrate to a court that both prerequisites are satisfied.

It is a traditional rule of equity that injunctive relief will not be granted "when the legal remedy of compensatory damages would be complete and adequate." Accordingly, if a plaintiff in an air pollution suit can be adequately compensated with money for the injury which he suffers, he will not be able to obtain an injunction. The validity of this traditional rule has been challenged; but "at least in form, the adequacy test remains on the books and appears in the case law."

The concept of inadequacy is in no sense a clear one. Under the most lenient application of the test, injunctive relief may be granted so long as the legal remedy is not as adequate as the equitable remedy would be. Usually, however, the determination whether the legal remedy is sufficiently adequate to preclude equitable relief is a matter left to the court's discretion. In general, a damage remedy

124. Pomeroy § 1338, at 956.
126. Injunctions 998.
127. Steggs v. National Discount Corp., 326 Mich. 44, 50-51, 59 N.W.2d 237, 239-40 (1949). Presumably, if the legal remedy were as adequate, the plaintiff would not request equitable relief.
is considered inadequate in two circumstances. First, it is inadequate if the type of injury suffered is such that the amount of money needed to compensate the injured party cannot be accurately calculated.\footnote{128} Second, it is inadequate when money damages are an insufficient form of relief because the injury is thought to be an irreparable one\footnote{129} or, perhaps, because the defendant is unable to pay money damages to the extent necessary for just compensation.\footnote{130}

Under either of these tests, a damage remedy will often be an inadequate form of relief in an air pollution suit.\footnote{131} It is difficult, if not impossible, to calculate accurately the value of the damage that past air pollution has caused to health, to the environment, and to property. Moreover, measuring the extent of future injury is at best a speculative venture; the evidence that such injury will occur may be clear, but quantifying that injury in dollar terms is virtually impossible.\footnote{132} The monetary appraisal of the injury caused by a single defendant's pollution is further complicated by the fact that in many instances the plaintiff is suffering damage from pollutants emanating from many sources.\footnote{133} Attributing the correct share of that damage to an individual defendant may be theoretically possible but is not feasible as a practical matter.\footnote{134} Compounding this attribution problem is the fact that much of the injury caused by pollution results from contaminants that are the end product of chemical reactions among many substances in the atmosphere.\footnote{135} It is therefore even theoretically impossible in many cases to ap-

\footnote{128. Injunctions 1002-04.}
\footnote{129. See Norris v. NLRB, 177 F.2d 25, 28 (1949). An injury is “irreparable” if the victim cannot be fully compensated by any amount of money. Injunctions 1002-04.}
\footnote{130. There has been considerable debate over the question whether insolvency renders a legal remedy inadequate. See, e.g., Horack, Insolvency and Specific Performance, 31 Harv. L. Rev. 702 (1918); McClintock, Adequacy of Ineffective Remedy at Law, 15 Minn. L. Rev. 233 (1932). The trend of the cases appears to be toward relaxing the requirement of inadequacy and, therefore, toward recognizing insolvency as a sufficient reason to permit the invocation of equity jurisdiction. See note 125 supra and accompanying text.}
\footnote{131. Although much is known about pollution generally, the plaintiff in any particular case will have to provide experts to analyze the specific types of pollutants in the geographic area encompassed by the suit to determine their source and possible effects, and to explain those findings, as well as their meaning in terms of the appropriate remedy, to the court. The Environmental Defense Fund will provide experts at cost for some types of cases, but often the costs for expert study and testimony are high. For discussion of the use of experts at trial, see Sive, Securing, Examining, and Cross-Examining Expert Witnesses in Environmental Cases, 68 Mich. L. Rev. 1175 (1970).}
\footnote{132. A Study of Pollution 13.}
\footnote{133. See note 49 supra.}
\footnote{134. With respect to an injunction, however, the fact that others besides the defendant or defendants are also contributing damaging pollutants to the air should not act to bar such relief. See Walcer v. Peerless Oil Co., 265 Mich. 396, 251 N.W. 552 (1933).}
\footnote{135. See note 49 supra.}
portion responsibility among the various polluters contributing the original chemical substances. Because injunctive relief operates only prospectively, there is less need to be concerned with determining the precise extent of the defendant's contribution to the pollution. Money damages may also be inadequate because much of the injury caused by air pollution is irreparable. Damage to health, destruction of wildlife, and disruptions of the weather and the eco-system generally, cannot be rectified by any amount of monetary reparation. 136

A different approach to the inadequacy requirement has been developed by some courts, which have created what amounts to a rule of per se inadequacy in certain categories of cases. For example, a damage remedy is often considered inadequate, and an injunction issued, whenever the injury caused to the plaintiff is a continuing one. 137 The reason for this approach is that if the injury is continuous, any remedy other than an injunction may lead to the undesirable result of necessitating periodic suits by the plaintiff. 138 An air pollution case seems quite likely to fall within this category. Any other approach would not only have the result that the plaintiff in the particular case might be compelled to bring periodic suits in the future, but would also ignore the existence of other individuals who are potentially plaintiffs and who should not be required to bring actions in the future. 139

A rule of equity that is closely related to the problem of adequacy is the traditional view that equity will not enjoin a criminal act unless there is a statute providing for injunctive relief. 140 There are three bases for this rule: first, there is a presumption that a criminal

136. In most of the reported cases, courts failed to mention the detrimental health effects of pollution. E.g., Prauner v. Battle Creek Co-op. Creamery, 173 Neb. 412, 113 N.W.2d 518 (1962); Elliott Nursery Co. v. Duquesne Light Co., 281 Pa. 166, 126 A. 345 (1924). The failure of most courts to treat health effects and to speak rather in terms of odor and discomfort seems to stem in part from a failure of plaintiff's counsel to emphasize health factors adequately. With the rapidly accumulating knowledge of the harm caused by air pollution, such a failure today would be inexcusable. Health effects, however, are not always ignored. See, e.g., Woodyear v. Schaefer, 57 Md. 1, 12 (1881), in which the court stated that if a nuisance operates to destroy health, an action at law furnishes no adequate remedy.

137. Injunctions 1001; W. WALSH, A TREATISE ON EQUITY § 30 (1930); e.g., Donovan v. Pennsylvania Co., 199 U.S. 279, 257 N.E.2d 870, 309 N.Y.S.2d 312 (1970) or an award of a continuing payment [e.g., Bates v. Quality Ready-Mix Co., 154 N.W.2d 852 (Iowa 1967)].

138. Injunctions 1001; W. WALSH, supra note 137, at § 30.

139. An alternative to injunctive relief, which has been developed in some cases of continuing injury, involves making a present award of damages for future injury [e.g., Boomer v. Atlantic Cement Co., 26 N.Y.2d 19, 257 N.E.2d 870, 309 N.Y.S.2d 312 (1970)] or an award of a continuing payment [e.g., Bates v. Quality Ready-Mix Co., 154 N.W.2d 852 (Iowa 1967)]. See generally Injunctions 1001. Such approaches are inappropriate in an air pollution case, both because damages are so difficult to quantify and because there are a number of other potential plaintiffs whose interests would be best protected by an injunction.

140. Injunctions 996.
penalty provides adequate protection for the interests that would be injured by a violation of the criminal statute;\textsuperscript{141} second, there is a notion that prosecutorial discretion is desirable and that private parties should not be allowed to interfere with its exercise;\textsuperscript{142} and third, there is a view that some acts are made criminal not because the legislature desires to prevent them, but because it desires to make those who engage in them pay a fee.\textsuperscript{143} This doctrine appears, however, to be losing support; and some courts have recently been willing to grant injunctions to bar criminally punishable conduct when the public prosecutor has been reluctant to bring criminal action\textsuperscript{144} or when the criminal sanction is a trivial one.\textsuperscript{145}

Although statutes regulating air pollution are not generally thought of as part of the penal code, many of them provide that violators may be found guilty of a misdemeanor.\textsuperscript{146} Accordingly, the traditional rule might be interpreted to bar private injunctive action against polluters. However, air pollution suits seem to be appropriate cases for departure from the rigid confines of the traditional dogma, because the available criminal sanctions are nominal and are seldom enforced.\textsuperscript{147} Since defendants in air pollution suits are invariably corporations, it is probable that courts will dismiss concern over interfering with prosecutorial discretion or upsetting the legislative design. There is simply too great a likelihood that nonenforcement of criminal sanctions is not the result of a governmental policy judgment that should be permitted, but rather the result of either an exertion of political power by industrial concerns or an irrational hesitancy on the part of enforcement officials to apply criminal sanctions to corporate entities.

Regardless of whether the traditional rule retains vitality, air pollution suits may well fall within an exception to that rule. That exception is that a private plaintiff may bring a nuisance action to

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\item 141. POMEROY \S 1347. It is probably true that the existence of a criminal statute has very much the same effect as an outstanding injunction. The major difference is, perhaps, the greater ease with which contempt may be punished. That difference provides sound reason for adhering to the traditional view.
\item 143. This view is often expressed in terms of concern that the injunction may be more severe than the criminal penalty. See, e.g., Miles-Lee Auto Supply Co. v. Bellows, 27 Ohio Op. 2d 452, 197 N.E.2d 247 (C.P. 1964).
\item 144. Injunctions 1016.
\item 145. Injunctions 1017. But see note 143 supra.
\item 146. See Mix, The Misdemeanor Approach to Pollution Control, 10 Am. L. Rev. 90 (1968). Regulations or statutes may specifically provide for criminal penalties or they may be couched in terms of public nuisance, the creation or maintenance of which is a crime. POMEROY \S 1349.
\item 147. See Hill 61, at col. 1. Some states by statute allow private suits to enjoin some criminally punishable conduct. See, e.g., Black v. Circuit Ct. of the 8th Judicial Cir., 78 S.D. 520, 101 N.W.2d 520 (1960).
\end{enumerate}
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enjoin criminally punishable conduct if he can show "a special and particular injury distinct from that suffered by him in common with the public at large." 148 In many air pollution cases, a private plaintiff may be able to demonstrate that he qualifies under this exception; and that possibility is made especially likely by the increased evidence of the adverse effects of air pollution upon health and property. 149 Many detrimental health effects are particular to the individual in that they relate to his own distinctive physiology, and property damage is similarly distinct if it involves a particular aspect of the plaintiff's land or personality. 150

Since a legal remedy is seldom adequate in an air pollution suit, a plaintiff's request for an injunction is not likely to be denied on that ground. In virtually every case damages are difficult to calculate, and in many instances the harm caused is irreparable. Moreover, if an injunction is not issued, the damages are likely to continue and to generate a multiplicity of actions.

D. Laches

The notion that a plaintiff's delay in bringing suit may bar him from obtaining injunctive relief is often introduced under the rubric "equity aids the vigilant." 151 The purpose of this rule—the doctrine of laches—is to protect the defendant in an equity action when the plaintiff's delay has caused the defendant to act to his own detriment. 152 Accordingly, the doctrine applies only when the plaintiff's delay is unreasonable under the circumstances of the case and when the defendant is prejudiced in some way by the delay.

In the typical air pollution case, it is doubtful that a defense of laches can be successfully asserted. Most of the scientific evidence concerning the adverse effects of air pollution is of recent origin and thus any delay in bringing suit will not usually be unreasonable. Indeed, until recently, there may have been no factual basis upon which a plaintiff could have sustained a cause of action against a polluter. Furthermore, most defendants are polluters who established their industrial facilities long before the detrimental effects of air pollution were a matter of public knowledge. 153 Only those polluters who built their plants after such information became widespread, and whose plans were known to the plaintiffs, will be able to assert successfully the doctrine of laches.

148. POMEROY § 1349.
149. The current liberalizing of the meaning of "particular injury" also makes this possibility more likely. See Injunctions 1014.
150. See generally MCCRINTOCK § 164; Injunctions 1013-16.
151. See MCCRINTOCK § 28, at 71.
152. Id.
One argument that a defendant might assert in order to obtain the application of laches is that he would have constructed his facility elsewhere if he had been confronted with an injunctive action. Any such claim of prejudice is weakened substantially by the fact that the current intensity of the conservation movement provides at least constructive notice that any activities which cause pollution are likely to be challenged. Moreover, if a defendant's conduct constitutes a violation of statutory air pollution standards that were in effect at the time the defendant constructed his facility, the defense of laches should not be available. No defendant can reasonably contend that a failure of private plaintiffs to seek injunctive relief sanctioned a violation of the statutory standards. A claim of prejudice is further weakened by the availability of procedures by which a company, prior to constructing a facility, can seek a declaratory judgment as to the permissible quantity and quality of emissions. Thus, the equitable defense of laches, like the defense of an adequate remedy at law, is not likely to preclude a decision on the merits in an air pollution suit.

IV. THE DECISION ON THE MERITS: BALANCING THE EQUITIES

If the technical requirements for injunctive relief are satisfied in a particular case, the court will proceed to exercise its discretion by "balancing the equities." This notion of balancing the equities is of particular significance in an air pollution suit, since it means that the ultimate resolution of the controversy will turn upon the judge's analysis of broad policy questions and his determination as to what is fair under the circumstances of the case. The outcome of the case will depend upon the balance which the judge strikes between the plaintiff's need for relief and the cost and hardship, both to the defendant and to the community, that would attend the granting of relief.

154. McClintock § 44, at 583. In the discussion that follows, no attempt is made to distinguish between the showing necessary to obtain an affirmative decree and that required to obtain a prohibitory decree. Though American courts have frequently suggested a stronger showing is needed to obtain the mandatory order, the distinction is seldom actually applied to suits for permanent injunctions. Injunctions 1081-82; Pomeroy § 1599.

155. The question of a trial court's competence to balance all the factors and resolve an environmental case is much debated. See, e.g., Sax, Explanatory Memorandum for the Proposed Natural Resources Conservation and Environmental Protection Act of Michigan (printed and distributed by the West Michigan Environmental Action Council), stating that trial judges are quite capable of deciding these issues; and Boomer v. Atlantic Cement Co., 26 N.Y.2d 219, 257 N.E.2d 870, 309 N.Y.S.2d 312 (1970), in which the court stated that it lacked the expertise necessary to fashion an appropriate injunction for the control of emission.

156. See, e.g., City of Harrisonville v. Dickey Clay Mfg., 289 U.S. 584 (1933); Dundalk Holding Co. v. Easter, 215 Md. 549, 137 A.2d 667 (1958). If the judge finds that the costs of correcting an air pollution problem are greater than the value of the benefits that can be derived from the correction, an injunction will not issue, even though it is in-
Of course the task of weighing relative costs and benefits is necessarily fraught both with value judgments concerning the importance of some kinds of benefits and with the difficulty of appraising different types of monetary and nonmonetary costs. Such value judgments are especially prevalent in the environmental context, since it is often necessary in such cases to balance the economic costs of terminating a pollutant discharge with the economic and noneconomic benefits that will result from cleaner air. Thus, the value predilections of a particular judge may often be dispositive in individual cases. 157

Before the judge can balance the relative merits, however, the parties must present evidence. The case which the plaintiff will present is apparent: he will present the evidence concerning the dangers of pollution to himself and to the community as a whole. 158 The defendant is then faced with the burden of persuading the judge that equity would not be served by the issuance of an injunction. The defendant’s primary line of defense is likely to be a demonstration that the imposition of costs associated with pollution abatement would cause more harm than would the activities of which the plaintiff complains. 159 Such a demonstration of significant cost to disputable that the plaintiff is suffering some injury. See Gilpin v. Jacob Ellis Realities, Inc., 47 N.J. Super. 26, 135 A.2d 204 (1957). “Cost” is used in the generic sense, not in the strictly monetary sense. Professor McClintock has summarized the factors that a court should consider as follows:

In determining whether to exercise its discretion to grant or refuse an injunction, the court should balance all of the equities, which include not only the relative hardships to the parties, but their conduct with reference to the transaction, the nature of the interests affected, and the relative proportion of the interests of each that will be lost by whichever course of action is taken. McClintock 383.

157. Of course, the court need not accept the exact relief requested by either the plaintiff or the defendant. See notes 185-87 infra and accompanying text. For a discussion of the various types of injunctions that might issue, see note 182 infra.

158. Such an argument may not be possible regarding community damages. It is, however, analogous to the clearly accepted notion that equity can consider potential harm to third persons or to the general public from the granting of an injunction. For example, some courts have refused to enjoin a damaging practice because enjoining it would likely result in a number of persons becoming unemployed. E.g., McCarthy v. Bunker Hill & Sullivan Mining & Concentrating Co., 164 F. 927 (9th Cir. 1908).

Most cases in which injunctions are sought involve injury to only one or a few persons, but in the air pollution context many are being injured. If the plaintiff were to bring a class action, the weighing of the benefit which would result from granting the injunction would include all the members of the class. Class actions are sometimes difficult to bring, however, and it therefore seems appropriate as a general rule that if a judge can recognize harm to third persons from granting an injunction, he should be able to consider harm to third persons from not granting the injunction. Cf. Boomer v. Atlantic Cement Co., 26 N.Y.2d 210, 227 N.E.2d 870, 209 N.Y.S.2d 512 (1970), which seems to indicate a consideration of the public benefit to be achieved from granting an injunction.

159. Most economists recognize air pollution as an external diseconomy—a business cost that is borne presently by persons or groups other than the businesses doing the polluting. They agree that some way of internalizing the costs should be
a defendant will not, by itself, prevent the issuance of an injunction;160 but such a demonstration will often be weighed heavily by a court,161 and the cost of pollution abatement may well be substantial.162

There are three cost arguments that a defendant may advance.163 First, he may argue as a matter of policy that the increased cost of production and the increased price of the commodity which will follow164 probably are not justified by the marginal benefits of pollution abatement. Second, he may show that the cost of complying with an injunction would be so great that the imposition of that cost would require him either to shut down his operation entirely or to move his business to another location. Such action would arguably lead to

160. The Supreme Court, in a case of original jurisdiction, has enjoined the operation of an entire copper smelting plant because of its air pollution. Georgia v. Tennessee Copper Co., 206 U.S. 230 (1907). A recent example of alleged high cost not stopping the issuance of an injunction is the issuance of a preliminary injunction barring construction of a 390-mile, $110 million oil pipeline access road in Alaska. The injunction was sought by three conservation groups relying in part on the National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852; and the order was issued despite claims that delay in building the road would result in “unprecedented economic disaster.” N.Y. Times, April 27, 1970, at 25, col. 1.


162. See generally Davenport, Industry Starts the Big Cleanup, FORTUNE, Feb. 1970, at 114. But see Gerhart, Incentives to Air Pollution Control, 33 Law & Contemp. Prob. 358, 363 (1968), suggesting that costs for some industries may be quite low.

163. The defendant’s cost arguments would be virtually the same if there were applicable statutory emissions standards. But if the plaintiff is seeking to enforce existing legislatively determined standards, the argument can be made that the standards represent a political determination of the best long-term interests of the jurisdiction and that the court, in its balancing, should accept that determination unless the immediate community harm from the granting of the injunction would be very severe.

164. The effect of the increased costs on the price of goods has been given a considerable amount of attention by economists who have studied the ability of the firm to shift the incidence of taxes. The ability of a firm to shift the costs of pollution control will depend on the nature of the cost and the nature of the industry. If the costs are fixed and the firm is in a monopoly position, it is unlikely that the costs can be passed on to the consumer at all. Cf. R. Musgrave, THE THEORY OF PUBLIC FINANCE 309-11 (1959). If the cost varies with output and the firm is in a highly competitive industry, there will likely be no short-run effect, but in the long run some portion of the cost will be shifted to consumers; the portion which will be shifted depends upon the price elasticities of the relevant supply and demand curves. Cf. J. Due, GOVERNMENT FINANCE 284-86 (1965). These conclusions are, however, theoretical. In practice, it has been found that even in the short run there is a shifting of costs which increase in proportion to output. M. Krzyniak & R. Musgrave, THE SHIFTING OF THE CORPORATION INCOME TAX (1963). This seeming inconsistency may be explained by the fact that the assumptions which form the basis of the economic analyses do not precisely reflect “real-world” conditions.
unemployment, a reduced tax base, and general economic decline in the area in which the company is operating. Finally he may contend that although the company might not be immediately forced out of business, the cost of compliance would be so great that the company would be placed at a competitive disadvantage with other enterprises which are not required to abate their pollution.

Any attempt to analyze these cost arguments must take account of a variety of economic factors such as the extent of the controls ordered, the economic condition of the defendant, the characteristics of the defendant's industry, and the economic conditions of the geographic area in which the defendant's enterprise is located. Thus, it is necessary to view separately the various types of enterprises that may be challenged in pollution suits in order to determine whether any of the cost arguments may be successfully maintained.

If the alleged polluter is a governmental body or a regulated industry, only the first of the above cost arguments is pertinent. The government can meet increased costs through its power of taxation, and the regulated industry can include the increment as a cost factor, at least part of which will be recovered through its rate structure. In both situations, the increased costs or a significant part of them are passed on directly to the public, and in neither situation is there any problem of competitive disadvantage. To the extent that the costs can be shifted to the public, there seems little reason for denying the injunction, for in that situation the public would both benefit from the pollution abatement and pay for it. Thus, the only question facing a court in such cases is to determine whether an increased cost to the public is outweighed by the advantages of clean

165. It has been argued that such economic arguments as these should not be given much credibility. Jackson, Foreword: Environmental Quality, the Courts, and the Congress, 68 Mich. L. Rev. 1073 (1970). See also Lewis 250:

While Benjamin Linsky was air pollution control officer of the San Francisco Bay area, he reported that in 14 years of nationwide study he had come across only two instances of the actual shutting down of a plant because of local air pollution regulations. More typically, the plant's investment is simply too great for it to up and move.

166. To lessen the impact of general cost arguments, a plaintiff may wish to point out examples of industries which have instituted pollution control programs without adverse effects. See Lewis 245-46; J. Bergman & S. Lenormand, supra note 20, at 141-42. He may also wish to show that adverse economic effects do not necessarily follow from even a very strict regulation of emissions. In Los Angeles, for example, rather stringent emission standards have been enforced for a number of years without particularly affecting its ability to attract and hold industry. In fact, it has been suggested that Los Angeles did not start acting against pollution until there were adverse effects on the business climate. Newsweek, Jan. 26, 1970, at 45.

167. Of course, if the rates are increased, the quantity demanded should decline and the company would then bear some part of the cost indirectly, at least if it was operating at the point of profit maximization prior to the price increase. The effect of the price increase would depend upon the price elasticities of supply and demand. See note 164 supra.
air. If there is a pertinent statute prohibiting the pollution, the
decision should be especially clear, for then it can be said that the
public has already expressed a desire to bear the necessary costs of
abatement.

Similarly, some large industrial enterprises—especially those in
oligopolistic industries—may be able to make only a modified form
of the first cost argument. For such enterprises, the cost of abatement
might be small relative to the size of operating costs and might never
be passed on to consumers. In such cases, the only real objection
would be that of the shareholders, who would eventually have to
absorb the cost in reduced profits. The position of the corporation is
more deserving of concern than is the position of the government
in the situation described above, for the corporation’s shareholders
cannot be identified with the beneficiaries of reduced pollution.
Nevertheless, the interest of the shareholders seems to be outweighed
by the damage caused by pollution, especially in light of the comp­
pelling policy argument that the cost of clean air is a business cost
that should be internalized and should not be thrust upon society.

If the situation exists in which the costs of abating pollution will
require that the defendant cease doing business, that concern is a
significant reason for denying the injunction. Nevertheless, there
are several reasons why a defendant’s economic hardship should not
necessarily constitute a defense. Historically, such arguments have
not been dispositive; courts have enjoined pollution practices even
when it appeared that the injunction would compel the defendant
to cease his business operations completely. In addition, the plain­
tiff’s argument that pollution control costs are production costs
that should be internalized may be coupled with the view that if an
enterprise cannot survive when it must pay all the costs of produc­
tion, then it represents an inefficient allocation of resources and
should not survive. It would clearly be incongruous to allow
inefficiency to justify continued pollution. If there are undesir­
able consequences that may attend the issuance of an injunc­

168. Larger firms would be able to absorb the cost more easily than small firms
only if the cost does not vary in proportion to the size of the operation or if the firm
is earning economic profits due to a lack of competition. See note 164 supra.

169. Wolozin suggests that the smaller a firm is relative to the average firm in the
industry, the heavier will be the financial burden of abatement. Wolozin, supra note
159, at 237.


172. Any kind of regulation will probably cause problems for marginal businesses,
but that does not mean that the regulation should be unenforced. In the case of mini­
mum wage laws or in-plant safety regulations, for example, a legislative “balancing”
decision was made, and some marginal producers no doubt went out of business as a
result; but the view that those producers should be exempt from the regulations has
never been accepted.
tion, then those consequences should be considered by the court, but should not necessarily be dispositive.

If the reason that the cost of pollution abatement constitutes a hardship is that the company merely lacks the required capital to finance the necessary technological changes, methods may be devised to furnish the necessary funds. While the court itself does not have the capacity to provide capital, a judge may take cognizance of potential sources of capital or existing tax incentives, and may frame his injunction order accordingly.

The arguments presented above also apply to a defendant who claims that requiring the imposition of pollution controls will place him at a long-term competitive disadvantage. Furthermore, the current expansion in the nationwide effort to end pollution militates against any argument by a defendant that his competitors will not be forced to incur the cost of pollution control. If the defendant's competition is local, the plaintiff may preclude any competitive-disadvantage argument by joining as defendants all the local producers of the same goods or services. If all the producers are not polluters, then those that do pollute are operating relatively inefficiently and should be forced either to incur the cost of abatement or to cease doing business.

Another reason why cost arguments may not be justified—for any class of defendants—is that the actual long-term costs of pollution abatement may not be as substantial as many businessmen imagine.

173. A tendency to oligopoly might be created, for example, if the number of marginal producers were decreased while the price of entry was raised. Similarly, there might be an increase in short-term unemployment.

174. For instance, over 90% of the manufacturing industries facing the greatest abatement costs—food, paper, chemical, petroleum refining, and primary metals—would be eligible for Small Business Administration loans. Money may also be available from the Economic Development Administration. Gerhardt, supra note 162, at 363-64. Cities and states might also set up public corporations to make long-term, low-interest loans available for pollution abatement. Similarly, it might be possible to approach some problems of air pollution control in the same way that municipalities often approach the need for industrial sewerage treatment: the municipality either builds or buys the control equipment and then leases it to the polluter. Finally, tax incentives might be offered to permit businesses to amortize pollution control facilities. See, e.g., Tax Reform Act of 1969, Pub. L. No. 91-172, § 704 (Dec. 30, 1969).

175. In some cases a judge might even condition the granting of an injunction on the defendant's ability to get capital from some source. Similarly, the injunction might require abatement only as capital becomes available. This approach might be made more definite if the defendant's potential earnings are examined and an abatement schedule is constructed in light of those anticipated profits.

176. Here again, the imaginative framing of an injunction order could reduce the impact of any competitive disadvantage. Abatement could, for example, be ordered in progressive stages so that there would be time for suits against other members of the industry. Similarly, in highly competitive situations the judge might order only that the defendant meet the emission standards of the lightest polluter in his industry in the area.
Indeed, prompt action to control pollution may be economically advantageous in the long run. There have been a number of instances, for example, in which companies have been compelled under protest to reduce their pollutant emissions and have subsequently found that the control devices literally paid for themselves.\textsuperscript{177} Moreover, it seems likely that evidence of the harmful effects of air pollution will continue to grow, which will lead to stricter regulatory controls and an increased likelihood that plaintiffs will be able to maintain successful damage actions against polluters. By acting at an early date to curb air pollution, a polluter may be foreclosing the possibility of governmental regulation and costly litigation.

Since the guiding principle of equity courts is discretion, the outcome of any particular case necessarily depends upon the judge’s evaluation of the unique facts of the case and his predisposition toward the various interests involved. Predictability is further complicated by the lack of precedent in this evolving field. In most of the older cases in which injunctions were sought under nuisance principles, the court was limited to two alternatives: it could either allow the pollution to continue or it could completely shut down the company.\textsuperscript{178} Today, however, the technology of air pollution control is such that defendants seldom can argue that significant abatement would be impossible without closing down their operation; thus the range of possible relief is greatly expanded.\textsuperscript{179}

Given the wide range of possible remedies, the question arises what standards the court should apply in framing particular in-

\textsuperscript{177} Much air pollution represents the waste of usable material, and many companies have been able to pay some or all of their abatement costs by using the materials recovered. Indeed, some companies have even earned a profit by developing activities for utilizing their trapped emissions. See, e.g., \textsc{Lewis} 246-48; J. \textsc{Bergman} \& S. \textsc{Lenormand}, \textit{supra} note 20, at 87-88; Gerhardt, \textit{supra} note 162, at 362.

\textsuperscript{178} \textit{E.g.}, \textsc{Bliss v. Washoe Copper Co.}, 186 F. 789 (9th Cir. 1911); \textsc{Elliott Nursery Co. v. Duquesne Light Co.}, 281 Pa. 166, 126 A. 345 (1924).

\textsuperscript{179} Cases in the past have indicated a wide variety of approaches to the question of balancing interests in this area. For example, the pollution from 50 coke ovens operating 24 hours a day, seven days a week, has been characterized as only a "petty annoyance." \textsc{Bove v. Donner-Hanna Coke Corp.}, 142 Misc. 329, 254 N.Y.S. 403 (1931), \textit{affd. mem.}, 336 App. Div. 37, 258 N.Y.S. 229 (1932). But other courts have recognized the health hazard from oil refinery fumes and required their abatement. \textsc{Waier v. Peerless Oil Co.}, 265 Mich. 398, 251 N.W. 552 (1933).

Many of the older economic and industrial neighborhood justifications for allowing pollution no longer seem persuasive. Not only has the evidence of the detrimental health and property effects of air pollution increased, but also the pervasiveness of pollution in many communities makes a distinction between industrial and residential neighborhoods impossible to apply. An interesting dilemma may face a plaintiff in an industrial area. The best way to reduce air pollution would be to attempt to join as many polluters as defendants as possible. Yet the more that are joined, the more persuasive the defendants’ community-economics arguments may be.
junctions. In most air pollution suits, the plaintiff seeks an injunction that would require the defendant to apply existing technology to the control of his pollutant emissions. Such a request for an order compelling the adoption of available control procedures avoids putting the court in the position of requiring that a firm cease doing business. As a result, a court will probably be more willing to issue an injunction than it would be if the plaintiff sought to have emissions limited to a certain level, without regard for technological feasibility. Since existing technology is quite advanced and is capable of significantly reducing the level of pollutant emissions from any source, there seems little reason for a plaintiff to insist on the impossible.

180. There would be an exception in cases of highly toxic emissions which existing control practices cannot prevent. This type of emission should probably be immediately curtailed even if it is necessary to close the plant of the defendant.

181. A number of cases indicate that a defendant cannot be required to meet any standard higher than that which is possible under existing technology. See, e.g., Bliss v. Washoe Copper Co., 185 F. 789 (9th Cir. 1911), and Koseris v. J.R. Simplot Co., 82 Idaho 293, 352 P.2d 239 (1960), both holding that an injunction will not issue if the defendant can show it used the "best known" or most "modern" methods of production and emission control.

For a discussion of the defense of industry standards as a bar to the enforcement of statutory standards, see Pollack, Legal Boundaries of Air Pollution Control, 33 LAW & CONTEMP. PROBS. 350, 549-48 (1968).

182. It may be that in some localities existing regulations allow levels of pollutant emissions which are higher than the level which could possibly be achieved. Where this is so, plaintiff will probably seek only to enforce the existing standards. Even if the plaintiff does seek to have the lowest possible level of pollution ordered, it may be likely, in the absence of a showing of very severe and immediate injury to the plaintiff, that the court will accept the legislatively determined standards as controlling. In most cases, such a decision by the court would be sound. The local standards probably represent a finding that the ambient-air quality of the area is such that it can absorb emissions at levels higher than those technically feasible. As the conditions of the area change and knowledge about pollution increases, the standards will change. But see notes 50-52 supra and accompanying text.

Compelling only the use of available procedures is an approach which allows the court to shape its remedies. Depending upon the nature of a particular case, a judge could fashion an order dealing with one or more of the following: emissions, control equipment, fuels, efficiency and proper use of existing equipment, training of personnel to operate equipment, installation or manufacture of equipment (e.g., banning use of a particular type of apartment incinerator). As technology improves, the court could order that new devices be used by the defendant.

183. The 1967 Air Quality Act, 42 U.S.C. §§ 1857-571 (Supp. IV, 1965-1968), requires the federal courts in nonemergency suits initiated by HEW to consider the economic and technological feasibility of controls. A state-of-the-art approach is also a flexible standard which would allow the court to shape its remedies, and to keep jurisdiction of a case, and to order implementation of increasingly stringent standards over time.

The 1967 Air Quality Act also requires HEW to develop and publish information on techniques for preventing and controlling air pollution, including data on the cost and effectiveness of alternative methods. 42 U.S.C. § 1857c-2(b) (Supp. IV, 1965-1968). This type of information would be invaluable to a judge attempting to shape a pollution abatement injunction.

184. This is a view shared by many. See, e.g., U.S. DEPT. OF HEW 27; A STUDY OF
If a particular plaintiff nonetheless insists upon an impractical solution, it would be appropriate for the court to find a middle ground. The court is not bound to the exact relief sought by the plaintiff; rather, it can “... adjust the remedy to the need”\(^{185}\) and may exercise its discretion in any appropriate manner.\(^{186}\) In most instances, if an injunction is issued, its scope will be general; unless it is clear what measures are appropriate, the offending party will be allowed to “experiment” with measures that he thinks will achieve the results which the court desires.\(^{187}\) For example, the court might frame an injunction, based upon its estimate of the capabilities of the existing technology, requiring the defendant to reduce his emissions to a certain level. The defendant would then be able to adopt the control method of his choice in order to meet the requisite standards. Abatement equipment, different fuels, and more efficient and careful operation of existing equipment, might be used by themselves or in combination, to lower emission levels. This existence of discretion in the trial judge is one of the most persuasive reasons for attacking the pollution problem by using the courts of equity. The same degree of flexibility is found in few other areas of the law.

V. Sanctions

If a court’s order is disobeyed, the availability of sanctions becomes important. In the usual case, however, the matter will have to be considered before an order is ever issued, for a traditional rule of equity stipulates that “a court of equity will not issue an unenforceable decree of injunction.”\(^{188}\) It has been suggested that this rule has two aspects: relief will be denied if it appears that the court would not be able to discover violations of its decree, and relief will be denied if the court would not have the means to punish any disobedience which might be discovered.\(^{189}\) This interpretation of the rule appears sound, and offers a convenient means of assessing the enforceability of injunctions against air polluters.

There are no major problems of enforceability in suits involving injunctions against air polluters. A court has power over all polluters which have a stationary source within the jurisdiction.

\(^{185}\) Alfred Jacobshagen Co. v. Dockery, 243 Miss. 511, 518, 139 S.2d 632, 634 (1962).
\(^{187}\) Five Oaks Corp. v. Gathmann, 190 Md. 348, 58 A.2d 656 (1948).
\(^{189}\) Injunctions 1012.
Thus, with the possible exception of suits involving pollutants discharged in a state other than the forum state, the court may either coerce compliance with its orders through civil-contempt sanctions or punish violators of its orders through the use of its criminal-contempt powers.

Moreover, not only are the means available to punish disobedient defendants, but any violations are easily discoverable as well. In general, the inability to discover violations of an order may be due either to a lack of standards by which compliance can be measured or to an absence of the means by which it may be ascertained that the defendant was disobedient. In an air pollution suit, the knowledgeable use of discretion by a judge in framing an order of abatement that takes into account both existing technological capabilities and available criteria for measuring pollution can produce definite standards by which to determine compliance with the order. Furthermore, those same standards may make it easy to discover violations, especially if cost considerations do not prevent the use of monitors and masters to oversee the implementation of the decree. If such costs are an important factor, the issuance of the decree could be conditioned upon the plaintiff's payment of them.

A court will also refuse to issue an injunction if the complexity or magnitude of enforcing it is sufficient to render it unmanageable. Indeed, mere difficulty of enforcement, rather than actual impossibility, may be sufficient grounds for denying an injunction, and there are numerous cases which cite problems of supervision, or the need

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190. The problem of extraterritorial decrees, although potentially significant in this field, are beyond the scope of this Comment. See generally Messner, *The Jurisdiction of a Court of Equity To Compel the Doing of Acts Outside the Territorial Limits of the State*, 14 Minn. L. Rev. 494 (1930).

191. Either imprisonment or a fine is an appropriate civil-contempt sanction so long as it is designed to coerce compliance or to compensate the plaintiff and is not designed to punish the defendant for noncompliance. *McComb v. Jacksonville Paper Co.*, 336 U.S. 187 (1949).

192. *Cf. Gompers v. Bucks Stove & Range Co.*, 221 U.S. 418, 428 (1911). The threat of imprisonment appears to be especially effective when the defendants are corporate executives, as is indicated by the history of the antitrust cases in which jail sentences were imposed upon several corporate executives who had conspired to fix prices in the electrical-equipment industry. *See Wall St. J.*, Feb. 7, 1961, at 2, col. 1; *cf. N.Y. Times*, March 12, 1961, at 1, col. 3.

193. *Injunctions* 1012.

194. *See note 182 supra*, for a suggestion of the types of injunctions which might issue.

195. *Injunctions* 1012. For example, equipment or fuel could be checked by inspection, and emissions could be checked by existing measuring devices. *See Ludwig, Air Pollution Control Technology: Research and Development on New and Improved Systems*, 34 Law & Contemp. Probs. 217, 223 (1968); Silverston, *Detecting and Measuring Pollution*, in *The Pollution Reader* 209 (1968). Efficient operation might be, in part, enhanced by requiring operating certificates for equipment or by requiring training for personnel.
for continuous supervision as adequate grounds for denying injunc­tive relief.\footnote{196} The difficulty of supervision for a court in an air pollution suit depends upon the number of defendants involved\footnote{197} and the type of abatement order that is issued.\footnote{198} Since supervision will never be completely impossible, it is difficult to know how much weight a particular judge will attach to the degree of enforcement difficulty existing in a particular fact situation.\footnote{199} Nevertheless, the level of supervision required should seldom be prohibitive since the actual efforts at compliance need not be observed by the court; the court may supervise compliance simply by measuring the level of pollution discharged by the defendant. Again, if costs are a significant factor, it is appropriate to condition the decree upon their payment by the plaintiff.

Thus, enforcement of a decree is not an insuperable obstacle, and concern with enforcement should not lead to the denial of injunctive relief. In fact, however, it is probably true that enforcement measures will be unnecessary. Corporations are generally law-abiding entities and will no doubt comply with any orders that are actually issued. Indeed, it is only through their cooperation, either with courts or with legislatures, that the menace of toxic air pollution will eventually be overcome.


\footnote{197} Once again the plaintiff is faced with a dilemma. \textit{See} note 179 \textit{supra.} The more polluters that he attempts to join as defendants, the more severe become the problems of enforcement. Perhaps by joining only those of a particular industry or only those responsible for a particular type of pollution in any one case, the plaintiff can reduce the court's fear of enforcement problems, because the measures necessary for ensuring that the defendants carry out an abatement order would be basically the same for each.

\footnote{198} \textit{See} note 195 \textit{supra.} The amount of effort necessary to ensure compliance with an order respecting the installation and use of abatement equipment, for example, would be less than that necessary to ensure continued low emissions without requiring any particular method for achieving them. \textit{But see} note 29 \textit{supra}, suggesting that anything other than generally worded abatement requirements leads to potentially inefficient use of resources.

\footnote{199} There have been cases in which controls were enforced, although they have usually involved only one defendant. \textit{See} note 179 \textit{supra.} On the other hand, some cases simply frighten judges away. \textit{See}, e.g., the $500 billion damage and injunction suit brought in Los Angeles in which the judge in dismissing the case, said that it was beyond the court's competence. Diamond v. General Motors Corp., No. 947,429 (Super. Ct., Cal., filed April 15, 1969).

It has been suggested that when a violation of constitutional rights requires an injunction, courts worry less about enforcement problems. \textit{Injunctions} 1012-13 (citing civil rights and reapportionment cases). If the legal right upon which an air pollution case rests is a constitutional one, this, of course, may mean that an injunction will issue. \textit{See} notes 97-99 \textit{supra} and accompanying text.