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Administrative Law—*American Textile Manufacturers Institute, Inc. v. Donovan*: Judicial Review Under OSHA

The Occupational Safety and Health Act of 1970[1] set the ambitious goal of assuring "so far as possible every working man and woman in the Nation safe and healthful working conditions."[2] In both its language and its tone, the Act emphasized worker health and safety, which were to be promoted through the promulgation of national standards. The Secretary of Labor was directed in compelling but unfortunately imprecise terms to set standards that "to the extent feasible, on the basis of the best available evidence," would prevent material impairment of employee health.[3] In *American Textile Manufacturers Institute, Inc. v. Donovan*[4] the United States Supreme Court considered basic definitional parameters for the type of evidence that would be deemed sufficient to withstand the "substantial evidence" standard of judicial review mandated by the Act.[5] In *American Textile* representatives of the cotton industry, insisting that both highly exacting evidence[6] and cost-benefit analysis[7] were required under the Act, brought suit challenging the validity of the cotton dust standards set by the Secretary.[8] Giving a deferential reading to "substantial evidence," the Court ruled that feasibility analysis was sufficient for the enactment of standards[9] to combat cotton dust exposure and the resulting brown lung disease, regardless of the cost to the industry.[10] The Court thereby recognized the Secretary's broad power to regulate, even in cases in which data imperfection inevitably yielded evidence of debatable substance. The concern for the textile worker's health preempted the rigorous substantial evidence requirement and cost-benefit analysis urged by the industry.

The cotton dust exposure standards under attack in *American Textile* were those issued by the Secretary of Labor in June 1978.[11] Temporary stan-

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1. 29 U.S.C. §§ 651-678 (1976).
2. Id. § 651(b).
3. Id. § 655(b)(5). The text of the section provides as follows:

> The Secretary, in promulgating standards dealing with toxic materials or harmful physical agents under this subsection, shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity . . . . In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws. Whenever practicable, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired.

4. 101 S. Ct. 2478 (1981).
5. 29 U.S.C. § 655(f) (1976) provides that "[t]he determinations of the Secretary shall be conclusive if supported by substantial evidence in the record considered as a whole."
6. 101 S. Ct. at 2497.
7. Id. at 2483.
8. Id. The standards are codified at 29 C.F.R. § 1910.1043 (1981).
9. Id. at 2492.
10. Id. at 2504.
11. Codified at 29 C.F.R. § 1910.1043 (1981). See generally 101 S. Ct. at 2485-87 (providing a more in-depth treatment of the history of cotton dust standards in the United States).

dards had been promulgated in 1970,[12] but debate over allowable exposure standards continued through the next decade. In 1978, acting through the Occupational Safety and Health Administration (OSHA), the Secretary promulgated permanent standards that reflected a predominant concern for worker health.[13] However, it had become apparent long before 1978 that worker health in the textile industry was a matter of great national concern. By the 1960s, exposure to cotton dust had been shown unequivocally to bear a direct relation to the incidence of brown lung disease, or byssinosis, a serious respiratory disease that affects more than 100,000 workers in the textile industry.[14] Incidence rates range from twenty to thirty percent among workers exposed to the dust, and "each worker faces a substantial risk of health impairment."[15]

The variable 200/500/750 micrograms per cubic meter ($\mu g/m^3$) standard that ultimately was adopted was predicated on the results of two separate exposure studies.[16] Research Triangle Institute (RTI), an OSHA-contracted group, conducted the first study. The second study was the result of an independent investigation conducted by industry representatives (Hocutt-Thomas).[17] Both studies focused in part on the total cost of engineering con-

12. See 101 S. Ct. at 2485 (pursuant to 29 U.S.C. § 655(a) (1976)).

13. In 1966 the American Conference of Governmental Industrial Hygienists (ACGIH) had recommended that cotton dust exposure be limited to 1000 micrograms per cubic meter of air (1000 $\mu g/m^3$) per eight-hour workday. Id. at 2485. The temporary regulation promulgated in 1970 included the 1000 $\mu g/m^3$ limit for total dust exposure. See note 12 supra. In 1974 ACGIH lowered its recommended daily exposure levels to 200 $\mu g/m^3$, at which time the Director of the National Institute for Occupational Safety and Health (created by the Act, 29 U.S.C. § 671 (1976)) requested that the Secretary adopt the more stringent standard. 101 S. Ct. at 2485. By that time, the Textile Workers Union of American had joined with the North Carolina Public Interest Research Group to petition the Secretary to set an exposure limit of 100 $\mu g/m^3$. Id. After three hearings, much testimony, and numerous post-hearing comments and briefs, the following final cotton dust standards were adopted:

Mandatory Permissible Exposure Limit
Over Eight-Hour Period

Yarn manufacturing	200$\mu g/m^3$
Slashing and weaving operations	750$\mu g/m^3$
All other operations	500$\mu g/m^3$

101 S. Ct. at 2486-87.

14. See S. Rep. No. 1282, 91st Cong., 2d Sess. 3, reprinted in 1970 U.S. Code Cong. & Ad. News 5177, 5179 (noting that recognition of brown lung disease as a distinct occupational hazard was relatively recent in the United States despite repeated warnings from other textile-producing nations). For an overview of brown lung disease in the textile industry, see Brown Lung: Hearing Before a Subcomm. of the Sen. Comm. on Appropriations, 95th Cong., 1st Sess. (1978); Schrag & Gullett, Byssinosis in Cotton Textile Mills, 101 Am. Rev. Resp. Disease 497 (1970).

15. AFL-CIO v. Marshall, 617 F.2d 636, 646 (D.C. Cir. 1979), aff'd in part, vacated in part sub nom. American Textile Mfrs. Inst., Inc. v. Donovan, 101 S. Ct. 2478 (1981). Since *American Textile* was decided in June 1981, the American Textile Manufacturers Institute has conducted its own study, which reports that fewer than one-half of one percent of textile workers suffer from byssinosis. Telephone interview with Elisa Braver, Epidemiologist, in Washington, D.C. (Feb. 1, 1982). However, Braver cited a number of critical inadequacies with the Institute's methodology: the study lacked a control group, failed to use the conventional Schilling classification to diagnose health impairment and gave only marginal attention to exposure data. Thus, there is serious doubt as to the reliability of the Institute's conclusion that only 670 of the 400,000 workers surveyed suffered from byssinosis. Id.

16. 101 S. Ct. at 2497. See also note 13 supra.

17. Id. at 2497. See RTI, Cotton Dust: Technological Feasibility Assessment and Final Inflationary Impact Statement (1976); see also Statements of Hovan Hocutt, Senior Vice-President, Engineering, Pneumafil Corp., Ex. 60, 2228-47 and Arthur Thomas, Senior Vice-President, The

trols for the achievement of more stringent exposure levels than the temporary 1000 $\mu g/m^3$ limit.[18] The common focus did not lead to a common result, however. RTI estimated that compliance with proposed standards would cost the textile industry $1.1 billion, while Hocutt-Thomas indicated that similarly protective exposure levels could be achieved through engineering controls costing only $543 million.[19]

In the course of setting its standards, OSHA questioned the validity of both studies. RTI mistakenly had included in its computations both synthetic mills, whose operations do not generate cotton dust, and mills already in compliance. In addition, the RTI study lacked current data.[20] Hocutt-Thomas also was thought improperly to have included synthetic mills in its compliance calculations. Moreover, Hocutt-Thomas failed to take into account natural production trends to replace old machinery and technological advances likely to occur during the four-year compliance period.[21] In spite of these acknowledged data inadequacies, OSHA finally adopted the Hocutt-Thomas study as "more realistic" than that of RTI.[22]

Claiming that $543 million was a gross underestimate for compliance given the stringent standards finally adopted,[23] the industry brought suit challenging the standard in the United States Court of Appeals for the District of Columbia.[24] The court of appeals held that there was substantial evidence to support the standard and that feasibility analysis was contemplated by the Act.[25] Twelve individual cotton textile manufacturers and the American Textile Manufacturers Institute, Inc., which represents more than 175 companies, then petitioned the United States Supreme Court for review. Petitioners challenged the substantiality of the evidence supporting OSHA's determination that the cotton dust standard was economically feasible[26] and alleged that the

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Bahnson Co., Ex. 62, 2248-57, reprinted in joint appendix to AFL-CIO v. Marshall, 617 F.2d 636 (D.C. Cir. 1979). Because the Hocutt-Thomas study was the more recent of the two, it was perhaps more attractive to OSHA in its search for valid data.

18. See note 13 supra.

19. 101 S. Ct. at 2498. RTI had made cost estimates for permissible exposure limits (PELs) of 100, 200 and 500 $\mu g/m^3$, but OSHA found them too unreliable to adopt as final estimates. Id. at 2500 n.53. Hocutt insisted that a PEL of 200 $\mu g/m^3$ was technologically impracticable for certain production operations; therefore, he declined to prepare cost estimates for the 200 $\mu g/m^3$ level. Id.

20. Id. at 2498.

21. Id. at 2499.

22. Id. at 2498.

23. The guidelines ultimately promulgated not only set the variable exposure level of 200/500/750 $\mu g/m^3$, but also called for exposure monitoring, medical surveillance of employees, educational programs, provision of respirators in certain situations and transfer without loss of pay for any employee unable to wear a required respirator. Id. at 2487.

24. AFL-CIO v. Marshall, 617 F.2d 636 (D.C. Cir. 1979), aff'd in part, vacated in part sub nom. American Textile Mfrs. Inst., Inc. v. Donovan, 101 S. Ct. 2478 (1981).

25. Id. at 664-66. See note 3 supra & note 31 infra. The court expressed humanitarian concerns in rejecting cost-benefit analysis under 29 U.S.C. § 655(b)(5) (1976): "Especially where a policy aims to protect the health and lives of thousands of people, the difference in comparing widely dispersed benefits with more concentrated and calculable costs may overwhelm the advantages of such analysis." 617 F.2d at 655. These same concerns also offer a partial explanation for the court's very flexible application of the "substantial evidence" standard of review.

26. 101 S. Ct. at 2483 & n.5, 2497.

Act required the Secretary to engage in a cost-benefit analysis before promulgating any exposure standard.[27] Additionally, petitioners questioned the authority of OSHA to mandate a transfer with full pay for industry employees unable to wear required respirators.[28] The industry received a single, cold concession in the Court's ruling—the issue of transfer with pay was remanded for determination whether the provision bore a reasonable relationship to the protection of worker health.[29] The ruling of the court of appeals was upheld in all other respects.[30] Not only was an elaborate cost-benefit analysis rejected in favor of a simple feasibility analysis,[31] but also the admittedly imprecise Hocutt-Thomas study was found to present evidence of sufficient substantiality to warrant upholding the standards adopted by the Secretary.[32]

Although the decision was a difficult one for the industry to accept, it was well in keeping with the legislative history of the Act. The legislative intent behind the Act admittedly was "not crystal clear,"[33] but congressional debate was unmistakably "replete with concern about dangers" to worker health and safety.[34] In *American Textile* rejection of the substantial evidence challenge

27. Id. at 2483.

28. Id. at 2483 & n.5, 2504.

29. Id. at 2505-06.

30. Id. at 2506.

31. Id. at 2491-97. Cost-benefit analysis would consist of balancing costs to the industry against the resulting reduction in risk to the working population. Such an analysis certainly would require some calculation of the value of human life. By contrast, feasibility analysis requires that a regulatory agency address these three questions: (1) does the worksite present unsafe conditions of employment or significant risks to worker health?; (2) is the standard promulgated the most protective possible?; and (3) is achievement of the standard feasible? See generally Note, Section 6(b)(5) of the Occupational Health Act of 1970: Is Cost-Benefit Analysis Required?, 49 Fordham L. Rev. 432 (1980).

32. 101 S. Ct. at 2500. The evidence ultimately was found to support a total cost estimate for compliance which included engineering controls at $543 million (Hocutt-Thomas study), medical surveillance and monitoring at $7 million, and waste and seed processing at $106.5 million, for a total of $656.5 million. Id. at 2498 n.44.

In deciding whether OSHA's determination had been based on "substantial evidence," the Court followed the standard of review articulated in Universal Camera Corp. v. NLRB, 340 U.S. 474 (1951). See 101 S. Ct. at 2497. In that case, the Court stated that "substantial evidence" is "more than a mere scintilla . . . . [It is] such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." 340 U.S. at 477. While the reviewing court must take contradictory evidence into account, the "possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency's finding from being supported by substantial evidence." Consolo v. Federal Mar. Comm'n, 383 U.S. 607, 620 (1966). Ordinarily, an "arbitrary and capricious" standard of judicial review is used in cases involving informal rulemaking procedures. Administrative Procedure Act, 5 U.S.C. § 706(2)(A) (1976). However, the Administrative Procedure Act applies only when the statute in question does not provide specifically for a standard of review. Id. § 703. In the case of OSHA, the "substantial evidence" standard is mandated by 29 U.S.C. § 655(f) (1976). Thus, by combining the informal procedure of notice-and-comment rulemaking with the essentially formal standard of "substantial evidence" review, OSHA has a "hybrid nature." Industrial Union Dep't v. Hodgson, 499 F.2d 467, 473 (D.C. Cir. 1974). Review is therefore complicated for the court, since detailed records often are lacking because of the informal procedures. For an insightful treatment of "substantial evidence" review in this area, see Jaffe, Judicial Review: "Substantial Evidence on the Whole Record," 64 Harv. L. Rev. 1233 (1951); Verkuil, Judicial Review of Informal Rulemaking, 60 Va. L. Rev. 185 (1974); Note, Scrutiny of OSHA Regulation in the Courts: A Study of Judicial Activism, 14 U. Rich. L. Rev. 623 (1980).

33. 101 S. Ct. at 2493.

34. Note, supra note 31, at 445 (indicating that employee safety is paramount concern of the Act, as reflected in legislative history). As introduced by Representative Daniels in the House,

and the cost-benefit analysis represented a recognition by the Court that mathematical exactitude cannot be demanded when considering worker health in the light of state-of-the-art technology and present medical knowledge.

The Court had been offered an earlier opportunity in *Industrial Union Department v. American Petroleum Institute*[35] to clarify the issues of substantial evidence review and cost-benefit analysis in a case involving the benzene exposure standard. The issue of substantial evidence emerged as the touchstone of the Court's holding in *American Petroleum*. The cost-benefit issue never was reached, since the stringent benzene standards were held unenforceable because they were unsupported by evidence of sufficient scientific substantiality.[36] The threshold proof that a low exposure level was "reasonably necessary or appropriate" to effect a drop in the incidence of leukemia simply had not been produced.[37] On the basis of more than fifty volumes of exhibits and testimony, OSHA had found that a reduction in exposure from ten parts to one part per million of benzene was "likely" to yield "appreciable" benefits.[38] The Court, emphasizing that administrative procedure placed the burden upon the agency to justify any new standard promulgated, did not think that the evidence met the substantiality requirement.[39] The Court did recognize that "OSHA is not required to support its finding that a significant risk exists with anything approaching scientific certainty."[40] In particular, the Court thought that section 655(b)(5), which specifically allows the Secretary to promulgate regulations on the basis of the "best available evidence,"[41] "gave OSHA some leeway where its findings must be made on the frontiers of scientific knowledge."[42] Nevertheless, the plurality remained unconvinced by the fifty volumes of benzene data and refused to approve the more protective standard.

The dissent in *American Petroleum* espoused a more liberal notion of "leeway" and expressed the strongly worded view that the Secretary clearly had produced "substantial evidence that exposure to benzene caused leukemia."[43] While the dissenters plainly recognized that it was their duty to un-

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OSHA originally required a standard that "most adequately assures . . . that no employee will suffer any impairment of health." H.R. Rep. No. 1291, 91st Cong., 2d Sess. 4 (1970). Emphasizing that the House bill reflected an unfairly "single-minded punitive approach" towards employers, Senator Dominick led a drive that culminated in several restrictive amendments. Sen. Rep. No. 1282, 91st Cong., 2d Sess. 61 (1970). As finally codified, the Act was limited to concerns of "material health impairment" caused by "toxic materials or harmful physical agents." 29 U.S.C. § 655(b)(5) (1976). The scope of the Act was narrowed, but its preeminent concern was still worker health. See 101 S. Ct. at 2493-97.

35. 448 U.S. 607 (1980) (plurality opinion).

36. Id. at 653.

37. Id. at 638.

38. Id. at 653.

39. Id. at 652-53.

40. Id. at 656.

41. 29 U.S.C. § 655(b)(5) (1976).

42. 448 U.S. at 656.

43. Id. at 698. Justices Marshall, Brennan, White and Blackmun dissented in the judgment and roundly condemned the plurality's decision as "both extraordinarily arrogant and extraordinarily unfair." Id. at 695.

dertake a "searching and careful judicial inquiry" into the basis of the Secretary's findings,[44] they also recognized that this duty did not mean that they were to "undertake independent review of adequately supported scientific findings made by a technically expert agency."[45] Emphasizing that, even under the substantial evidence test, judicial review is "ultimately deferential,"[46] the dissent singled out three key factors which served to make substantial evidence review particularly difficult under OSHA: the high level of technological complexity, the impossibility of achieving definite resolution of factual issues, and the inability of avoiding policy considerations "when the question involves determination of the acceptable level of risk [to worker health]."[47] The dissent rejected the notion that these complications justified the plurality's excessively demanding review, and went so far as to say that "today's decision represents a usurpation of decisionmaking authority that has been exercised by and properly belongs with Congress and its authorized representatives."[48]

The rationale of the dissent in *American Petroleum* also was evident in the rulings of several lower courts on the issue of substantial evidence. In *United Steelworkers of America v. Marshall*,[49] one of the most notable lower court cases, the United States Court of Appeals for the District of Columbia held that the stringent, OSHA-promulgated lead exposure standard was enforceable even though based on "the inconclusive but suggestive results of numerous studies."[50] The scope of judicial review was expressed in very narrow terms,[51] and the court seemed to presage Justice Marshall's dissent in *American Petroleum* when it noted, "[W]e must remember that the precise choice of [a numerical toxic exposure limit] is essentially a legislative judgment to which we must accord great deference and which only must fall within a 'zone of reasonableness.' "[52]

The humanitarian concerns that ultimately held sway in *American Textile* were also present in the *United Steelworkers* decision. While the court of appeals faulted OSHA for being careless in some data presentation and analysis,[53] it refused to second-guess technologically complicated agency decisions and observed that "OSHA cannot let workers suffer while it awaits the Godot

44. Id. at 695 n.9.

45. Id. at 695. The dissent believed that de novo review was "especially inappropriate" when complicated scientific data was at issue, as the Court plainly lacked expertise in such matters. The logical thrust of this deferential approach was that the "reviewing court must be mindful of the limited nature of its role," even under substantial evidence review. Id. at 706.

46. Id. at 705.

47. Id. at 705-06.

48. Id. at 712.

49. 647 F.2d 1189 (D.C. Cir. 1980).

50. Id. at 1253 (quoting Ethyl Corp. v. EPA, 541 F.2d 1, 37-38 (D.C. Cir.) (en banc), cert. denied, 426 U.S. 941 (1976)).

51. Review was restricted to "requiring the agency to identify relevant factual evidence, to explain the logic and the policies underlying any legislative choice, to state candidly any assumptions on which it relies, and to present its reasons for rejecting significant contrary evidence and argument." Id. at 1207.

52. Id. at 1253.

53. The majority proffered the slightly understated criticism that OSHA's carelessness "will

of scientific certainty. It can and must make reasonable predictions on the basis of 'credible sources of information. . . .' "[54] Although the substantial evidence issue was remanded in regard to some secondary segments of the steel industry, the standard was upheld in major respects, with the court noting that "we cannot require of OSHA anything like certainty."[55] The *United Steelworkers* court characterized the difficulty of substantial evidence review in clear-cut terms:

> The peculiar problem of reviewing the rules of agencies like OSHA lies in applying the substantial evidence test to regulations which are essentially legislative and rooted in inferences from complex scientific and factual data, and which often necessarily involve highly speculative projections of technological development in areas wholly lacking in scientific and economic certainty.[56]

Faced with such highly speculative projections, the *United Steelworkers* court struck the balance in favor of worker health and excused data inadequacies when the *American Petroleum* Court would not.[57]

In rejecting both the conceptually valid industry challenge to the substantial evidence issue and the cost-benefit analysis,[58] the *American Textile* Court moved far toward adopting the reasoning of *United Steelworkers* and the *American Petroleum* dissent. The *American Textile* Court therefore revealed a strong measure of deference to administrative rulemaking authority and considerable solicitude for worker health. Whereas fifty volumes of benzene data were deemed insufficient in *American Petroleum*, a generous reading of the faulty RTI and Hocutt-Thomas cotton dust studies met the substantial evidence standard in *American Textile*.

In evaluating the feasibility of the $656.5 million total compliance figure under section 655(f),[59] the court of appeals in *American Textile* had recognized that the task of the court under the substantial evidence requirement was "to provide a careful check on the agency's determinations."[60] But the court also believed that it had great flexibility in assessing whether the evidence was substantial. This flexibility becomes the essence of the judicial review standard in the Supreme Court opinion, and the concept of "careful check" conveniently

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never place the lead exposure standard in the Pantheon of administrative proceedings." Id. at 1207.

54. Id. at 1266 (quoting AFL-CIO v. Marshall, 617 F.2d 636, 657-58 (D.C. Cir. 1979)).

55. Id.

56. Id. at 1206-07.

57. The *United Steelworkers* bench found ample precedent for its holding in an early toxic exposure case, Industrial Union Dep't v. Hodgson, 499 F.2d 467 (D.C. Cir. 1974), in which OSHA was found to have broad discretion in the area of toxics regulation. The *Hodgson* court held that when data was obtained "on the frontiers of scientific knowledge," regulations "must in that circumstance depend to a greater extent upon policy judgments and less upon purely factual analysis." Id. at 474.

58. 101 S. Ct. at 2491-92. The Court was aware of the difficulty the industry faced in achieving compliance and freely admitted that "some marginal employers may shut down rather than comply." 101 S. Ct. at 2501. Even on those facts, however, the value of worker health was thought to preclude any mechanical application of cost-benefit analysis.

59. See note 32 supra.

60. 617 F.2d at 649.

is omitted. The Court fully adopts the "familiar rule" that "[t]his Court will intervene only in what ought to be the rare instance when the [substantial evidence] standard appears to have been misapprehended or grossly misapplied' by the court below."[61] Although the exposure levels contemplated by Hocutt-Thomas were less stringent than those ultimately adopted by the Secretary, the Supreme Court agreed with the lower court's speculation that "little more than the dust control measures assumed by the industry [Hocutt-Thomas] would be necessary to achieve the final PEL."[62] In spite of conflicting and inapposite data, the Court nonetheless believed it was warranted in upholding the precise and demanding cotton dust standard mandated by the Secretary.[63]

A requirement of scientifically impeccable data and careful economic balancing undoubtedly would have been particularly inappropriate in the case of brown lung disease. Due to increased popular awareness of the dangers of toxic exposure, the class protected by the cotton dust standard engendered considerable public sympathy. The facts of *American Textile* offered the Court a perfect opportunity to recognize that neither a compendium of absolute scientific truth nor a mathematically precise economic analysis was mandatory where considerations of high technology response to imperfectly understood incidence of disease were involved.

Nonetheless, the legal foundation of the Court's decision is open to challenge. Had it not been for the emotional appeal of the protected class, the cotton dust standards might well have been invalidated because they were based on insubstantial evidence. Justice Stewart's dissent clearly echoes the demanding concept of substantial evidence review articulated in *American Petroleum* and suggests that the agency badly overstepped its bounds in promulgating cotton dust standards based on grossly insufficient evidence.[64] Neither the RTI nor the Hocutt-Thomas study was geared to the standards ultimately adopted. In addition, both studies suffered from assorted methodological inadequacies.[65] As Justice Stewart correctly noted, even feasibility analysis cannot be made without substantial evidence. His dissent attacked the majority decision for this very reason:

> The agency flatly rejected [the RTI] prediction as a gross over-estimate. . . . [Then] [t]he agency examined the Hocutt-Thomas study, and concluded that it too was an over-estimate of the costs of the less stringent standard it was addressing... . But in a remarkable non sequitur, the agency decided that because the Hocutt-Thomas study was an over-estimate of the cost of a less stringent standard, it could be treated as a reliable estimate for the more costly final Standard

61. 101 S. Ct. at 2497 (quoting Universal Camera Corp. v. NLRB, 340 U.S. 474, 491 (1951)).

62. 617 F.2d at 660.

63. The Court did refuse, however, to "scrutinize the record to uncover and formulate a rationale" for the transfer with pay provision. 101 S. Ct. at 2505 n.73. That issue was remanded for further examination in the court below and thus represented the industry's sole success in its challenge to the standards.

64. Id. at 2506-07.

65. See notes 20-22 and accompanying text supra.

> actually promulgated, never rationally explaining how it came to this happy conclusion. This is not substantial evidence. It is unsupported speculation.[66]

In light of the Court's demanding substantial evidence review in *American Petroleum*, Justice Stewart's dissent seems well taken. The rigorous cast of mind that prevailed on the *American Petroleum* bench perhaps was tempered by the more obvious peril to the cotton worker considered in *American Textile*. While the carcinogenic qualities of benzene at low levels were open to dispute, the fact that byssinosis "affected as many as 30% of the workers [in some production processes] in some American cotton mills" was fairly clear.[67] The public appeal of the cause in *American Textile* allowed the Court to direct its focus away from the substantial evidence requirement of section 655(f) and instead to speak of the "best available evidence" required by section 655(b)(5).[68] In effect, the *American Textile* decision may be read as at least a partial fulfillment of Justice Marshall's predictions in the *American Petroleum* dissent:

> In all likelihood, [*American Petroleum*] will come to be regarded as an extreme reaction to a regulatory scheme that, as the Members of the plurality perceived it, imposed an unduly harsh burden on regulated industries. . . . I am confident that the approach taken by the plurality today . . . will eventually be abandoned, and that the representative branches of government will once again be allowed to determine the level of safety and health protection to be accorded to the American worker.[69]

In minimizing the rigorous demands of the substantial evidence standard of review, the Supreme Court plainly followed the spirit of the court of appeals' holding in *American Textile*.[70] The lower court had predicated its holding on the fact that Congress "delegated unusually broad discretionary authority" to OSHA for the issuance of regulations.[71] The court evidenced an extremely deferential attitude toward agency determinations when it noted that "[t]o protect workers from material health impairments, OSHA must rely on predictions of possible future events and extrapolations from limited data. It may have to fill gaps in knowledge with policy considerations."[72] Likewise, the Supreme Court voiced a similar flexibility, rather than the exacting tone of the earlier *American Petroleum* decision, when it noted and readily excused the fact that "both the RTI and Hocutt-Thomas studies had to rely on assumptions the truth or falsity of which could wreak havoc on the validity of their

66. 101 S. Ct. at 2507.

67. 448 U.S. at 646. See also note 15 supra.

68. 29 U.S.C. §§ 655(b)(5), 655(f) (1976).

69. 448 U.S. at 723-24.

70. 617 F.2d 636 (D.C. Cir. 1979).

71. Id. at 649.

72. Id. at 651. The court went on to note that "standards do not become infeasible simply because they may impose substantial costs on an industry, force the development of new technology, or even force some employers out of business. Otherwise the Act's commitment to protect workers might be forever frustrated." Id. at 655.

final numerical cost estimates."[73]

The key issue in future litigation may well be just how much "havoc" the Court will allow before invalidating standards under the section 655(f) standard of review. The wide divergence of approaches to judicial review evidenced by *American Textile* and *American Petroleum* does not lend itself to a natural synthesis, but some directions of the Court are discernible. First, industrial noncooperation will not be tolerated lightly. Because the Secretary had been limited in the precision of his estimates "by the industry's refusal to make more of its own data available,"[74] the industry was not readily heard to complain once final standards were enacted.

Second, by strictly limiting its review function and simply "declin[ing] to hold as a matter of law"[75] that OSHA's determination was unsupported by substantial evidence, the Court may have given a first hint of abdicating the field of rigorous review so willingly entered in *American Petroleum*. As Milton Wright of RTI noted, "We establish *bounds* on the costs. We're encouraged to do so by the agencies."[76] "Hard evidence is almost non-existent"[77] for certain textile production stages, and the absence of data on other aspects of cotton dust exposure has been termed "particularly regrettable"[78] and "especially unfortunate."[79] Bounds and nonexistent data are hardly the stuff of which truly meaningful substantial evidence review can be made. Mr. Wright termed the Secretary's conclusions "fairly logical."[80] Perhaps after *American Textile* substantial evidence will come to be regarded as "fair logic" in protective veneer.

Third, even though the Court commited itself to a liberal interpretation of substantial evidence in *American Textile*, a major question remains as to exactly how far the Court will go in employing the substantial evidence review as a validation device for extremely costly industrial regulation. Substantial evidence may well demonstrate increased risk to worker health as industrial processes grow in sophistication and in toxic exposure levels, but a delicate balance ultimately must be struck between protective regulation and the survival of the industry under review. The *American Textile* Court explicitly refused to decide "the question whether a Standard that threatens the long-term profitability and competitiveness of an industry is 'feasible' within the meaning of . . . 29 U.S.C. § 655(b)(5)."[81] When faced with the possibility of indus-

73. 101 S. Ct. at 2500 n.54.

74. Id. at 2500. Hocutt referred to the confidentiality of his sources during committee hearings. Id. at 2500 n.51. On the other hand, Milton Wright of RTI, who supervised the engineering control estimates, remembered that the industry was "willing to be cooperative" and "didn't hesitate" to supply data when requested. However, Mr. Wright did not note that complete industry-wide data were not available and that the lack of a central source complicated estimate procedures. Interview with Milton Wright, Consultant, RTI, in Research Triangle Park, N.C. (Nov. 18, 1981).

75. 101 S. Ct. at 2500.

76. Interview, supra note 74 (emphasis added).

77. Id. (referring to weaving).

78. RTI, supra note 17, at vol. I, II-3.

79. Id. at III-6.

80. Interview, supra note 74.

81. 101 S. Ct. at 2501 n.55.

trial demise and resulting economic dislocation, the Court may feel itself constrained to preserve worker employment at the expense of worker health. This problem may become particularly acute in times of mounting concern over the debilitating effects of unemployment upon the nation as a whole. Some degree of judicial experimentation in this regard is to be expected in future litigation, with the Act's provision for industrial petition for variance in compliance serving as a buffer against the economic shock of restrictive regulation.[82]

It is to be hoped that such future judicial experimentation in review of agency action will preserve the element of concern for human well-being so eloquently expressed in *American Textile*. At bottom, it is precisely this sort of policy determination that lies at the core of the *American Textile* decision. An attempt to incorporate absolute quantification into such policy-making plainly would have elevated industry profit above worker health. In this respect, the Court's deferential treatment of the substantial evidence standard of review in *American Textile* is to be welcomed as a necessary and sensible response to a pressing human need.

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82. 29 U.S.C. § 655(d) (1976) makes specific provision for variance from standards promulgated by OSHA, allowing "[a]ny affected employer [to] apply to the Secretary for a rule or order for a variance."