

Book Reviews

Anthropologizing Environmentalism

Risk and Culture: An Essay on the Selection of Technical and Environmental Dangers. By Mary Douglas and Aaron Wildavsky. Berkeley: University of California Press, 1982. Pp. ix, 221. \$14.95.

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*Risk and Culture*¹ by anthropologist Mary Douglas and political scientist Aaron Wildavsky proves that a whole is sometimes less than some of its parts. The book consists of two interwoven but separable parts: (1) an abstract theory of the relationship between risk and culture; and (2) an application of the theory to explain “the sudden, widespread, across-the-board concern about environmental pollution and personal contamination that has arisen in the Western world in general and with particular force in the United States”² (a phenomenon that I will call “environmentalism”).

Most readers will be struck not by the abstract theory but by its application to the rise of environmentalism. This emphasis is unfortunate. The attempt to “explain” environmentalism makes a few good points, but on the whole this part of the book is crude, shortsighted, and snide.³ On the other hand, the sections that consider the relationship between risk and culture on a more fundamental level are sensitive and thoughtful.

Even at its best, *Risk and Culture* is not entirely successful at explaining the paradox of risk—the problem of managing the unknown—but parts of the book deserve to be read seriously by people interested in the problem of risk, including environmental lawyers.

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1. M. DOUGLAS & A. WILDAVSKY, *RISK AND CULTURE: AN ESSAY ON THE SELECTION OF TECHNICAL AND ENVIRONMENTAL DANGERS* (1982) [hereinafter cited by page number only].

2. P. 10.

3. See Winner, *Pollution as Delusion*, N.Y. Times, Aug. 8, 1982, § 7 (Book Review), at 8, 18 (accusing Douglas and Wildavsky of “ill-conceived polemic” and “a shabby political critique” of environmentalists).

I.

One cannot adequately appreciate Douglas and Wildavsky's position from a mere recitation of their conclusions. The scope and texture of their argument must be set out at some length.

Risk and Culture begins with the proposition that "total knowledge" would be necessary for us to understand the risks we face.⁴ The number of possible dangers is infinite, and "[s]ince no one can attend to everything, some sort of priority must be established among dangers."⁵ Douglas and Wildavsky reason that "[o]nly social consent keeps an issue out of contention," and therefore that the perception of risk is itself a social process.⁶

Douglas and Wildavsky insist that their cultural theory of risk perception does not ignore the reality of the dangers.⁷ Their point is that "social principles" determine which "real dangers" we select for attention: "No doubt the water in fourteenth century Europe was a persistent health hazard, but a cultural theory of [risk] perception would point out that it became a public preoccupation only when it seemed plausible to accuse Jews of poisoning the wells."⁸

According to Douglas and Wildavsky, environmentalism is like the fear that Jews are poisoning the wells; it has been selected for public attention because it supports a certain kind of "social criticism."⁹ The reason that asbestos poisoning gets more attention than skin cancer caused by sunbathing, we are told, is that asbestos "justifies a particular anti-industrial criticism," whereas "there is no obvious way in which the incidence of skin cancer caused by leisure-time sunburn can be mobilized for criticism of industry, and so we hear less of it."¹⁰

According to Douglas and Wildavsky, environmentalism is caused by the rise of sectarianism, an outlook that emphasizes goodness, equality, and purity of heart and mind.¹¹ Sectarianism in turn is a response to the "problems of voluntary organization," the problems groups face trying to "hold their members together without coercion."¹² Douglas and Wildavsky do not exactly portray environmentalism as a conspiracy, but they do contend that "[p]ollution ideas are an instrument of control."¹³ Like prim-

4. P. 3.

5. *Id.*

6. P. 6.

7. P. 7.

8. *Id.*

9. *Id.*

10. *Id.*

11. P. 10.

12. P. 11.

13. P. 47.

itive tribes and religious sects, environmentalists use fear of attack or infiltration from an evil world outside to keep their followers in line. "Infiltration from the evil world appears as Satanism, witchcraft, or *their modern equivalent*—hidden technological contamination that invades the body of nature and of man."¹⁴

Extending Mary Douglas' provocative earlier work on pollution beliefs,¹⁵ *Risk and Culture* contends that "there is not much difference between modern times and ages past" when it comes to "selection and priority among real dangers."¹⁶ The book raises but rejects the distinction between modern and primitive ways of thought drawn by Lévy-Bruhl:

[A]fter millennia . . . in which dangers were said to be caused by witchcraft and taboo-breaking, our distinctive achievement was to invent the idea of natural death and actually believe in it. The concept of the accident rate and of normal chances of incurring disease belongs to the modern, scientific way of thinking . . . [T]he defining feature of primitive mentality is to try to nail a cause for every misfortune; and the defining feature of modernity, to forbear to ask.¹⁷

With the rise of environmentalism, this distinction between modern and primitive modes of thought has collapsed as people have stopped "forbearing to ask" why they die of cancer, heart disease, or old age. Douglas and Wildavsky see the new consciousness not as progress but as a return to premodernism. Lévy-Bruhl would be astonished, we are told, to behold "moderns using advanced technology and asking those famous primitive questions as if there were no such thing as natural death, no purely physical facts, no regular accident rates, no normal incidence of disease . . . [W]e have joined the primitives in refusing to quench our concern."¹⁸ These changes in political attitudes have merely fostered an "institutionalized mistrust"¹⁹ and have enlarged "the scope of making someone pay for each misfortune we undergo."²⁰

Douglas and Wildavsky compare our culture's concern about pollution with the "pollution beliefs" of the Hima, a nomadic tribe of northwestern Ankole. The reader is challenged to "discern differences between 'us' and 'them' in the way that dangers are selected for public concern."²¹ The

14. Pp. 10-11 (emphasis added).

15. M. DOUGLAS, *PURITY AND DANGER: AN ANALYSIS OF CONCEPTS OF POLLUTION AND TABOO* (1966).

16. P. 30.

17. P. 31.

18. P. 32.

19. P. 34.

20. P. 33.

21. P. 14.

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Hima believe that cows, their primary source of food, will die if a person eats agricultural products within twelve hours after consuming milk.²² The Hima's pollution beliefs, like ours, are said to refer to "real dangers, for cows do die and get lost and their milk does dry up."²³ Among the Hima, "reactionaries" use pollution to fight a "rearguard action against change," whereas in our society the "critics" use pollution to support their arguments against "immoral forms of economic and political power."²⁴

The thesis that risk selection has a social or cultural component would be provocative enough, but Douglas and Wildavsky go beyond this thesis to argue that "[e]ach form of social life has its own typical risk portfolio. . . . [E]ach social arrangement elevates some risks to a high peak and depresses others below sight."²⁵ According to Douglas and Wildavsky, the voluntary organizations to which we belong determine the views we hold:

The conditions of voluntary organization cause sectarians to invoke God and claim higher spiritual worth than the rest of the world. But it is not so much that they chose first to criticize the central institutions and therefore formed the sect. Rather it was the other way around: they combined voluntarily and, as a result of problems and strategies, they found the scope to criticize Inevitably they must see the risks in the world from a different perspective.²⁶

In the most stimulating part of their argument, Douglas and Wildavsky sketch connections between various forms of social organization and perceptions of risk. According to their typology, groups can be "border" or "center," and "sectarian" or "hierarchical." The "center" tends to ignore "long-term and low-probability" risks, while the "border" predicts "imminent disaster."²⁷ Industrial corporations are "center" and "hierarchical," while environmental groups are "border" and either "sectarian" or "hierarchical."

Douglas and Wildavsky compare a series of "border" groups with different forms of organization: the Hutterites, the Amish, the Sierra Club, the Friends of the Earth, and the anti-nuclear Clamshell Alliance. They contend that "[t]he more that a public interest group is organized as a hierarchy, the more it believes there is time for reform. It seeks incremen-

22. P. 42.

23. P. 43.

24. Pp. 46-47.

25. P. 8.

26. P. 121. Thus, Douglas and Wildavsky go beyond the familiar point that the problems of forming and holding voluntary organizations together explain why people with particular views succeed in forming politically effective groups. See Wilson, *Introduction* to *THE POLITICS OF REGULATION* at vii-xii (J.Q. Wilson ed. 1980); cf. M. OLSON, *THE LOGIC OF COLLECTIVE ACTION* (rev. ed. 1971) (theoretical description of problems of organizing voluntary groups).

27. P. 122.

tal changes and speaks frankly for its own perceived interests."²⁸ Thus, they assert (without supporting evidence) that unlike the sectarian Friends of the Earth, the hierarchical Sierra Club has always been prepared to make "compromises with economic demands."²⁹

In their final chapter, Douglas and Wildavsky widen their focus to consider the implications of their view of risk as a "collective construct."³⁰ Although they insist that their position is not relativistic, Douglas and Wildavsky do see knowledge as only

the changing product of social activity . . . an open-ended communal enterprise . . . a ship voyaging to an unknown destination but never arriving and never dropping anchor. It [knowledge] is like a many-sided conversation in which being ultimately right or wrong is not at issue. What matters is that the conversation continue with new definitions and solutions and terms made deep enough to hold the meanings being tried.³¹

Reflecting their notion that right and wrong are not what "matters," Douglas and Wildavsky insist that the opinions of experts are not entitled to special weight on risk issues. Risk is not "a straightforward consequence of the dangers inherent in the physical situation."³² It is the product of "shared beliefs and values."³³

II.

Douglas and Wildavsky's account of environmentalism is unsatisfactory for a number of reasons, but two in particular stand out: It reduces culture to a theory of the structure of environmental groups; and it fails to give proper weight to rational factors, such as science and economics, in explaining the increased attention policymakers have given to the environment.

A. *Culture as Group Structure*

Douglas and Wildavsky promise a cultural theory of risk perception that will explain the sudden increase in public concern about environmental pollution. They end up with a theory that reduces culture to a single factor: the organizational structure of groups. Douglas and Wildavsky further restrict their vision by applying their organizational theories only

28. P. 126.

29. P. 137.

30. P. 186.

31. Pp. 192-93.

32. P. 193.

33. P. 194.

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to environmental groups. One might expect the family, education, religion, government, and the press—none of which they discuss—to be far more influential than environmental groups in shaping our perceptions of risks.³⁴

Even taking Douglas and Wildavsky's argument on its own terms, there are major difficulties. Suppose that the Sierra Club does behave as they claim. The relationship between the structure of environmental groups and the positions they advocate might make a worthwhile topic. But it is a far cry from the problem that Douglas and Wildavsky purport to address—the dramatic increase in public concern about environmental pollution.

The structure of environmental groups cannot explain the sudden outpouring of public support for legal control of environmental pollutants, since only a tiny fraction of the population has ever formally belonged to an environmental group.³⁵ A cultural theory of risk selection should not aspire to tell us why environmental groups struck the particular notes they did, but why those notes resonated with such force through the culture.

Douglas and Wildavsky offer little enlightenment on the crucial question of why society embraced the positions advocated by “border” environmental groups. They tick off a series of banal political explanations that range from a tradition of “political sectarianism” in American culture³⁶ to tax exemptions for public interest groups.³⁷ These explanations are hard to square with the fact that environmentalism was also on the rise in other industrialized nations where the conditions Douglas and Wildavsky emphasize did not exist.³⁸ Douglas and Wildavsky do not discuss environ-

34. As one illustration of the kinds of cultural influences that Douglas and Wildavsky overlook, consider literary critic Stephen Greenblatt's observation:

[I]n the West, since the onset of the early modern period, the archetypal rules, the earliest and most systematic to which the child is exposed and in which he is trained are those governing the definition and control of wastes. The behavior manuals of the fifteenth through the eighteenth centuries return again and again to codes elaborated for the management of the body's products: urine, feces, mucus, saliva and wind.

Greenblatt, *Filthy Rites*, DAEDALUS, Summer 1982, at 1, 2. The analogy between human body and world is one of the most powerful and persistent images in our culture. See L. BARKAN, *NATURE'S WORK OF ART: THE HUMAN BODY AS IMAGE OF THE WORLD* (1975).

35. A comprehensive analysis of public opinion polls for the early 1970's by the then-White House adviser responsible for environmental issues, J. WHITAKER, *STRIKING A BALANCE: ENVIRONMENTAL AND NATURAL RESOURCES POLICY IN THE NIXON-FORD YEARS 2-16* (1976), concluded that the “unprecedented speed and urgency” with which environmental issues burst into the American consciousness was “[a] miracle of public opinion,” *id.* at 16; see A. MARCUS, *PROMISE AND PERFORMANCE: CHOOSING AND IMPLEMENTING AN ENVIRONMENTAL POLICY 19* (1980).

36. Pp. 152-57.

37. Pp. 165-67.

38. See, e.g., Currie, *Air Pollution Control in West Germany*, 49 U. CHI. L. REV. 355, 391-93 (1982) (describing “enormous similarities” between American and West German air pollution laws despite “quite disparate legal traditions”); D. Vogel, *Coercion Versus Consultation: A Comparison of*

mentalism in any other industrialized Western cultures—a serious omission in a book that treats culture as the primary determinant of attitudes toward risk.

In losing sight of culture and focusing on environmental groups, Douglas and Wildavsky mistake a few of the dancers for the dance.

B. *Science, Economics, and the "Real Dangers" Fallacy*

There is a relatively straightforward explanation for the simultaneous rise of environmentalism in a number of industrialized Western cultures. These countries share a concept of the state that leads to governmental action in response to scientific evidence that environmental pollution damages public health and economic information that control is practicable.

Science, with its potential to identify causes of natural events, is one factor that distinguishes contemporary "pollution beliefs" from magic and witchcraft in primitive cultures. The difference between science and superstition has sometimes been exaggerated:³⁹ Science does not eliminate judgment and disagreement, nor does it establish immutable truths.⁴⁰ But it is also misleading to treat pollution beliefs based on science and those based on superstition as equivalent.

Douglas and Wildavsky obscure important differences between science and superstition by describing pollution beliefs in both modern and primitive cultures as equally based on "real dangers."⁴¹ The dangers are not real in the same way. The Hima's cows die all right, but not *because* their owners have eaten agricultural products. The Hima conception of pollution rests on a false supposition about a causal link between events. On the other hand, asbestos really does cause diseases that kill workers.

There is an important difference between a society that uses false consciousness and one that uses science as the basis for its pollution beliefs.⁴²

Environmental Protection Policy in the United States and Great Britain 5 (Sept. 1980) (paper presented to Am. Political Science Ass'n Annual Convention) (describing substantial disparities between environmental policies in U.S. and Britain despite fact that "the politics of contemporary British and American environmental movements have been remarkably similar").

39. See J. FRAZER, *THE GOLDEN BOUGH: A STUDY IN MAGIC AND RELIGION* 825-27 (abridged ed. 1950). Frazer, one of the leading cultural anthropologists of an earlier generation, used mankind's progression from magic, to religion, to science as the central organizing idea for his work. Douglas sarcastically characterizes Frazer's attitude toward magic: "Magic resulted from early man's inability to distinguish between his own subjective associations and external objective reality. Its origin was based on a mistake. No doubt about it, the savage was a credulous fool." M. DOUGLAS, *supra* note 15, at 23. She concludes: "It is hard to forgive Frazer for his complacency and undisguised contempt of primitive society." *Id.* at 24.

40. See T. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* 111-35 (2d ed. 1970).

41. Compare p. 7 (cultural theory of risk does not deny reality of dangers) with p. 43 (Hima's beliefs based on "real dangers").

42. Cf. Calabresi, *Concerning Cause and the Law of Torts: An Essay for Harry Kalven, Jr.*, 43 U. CHI. L. REV. 69, 105 (1976) ("[T]he 'cause' of a disease would depend on how, at any given time, it could be most easily controlled.").

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Water from wells in medieval Europe may have been a “real danger,” but not because Jews were poisoning the wells. A pogrom to kill Jews would not have reduced the “real dangers,” but regulations that decrease the levels of toxic pollutants such as heavy metals or carcinogens will.⁴³

There is more to the process of risk selection in societies like ours than causal knowledge regarding harm. Douglas and Wildavsky correctly point out that attention to environmental risks involves a choice to devote less time and fewer resources to other dangers like war, poverty, and racial injustice, but this is hardly a new insight. Both environmentalists⁴⁴ and lawyer-economists⁴⁵ recognize that scarcity requires tradeoffs with other worthy causes.

In view of their concern with alternative uses of resources, it is ironic that Douglas and Wildavsky dismiss economics. They do not see that the cost side of a cost-benefit comparison is a measure (albeit rough and imperfect) of the alternative uses to which resources might be put.⁴⁶ What counts for society’s risk selection decision is the comparison of what can be done about a risk with what it takes to do it; the absolute magnitude of risks is irrelevant. Thus, even if decisionmakers reject formal cost-benefit analysis, they cannot escape making alternative allocations of scarce resources.

Moreover, Douglas and Wildavsky reject cost-benefit analysis as biased.⁴⁷ They fail to realize that the biases are not random: Cost-benefit analysis systematically understates the relative attractiveness of pollution control programs as compared with alternative uses of resources.⁴⁸ Thus, cost-benefit analysis can be a useful tool when it demonstrates that an environmental program is justified (although admittedly it is not necessa-

43. This is not to say that every environmental regulation is based on “good science,” but only that when they are, they can reach actual causes of harm. Cf. Crandall & Lave, *Introduction and Summary*, in *THE SCIENTIFIC BASIS OF HEALTH AND SAFETY REGULATIONS* 1, 16 (R. Crandall & L. Lave eds. 1981) (in five cases of health and safety regulation studied, technical “data and analysis [were] not the sole basis for setting standards; indeed, they often do not serve as an important resource”).

44. See Commoner, *Environment Is Not a Motherhood Issue*, N.Y. Times, Dec. 7, 1971, at 47, col. 1 (“Pursued to its source, every environmental issue generates a confrontation with the grave, unsolved, intensely contested issues of the world—war, poverty, hunger and racial antagonism.”).

45. See G. CALABRESI & P. BOBBITT, *TRAGIC CHOICES* 18 (1978) (“tragic choices” involved when scarcity requires a distribution of goods that results in suffering or death).

46. Pp. 67-82. But see Wildavsky, *The Political Economy of Efficiency: Cost-Benefit Analysis, Systems Analysis, and Program Budgeting*, in *POLITICAL SCIENCE AND PUBLIC POLICY* 55, 63-64 (A. Ranney ed. 1968) (despite shortcomings, cost-benefit analysis tells “decision-makers something about what they will be giving up if they follow alternative policies”).

47. Pp. 69-70.

48. Articles by environmentalists criticizing cost-benefit analysis for systematically understating the attractiveness of environmental regulations are legion. See, e.g., Baram, *Cost Benefit Analysis: An Inadequate Basis for Health, Safety, and Environmental Regulatory Decisionmaking*, 8 *ECOLOGY L.Q.* 473 (1980); Epstein, *Cost-Benefit Analysis: Inspired by Rational Economics or a Protectionist Philosophy?*, *AMICUS J.*, Spring 1982, at 41.

rily valid when it reaches the opposite conclusion).

Unlike Douglas and Wildavsky, lawyers have traditionally understood environmental law as an amalgam of law, science, and economics.⁴⁹ Wildavsky has criticized this approach for ignoring anthropology and for failing to recognize that for environmentalists "the symbolic level is the real one."⁵⁰ Rather than add anthropology and symbolism to the mix of factors that explains our society's selection of technological risks, Douglas and Wildavsky fail to recognize anything but symbolism in environmental decisions.

III.

Douglas and Wildavsky make a provocative and, I believe, an original point when they call attention to risk selection as a social process. Knowledge alone cannot explain social decisions about risks. Information about the kind of risks we confront in complex technological societies may be beyond our capacity to assimilate, and in any event, no normal person has a taste for such dismal information in quantity. Organizations certainly do channel and simplify information that individuals receive.⁵¹ Douglas and Wildavsky, however, never support the assumption implicit in their focus on the structure of environmental groups: that such groups are the primary channels that select and relay information about environmental risks. Douglas and Wildavsky's own selection of source materials tends to belie their assumption. In providing "illustrative episodes"⁵² of decisions about technological and environmental dangers, they turn to reports of governmental regulatory proceedings in the popular press.⁵³ Their example suggests that press reports about governmental proceedings may shape our view of technological and environmental risks.

In other areas of the law, the courts and the other parts of the legal system are often portrayed as playing a role in shaping culture.⁵⁴ There is reason to believe, however, that the legal system is not performing its educational function well in the environmental area. One symptom is the

49. See B. ACKERMAN, S. ROSE-ACKERMAN, J. SAWYER & D. HENDERSON, *THE UNCERTAIN SEARCH FOR ENVIRONMENTAL QUALITY* 1-2, passim (1974).

50. Wildavsky, *Economy and Environment/Rationality and Ritual* (Book Review), 29 *STAN. L. REV.* 183, 193-94 (1976).

51. See H. SIMON, *ADMINISTRATIVE BEHAVIOR: A STUDY OF DECISION-MAKING PROCESSES IN ADMINISTRATIVE ORGANIZATION* 108-09 (3d ed. 1976).

52. P. 50.

53. Pp. 49-66.

54. In this spirit, Eugene Rostow once referred to United States Supreme Court Justices as "teachers in a vital national seminar." Rostow, *The Democratic Character of Judicial Review*, 66 *HARV. L. REV.* 193, 208 (1952); see also D. KONIG, *LAW AND SOCIETY IN PURITAN MASSACHUSETTS: ESSEX COUNTY, 1629-1692*, at 188-89 (1979) (describing colonial courts as arenas for development of public norms).

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widespread—and erroneous—belief among the American public that “everything causes cancer.”⁵⁵ Another is the fear many communities have about the transportation of nuclear wastes, while they readily accept shipments of other, more hazardous cargoes.⁵⁶ The list of inconsistent public attitudes toward technological and environmental risks is a long one.

Many cultural factors may be important in understanding patterns of public fear, but I want to focus on one aspect of the social process that is particularly relevant to lawyers and that helps to explain the widespread confusion and paranoia about technological risks. I believe that only part of the message about what transpires in courts and regulatory agencies dealing with environmental risks is getting through to the public.

My evidence is only impressionistic, but the press seems to report clearly and dramatically the charges and fears expressed in government proceedings on environmental hazards. Final decisions by responsible officials do not usually receive comparable attention. Final decisions generally resolve problems by implementing measures to deal with a risk or by explaining why the claims of risk have been discounted. A bias in the flow of information in favor of charges and against outcomes could tend to accentuate public fears about the risks of technology.

The structure and incentives of the press may contribute to this imbalance.⁵⁷ At least part of the fault, however, lies with environmental institutions, which do not justify their decisions in a way that is even minimally accessible to the press and public.⁵⁸ It is not surprising, therefore, that in *Risk and Culture* Douglas and Wildavsky never once refer to a primary source like agency decisions reported in the *Federal Register*.

There are undoubtedly many reasons why environmental agencies express themselves in a way that makes it nearly impossible for them to perform their educational function well. I want to focus on one aspect of administrative law to illustrate why agencies may have no incentive to explain their decisions clearly. There may even be incentives for them to obfuscate.

When the basic principles of administrative law were formulated, the drafters of the 1946 Administrative Procedure Act (APA)⁵⁹ did provide that a “concise general statement” of “basis and purpose” must accom-

55. See S. EPSTEIN, *THE POLITICS OF CANCER* 32-33 (rev. ed. 1979).

56. See Mills & Mills, *Moving A-Waste*, N.Y. Times, Jan. 29, 1983, at A23, col. 4.

57. See Yoder, *From Mud to Mudslides*, Wash. Post, Aug. 7, 1983, at C7, col. 1 (chemical waste and nuclear power stories with “EPA men in their rubber suits” make “better pictures” for television news than do stories about abstract issues such as budget deficits).

58. See Ackerman & Elliott, *Air Pollution ‘Rights,’* N.Y. Times, Sept. 11, 1982, at A23, col. 3 (criticizing EPA for obscuring issues “in an 8,000-word regulatory initiative full of jargon and technicalities”).

59. 5 U.S.C. §§ 551-706 (1982).

pany rules published in the *Federal Register*.⁶⁰ As courts and agencies adapted informal rulemaking to proceedings never contemplated when the APA was drafted, however, the "statement of basis and purpose" took on a function different from its original purpose of informing the public.⁶¹ Today, this statement forms the primary basis for judicial review.⁶² Under the "hard look" standard of review in environmental cases,⁶³ agencies must respond to each significant comment in a rulemaking that may involve hundreds of parties and tens of thousands of record pages.⁶⁴

No procedural instrument can perform two functions as different as informing the public about complex issues and forming the basis for an agency's defense of its action in court.⁶⁵ This does not mean that we should abolish judicial review or even meliorate the "hard look" standard of review in environmental cases. Rather, we should recognize that enhanced judicial review of informal rulemaking has altered the statement of basis and purpose so that it can no longer fulfill its original function.

New procedural mechanisms, unrelated to judicial review, are needed to encourage agencies to make simple, common-sense statements of the nature of problems in their area of responsibility and the solutions they propose. A number of ways to improve communication between agencies and the public have been suggested,⁶⁶ and others can be imagined.⁶⁷ Specific

60. Administrative Procedure Act § 4(b), 5 U.S.C. § 553(c) (1982).

61. In at least one recent environmental statute, the original function of the "statement of basis and purpose" has been preserved. See Toxic Substances Control Act, 15 U.S.C. § 2625(f) (1982) ("Any final order issued under this chapter shall be accompanied by a statement of its basis and purpose. The contents and adequacy of any such statement shall not be subject to judicial review in any respect.").

62. See *Kennecott Copper Corp. v. EPA*, 462 F.2d 846, 850 (D.C. Cir. 1972); *Automotive Parts & Accessories Ass'n v. Boyd*, 407 F.2d 330, 338 (D.C. Cir. 1968).

63. See *National Lime Ass'n v. EPA*, 627 F.2d 416, 451-52 & n.126 (D.C. Cir. 1980) ("hard look" demands remand to agency for more adequate explanation or supplementary data). See generally Rogers, *A Hard Look at Vermont Yankee: Environmental Law Under Close Scrutiny*, 67 GEO. L.J. 699 (1979) (reviewing "hard look" cases).

64. See *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 393-94 (D.C. Cir. 1973), cert. denied, 417 U.S. 921 (1974); *International Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 651 (D.C. Cir. 1973) (Bazelon, J., concurring) ("agency [must] set forth with clarity the grounds for its rejection of opposing views"); Rodgers, *Judicial Review of Risk Assessments: The Role of Decision Theory in Unscrambling the Benzene Decision*, 11 ENVTL. LAW 301, 309 (1981) ("Few practitioners believe that judges read, much less studiously follow, the monstrous records thrust before them. Nor do these records deserve reading, contrived and formless as they are.").

65. But see Bazelon, *New Gods for Old: "Efficient" Courts in a Democratic Society*, 46 N.Y.U. L. REV. 653, 655 (1971) ("The true measure of the quality of a judicial system is how many hidden problems it brings into public view and how well it stimulates the responsible officials and agencies into doing something about these problems.").

66. See *EPA Policy on Public Participation*, 46 Fed. Reg. 5736 (1981). Other devices that also hold some promise are increased Congressional oversight over agency rulemaking, but see *INS v. Chadha*, 103 S. Ct. 2764 (1983) (legislative veto unconstitutional), and the proposed "regulatory budget," see *Regulatory Budgeting and the Need for Cost-Effectiveness in the Regulatory Process: Hearings Before the Joint Economic Comm.*, 96th Cong., 1st Sess. (1979); C. DeMuth, R. Shackson, E. Stork & A. Wright, *The Regulatory Budget as a Management Tool for Reforming Regulation* (May 29, 1979) (unpublished paper) (John F. Kennedy School of Gov't, Harvard Univ.).

67. If encouraging social dialogue about risk selection were the only goal, one might want to

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remedies are less important, however, than that responsible people in agencies dealing with risks realize that what they say and how they say it can be almost as important as what they do.⁶⁸

require each environmental agency to make a public annual report justifying its actions and proposed agenda to a committee of citizens (an EPA board of directors?).

68. The new EPA administrator, appointed after this Review was written, appears to be more sensitive than his predecessors to the agency's educational function. See Ruckelshaus, *How E.P.A. Faces the Arsenic Risk*, N.Y. Times, July 23, 1983, at A22, col. 1 (defending EPA decision to request comments from public on whether health risks posed by copper smelter are acceptable); see also Ruckelshaus, *Science, Risk, and Public Policy*, 221 SCIENCE 1026, 1028 (1983) (scientific community should join with EPA in effort to educate public on risk issues).

Culture and Conflicting Rationalities

Risk and Culture: An Essay on the Selection of Technical and Environmental Dangers. By Mary Douglas and Aaron Wildavsky. Berkeley: University of California Press, 1982. Pp. ix, 221. \$14.95.

Douglas MacLean†

In a brief period around 1970, Congress enacted a remarkable set of laws to protect the environment and the public health. These laws include the National Environmental Policy Act, the Occupational Safety and Health Act, and the Endangered Species Act; they led to the creation of some of our most important regulatory agencies.

This flurry of regulatory activity is reminiscent of the New Deal; the regulatory goals, however, are quite different. In the 1930's, the public's faith in unregulated markets had been shaken. The government responded with laws and programs to secure jobs and income, to pave the way for economic recovery, and in general to correct for market failures. In contrast, the environmentalism of the early 1970's generated support for legislation that would intervene in normally functioning markets to promote other, noneconomic values.

Environmental legislation tends to be single-mindedly protectionist, with little concern for economic incentives or impacts. It mandates, for example, that regulatory agencies set enforceable standards to protect the public's health from air pollution, ensure a safe and healthful workplace, prohibit economic development that destroys endangered species, or guarantee the safety of drinking water. For the most part, these laws do not instruct agencies to balance the environmental or health goals of regulation against its other costs and benefits; in fact, some prohibit agencies from doing so. They give regulators little guidance in determining when the increasing marginal cost of greater protection becomes too great a price to pay.

Largely because of this single-mindedness, the environmental and health statutes of the early 1970's are now under attack in the crusade for regulatory reform. Despite criticisms from industry, professional policy

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analysts, economists, and even some regulators, however, these laws remain politically difficult to change. Environmental groups stand ready to fight any attempt to reverse the gains they made a decade ago, and these groups claim a broad base of public support. In the fall of 1981, for instance, well after the Reagan election had been interpreted as a mandate for less governmental intervention in the economy, the pollster Louis Harris suggested that the public might not welcome attempts to reform environmental legislation, claiming that a substantial majority of Americans, sixty-five percent, opposed any cost constraints on health standards in the Clean Air Act.¹ Harris gave the following summary of his findings:

But I am saying to you just as clear as can be that Clean Air happens to be one of the sacred cows of the American people, and the suspicion is afoot, however you slice it, that there are interests in the business community, and among Republicans and some Democrats who want to keelhaul that legislation.

And people are saying, "Watch out. We will have your hide if you do it." That is the only message that comes out of this as clear cut as anything I have ever seen in my professional career.²

I.

The environmental movement in America combines a reverence for nature with an antagonism toward technologies like nuclear power. It is a remarkable patchwork of sacred cows and *bêtes noires*. *Risk and Culture*³ is the attempt of two well-known scholars in different fields to understand this puzzling phenomenon and to explain the controversy over environmental regulation. Mary Douglas, a social anthropologist, has been developing for some years a theory about how cultural groups identify dangers and respond to them.⁴ Aaron Wildavsky is an expert on American politics and an iconoclastic policy analyst.⁵

Douglas and Wildavsky are struck by "the moralism of [environmental] legislation—setting standards that could not be met, using legal orders to

1. *Health Standards for Air Pollutants: Hearings Before the Subcomm. on Health and the Environment of the House Comm. on Energy and Commerce, 97th Cong., 1st Sess.* 265 (1981) (statement of Louis Harris).

2. *Id.* at 299.

3. M. DOUGLAS & A. WILDAVSKY, *RISK AND CULTURE: AN ESSAY ON THE SELECTION OF TECHNICAL AND ENVIRONMENTAL DANGERS* (1982) [hereinafter cited by page number only].

4. See M. DOUGLAS, *IMPLICIT MEANINGS: ESSAYS IN ANTHROPOLOGY* (1975); M. DOUGLAS, *NATURAL SYMBOLS* (1970); M. Douglas, *Cultural Bias* (Royal Anthropological Inst. occasional paper No. 35 (1978)).

5. For work related to *Risk and Culture*, see A. WILDAVSKY, *THE ART AND CRAFT OF POLICY ANALYSIS* 385-406 (1979); Wildavsky, *Richer Is Safer*, *PUB. INTEREST*, Summer 1980, at 23; Wildavsky, *No Risk Is the Highest Risk of All*, *67 AM. SCIENTIST* 32 (1979).

enforce them, refusing to consider costs."⁶ They are also struck by how risk perceptions differ among individuals and groups. People are selective about which risks concern them in ways that are difficult to understand. Douglas and Wildavsky's "cultural analysis" attempts to connect and explain these facts—the selective concerns about risk and moralistic environmental policies.⁷

Cultural analysis treats these phenomena quite differently than does risk analysis, the professional discipline that emerged with the regulatory legislation of the 1970's and attempted to develop methods and decision procedures for promulgating health and safety standards. Risk analysts devote much attention in their professional journals to the attitudes of environmentalists;⁸ they understand that if their recommendations are to have any practical effect on public policy, they must come to terms with the disparity between expert judgment and public perception. They disagree, however, on the proper manner to deal with this gap. Some risk analysts conclude that the selective concerns of environmentalists should not receive special attention.⁹ Regulatory agencies, after all, are established to protect the public, not to satisfy it; by exposing our irrationalities, risk analysis can help us reduce environmental harms at least cost. Other risk analysts show more deference to public attitudes.¹⁰ To be politically neutral, they argue, risk analysis must accept the preferences people express and attach greater weight to more dreaded risks as well as to "intangible" (that is, difficult to measure) benefits.

Douglas and Wildavsky find both responses unsatisfactory: "The current theories of risk perception steer badly between overintellectualizing the decision process and overemphasizing irrational impediments."¹¹ They find that sympathetic psychologists explain differences in risk perception by attributing to individuals capacities for discrimination and rationalization that are too elaborate to be plausible. At the same time, they argue that unsympathetic risk analysts, those who label all beliefs inconsistent with their own as irrational, fail to understand the processes that lead people to adopt the preferences they express.

Douglas and Wildavsky claim that social processes and group dynamics determine personal attitudes about risk.¹² They believe that shared social values are the key to determining risk selection. "Humans are not isolated

6. P. 163.

7. P. 38.

8. See Fischhoff, Slovic & Lichtenstein, *Weighing the Risks*, ENVIRONMENT, May 1979, at 17.

9. Krouch & Wilson, *Regulation of Carcinogens*, 1 RISK ANALYSIS 47, 47, 56 (1981).

10. See Fischhoff, Slovic, Lichtenstein, Read & Combs, *How Safe Is Safe Enough?: A Psychometric Study Towards Technological Risks and Benefits*, 9 POL'Y SCI. 127 (1978).

11. P. 84.

12. Pp. 89-90.

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individuals,” they write. “Their sociality should be included in the analysis of how their minds work. In risk perception, humans act less as individuals and more as social beings who have internalized social pressures and delegated their decision-making processes to institutions.”¹³

Social forms determine why, in a heterogeneous society, people focus on certain risks and ignore others. They explain, for example, why environmentalists are afraid of pollution but seem blind to the social consequences of our economic problems; why executives are afraid of inflation and high interest rates but can be cavalier about poisoning the air and water; or why some government officials can regard both economic and environmental risk as insignificant compared to threats to our national security.

This book is certainly one of the most interesting and provocative contributions to risk analysis since Chauncey Starr first proposed a quantitative technique for comparing the risks and benefits of new technologies.¹⁴ But it will not be a popular one, especially among the environmental groups whose behavior the authors are trying to explain.

Environmentalists are portrayed as afraid and in need of enemies;¹⁵ they are accused of welcoming the use of “other people’s money to keep competitors away from the wilderness;”¹⁶ their rise is attributed in part to “a cadre of white activists, accustomed to leadership and trained to represent deprived groups” who, when blacks took over the civil rights movement, were “left out of work and free to lead the fight against risks perpetrated by giant corporations and big government.”¹⁷ In an invidious comparison to apocalyptic millennialists and the McCarthyites of the 1950’s, environmentalists are said to be driven by a “fear of subversion by invisible forces.”¹⁸

Attacks like these are not only unfair, but also unfortunate; they may lead readers to dismiss this book as yet another denunciation of the successes and excesses of environmentalism and thus to fail to appreciate its strikingly original analysis of social conflicts in American life. The authors recognize that their best strategy is “to describe with impartial care the deducible consequences of preferring one form of social organization over others.”¹⁹ But the attitudes exhibited by the risk analyst (that our risks are complicated, but manageable) or the entrepreneur (that risk is opportunity) are spared the insults reserved for the environmentalist. By failing to be impartial, the book does a serious injustice to its own theory.

13. Pp. 79-80.

14. Starr, *Social Benefit versus Technological Risk*, 165 *SCIENCE* 1232 (1969).

15. Pp. 120-21.

16. P. 158.

17. P. 164.

18. P. 153.

19. P. 187.

II.

Risk and Culture focuses on the meaning of pollution, as both an environmental and an anthropological concept. Unlike the environmentalist, the anthropologist treats pollution beliefs as mechanisms to uphold cultural values. To Douglas and Wildavsky, pollution beliefs "function to keep some categories of people apart so that others can be together. By preserving the physical categories, pollution beliefs uphold conceptual categories dividing the moral from the immoral and so sustain the vision of the good society."²⁰ For example, consider the Hima, a cattle-herding tribe in Uganda. The main threat to their way of life is assimilation. Their fertile grazing land is ideal for agriculture, and a neighboring tribe, the Iru, thrives by cultivating the soil. The Hima believe two things will cause cattle to die: contact with women and mixing vegetables with cows' milk in human diets. The first belief keeps women apart from economic activity and free to pursue the Hima ideal of beauty, which involves drinking a great deal of milk and becoming fat. A beautiful wife is shared with a man's neighbors, which serves to attract other men, who will pool their cattle together into viable herding units. The second belief closes the door to agriculture among the Hima and also makes intermarriage with the Iru impossible.²¹

Douglas and Wildavsky make clear that threats must be real for pollution beliefs to be reasonable. "Just as cows do really die, so do Iru succeed in really transforming the Hima way of life. The threat is not at all idle."²² The causal beliefs of the Hima, then, although utterly false empirically, may nonetheless serve as a weapon in the fight for cultural survival: "The Hima are clearly using their ideas about bovine nature to hold up a fragile social system. They are using nature in a rearguard action against change."²³ Such beliefs are not simply irrational; nor can they be explained in psychological terms alone.

According to Douglas and Wildavsky, cultural sects similar to the Hima (for example, the Amish) have always thrived on the border of American life. The survival of these sects also depends on pollution beliefs, which protect the sects' values from the center or mainstream culture. The environmental movement, Douglas and Wildavsky argue, is also largely sectarian. Many environmental groups are motivated not simply by a concern for physical health or the preservation of species, but also by moral ideals about life and society. People join groups like the Clamshell

20. P. 37.

21. Pp. 40-48.

22. P. 47.

23. P. 46.

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Alliance, Douglas and Wildavsky claim, because they oppose nuclear power "both as a technology and as the manifestation of undemocratic unresponsiveness to individual needs within American society."²⁴ Nuclear society is seen as authoritarian; nonnuclear society as promoting equality and democracy.²⁵ Because the egalitarian ideals of environmental sects prevent these groups from creating formal organizational structures, their membership is held together by uncompromising beliefs and opposition to evils outside the sect. Nuclear power or environmental pollution becomes their weapon in a political war: "[T]he critics of our society are using nature in the old primitive way: impurities in the physical world or chemical carcinogens in the body are directly traced to immoral forms of economic and political power."²⁶ Thus, the analogy between groups like the Clamshell Alliance and the Hima.

III.

Sects are distinguished by two features: First, they have a weak internal structure, which makes them vulnerable to external threats; second, they compensate for this weakness with pollution beliefs, which strengthen their cohesiveness by creating a strong group identity.²⁷ Pollution beliefs create a "wall of virtue," which gives the sect a moral identity and distinguishes it from the evil world outside. Sects rely on moral suasion to maintain the allegiance of their members.

The basic weakness of the Clamshell Alliance, apparently, is its steadfast commitment to egalitarianism and direct democracy. It prevents the Alliance from becoming a strong and stable group because it makes it almost impossible for leaders to emerge. Without leadership, the Alliance cannot engineer political success through negotiation; it cannot secure its existence with long-range plans and strategies; it is not flexible. So within the group, opposition to nuclear power is not seen as just one campaign against one reactor siting, but is elevated to an ideology. Nuclear power becomes a symbol of corruption in American society. The importance of the cause strengthens the allegiance of the group's members.

This explains why sects are supposed to be able to exist only on the

24. P. 149.

25. This argument is frequently made. For its most famous and influential version, see Lovins, *Energy Strategy: The Road Not Taken?*, 55 FOREIGN AFF. 65 (1976).

26. P. 47.

27. P. 138. Some environmental groups, however, are hierarchical. They utilize organized lobbyists and intervene in regulatory proceedings. They have their own experts, and they show up in the courts. They do not get involved with the direct action championed by the Clamshell Alliance. Among successful organizations like the Union of Concerned Scientists or the Natural Resources Defense Council, one does not find simplistic anti-nuclear attitudes. Their positions are always more sophisticated, usually more qualified. P. 130.

borders of American society, as critics of the centers of power. If a sect were successful enough, it would eventually have to develop its own leadership and otherwise alter its structure in ways necessary for wielding political power. It would thus be transformed into a different kind of cultural group (as was the Sierra Club after it met with success) or else it would disintegrate.

What is truly interesting about cultural analysis, however, is not so much its portrayal of environmental sects but rather its more ambitious and general explanation of cultural differences. By varying the two features that distinguish sects, all cultural forms can be understood. Group identity can be strong, as it is in sects, or it can be weak. The degree of structure or differentiation within a group—the “grid,” as it is called—can be high, or it can be low. Cultural forms are determined by these two features alone, and so the number of possible cultural types is therefore quite small. Only three different kinds of culture are described in *Risk and Culture*. These are: the sectarian, the hierarchical, and the market individualist. With each cultural type comes a characteristic set of attitudes, values, and social requirements that Douglas and Wildavsky call a “type of rationality.”²⁸

If the culture is strong in group identity but weak in internal structure, then it is a sect. If it is strong in group identity but at the other end of the grid scale, that is, strong in internal structure or differentiation, then it is hierarchical, as in a caste system.²⁹ Sects tend to be egalitarian and, in America, to have voluntary membership; in hierarchies, however, the membership is closed, so the cost of leaving can be made high. Hierarchies can maintain loyalties through a system of rewards and punishments. Loyalty in hierarchies is rewarded through success in moving up the ladder, benefits that cannot be taken with individuals when they leave the group, and so on. Through such devices, hierarchies replace the need for pollution beliefs.

Hierarchists trust their experts or their priests. American hierarchies include organized religions, industrial organizations, and Washington bureaucracies. Where sectarians are moral absolutists, American hierarchists are portrayed as sharing a belief that perseverance through the system will solve our problems. Hierarchical morality is more pragmatic, more flexible. It reflects a faith in existing institutions as organic, progressively evolving systems. Unlike the sectarian, who thinks that the future will be discontinuous with the present, the hierarchist is convinced of its similarity; all he worries about is ensuring a smooth transition.

28. P. 104.

29. Pp. 116-25.

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At the other end of the group scale, that is, low in group identity, we find the market individualists.³⁰ They also happen to be low in grid and thus strongly egalitarian. Individualists embody the rationality of utility theory. They are oriented to the present: They have little concern for the future; little use for history and tradition; and an overriding moral concern for procedural fairness, the protection of individual liberties, and just rewards for personal accomplishment.

The center of American society is occupied by hierarchists and market individualists. In spite of vast differences in basic outlook, they can coexist:

The two have some similar ideas about danger. Both give priority to any threat to the whole system, whichever it is. Both are sensitive to the public confidence that maintains it. Both like to protect universalistic rules, but the hierarchist wants rules of instruction, while the individualist wants fair-play rules that do not stipulate what is to be done. Both have imperialist tendencies, since both can solve their organizational problems by expanding the field of operations—bigger markets, larger collectives.³¹

Viewed from this perspective, risk analysis would appear to be a technique thought up by market individualists (having lost the battle over regulatory legislation) to be sold to hierarchical government bureaucrats. The former endorse risk analysis because it expresses their conception of rationality; the latter will accept it if they can be convinced that it conforms to the purposes of the rules and the intent of the rulemakers. In any event, these two kinds of social beings cooperate to dominate the center. Sectarians, on the other hand, see the center as corrupt and thrive by condemning it from the border.

IV.

The authors' grid/group structure of cultural analysis tells us, then, that sectarian cultures will adopt the absolutist moral beliefs described by pollution theory; market individualist cultures will ground social values in individual freedom and seek to maximize preference satisfaction; and hierarchical cultures will be more oriented to tradition. To call each outlook a different rationality simply means that each set of shared values displays a coherence that carries over to the group's attitudes about danger.

But is all this true? By what standards should we evaluate cultural analysis, and how should we compare it to the more individualistic, psy-

30. Pp. 90-97.

31. P. 97.

chologically oriented risk analysis? Cultural analysis does not give us much hope for finding a neutral decision procedure for resolving risk controversies. Rather, it suggests that in a heterogeneous society like the United States the policy analyst's quest for an environmental algorithm will be as futile as the alchemist's search for the philosopher's stone. Nor does cultural analysis seem to promise better predictions about our society's willingness to accept new technologies or different environmental policies. So if we are committed to the view that risk attitudes should be explained scientifically—in the value-neutral, behavioristic, predictive model laid down by Galileo for the physical sciences—we will be likely to find the grid/group structure in *Risk and Culture* disturbing and perhaps a bit cranky.

But if we are not interested in joining the debate about the proper method for social science—whether it should be Galilean or more descriptive and hermeneutical³²—we can simply ask whether cultural analysis helps us understand attitudes toward risk and the controversy over regulatory policies. The answer to this question, I think, is mixed.

Risk analysis appeals to psychological data to explain risk selection: Certain properties of a technology or an environmental hazard cause people to weigh the consequences of a risk more heavily. This approach provides the risk analyst with a psychological account of why public concerns about risk are sometimes at variance with expert assessments. The risk analyst can then treat people as if they were utility maximizers. The dreaded qualities simply affect their estimates of the probabilities or the weight of the consequences. But in many instances this kind of explanation seems too artificial to be true.

Recently, a proposed site for a liquified energy gas terminal in California was rejected, in part because of public concern over the potential hazards to nearby communities.³³ One of these was a worst-case scenario reported in the risk assessment done for the government agency considering the site. This scenario would have led to the death of 113,000 local inhabitants; it was estimated to have a likelihood of only 10^{-57} ,³⁴ which I calculate to be less than the probability of being simultaneously struck by lightning and hit by a meteorite! That estimate could be off by more than thirty orders of magnitude, and the risk would still be negligible. The pollution theory of cultural analysis seems a much more plausible expla-

32. For a discussion of this debate, see R. RORTY, CONSEQUENCES OF PRAGMATISM 191-210 (1982).

33. See H. KUNREUTHER, J. LINNERTHOOTH, J. LATHROP, H. ATZ, S. MACGILL, C. MANDEL, M. SCHWARZ & M. THOMPSON, RISK ANALYSIS AND DECISION PROCESSES: THE SITING OF LEG FACILITIES IN FOUR COUNTRIES 233-315 (International Inst. for Applied Sys. Analysis report no. A-2361, Mar. 1982) (preliminary draft).

34. *Id.* at 302.

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nation of the opposition to the site that results from this estimate than does the preference theory of risk analysis.³⁵

Cultural analysis makes sense of other phenomena as well. For instance, the sherpas of Khumbu, those “adventurous traders” of the Himalyas, have hired themselves out in recent years to high-risk climbing expeditions, even though their probability of being killed is one in six.³⁶ These risk-takers, all Buddhists, stand in sharp contrast to the Hindu farmers, the “cautious cultivators,” who live nearby. Michael Thompson explains this contrast by the different positions the Hindus and Buddhists occupy on a group axis. The Buddhist sherpa

lives in an atomized social world in which the nuclear family is the economic unit and in which all sorts of institutions militate against the formation of coercive social relationships. . . . His Hindu neighbor, by contrast, is a member of a joint family that is intricately bound together by all kinds of tightly knotted rights and obligations, and his most important resource of all—land—remains firmly in the control of the elderly head of that family. In such a situation, there is little incentive, or even opportunity, for personal risk-taking.³⁷

The social structure of the Hindu leads to risk-sharing and to individual risk-avoiding. Since the Buddhist sherpa cannot protect himself by spreading risk, and since he need not share his rewards, he regards risk as opportunity.

Other phenomena that fit cultural analysis include the very different forms that regulatory debates take in different societies. Great Britain is basically a hierarchical society, and regulatory movements there typically proceed in a nonlitigious fashion from the top down, from experts to the public. In the United States, where sectarianism survives, regulation often proceeds from the bottom up. Public action comes first, and the government responds to the pressure. Consider, for instance, the difference in the anti-smoking movements of Britain and the United States. Thompson says:

In Britain we could find only three or four anti-smoking groups; in the United States we found 41 (not counting the 91 independent

35. A number like 10^{-57} is, of course, not only unimaginable, but an estimate this small is also hard to believe. It is an example of the kind of meaningless precision that has given risk assessments a bad reputation. Opponents of the site might have taken this estimate as an indication that the entire assessment was not to be trusted.

36. M. Thompson, *To Hell with the Turkeys!: A Diatribe Directed at the Pernicious Trepidation of the Current Intellectual Debate on Risk 4-6* (Center for Philosophy and Pub. Policy, Univ. of Maryland, working paper RC-5, Mar. 1983); Thompson, *Aesthetics of Risk: Culture or Context*, in *SOCIETAL RISK ASSESSMENT* 273 (R. Schwing & W. Albers, Jr., eds. 1980).

37. M. Thompson, *supra* note 36, at 5.

chapters of GASP—Group Against Smokers' Pollution). . . . British ASH (Action on Smoking and Health) is the joint creation of the Royal College of Physicians and the Health Education Council [It] sees its task as but one facet of preventive medicine . . . ; American ASH focuses on the single issue of non-smokers' rights.

. . . . British anti-smoking is essentially dull—a sober-sided and carefully worded affair; American anti-smoking is fun—all ad hoc exuberance and righteous razzmatazz. Or, to put it at its most offensive, anti-smoking in Britain is biased toward saving the lives of the poor unfortunate smokers; anti-smoking in America is biased toward putting those filthy despicable people in their place (and serve them right if they get cancer!).³⁸

V.

These examples show how cultural analysis can help us understand what is going on in different instances of risk selection and in different kinds of environmental controversies. But even if we are sympathetic to this kind of explanation, there are some difficulties and problems, some things cultural analysis ought to explain but does not.

One of these is the immense public support in the United States for the regulatory legislation of the 1970's. Douglas and Wildavsky claim that this popularity reflects a brief moment when the center was weak and the border triumphant,³⁹ but this explanation seems to be incompatible with the enduring popularity of environmentalism, as reflected in public opinion polls.⁴⁰ If environmental sects must remain small to survive, moreover, how can support for sectarian positions on pollution standards be so overwhelming? Why is it so politically difficult today to reform these regulations?

To try to answer these questions in terms of grid and group is to discover a rather large problem with the theory. Figure 1 shows how we might chart the different cultural forms. It defines the three rationalities or patterns of shared beliefs and attitudes. But what about the upper-left quadrant of Figure 1? This section should be filled in with those people who are low on group identity and see themselves as filling positions in a stratified society. Thompson describes this kind of person as a peripheral character, who is ineffectual because he has no group identity and little social mobility.⁴¹ He does not prescribe but is prescribed to. In anthropological terms, he is a Rubbish Man; in America, a mainstream, middle

38. *Id.* at 7-8.

39. P. 162.

40. *See supra* p. 901.

41. M. Thompson, *supra* note 36, at 16-18.

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class housewife or blue collar worker. The majority of Americans, I suspect, find themselves in this quadrant. Opinion polls show that they are important in the risk debates, even if they do not move to the right on the group axis (say, by joining labor unions) to become actors and prescribers. These people form the public support that environmental sects can muster.

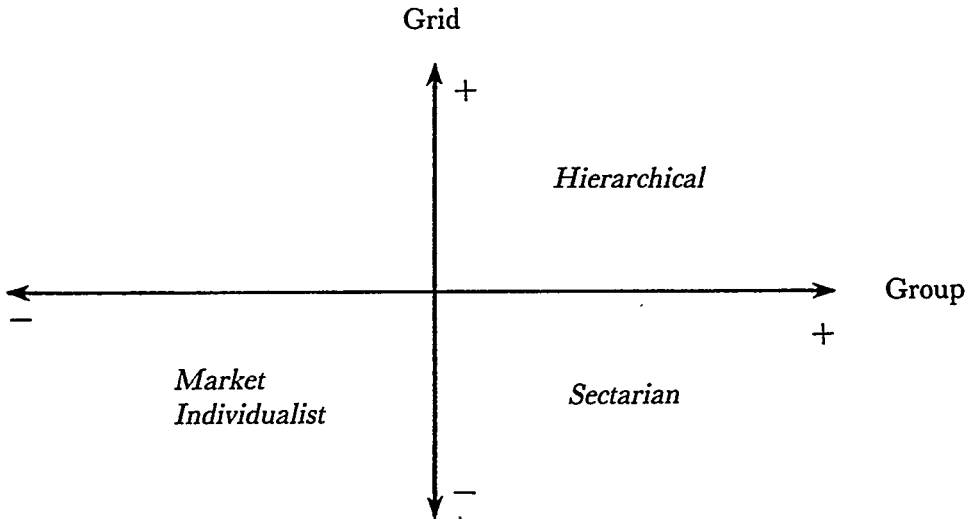


Figure 1

Risk and Culture tells us nothing about these people and their attitudes. Why are they afraid for their health and the environment? No social pressures, no survival needs, push them to adopt certain attitudes, and yet it is the support of this group that permits environmental sects to vie with the hierarchists and individualists who supposedly dominate the center.

A second problem with cultural analysis arises when we ask why particular risks, technologies, and forms of pollution become the centers of controversy while others do not. Douglas and Wildavsky cannot explain, for instance, why nuclear fission and radiation stimulate such extraordinary responses. Why is nuclear power a symbol of sectarian fears, and not electricity generated from coal, about which there are at least as many environmental uncertainties? Why is radiation from reactors so much more dreaded than equivalent amounts of x-ray radiation? Until we can answer these questions, we cannot be sure that culture, and not individual

psychology or even something more mysterious, is the guiding factor in risk selection.⁴²

VI.

A book as provocative as *Risk and Culture* will inevitably stimulate much criticism. I have chosen to focus on a narrow range of issues about the robustness of cultural analysis and to ignore other controversial issues, like the invidious characterization of environmentalists as primitive or methodological questions about whether cultural analysis constitutes good social science. I have suggested that cultural analysis cannot, in the end, supplant risk analysis and psychological explanations of risk selection. But it can and should supplement them.

Risk and Culture is a short, lively book that brings a new outlook to a difficult problem in public policy. Cultural analysis adds a needed dimension to our understanding of risk selection and of the difficulty of determining socially acceptable levels of risk in a heterogeneous society like our own. If the book succeeds in stimulating discussion about cultural values, if it makes policy analysts aware that values might be as complex, pervasive, and central to the problems of managing technological and environmental risk as are toxic substances or radiation, then its other sins can be forgiven, for it will have made a substantial contribution.

42. The associations between fission, radiation, and total destruction are very mysterious and deep. For more than half a century now, at least since H.G. WELLS, *THE WORLD SET FREE: A STORY OF MANKIND* (1914), the idea of tinkering with the atom has produced ambivalent responses of technological utopianism and total world destruction. By 1930, these tales had become so popular that one nuclear optimist of the day felt compelled to deride the humanists who "pictured the diabolical scientist tinkering heedlessly, like the bad small boy, with these enormous stores of sub-atomic energy, and some sad day touching off the fuse and blowing our comfortable little globe to smithereens." R. MILLIKEN, *SCIENCE AND THE NEW CIVILIZATION* 95 (1930). What makes these attitudes so amazing is not simply that Milliken could have written this book today, but that he in fact wrote it nine years before nuclear fission had even been discovered!