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WHAT PROCESS IS DUE? COURTS AND SCIENCE-POLICY DISPUTES.
By *David M. O'Brien*. New York: Russell Sage Foundation. 1987.
Pp. xviii, 242. \$22.50.

David M. O'Brien's¹ book *What Process Is Due? Courts and Science-Policy Disputes* is a discussion of the law's role in controlling technological risks and uncertainties. For the most part, O'Brien does this through a collection of stories about the major disputes around which the law in this area has been shaped. At the outset, O'Brien promises to do more than provide the reader with anecdotes. He offers an intriguing new conceptualization of these disputes. They are, O'Brien suggests, "trilemmas" requiring responses to three different sets of competing demands: (1) the need for a scientific basis for regulation; (2) the requirement that choices be politically responsible; and (3) the requirement that some degree of procedural fairness be afforded those who are interested in the outcome. Unfortunately, O'Brien fails to work this conceptualization into the stories that he tells; and fails to glean any persuasive prescriptive insights from this framework. Thus, the book is left to stand as a collection of extended stories.

What Process Is Due? in many ways parallels O'Brien's earlier work, *Storm Center: The Supreme Court in American Politics*.² *Storm Center* was well received as a useful compilation that chronicled the Court's internal dynamics in the face of an increasing caseload and changing political role. But many observers felt that *Storm Center* lacked analytical and prescriptive elements. That work presented, but failed to explain, interesting events. One reviewer observed that "it is Mr. O'Brien's historical and statistical evidence, not the conclusions he draws, that will make 'Storm Center' fascinating to historians and valuable to those who want to debate the Court's future."³

Unfortunately, *What Process Is Due?* shares the earlier work's flaws, but not its strengths. Unlike *Storm Center*, *What Process Is*

1. The author is a professor in the Woodrow Wilson Department of Government and Foreign Affairs at the University of Virginia. His prior works include *STORM CENTER: THE SUPREME COURT IN AMERICAN POLITICS* (1986); *THE PUBLIC'S RIGHT TO KNOW: THE SUPREME COURT AND THE FIRST AMENDMENT* (1981); *PRIVACY, LAW, AND PUBLIC POLICY* (1979); *The Seduction of the Judiciary: Social Science and the Courts*, 64 *JUDICATURE* 8 (1980); and *Of Judicial Myths, Motivations, and Justifications: A Postscript on Social Science and the Law*, 64 *JUDICATURE* 285 (1980).

2. D. O'BRIEN, *STORM CENTER: THE SUPREME COURT IN AMERICAN POLITICS* (1986).

3. Mackenzie, *Rehnquist's Inheritance*, N.Y. Times, July 27, 1986, § 7 (Book Review) at 14; see also Book Notice, 85 *MICH. L. REV.* 1197, 1199 (1987) (reviewing D. O'BRIEN, *STORM CENTER: THE SUPREME COURT IN AMERICAN POLITICS* (1986)) ("*Storm Center's* method is more derivative than original, its use of the material more encyclopedic than instructional, and its effect more corroborative than groundbreaking.").

Due? breaks no new ground and presents no new data or evidence. And the development of federal review of agency decisions is not nearly so photogenic a subject as the machinations of Supreme Court decision making. Too esoteric to be engaging storytelling, and too anecdotal to be serious scholarship, the work is left without a reader.

O'Brien argues that "disputes over the scientific basis for and the basic value conflicts in regulating risk are structured according to adversarial processes and forced into the courts" (pp. 32-33). This "judicialization" is a "uniquely American response" (p. 34); a result of "our uniquely adversarial culture and its relation to democratic politics" (p. 33). He offers virtually no comparative analysis defending his assertion that this response is "uniquely American,"⁴ however. And while he deems this judicialization an "imperfect response to the problems of managing risks" (p. 34), he never suggests an alternative. As O'Brien goes on to describe instances of judicial review, he treats the premise of judicialization as an unquestioned given.

O'Brien begins with a survey of the irreducible uncertainties confronting any attempt to regulate carcinogenic risks. Scientists are not in agreement as to whether environmental pollution has led to an increase in the cancer rate (pp. 14-19). While cancer rates have undoubtedly increased, this might be the result of demographic changes in the population (people live longer).⁵ Furthermore, O'Brien points out, the methodology of carcinogenicity experiments — risks extrapolated from extremely high doses in a rodent population — is inherently suspect. There is no agreement in the scientific and regulatory community on how to extrapolate these data to low doses (p. 29), or on whether there is any safe threshold for carcinogens.⁶ Nor is there any agreement on the role individual lifestyle factors play in cancer rates (p. 22). Because these factors and others are so uncertain, the adoption of any model of carcinogenicity is a political — as opposed to scientific — choice (p. 19).

O'Brien then details the shortcomings of private law litigation through a rapid sketch of the avalanche of litigation that followed the identification of asbestos as a carcinogen. He concludes, rather unremarkably, that private law litigation is a "slow, inefficient, and ex-

4. P. 34. O'Brien observes, in one conclusory sentence, that "In England, science-policy disputes are settled in a parliamentary [sic] fashion and with deference to the expertise of the civil service." P. 34.

5. Several works have announced a cancer epidemic, including R. CARSON, *SILENT SPRING* (1962) and S. EPSTEIN, *THE POLITICS OF CANCER* (1979). Refutations of this view are found in E. EFRON, *THE APOCALYPTICS: CANCER AND THE BIG LIE* (1984); Gori, *The Regulation of Carcinogenic Hazards*, 208 *SCIENCE* 256 (1980); and Peto, *Distorting the Epidemiology of Cancer: The Need for a More Balanced Overview*, 284 *NATURE* 297 (1980). See generally pp. 15-34, and sources cited therein.

6. P. 30. O'Brien refers the reader to E. EFRON, *supra* note 5, and OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS, *ASSESSMENT OF TECHNOLOGIES FOR DETERMINING CANCER RISKS FROM THE ENVIRONMENT* (1981).

pensive" solution to the problems presented by substances of unknown toxicity (p. 59). The reader finds few original observations, but copious references to more thorough works in the field.

O'Brien continues with a discussion of the inability of judges to deal effectively with complex — and probably insoluble — scientific factual questions. Most of this section is devoted to a detailed narrative of the Reserve Mining controversy,⁷ one of the first major environmental lawsuits of the 1970s. This storytelling is what O'Brien does best. His account is refreshingly broad: in most of the legal literature, that controversy is reduced to little more than its holding, and is treated more as an incremental step in the evolution of the rules of causation than as the manifestation of a broader, cultural awakening.⁸

The Reserve Mining controversy involved Reserve Mining's operation of a taconite ore refining plant on the shores of Lake Superior in northern Minnesota. The process required huge amounts of water, and produced substantial amounts of water-borne taconite tailings⁹ as waste. When the plant was constructed in the 1940s, there was no evidence that the dumping of tailings would cause environmental damage to the lake (p. 82). Potential harms to human health were not extensively considered.¹⁰ As public concern over the environment grew, and the effects of the dumping on life in the lake became clearer, the dumping of tailings came under increasing scrutiny. Twelve years of litigation intended to stop disposal of the tailings saw several state court suits seeking revocation of Reserve Mining's discharge permits (pp. 84-85), an offensive suit by Reserve Mining challenging the state's water pollution control laws (p. 85), a lawsuit in federal court brought by the federal government seeking an injunction preventing further

7. Judicial dispositions of various stages of the controversy are found at *United States v. Reserve Mining Co.*, 419 U.S. 802 (1974) (denying *certiorari*, but indicating, in an opinion joined by a total of four justices (the number necessary for a grant of *certiorari*), that the Court would consider the case if a final judgment had not been rendered by January 31, 1975); *Reserve Mining Co. v. Lord*, 529 F.2d 181, 185 (8th Cir. 1976) (removing the district court judge who was handling the proceedings for "shed[ding] the robe of the judge and . . . assum[ing] the mantle of the advocate"); *Reserve Mining Co. v. EPA*, 514 F.2d 492 (8th Cir. 1975) (en banc); *United States v. Reserve Mining Co.*, 380 F. Supp. 11 (D. Minn. 1974); *Reserve Mining Co. v. Minnesota Pollution Control Agency*, 267 N.W.2d 720 (Minn. 1978); *Reserve Mining Co. v. Herbst*, 256 N.W.2d 808 (Minn. 1977).

8. See, e.g., Baker & Markoff, *By-Products Liability: Using Common Law Private Actions to Clean Up Hazardous Waste Sites*, 10 HARV. ENVTL. L. REV. 99 (1986); Glicksman, *Federal Preemption and Private Legal Remedies for Pollution*, 134 U. PA. L. REV. 121 (1985); Rosenberg, *The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System*, 97 HARV. L. REV. 849 (1984).

9. Taconite tailings are the by-products of the refining process. Taconite ore is a low-grade iron ore containing 20 to 25 percent iron material. "Tailings" are the residual materials of crushed ore and water left after the iron has been extracted from the ore. P. 21. The tailings are virtually identical to asbestos, and are similarly carcinogenic when inhaled, but the danger posed by ingested water-borne asbestos (and therefore taconite tailings) is uncertain. See pp. 90-94.

10. This was before the era of the environmental impact statement. Even if a statement had been required, it is doubtful that this harm would have been recognized because the toxicity of asbestos and thus taconite tailings was not appreciated at the time.

discharges, and two Eighth Circuit rulings.¹¹ O'Brien ties events in the controversy to shifting presidential politics, legislative fits and starts, and the historical evolution of scientific views on the carcinogenicity of the tailings.

Eventually, the Fifth Circuit ordered restrictions on tailing discharges on the grounds that taconite leaching into the water supply endangered public health, and was therefore subject to proscription under the Federal Water Pollution Control Act.¹² Prior cases had asked whether harm to the public was "more likely than not." The government could not meet those traditional proof burdens in this case: while the inhalation of asbestos fibers¹³ — and therefore the identical taconite fibers — was known to be carcinogenic, the harmful effects of ingestion were only suspected. The court conceded that "it [could not] be proven that the probability of harm is more likely than not" but concluded that the potential severity of the harm justified a relaxation of traditional burdens.¹⁴

This section exemplifies the book's shortcomings as well as its strengths. O'Brien does not explain the implications of the important legal result of the Reserve Mining controversy, and does not comment on the fact that the case appears implicitly to settle the dispute over carcinogenicity in favor of the no-threshold paradigm,¹⁵ at least where the potential harm is severe enough. If the book is about the allocation of decisional authority, such a result ought not to go unnoticed.

O'Brien does refer to some intriguing explanations of the failure of adjudication that have been developed in other works, but he never applies them in a careful way to his own observations. For example, he notes that judicial difficulty with science-policy disputes may be the result of the "polycentricity" of the disputes, a term that has been used by Professor Fuller to describe the inadequacies of adversary litigation in dealing with disputes characterized by a lack of any principle or standard against which an asserted "right" can be measured, and by a multiplicity of interests and affected parties, each of which is affected by a decision made with respect to another party. Fuller provides the example of a woman bequeathing a collection of paintings to two different museums "in equal shares[]":

[T]he disposition of any single painting has implications for the proper

11. Pp. 88-106.

12. 514 F.2d at 529 (citing 33 U.S.C. § 1160(g)(1) (1970) (repealed 1972)).

13. See *supra* note 9.

14. 514 F.2d at 520; see also *Certified Color Mfrs. Assn. v. Mathews*, 543 F.2d 284, 297-98 (D.C. Cir. 1976) (citing *Reserve Mining*) ("where the harm envisaged is cancer, courts have recognized the need for action based upon lower standards of proof than otherwise applicable"); *Ethyl Corp. v. EPA*, 541 F.2d 1 (D.C. Cir. 1976) (citing *Reserve Mining* favorably in upholding the EPA's regulation of the lead content of gasoline even though the risk of harm was not "certain"); *United States v. Vertac Chem. Corp.*, 489 F. Supp. 870 (E.D. Ark. 1980).

15. See *supra* note 6.

disposition of every other painting. If [one museum] gets the Renoir, the Gallery may be less eager for the Cezanne but all the more eager for the Bellows, etc. If the proper apportionment were set for argument, there would be no clear issue to which either side could direct its proofs and contentions.¹⁶

This aptly characterizes environmental disputes, if the apportionment of environmental risks and benefits were substituted for the paintings, and the two museums were replaced with some far greater number of constituencies. Such disputes are more appropriately dealt with through legislative and contractual solutions (p. 79); and O'Brien correctly observes that this explains some of the difficulty that judges have had with science-policy disputes.¹⁷ But O'Brien does not explain how these pressures affect judges uniquely in science-policy disputes.

One insight broached, then left untouched, is his mention of school desegregation and reapportionment cases as instances where polycentricity and proof problems have not proved impassable barriers to effective judicial intervention (p. 106). Those cases are arguably as polycentric as science-policy disputes: they involve at least as many constituencies, each affected by any decisions made with respect to any other parties, as in environmental disputes; and there is a similar lack of a firmly established principle of adjudication to which proofs can be directed. O'Brien notes that the judicial role in resolving these latter disputes has been largely unchallenged (p. 106); but never asks or attempts to explain why these might be different from science-policy disputes.

O'Brien also chronicles the problems with judicially supervised administrative solutions. He tells the story of the Consumer Product Safety Commission's (CPSC) ban on Tris, a fire retardant sprayed on children's clothing, as an example of the pathologies of the evolving relationship between agencies and courts (pp. 129-43). When the CPSC first received data suggesting that Tris was a carcinogen, it banned the substance without waiting for further proof. The CPSC did not afford interested parties any opportunity for a hearing, and did not assess the economic impact of its ruling. O'Brien argues that this haste was provoked by the threat of litigation rather than an informed risk assessment, and that this is yet another instance of the shortcomings of judicialization (p. 142).

O'Brien then makes some more general observations about the distorting effect of the threat of litigation. He notes that judicialization engenders delay and inefficiency (pp. 146-49), and in support of this cites both the costs of rule making and the costs of compliance with

16. Fuller, *The Forms and Limits of Adjudication*, 92 HARV. L. REV. 353, 394 (1978).

17. Pp. 102-04. For a more detailed discussion of the polycentric nature of environmental disputes, see Krier, *The Pollution Problem and Legal Institutions: A Conceptual Overview*, 18 UCLA L. REV. 429, 458-59 (1971).

those rules (p. 148). But how much of these costs are attributable to the judicialization of the rule-making process? How much is a cost of information gathering that would be necessary, or at least desirable, no matter what form the rule making takes? What is needed here, and is lacking, is some quantification of the percentage of those costs that can be attributed to judicialization alone, and a discussion of whether the judicially imposed informational requirements are independently desirable.

The last section of the book (pp. 153-86) discusses the role of federal appellate courts in environmental disputes as it evolved through *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*,¹⁸ the *Benzene* case,¹⁹ and the *Cotton Dust* case.²⁰ These stories, too, are told without being tied to any descriptive or prescriptive framework. Here O'Brien devotes far more space to the legal doctrines involved in those cases, and less to the factual and political background of the disputes, than with the other discussions in the book. The section contains little of the detail that makes his discussion of *Reserve Mining* worth reading. Because his doctrinal synopses do not go beyond the cases themselves, they have little to add.

If the book has a common theme, it is that judicial resolutions of science-policy disputes ought "not purport to resolve scientific questions but the underlying normative conflicts" (p. 190). To the extent that O'Brien's book makes that fact perfectly clear, it is a useful contribution to the literature. But O'Brien's own observations, ironically, indicate that judges and lawyers are already painfully aware of the difficulty, and value-laden nature, of those conflicts.

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18. 435 U.S. 519 (1978) (holding that a court reviewing a regulatory decision cannot impose adversarial procedures on agency rule-making, but also sanctioning "heightened scrutiny" of the regulatory decision-making process). Pp. 162-63.

19. *Industrial Union Dept., AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607 (1980) (holding that the Occupational Safety and Health Administration's benzene regulations needed to be based on a finding of significant risk and could not be premised on a policy which presumed such risk at extremely low levels of exposure once carcinogenic risk at higher levels was established).

20. *American Textile Mfrs. Inst. v. Donovan*, 452 U.S. 490 (1981) (holding that the Occupational Safety and Health Act did not require a cost-benefit analysis in support of regulations). The case "warn[ed] lower courts that they may not on their own require agencies to undertake more rigorous analysis than clearly required by Congress or mandated by the White House." P. 176.