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NOTES

THE ROLE OF THE COURT IN PROTECTING THE ENVIRONMENT — A JURISPRUDENTIAL ANALYSIS*

I. INTRODUCTION

Today man's environment faces many grave problems,¹ and in increasing numbers concerned citizens are turning to the courts seeking judicial protection for the environment.² The purpose of this paper is to consider the proper role that a court, as an institution, should play in protecting the environment.

When a court is asked to solve environmental problems directly³ on a case by case basis, certain questions arise: Is the court institutionally suited to solve the problem at hand? If not, does the court have the constitutional power to consider the problem?

II. THE INSTITUTIONAL LIMITS OF ADJUDICATION

A. *In General*

When one speaks of the institutional limits of adjudication,⁴ he has in mind certain problems that are incapable of resolu-

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1. See TIME, Feb. 2, 1970, at 56-63; TRIAL, Aug./Sept., 1969, at 10-28.

2. See Main, *Conservationist at the Barricades*, FORTUNE, Feb., 1970, at 145; Sax, *The Public Trust Doctrine In Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 473-74 (1970).

3. In environmental cases a court's participation might be characterized as either direct or indirect depending upon which governmental institution is ultimately responsible for solving the problem presented on its merits. A court's participation is direct when it attempts to fashion a solution to the problem on a case by case basis without the aid of a statute. A court's participation is indirect when it applies to the facts of a given case a legislative solution to the problem or when it reviews an administrative agency's attempt to solve the problem without becoming involved in the merits.

In some cases a court's participation in environmental problems will be direct although the court appears to be applying a legislative solution. For example, a court may be called upon to directly solve environmental problems by a mere procedural statute that does not prescribe a substantive rule of decision.

4. Professor Lon L. Fuller of the Harvard Law School has defined adjudication as a form of social ordering that is distinguished from the other forms of social ordering, ordering by reciprocity and ordering by common aims, by the way in which the effected parties participate. Ordering by

tion by adjudication. Adjudication is, in other words, by nature not suited to perform certain tasks. The question of concern here is whether any of the environmental problems presently to be considered fall beyond the natural limits of adjudication.

B. Adjudication Results in a Formal Declaration of Right and Wrong.

Traditionally courts have been viewed as an institutional mechanism for settling actual disputes between litigants.⁵ In settling disputes, courts determine the rights or, in criminal cases, the wrongs of the parties before them.⁶ This observation—that the end result of adjudication is the formal declaration of rights and wrongs—suggests an institutional limitation of adjudication that Professor Lon L. Fuller of the Harvard Law School feels is the most significant of all.⁷ In the words of Professor Fuller:

Adjudication is not a proper form of social ordering in those areas where the effectiveness of human association would be destroyed if it were organized about formally defined "rights" and "wrongs". Courts have,

reciprocity generally involves an exchange, or something close to it, between two or more parties seeking different ends (*e.g.*, a contract, a treaty, etc.). The parties participation here could best be described by the term negotiation. Ordering by common aims generally involves an association, voluntary or involuntary, between two or more parties desiring the same end (*e.g.*, a political party, democratic government, etc.). The parties' participation here could best be described by the term voting or some such similar term. With adjudication the parties participate in the decision of a court, administrative body, or arbiter by presenting proofs and reasoned arguments. This mode of participation defines the institutional limits of adjudication. If an attempt to solve a problem by adjudication would destroy the efficacy of the parties' participation by presenting proofs and reasoned arguments, then that problem is beyond the limits of adjudication. L. Fuller, *The Forms And Limits Of Adjudication*, at 4-17, 36 (unpublished article; copies available in the library of the University of South Carolina School of Law) [hereinafter cited as *The Forms And Limits Of Adjudication*].

5. J. GRAY, *THE NATURE AND SOURCES OF LAW* 115 (1938); Trelease, *Law Water and People: The Role of Water Law In Conserving and Developing Natural Resources In The West*, 18 Wyo. L.J. 3, 3 (1962).

6. J. GRAY, *supra* note 5, at 114-15; see *The Forms And Limits Of Adjudication* 14-17.

Professor Fuller feels that the statement: "judges declare rights", is not a significant way of describing the limits of adjudication. Rather he feels that this statement follows from his definition of adjudication, which, he feels, is a more significant way of describing the limits of adjudication. See discussion note 4 *supra*. Since the litigants participate in the judge's decision by presenting proofs and reasoned arguments, they will necessarily be expected to point to some principle or standard that would support a decision in their favor. And since a claim of right is a claim based upon "some principle or standard by which [the] 'right' can be tested," it follows that courts generally decide claims of right. *Id.* at 14.

7. *The Forms And Limits Of Adjudication*, at 17.

for example, rather regularly refused to enforce agreements between husband and wife affecting the internal organization of family life. There are other and wider areas where the intrusion of "the machinery of the law" is equally inappropriate. An adjudicative board might well undertake to allocate one thousand tons of coal among three claimants: it could hardly conduct even the simplest coal-mining enterprise by the forms of adjudication. Wherever successful human association depends upon spontaneous and informal collaboration, shifting its forms with the task at hand, there adjudication is out of place except as it may declare certain ground rules applicable to a wide variety of activities.⁸

In connection with this first observed limitation, it might be useful to consider briefly the doctrine of common law nuisance,⁹ which courts have developed and used as a tool for controlling environmental pollution.

Like the law of negligence, the law of nuisance governs the relationships between individuals living together in organized society.¹⁰ Generally speaking, these relationships are of such a nature that they are not susceptible to "a pervasive delimita-

8. *Id.*

9. See generally W. PROSSER, HANDBOOK OF THE LAW OF TORTS 592-633 (3d ed. 1964). Generally speaking, there are two types of nuisance: public nuisance and private nuisance. The analytical distinction between the two is that private nuisance involves an unreasonable and substantial interference with the plaintiff's rights to the use or enjoyment of his land, whereas a public nuisance involves an unreasonable and substantial interference with common public rights. *Id.* at 593-94. In order to recover damages or receive injunctive relief in a suit based upon public nuisance, a plaintiff must be able to show some special injury "over and above the ordinary damage caused to the public at large by the nuisance." *Id.* at 608.

10. RESTATEMENT OF TORTS § 822, Comment *j* at 231 (1939).

Life in organized society, and especially in populous communities, involves an unavoidable clash of individual interests. Practically all human activities, unless carried on in a wilderness, interfere to some extent with others or involve some risk of interference, and these interferences range from mere trifling annoyances to serious harms. It is an obvious truth that each individual in a community must put up with a certain amount of annoyance, inconvenience and interference, and must take a certain amount of risk in order that all may get on together. The very existence of organized society depends upon the principle of 'give and take, live and let live,' and therefore the law of torts does not attempt to impose liability or shift the loss in every case where one person's conduct has some detrimental effect on another. Liability is imposed only in those cases where the harm or risk to one is greater than he ought to be required to bear under the circumstances, at least without compensation.

Id.

tion of rights and wrongs."¹¹ *A fortiori*, "adjudication is out of place [here] except as it may declare certain ground rules applicable to a wide variety of activities."¹²

With respect to conduct constituting pollution of the environment (*e.g.*, industrial, municipal, and individual waste disposal), the law of nuisance lays down certain minimum rules that must be observed if community living is to continue.¹³ It is not feasible, however, to go beyond declaring a few basic ground rules. For, although these minimum rules must be observed, individuals and groups in society necessarily have to dispose of certain waste products generated during the course of daily living and it is not feasible nor desirable to govern this activity with a detailed set of rules.

In his book, *The Morality of Law*,¹⁴ Professor Fuller discusses two concepts of morality that are helpful in understanding the proper role that a court should play in pollution control.¹⁵ One morality, the morality of duty, "lays down the basic rules without which an ordered society is impossible, or without which an ordered society directed toward certain spe-

11. *The Forms And Limits Of Adjudication* at 17.

12. *Id.*

13. The term nuisance is incapable of an exact or comprehensive definition. W. PROSSER, *supra* note 9, at 592. The general statement of the doctrine—a substantial and unreasonable interference with a protected interest—constitutes more of a standard than a rule.

The requirement of unreasonableness, with respect to the defendant's conduct (*see generally id.* at 602-03, 616-23) has been a source of confusion in some states that follow the riparian rights doctrine of water law. *See generally* F. TRELEASE, *CASES AND MATERIALS ON WATER LAW* 1 (1967); Trelease, *Law, Water and People: The Role of Water Law in Conserving and Developing Natural Resources in The West*, 18 Wyo. L.J. 3, 4 (1962); Note, *The Riparian Rights Doctrine In South Carolina*, 21 S.C.L. Rev. 757 (1969). Generally speaking, the riparian rights doctrine gives to each riparian owner an equal right to make a reasonable use of the water which flows through or by his land. *But see* Prather v. Hoberg, 24 Cal. 2d 549, 150 P.2d 405 (1944) (preference for natural uses). The reasonableness of one riparian's use is measured against the use of the water by other riparians. Industrial waste disposal is generally recognized as one use of riparian waters. Note, *The Riparian Right Doctrine In South Carolina*, 21 S.C.L. Rev. 757, 765 (1969), and some courts have discussed water pollution in terms of the reasonable use concept of the riparian rights doctrine. *See, e.g.*, Sandusky Portland Cement Co. v. Dixie Pure Ice Co., 221 F. 200 (7th Cir. 1915). This position creates theoretical problems, however, since riparians have a right to the reasonable use of riparian waters. Thus, seemingly under this position, riparians would have a right to pollute and only a riparian could complain of stream pollution. F. TRELEASE *supra*, at 243-44. For these reasons courts more commonly treat water pollution as a problem of nuisance separate and distinct from the general body of water law. *Id.* at 244.

14. L. FULLER, *THE MORALITY OF LAW* (2d ed. 1969).

15. *See generally id.* at 3-32. For a comprehensive discussion distinguishing moral rules from other social rules, *see* H. HART, *THE CONCEPT OF LAW* 169-76 (1961).

cific goals must fail of its mark."¹⁶ The other morality, the morality of aspiration, is concerned with the highest goals of human achievement. It "has to do with our efforts to make the best use of our short lives."¹⁷ Each member of the community has his own idea of what constitutes excellence in terms of human achievement and he will allocate his time and efforts accordingly. In this sense the morality of aspiration has a close affinity with "[m]arginal utility economics [which] deals with our efforts to make the best of our limited economics resources."¹⁸ The morality of duty, on the other hand, "finds its closest cousin in the law."¹⁹ In terms of a moral scale, the morality of duty "begins at the bottom with the most obvious demands of social living"²⁰ The morality of aspiration begins where the morality of duty leaves off "and extends upward to the highest reaches of human aspiration."²¹

Generally speaking, the decisions that courts make on a case by case basis cluster around the bottom of the moral scale—the morality of duty²²—whereas legislative decisions cluster around the top of the moral scale—the morality of aspiration.²³ In other words, courts are primarily concerned with assessing penalties "for failing to respect the basic requirements of social living";²⁴ they are concerned with questions of right and wrong and duty and obligation. The legislature, on the other hand, is responsible for deciding how the community should allocate its scarce resources. It is not so much concerned with questions of right and wrong but rather with making decisions where there are any number of choices, no one of which can be clearly said to be right or wrong. For example, a decision to spend so much tax money to send a man to the moon is not a question of right or wrong. It is a decision to pursue certain ends ahead of others with a view toward resources that are limited in their capacity to achieve all of the ends under consideration.²⁵

As previously mentioned, certain minimum standards, with respect to pollution and waste disposal, must be observed or social living will be impossible. Where these minimum stand-

16. L. FULLER, *supra* note 14, at 5-6.

17. *Id.* at 17.

18. *Id.*

19. *Id.* at 15.

20. *Id.* at 9.

21. *Id.* at 9-10.

22. *See id.* at 31.

23. *See id.* at 15-19.

24. *Id.* at 6.

25. Note 23 *supra*.

ards are breached, a court has no trouble in assessing an appropriate penalty. Thus, where the smoke from a paper mill destroys the plaintiff's property, a court is on safe ground when it either enjoins the nuisance or awards damages or both. A court could not act with such confidence, however, if it were asked to decide whether a particular undeveloped tract of land should be devoted to conservation or industrial development. This type of question is not a question of right or wrong or duty or obligation. It is rather the type of question that is usually decided by a legislature.

C. Adjudication and the Rule of Decision

Another limitation of adjudication as a form of social ordering is related to the first limitation discussed above. It concerns the rational quality that is demanded of an adjudicatory decision. Since the end product of adjudication is a formal definition of right or wrong, the judge is expected to assert "some principle or standard by which [the right or wrong defined in his decision] can be tested."²⁶ This principle or standard, commonly referred to as the rule of decision, is generally imposed on the judge by some authority (*e.g.*, a statute) before the proceedings are initiated.²⁷ It is possible in some cases, however, to proceed with adjudication even though no rule of decision is formally announced in advance.²⁸ In such cases the facts usually suggest a principle to serve as a rule of decision. For example, the court may be able to fashion a rule of decision from what it feels is a strong sense of community or what it feels are certain received "ideals of the end of the legal order . . . and judicial process."²⁹ But where the facts

26. *The Forms And Limits Of Adjudication* at 14.

27. Professor Fuller points out that the rule of decision may be voluntarily accepted by the parties before adjudication proceedings are begun, as is the case with arbitration. *Id.* at 22.

28. Professor Fuller states:

Where adjudication appears to operate meaningfully without the support of rules formally declared or accepted in advance, it does so because it draws its intellectual sustenance from the two basic forms of social ordering . . . [reciprocity and common aims].

Id. Thus when a court formulates a rule of decision based upon a strong sense of community, it is relying on the common aims form of social ordering. When the court formulates a rule of decision based upon "the full implications of a [regime of reciprocity] already established" (*e.g.*, a customary system of exchange existing between commercial traders, the system of federalism in the United States) it is relying on the reciprocal form of social ordering. *Id.* at 22-23.

The forms of social ordering are discussed in note 4 *supra*.

29. Pound, *A Comparison Of Ideals Of Law*, 47 HARV. L. REV. 1, 2 (1933). Dean Pound's discussion of the received ideals of the end of the legal order

do not readily suggest a rule of decision, then the court will not be able to proceed confidently without the aid of a previously announced rule of decision.

Several recent controversies between conservationists and other groups over the particular use to which an area of land should be dedicated demonstrate how a court can be drawn in to a problem that does not readily suggest a rule of decision to be applied.³⁰ Typically these cases involve a situation where concerned conservationists seek an injunction against the construction of an industrial complex, highway, bridge, or some other governmental facility, which they feel will destroy the environment of a particular area. Consider, for example, a case where the construction of an industrial plant is questioned. There is authority in nuisance law for judicial intervention to protect the environmental character of a particular area that is already developing along certain lines.³¹ Thus, where an industrial firm starts construction of a new plant in a locality that is developing primarily along residential lines, generally speaking, it can be enjoined. But what if the area is previously undeveloped but prized by conservationists for its natural beauty, which they feel will be destroyed if the firm is allowed to proceed with its construction plans. The community may be, and usually is, equally divided on the issue: some members of the community feel that the natural quality of the environment should be preserved, whereas others desire industrial development with all its accompanying economic benefits. Thus, with no clear sense of community either way, the court would not be able to look to the common aims of the community in fashioning a rule of decision.

and judicial process suggests that these received ideals should be characterized as a form of ordering by common aims. The term public policy is sometimes used by judges to refer to these received ideals. The term public policy is also used to refer to certain other values that a particular judge feels are commonly shared.

30. See, e.g., *Robbins v. Department of Public Works*, 244 N.E.2d 577 (Mass. 1969); Main, *Conservationists at the Barricades*, *FORTUNE*, Feb., 1970, at 150; Ways, *How To Think About The Environment*, *FORTUNE*, Feb., 1970, at 165; *TIME*, Jan., 26, 1970, at 55, 58.

31. W. PROSSER, *supra* note 9, at 620-21.

The decisive consideration in many cases is the nature of the locality, and the suitability of the use made of the land by both [parties] The courts have been compelled to recognize that certain areas, by reason of their physical character or the accident of community growth, are devoted to certain types of activities, and that some uses of land are more or less segregated in certain localities, in order to avoid unnecessary conflict between those which are necessarily incompatible.

Id. at 620 (footnotes omitted).

D. *The Polycentric Problem*

A third limitation of adjudication as a form of social ordering is one suggested by Professor Fuller that is characterized by the term, polycentric problem.³² A polycentric problem is one that, as the name implies, has many different sides or interacting centers of influence. When a change is made in any one of these centers, a chain reaction is set off that will eventually require readjustments to be made at other centers, which will in turn necessitate further changes. Professor Fuller describes the complications involved with polycentric problems as follows:

We may visualize this kind of situation by thinking of a spider web. A pull on one strand will distribute tensions after a complicated pattern throughout the web as a whole. Doubling the original pull will, in all likelihood, not simply double each of the resulting tensions, but will rather create a different complicated pattern of tensions. This would certainly occur, for example, if the doubled pull caused one or more of the weaker strands to snap. This is a "polycentric" situation because it is "many-centered,"—each crossing of strands is a distinct center for distributing tensions.³³

Perhaps the concept of the polycentric problem can best be illustrated by an example and the factual situation involved in the case of *Burford v. Sun Oil Co.*³⁴ seems particularly appropriate. In that case the Sun Oil Company appealed an order of the Texas Railroad Commission granting Burford permission to drill four well on a small plot of land located in an East Texas oil field. The Commission was charged with the duty of conserving the state's oil reserves by the prevention of waste while, at the same time, allowing the individual land owners to recover their fair share of the oil pool lying beneath their property. The oil pool in question was approximately forty miles long, between five and nine miles wide, and had over 26,000 wells drilled into it. The surface area of the field was divided into many small tracts. Since the oil in the pool circulated throughout the entire field, one well operator could "not only draw the oil from under his own surface area"³⁵ but also from under the surface area of more distant wells. This practice was called confiscation. The problem was also compli-

32. *The Forms And Limits Of Adjudication* at 36-45.

33. *Id.* at 36.

34. 319 U.S. 315 (1943).

35. *Id.* at 319.

cated by the need to maintain sufficient gas and water pressure to force the oil through the wells to the surface. If this pressure were lost, then the oil could only be recovered by pumping it to the surface at great expense. In an effort to prevent waste, the Commission adopted, in cooperation with other states, oil production quotas based upon such factors as "full utilization of the oil supply, market demand, and protection of the individual operators, as well as protection of the public interest."³⁶ These quotas were "translated" into a specific amount of oil that could be produced by each well. Moreover, the Commission regulated the spacing of the individual wells. Exceptions were allowed, however, as in the instant case, to prevent confiscation and insure a well operator that he would recover his fair share.

In the factual situation as just outlined, each well operator constituted an interacting center of influence. Every time one well operator was granted an exception, this decision would ultimately effect other distant well owners through confiscation or loss of pressure and thus precipitate the necessity of granting more exceptions. These new exceptions would in turn precipitate the necessity of granting still more exceptions or perhaps even a change in quota or spacing requirements. It was estimated that over two-thirds of the wells in question were exceptions to the general rule.

The Supreme Court perhaps sensed the strong polycentric features presented by the *Burford* case. Recognizing the strong public policy of the state in conserving its oil reserves and the confusion that federal judicial intervention had caused here in the past, the Court held that, although the district court had jurisdiction, it should have declined to exercise it as a matter of policy.

As pointed out by Professor Fuller, practically all of the problems decided by courts have some polycentric features. The problem for the court is to recognize when a problem is so polycentric that it is beyond the institutional limits of adjudication. Often a problem will contain covert polycentric features that don't appear until after a decision has been made. Often, in such cases, the court will have accommodated the problem to traditional judicial forms and what at first appears to be a decision defining rights and duties is "in fact an inept solution for a polycentric problem."³⁷

36. *Id.* at 321.

37. *The Forms And Limits Of Adjudication* at 39-40.

To illustrate this point, Professor Fuller gives the following example:

Suppose a court in a suit between one litigant and a railway holds that it is an act of negligence for the railway not to construct an underpass at a particular crossing. There may be nothing to distinguish this crossing for other crossings on the line. As a matter of statistical probability it may be clear that constructing underpasses along the whole line would cost more lives (through accidents in blasting, for example) than would be lost if the only safety measure were the familiar "Stop, Look and Listen" sign. If so, then what seems to be a decision simply declaring the rights and duties of two parties is in fact an inept solution for a polycentric problem, some elements of which cannot be brought before the court in a simple suit by one injured party against a defendant railway.³⁸

With respect to these covert polycentric features that appear after a decision is made, Professor Fuller points out that the judicial process as a whole may be able to absorb them if the courts take a liberal view of precedent and the doctrine of *stare decisis*.³⁹

In connection with this last point, one might consider the historical development of water law in the United States. Watercourses, surface waters, and ground waters were at first thought to be separate and distinct hydrologic systems. Accordingly, separate bodies of law were developed for each system. Now, however, all three are recognized as constituting one hydrologic cycle.⁴⁰ Thus, if too much water is withdrawn from the wells in a given area, a neighboring stream might dry up. It remains to be seen whether the courts can accommodate the old cases to these polycentric features that until recently were unknown.⁴¹

38. *Id.*

39. *Id.* at 40.

40. F. TRELEASE, *supra* note 13, at 84-85.

41. With respect to ground water, some courts have already begun the process of accommodation.

Although aquifers are usually fed by seepage from the surface, and often discharge waters into springs and streams, ground water in aquifers is so physically different from water in streams that historically it was treated differently. The first rules were of ownership: The land owner was regarded as owning the water underneath his land and was permitted to take whatever quantity

It is also interesting to note the overt polycentric features that exist in many problems in the area of pollution control.⁴² Thus, a court that enjoins a municipality from burning garbage in an effort to curb air pollution may precipitate a problem in pollution from solid wastes. Also, it has been observed that, although the gas turbine will decrease air pollution, it will increase noise pollution.⁴³ Moreover, the new advances in pollution control equipment for automobiles, although they reduce the levels of certain pollutants emitted by automobile engines, increase the levels of other emissions that may eventually prove harmful to human life.⁴⁴

Indeed, the environment itself, or more precisely the biosphere⁴⁵ in which man lives, is extremely complex. It is composed of a number of different ecosystems⁴⁶ that are totally dependent on one another.⁴⁷ Every species that inhabits the

he could capture. A number of state courts then imposed requirements that the owner's use of ground water must be reasonable. Some have applied a rule of correlative rights similar to riparian doctrines of reasonable sharing.

F. TRELEASE, *supra* note 13, at 6.

It is also interesting to note in this connection, that some riparian rights states, which at first espoused the natural flow theory of riparian rights, subsequently switched over to the more utilitarian reasonable use theory. *Id.* at 119.

42. See generally Bowen, *Our New Awareness of the Great Web*, *FORTUNE*, Feb., 1970, at 198; *TIME*, Feb. 2, 1970, at 56.

43. Moreover, although "gas turbines emit less carbon monoxide and hydrocarbons than piston engines per pound of fuel . . . , [they] burn more fuel per mile, especially in city traffic." Alexander, *Some Burning Questions About Combustion*, *FORTUNE*, Feb., 1970, at 168.

44. *TIME*, Feb. 2, 1970, at 59.

45. The biosphere, a thin film over the surface of the earth where life exists, has been described as "a vast web of interacting organisms and processes that form the rhythmic cycles and food chains in which ecosystems support one another." *Id.* at 59.

46. The term ecosystem is used by ecologists to describe a system made up of certain organisms and their physical environment. The elements of an ecosystem are:

- 1) inorganic substances (gases, minerals, compounds); 2) "producer" plants, which convert the substances into food; 3) animal "consumers", which use the food; and 4) "decomposers" (bacteria and fungi), which turn dead protoplasm into usable substances for the producers.

Id. at 57.

Even the simplest ecosystem, it has been said, "is so complex that the largest computer cannot fully unravel it." *Id.* at 62-63. And "[i]n the ecosystem of man, which includes institutions and artifacts that themselves impinge upon and alter the environment, the interrelations are unimaginably complex." Bowen, *supra* note 42, at 198.

47. The interdependence of all living creatures, it has been said, is the first law of ecology. Bowen, *supra* note 42, at 198.

The continued functioning of any organism depends upon the interlinked functionings of many other organisms. Seemingly autonomous man ultimately depends upon photosynthesis for his

earth occupies its own niche in a specific ecosystem and all species, along with all other elements that go to make up their physical environment, constitute interacting centers of influence, not only with respect to their own ecosystems but with respect to other ecosystems as well. It is because of this complexity, that man "can never do merely one thing,"⁴⁸ with respect to the environment. For "[w]hen we intervene in a complex system so as to produce a certain desired effect, we always get in addition some other effect or effects, usually not desired."⁴⁹

All of these polycentric features suggest perhaps that courts should pay a more limited role in trying to solve the environmental crisis. Perhaps the legislature, or some specially designed administrative agency, is a more appropriate institution for dealing with the problems discussed.⁵⁰ In any event, courts

food. The seemingly autonomous oak in the forest depends upon microscopic organisms to break down fallen leaves, releasing nutrients that can be absorbed by its roots. Interrelations between organisms are often intricate, and some obscure species provide vital linkages not at all apparent to the casual observer. The seeds of the bitterbush, an important food plant for browsing animals in arid sections of Africa, fail to germinate unless several seeds are buried close together below the surface of the soil; that happens in nature only through the intervention of a species of ground squirrel, which buries hoards of seeds and often forgets them. It is unwise for men ever to assume without very close study that any species is entirely dispensable.

Id.

48. *Id.* at 199.

49. *Id.* Moreover, since causes and effects in ecosystems are widely separated in time and space, these undesired results are invariably unexpected. After years of spraying persistent pesticides to kill insects, we find that we have come close to wiping out a national symbol, the bald eagle: concentrated through food chains, pesticides accumulate in the tissues of eagles and certain other birds to the point of impairing reproduction. We drain Florida swamp lands and learn later on that by reducing the outflow of fresh water into estuaries we have increased their salinity and thereby damaged valuable breeding environment for fish and shrimp. The Aswan Dam impounds silt that would otherwise be carried downstream, so the Nile no longer performs as richly as before its ancient function of renewing fields along its banks. The fertility of the Nile Valley is therefore declining. That is only one variety of ecological backlash from this triumph of engineering. With the flow of the river reduced, salt water is backing into the Nile delta, harming farm lands there. And in time, some authorities predict, the flow of Nile water to new farm lands through irrigation canals will bring on a calamitous spread of schistosomiasis, a liver disease produced by parasites that spend part of their life cycle in the bodies of snails.

Id. For other specific examples of "ecological backlash", see TIME, Feb. 2, 1970, at 57, 62.

50. Although adjudication is ill suited for solving polycentric problems, Professor Fuller points out that the majority principle is likewise "quite

should at least try to foresee and consider the ecological effects of their decisions and be prepared to accommodate the judicial process to any environmental problems inadvertently precipitated by their decisions.

E. The Polycentric Features of Resource Allocation

In Professor Fuller's view, generally speaking, problems of resource allocation are too polycentric to be suitable for adjudication. This point is emphasized by several of his statements in the MORALITY OF LAW:

By its nature adjudication must act through openly declared rule or principle, and the grounds on which it acts must display some continuity through time. Without this, joinder of argument becomes impossible and all the conventional safeguards that surround decision (such as that proscribing private conferences between the litigant and the arbiter of the dispute) forfeit their meaning.

To act wisely, the economic manager must take into account every circumstance relevant to his decision and must himself assume the initiative in discovering what circumstances are relevant. His decisions must be subject to reversal or change as conditions alter. The judge, on the other hand, acts upon those facts that are in advance deemed relevant under declared principles of decision. His decision does not simply direct resources and energies; it declares rights, and rights to be meaningful must in some measure stand firm through changing circumstances. When, therefore, we attempt to discharge tasks of economic management through adjudicative forms there is a serious mis match between the procedure adopted and the problem to be solved.

. . . .

[W]e must face the plain truth that adjudication is an ineffective instrument for economic management and

incapable of solving polycentric problems." *The Forms And Limits Of Adjudication* at 41. Professor Fuller indicates, however, that polycentric problems can often be solved, at least after a measure, by parliamentary methods which include an element of contract in the form of the political "deal." The parties in interest—or, more realistically, the parties most obviously concerned—are called together at a legislative hearing or in a conference with legislative leaders and "an accommodation of interests" is worked out.

Id.

for governmental participation in the allocation of economic resources.⁵¹

In dealing with the problems of environmental quality, a court may become involved in the process of allocating resources without realizing it. For example, waste disposal and industrial cooling are two recognized uses to which the waters of a particular stream may be put. Either use may result in pollution of the stream. Thus, if a court decides that a defendant's use of the water for waste disposal is not unreasonable, it has in effect allocated a part of the stream to that use. If the defendant's activity results in pollution of the stream, then the end result of the court's decision may be the dedication of the entire stream to industrial and municipal waste disposal.⁵²

In the field of water law, however, courts have historically engaged in the business of resource allocation.⁵³ Although the adjudication of water rights is at times difficult and subject to criticism,⁵⁴ courts generally recognize that, where jurisdiction

51. L. FULLER, *supra* note 14, at 171-72, 176. Many of the limitations of adjudication suggested by Professor Fuller are overlapping. Thus morality-of-aspiration-type decisions, which are, generally speaking, entrusted to legislatures, bear a close affinity to resource-allocation decisions. *Id.* at 15-19. Legislatures, after all, are responsible for selecting the basic directives of society with a view toward resources that are scarce in their ability to achieve all the directives under consideration. In other words, legislatures are principally responsible for deciding how society should allocate its scarce resources. And problems of this type tend to center around the top of the moral scale and they have strong polycentric features. Accordingly, courts are uncomfortable with them.

52. Another example to illustrate the above proposition would be the environmental zoning cases where a court is asked to enjoin the development of a particular region in the name of conservation. Here the court's decision will necessarily have the effect of allocating the land in question to a particular use. See discussion in text accompanying notes 30-31 *supra* and note 71 *infra*. In such cases the problems inherent in the task of resource allocation are further complicated by the existence of the other polycentric features that are associated with environmental problems.

53. See F. TRELEASE, *supra* note 13, at 160-64, 167-71.

54. *Id.* at 162; Johnson, *Adjudication of Water Rights*, 42 TEXAS L. REV. 121 (1963). The criticism usually directed at the adjudication of water rights concerns itself with the inadequacy of the available procedures.

A charge often leveled at the traditional judicial procedures is the assertion that courts lack the necessary expertness to deal adequately with the hydrological and other technical non-legal problems involved in water rights adjudications. Kinney's reference to "the ludicrous spectacle of learned judges solemnly decreeing the right to from two to ten times the amount of water flowing in a stream" is frequently quoted. One may well wonder why courts which are able to handle cases involving technical issues of medical science in personal injury litigation, geology and engineering in oil and gas [sic] cases, surveying in boundary suits, industrial processes in patent infringement cases, corporate finance in stockholders' suits, economics in antitrust

over the parties and subject matter is proper, equity not only has the power to apportion water among the litigants, but also the power to prescribe the method of apportionment and measurement.⁵⁵ Moreover, the acquisition and use of water has traditionally been viewed as a right, especially in the arid western states where water is a scarce commodity.⁵⁶ Likewise, pollution has traditionally been viewed as a wrong, and, as previously mentioned, courts are principally concerned with the formal declaration of rights and wrongs. Furthermore, the recognition of individual rights is simply one method or resource allocation. As Dean Frank J. Trelease of the University of Wyoming Law School points out:

American institutions are for the most part based upon the theory that in our present economy, where individuals with a wide range of free choice make their

litigation, and so forth, are unable to cope with the technical aspects of water rights controversies. Perhaps one explanation is that courts have received insufficient assistance from counsel in water rights cases, whose clients are unable or unwilling to bear the financial burden of producing the voluminous mass of data required for proper disposition of such cases.

Johnson, *supra*, at 129 (footnotes omitted). Perhaps the real reason why courts have so much trouble with water rights cases is, as Professor Fuller suggests, that adjudication is institutionally ill suited for the allocation of resources. L. FULLER, *supra* note 14, at 171-72, 176. See also Fuller, *Irrigation and Tyranny*, 17 STAN. L. REV. 1021 (1965).

55. Hidalgo County Water Improvement Dist. No. 2 v. Cameron County Water Control & Improvement Dist. No. 5, 253 S.W.2d 294, 296-97 (Tex. Civ. App. 1952). The use of the equitable bill of peace as an instrument for adjudicating the rights to water and the difficulties involved are discussed in F. TRELEASE, *supra* note 13, at 161-62. For a discussion of water measurement, see *id.* at 7-8.

56. Generally speaking, water rights in the eastern states are tied to a particular class of land—riparian land. The water itself is allocated equally among riparian land owners according to the principle of reasonable use. In the western states, however, water rights are normally allocated to those persons who are actually using the water regardless of whether or not they are riparian to the stream. These people are called appropriators and the water itself is allocated unequally among competing appropriators according to the principle of first in time, first in right. F. TRELEASE, *supra* note 13, at 1-7.

The right to use water is more properly considered a true right under the western system of prior appropriation than under the eastern system of riparian rights. Since an appropriator's right to use the water is more readily translated into a specific amount of water, it is more definite and certain and other inferior appropriators are under a duty to respect it. A riparian user's right, however, might be more properly described as a privilege. That is to say, that he has a privilege that is subject to the exercise of a like privilege in other riparians. See *id.* at 7.

Ten states, California, Kansas, Mississippi, Nebraska, North Dakota, Oklahoma, Oregon, South Dakota, Texas, and Washington, have developed or adopted a dual system of water law that combines elements of both the prior appropriates and riparian systems. Other states, including Florida, Hawaii, Iowa, Maryland, Minnesota, and Wisconsin, follow a statutorily modified riparian rights system. *Id.* at 5-6.

own decisions within limits set by governments, each will attempt to achieve the largest possible benefit for himself, and the total result of all of this individual action will tend to produce maximum welfare for the state or nation.

The institution most used in western civilization for allocating elements of man's environment to individuals is private property. The state creates in individual or groups "rights, powers or privileges" to deal in certain ways with certain aspects of the natural resources upon which welfare depends.⁵⁷

Dean Trelease also points out that the goal of natural resource law, and of law generally, is to order human activity in such a way as to minimize waste and attain "the largest possible 'net social returns' from the use of a resource."⁵⁸ This principle of maximum utilization is also the goal of resource allocation from an economic stand point. As Professor Fuller points out, "[economic calculation] knows but one general principle, that of obtaining a maximum return from limited resources."⁵⁹ Professor Fuller, however, feels that this goal cannot be attained through the forms of adjudication.

Nevertheless, the principle of maximum utilization has had a significant impact on the development of natural resource law. For example, it is often said that no one has a right to pollute the environment. Yet courts in the past have in effect given industrial defendants a license to do just that by refusing to enjoin pollution in a proper case. The equitable doctrine of balance of convenience has been used in a number of cases to protect industrial defendants from the rigors of nuisance law at the expense of the environment.⁶⁰ In these cases the courts presumably calculate that the particular river, stream, or other resource involved can yield "the largest possible 'net social returns' "⁶¹ by serving industry as a cheap method of waste disposal.⁶²

57. *Id.* at 6.

58. *Id.*

59. L. FULLER, *supra* note 14, at 171. See also *id.* at 15-19.

60. See, e.g., *Pennsylvania Coal Co. v. Sanderson*, 113 Pa. St. 126, 6 A. 453 (1886). As a result of the *Sanderson* decision, in which the court even refused to allow the plaintiff to recover damages, many Pennsylvania streams were destroyed by coal mining operations. F. TRELEASE, *supra* note 13, at 244-45.

61. F. TRELEASE, *supra* note 14, at 6.

62. See, e.g., *Hampton v. North Carolina Pulp Co.*, 49 F. Supp. 625 (E.D.N.C. 1943); *Pennsylvania Coal Co. v. Sanderson*, 113 Pa. St. 126, 6 A. 453 (1886).

The calculus of net social returns has undergone a change in recent times, however. Man is now better able to compute the social cost of pollution,⁶³ and courts, when called upon to balance the convenience of the parties, should also balance the economic and social interests of the community against the possible injury to the environment. The community's sense of priorities in this areas seems to be shifting, however.⁶⁴ More and more emphasis is being placed on the quality of life as opposed to economic and industrial development at any cost. Thus, a court that is called upon to trade off environmental quality in favor of development will generally lack the confidence typical of some of the earlier decisions⁶⁵ where substantial environmental interests were sacrificed in favor of other social and economic interests.

F. The Constitutional Aspects of the Institutional Limits of Adjudication

In the field of constitutional law, there exist certain legal doctrines that attempt in some measure to define the institutional limits of adjudication. One such doctrine is the doctrine of political questions. Another is the doctrine of standing. Both are different aspects of the case-controversy requirement,⁶⁶

Some of the problems involved in recognizing a right to pollute were discussed earlier in note 13 *supra*. Dean Trelease outlines the problem as follows:

Should property rights to pollute be allocated to individuals and firms? . . . The industry whose processes of grinding, washing and chemical treatment of materials produce a noxious waste product must get rid of it, and dumping it into a stream is often the cheapest way of disposing of it. The industry's costs are minimized and its profits are maximized. The municipality that dumps raw sewage into a stream realizes the benefits of getting rid of it at a cost of practically nothing. An irrigator who withdraws water from a stream makes it unavailable to others. He uses it to produce wealth, and his use is called reasonable and beneficial. The polluter makes water unavailable for use by others and produces wealth by the negative process of cutting cost.

F. TRELEASE, *supra* note 13, at 244.

63. See Rose, *The Economics of Environmental Quality*, FORTUNE, Feb., 1970, at 120.

64. Jackson, *Foreward: Environmental Quality, The Courts, And The Congress*, 68 MICH. L. REV. 1073, 1074-75 (1970); Comment, *Equity and the Eco-System: Can Injunctions Clean the Air?*, 68 MICH. L. REV. 1254, 1266 (1970).

65. Cases cited note 62 *supra*.

66. See generally C. WRIGHT, HANDBOOK OF THE LAW OF FEDERAL COURTS §§ 12-15 (2d ed. 1970). The doctrine of standing focuses on the parties to the suit, whereas the political question doctrine focuses on the subject matter of the litigation.

which is the primary limitation on the judicial power in a constitutional sense.⁶⁷

The political question doctrine, it has been said, is "essentially a function of the separation of powers."⁶⁸ That is to say, in the United States the powers of each of the three coordinate branches of government, both at the federal and state levels, are spelled out in a written constitution.⁶⁹ Each branch has its own separate and distinct sphere of activity and each is precluded from performing tasks that are peculiar to another branch. In this sense the political question doctrine attempts to define the outer limits of the judicial power.

Generally speaking, political questions fall into two major categories: (1) questions that are committed by the constitution to another coordinate branch⁷⁰ or (2) questions that are, in the nature of things, peculiarly appropriate for decision by another branch. This second category would seemingly include questions that have strong polycentric features or questions that are essentially legislative in nature in the sense that they call for a morality-of-aspiration-type decision. In other words, questions that are so far beyond the institutional limits of adjudication that they are beyond the constitutional limits of the judicial power.

If a court is presented with a problem that has strong ploy-

67. "Article III of the United States Constitution limits the power of the judiciary to deciding 'case or controversies', and many state courts require similar grounds of justiciability." Comment, *Equity and the Eco-System: Can Injunctions Clean the Air?*, 68 MICH. L. REV. 1254, 1264 (1970) (footnotes omitted).

68. *Baker v. Carr*, 369 U.S. 186, 217 (1962). This case contains the classic statement of the doctrine:

Prominent on the surface of any case held to involve a political question is found a textually demonstrable constitutional commitment of the issue to a coordinate political department; or a lack of judicially discoverable and manageable standards for resolving it; or the impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion; or the impossibility of a court's undertaking independent resolution without expressing lack of the respect due coordinate branches of government; or an unusual need for unquestioning adherence to a political decision already made; or the potentiality of embarrassment from multifarious pronouncements by various departments on one question.

Id.

69. At the federal level, the separation of powers is implicit in the scheme of government set up by the United States Constitution. Some state constitutions, however, expressly provide for the separation of powers. See, e.g., S.C. CONST. art. 1, § 14.

70. The first category describes the so called "textually demonstrable constitutional commitment." *Powell v. McCormick*, 395 U.S. 486 (1969); *Baker v. Carr*, 369 U.S. 186, 217 (1962).

centric features or a problem that is otherwise beyond the institutional limits of adjudication, it should consider the constitutional implications of an exercise of jurisdiction. For example, in the environmental zoning cases, the courts are asked to decide whether a particular region should be used for development or conservation. It was pointed out earlier that in such cases the courts will probably not be able to look to a strong sense of community either way. Thus, the fact situation does not readily suggest a rule of decision to be applied. Also the problem presented would involve the courts in the task of allocating resources—a task not suited to the forms of adjudication. Moreover, the polycentric features of many environmental problems should give courts pause.⁷¹

The other constitutional doctrine mentioned above, the doctrine of standing,⁷² is perhaps related in some way to the moral-

71. Also the problem may be complicated by other political factors. For example, the particular region may have been singled out for development by an industrial firm in coordination with a state agency in charge of the state's industrial development. Thus, if the court permanently enjoins construction, it is frustrating a policy of the state legislature as expressed through one of its agencies.

72. See generally C. WRIGHT, *supra* note 66, § 13. The requirement of standing has been the subject of much criticism in recent years but there are perhaps some valid policy reasons for retaining the requirement. Recently Michigan adopted a law that "lets ordinary citizens sue polluters without having to show evidence of direct personal injury." Holsendolph, *States Join the Pollution Battle*, *FORTUNE*, Oct., 1970, at 116. In light of the present crisis in the courts of the United States, the wisdom of such a statute seems questionable. See Main, *Only Radical Reform Can Save the Courts*, *FORTUNE*, Aug., 1970, at 111.

The courts cannot continue to deal with an exponentially increasing amount of regular business and have society's new problems dumped on them as well. Society will have to choose priorities, and decide anew which kinds of problems are worth the time of the courts and can be solved only by the courts. For the problems that don't pass that test, society should seek other solutions. *Id.* at 113.

Moreover, it may be that courts are institutionally ill suited to deal with pollution problems where the plaintiff has suffered no direct personal injury. Indeed, some people question the wisdom of trying to solve environmental problems with the traditional law suit.

Better handling of the environment is going to require lots of legal innovation to shape the integrative forums and regulatory bodies where our new-found environmental concerns may be given concrete reality. These new legal devices will extend all the way from treaties forbidding oil pollution on the high seas down to the minute concerns of local government. But the present wave of conservationist interest among lawyers and law students does not seem to be headed along that constructive path. Rather, it appears intent on multiplying two-party conflicts between "polluters" and victims.

When we read of some environmental atrocity—a sonic boom, a baby bitten in a rat-infested slum, a disease caused by polluted air—our sympathies go out to the victims, just as our sympathies

ity of duty. It was pointed out earlier that the decisions that courts make tend to cluster around the morality of duty and that courts are principally concerned with assessing penalties "for failing to respect the basic requirements of social living."⁷³ The requirement of standing in a sense insures that courts will stay within their proper sphere of activity. For where the defendant's conduct violates "the basic requirements of social living,"⁷⁴ the plaintiff will likely be able to point to some specific injury that will give him standing. And where pollution, for instance, constitutes a threat to the continued existence of organized society, there will likely be some member of the community who has standing to complain. But where the pollution complained of does not constitute a threat to the continued existence of organized society or a failure "to respect the basic requirements of social living,"⁷⁵ there will likely be no member of the community who has standing to complain.

G. The Role of the Court in Protecting the Environment

What is the proper role of the court, as an institution, in protecting the environment? Perhaps the most helpful way to think about the role of the court here is in terms of the morality of duty. It was pointed out earlier that the decisions that courts make on a case by case basis tend to cluster around the bottom of the moral scale—the morality of duty. Courts are concerned with questions of right and wrong and duty and obligation; they are also concerned with assessing penalties "for failing to respect the basic requirements of social living."⁷⁶ A legislature, on the other hand, is concerned with deciding how the community should allocate its scarce resources. It is a more appropriate institution for setting or changing the basic directives of society.

go out to those hurt in automobile accidents. This example should give us pause. The damage suit as a legal remedy in automobile accident has clogged the courts and imposed on the public a \$7-billion annual bill for liability insurance premiums. This huge cost contributes almost nothing to highway safety. For a fraction of the dollars and the legal brains drained off by damage suits we could have produced better highway codes and better regulations for car safety—and also provided compensation for the victims of a diminished number of accidents. If environmental law follows the dismal pattern of automobile tort cases, every business and perhaps every individual will be carrying insurance against pollution-damage suits. An army of pollution chasers, hot for those contingent fees, will join the present army of ambulance chasers. None of that is going to do the environment any good.

Ways, *How to Think About the Environment*, FORTUNE, Feb., 1970, at 165.

73. L. FULLER, *supra* note 14, at

74. *Id.*

75. *Id.*

76. *Id.*

With respect to the environmental crisis, then, the court's role as an institution is to enforce "the basic requirements of social living"⁷⁷ by enjoining forms and levels of pollution that constitute a threat to the continued existence of society. Since this category of pollution is increasing, it seems likely that the court's role here is growing and will continue to grow. For as the aggregate levels of pollution increase and as man's knowledge about the environment increases, forms and levels of pollution previously thought to be innocuous now appear to constitute definite threats to man's continued existence.

Courts should be careful, however, not to disturb the basic directives of society in the guise of enjoining environmental wrongs. Certain minimum rules must be observed if social living is to continue. For example, a defendant cannot be permitted to dump his garbage in the plaintiff's well. But we must have some factories and a decision to have more factories and less parks or less factories and more parks is a legislative question. It involves selecting from competing ends (*e.g.*, parks and factories) with a view toward resources (*e.g.*, undeveloped land, water, etc.) that are limited in their capacity to achieve all the ends under consideration.

The court's role as an enforcer of "the basic requirements of social living"⁷⁸ is perhaps too limited to suit most conservationists. The polycentric features of many environmental problems, however, tend to support the suggestion that the courts should play a more limited role here and let more appropriate institutions attempt to solve the environmental crisis.⁷⁹ Moreover, there are certain things a court can do to insure that environmental problems are properly resolved without becoming involved in the merits.⁸⁰

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77. *Id.*

78. *Id.*

79. Note 50, *supra*.

80. See Sax, *The Public Trust Doctrine In Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 557-566 (1970). Professor Sax points out that courts may

effectively overrule a questionable policy decision by requiring that the appropriate agency provide further justification; alternatively, the courts may, in effect, remand the matter for additional consideration in the political sphere, thus manipulating the political burdens either to aid underrepresented and politically weak interests or to give final authority over the matter to a more adequately representative body.

Id. at 558.