

# THE FUTURE OF TOXIC TORTS: OF CHEMOPHOBIA, RISK AS A COMPENSABLE INJURY AND HYBRID COMPENSATION SYSTEMS

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In America, lawsuits are morality plays. We are a secular society of many cultures that holds its most important public rituals in the courtroom. As we separate the guilty from the innocent, the good guys from the bad guys, we symbolically reexamine, and sometimes redefine, our official morality—the values that establish us as a community.

This is the key point that has generally been overlooked by the critics, including the present author,<sup>1</sup> of courts in toxic tort cases and other technical controversies.<sup>2</sup> Far more than fair and efficiently delivered compensation for bodily injury is at issue in these cases. Neither are these cases solely about issues of epidemiology, toxicology, and oncology, though these sciences have an important role to play.

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1. See Elliott, *Goal Analysis versus Institutional Analysis of Toxic Compensation Systems*, 73 GEO. L. J. 1357, 1374-75 (1985) [hereinafter *Goal Analysis*] (recommending that other institutions should be substituted for case-by-case litigation before lay courts for most toxic tort compensation claims); Elliott, *Why Courts? Comment on Robinson*, 14 J. LEGAL STUD. 799, 801 (1985) [hereinafter *Why Courts?*].

2. Feinberg, *The Toxic Tort Litigation Crisis: Conceptual Problems and Proposed Solutions*, 24 Hous. L. REV. 155, 171-74 (1987); Huber, *Safety and the Second Best: The Hazards of Public Risk Management in the Courts*, 85 COLUM. L. REV. 277, 322-35 (1985); Huber, *The Bhopalization of U.S. Tort Law*, 2 ISSUES SCI. & TECH. 73 (Fall, 1985); Jasanoff & Nelkin, *Science, Technology, and the Limits of Judicial Competence*, 68 A.B.A. J. 1094, 1099 (1982). Yellin, *High Technology and the Courts: Nuclear Power and the Need for Institutional Reform*, 94 HARV. L. REV. 489, 550-52 (1981). See also Priest, *Modern Tort Law and Its Reform*, 22 VAL. U. L. REV. 1, 10 (1987). See generally Sugarman, *Doing Away with Tort Law*, 73 CALIF. L. REV. 555 (1985) (general overview and criticism of the present tort law system).

Toxic tort cases are about good and evil, about corporate greed and indifference, and about the risk of the unknown.<sup>3</sup> But above all, toxic tort cases are about redefining our public morality for a new era in which we must confront the troubling truth that we do not fully comprehend the relationships between the things that we have made and our health and well-being.

Because toxic tort cases raise fundamental issues of public policy, we as a society will not, and probably *should* not, take these controversies out of the courts at this point in our history<sup>4</sup> and turn them over to compensation funds, whether administered by government or through private insurance.<sup>5</sup> Toxic tort cases are still too novel and too important to be left to panels of experts and bureaucrats in either administrative agencies or insurance companies. They involve basic controversies over evolving public values; these are fundamental political issues that experts have no greater right to resolve than anyone else in a democratic society.<sup>6</sup>

But the fact that experts should not dictate decisions of these issues to the rest of society does not imply, as many seem to think, that only policy or value decisions matter and that science is irrelevant or unimportant. The fact that juries are deciding fundamental issues of public morality in toxic tort cases is a compelling argument *in favor of* making sure that their verdicts are based on "good science," not an argument against it. Getting the science

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3. See E.D. Elliott, *Science Panels in Toxic Tort Litigation: Why We Don't Use Them* 22 (rev. ed. Feb. 8, 1988)(unpublished paper originally presented at the Cornell University Institute for Comparative and Environmental Toxicology Conference "Immunotoxicology: From Lab to Law" on October 16, 1987 [hereinafter *Science Panels*])("[T]oxic tort cases today really are like White Collar Crime cases; they have a lot more to do with the morality of the defendants' conduct than they do with estimating dose-response relationships."). See also Abraham, *Individual Action and Collective Responsibility: The Dilemma of Mass Tort Reform*, 73 VA. L. REV. 845, 883 (1987) ("Running through each of the principal problems that tend to be raised by mass tort litigation, however, is the tension between the traditional notion of individual responsibility and the expanded notion of collective responsibility.").

4. Professor David Rosenberg has made the point that case-by-case litigation "produced the informational and legal predicate for settling and trying tens of thousands" of asbestos cases. Rosenberg, *Toxic Tort Litigation, Crisis or Chrysalis: A Comment on Feinberg's Conceptual Problems and Proposed Solutions*, 24 HOUS. L. REV. 183, 189 (1987).

5. For a generally balanced discussion of the pros and cons of compensation funds and case-by-case litigation of toxic tort cases, see Rabin, *Environmental Liability and the Tort System*, 24 HOUS. L. REV. 27 (1987).

6. See Carter, *The Bellman, The Snark, and the Biohazard Debate*, 3 YALE L. & POL'Y REV. 358, 360-61 (1985)(discussing public distrust of scientists' judgment); Latin, *Good Science, Bad Regulation, and Toxic Risk Assessment*, 5 YALE J. ON REG. 89, 126-30 (1988) (value judgments important due to many uncertainties present in current regulatory practice).

right is necessary to frame the issues of value for juries to decide, just as good science is necessary to frame the policy issues for political decisions in the regulatory process.<sup>7</sup>

To date, a false dichotomy between the political wisdom of courts as the conscience of the community and the expertise and efficiency of agencies has dominated the discussion of institutions for dealing with issues of compensation for exposure to hazardous substances in the environment. This article attempts to dissolve that Hobson's choice. In fact, both courts and agencies have distinct advantages and disadvantages for dealing with issues of hazardous substances in the environment. Rather than continuing to debate a "no-win" choice between courts and compensation funds, we need to develop new institutional arrangements that adapt the best features of both courts and the administrative process to deal with the problems of toxics in the environment. Techniques that mesh judicial and administrative elements may be called *hybrid compensation systems*. The idea is *not* to replace judges and juries, but to facilitate their deliberations by using the administrative process to develop scientific information that can be used in individual tort cases.<sup>8</sup> We are beginning to develop such hybrid approaches to toxic compensation issues in practice.<sup>9</sup> This article proposes one illustration of how such a hybrid approach to compensation for exposure to toxic risk might work.

Institutional issues cannot be considered adequately, however, without also considering substantive standards of liability.<sup>10</sup> Proce-

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7. Ruckelshaus, *Risk in a Free Society*, 14 ENVTL. L. REP. (Envtl. L. Inst.) 10190, 10194 (1984).

8. Atkeson, *Toxics Regulation and Products Liability: Decreasing Exposure in the Workplace, Increasing Exposure in the Courts*, 13 ENVTL. L. REP. (Envtl. L. Inst.) 10418, 10418-19 (1983). See also STAFF OF SENATE COMM. ON ENVTL. & PUB. WORKS, 97th CONG., 2D SESS., SUPERFUND SEC. 301(E) STUDY GROUP, INJURIES AND DAMAGES FROM HAZARDOUS WASTES: ANALYSIS AND IMPROVEMENT OF LEGAL REMEDIES 198-219 (Comm. Print 1982) [hereinafter *Grad Report*] (rebuttable presumption of causation based on Toxic Substances Document).

9. Various examples of administrative-court hybrids are reviewed in E.D. Elliott, *Toward Incentive-Based Procedure: Three Approaches for Regulating Scientific Evidence* (March, 1988), Yale Law School Civil Liability Program Working Paper No. 76 [hereinafter *Three Approaches*].

10. Some of my previous work has been justly criticized for attempting to address institutional issues without considering the substantive legal standards that institutions would apply. See Farber, *Toxic Causation*, 71 MINN. L. REV. 1219, 1251 n.126 (1987) (criticizing Elliott, *Goal Analysis versus Institutional Analysis of Toxic Compensation Systems*, 73 GEO. L. J. 1357 (1985)).

Farber's other criticism is not well-taken. He ridicules my statement that it is "rare

ture and substance are inseparably intertwined in the law, and therefore "it is going to be impossible to create procedures for deciding toxic tort cases based on good science until we get straight on . . . a substantive liability standard."<sup>11</sup>

In what follows, I focus first on substantive standards for compensation. I will argue that several major distortions afflict toxic tort litigation today. Some of these problems are well recognized, such as the high cost and inherent inefficiency of case-by-case litigation in court.<sup>12</sup> A problem that is not so well recognized, but which is perhaps even more pernicious, is the effect of the traditional legal requirement that plaintiffs must prove that they are more likely than not to have suffered physical injury in order to recover.<sup>13</sup> I will argue that this focus on physical injury as the virtual *sine qua non* for recovery in toxic tort cases is an unfortunate legal fiction that produces major distortions in the trial of these cases, thereby exacerbating the flow of misinformation to the public about the effects of chemicals on human health.

To improve the system, we must try to develop standards of

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indeed that anything like the information base necessary to make even rough probability estimates [of risk] will exist," *Why Courts?*, *supra* note 1, at 802, with the rejoinder "This must have been welcome news to the Johns-Manville Corporation," a leading asbestos manufacturer forced into bankruptcy by toxic tort liability. Farber, *supra* note 10, at 1251 n.127. Nevertheless, in the very article that Farber cites, I specifically recognized that asbestos was an "exception" because "exposure to a single substance dominates" the victim's risk portfolio. *Why Courts?*, *supra* note 1, at 803. Farber himself goes on to recognize that asbestos is exceptional in that it causes "signature diseases" which are extremely rare. Farber, *supra*, at 1251-52. For further descriptions of why asbestos is atypical, see Abraham & Merrill, *Scientific Uncertainty in the Courts*, *ISSUES SCI. & TECH.* 93, 101 (Winter 1986).

11. Science Panels, *supra* note 3, at 22.

12. J. Kakalik, P. Ebener, W. Felstiner & M. Shanley, *Costs of Asbestos Litigation* vii (Rand Inst. for Civil Justice 1983) (Table S.2)(victims receive only 37% of total costs paid by defendants and insurers); Feinberg, *supra* note 2, at 159-64. See also Wellington, *Asbestos: The Private Management of a Public Problem*, 33 *CLEV. ST. L. REV.* 375, 376-78 (1984-85).

Professor Rosenberg's argument that the high costs for asbestos cases in the Rand study are exaggerated by "start-up" costs is probably correct, but that is clearly insufficient to explain away the enormous disparity in transaction costs between litigation and other compensation systems. Rosenberg, *supra* note 3, at 166. Other studies of the tort system have found transaction costs approximately equal to the amounts of compensation delivered, as opposed to roughly twice as high as in the Rand asbestos study. In either case, the costs of litigation are much higher than other compensation systems. See U.S. DEPT. TRANSPORTATION, *MOTOR VEHICLE CRASH LOSS AND THEIR COMPENSATION IN THE UNITED STATES* 94-100 (1971), quoted in R. EPSTEIN, C. GREGORY & H. KALVEN, *CASES AND MATERIALS ON TORTS* 951, 952 (4th ed. 1984).

13. See *Jackson v. Johns-Manville Sales Corp.*, 727 F.2d 506, 516 (5th Cir. 1984), *cert. denied*, 106 S.Ct. 3339 (1986)(stating the traditional "more likely than not" rule).

liability that more closely approximate the community's prevailing moral norms. This implies that courts should begin to recognize a cause of action for involuntary exposure to the *risk* of chemical injury, which is separate and distinct from the physical injuries that can be proved to result from chemical exposure.

In the second part of the article, I turn to institutional issues, considering the reasons that lie behind the curious evolution of our legal institutions for dealing with chemicals in the environment and arguing that the future of toxic torts should not be either courts or compensation funds, but hybrid systems that combine the best of both.

### I. CHEMOPHOBIA AND RISK AS A COMPENSABLE INJURY

Americans have a widespread, irrational fear of chemicals, a phenomenon which I shall call *chemophobia*.<sup>14</sup> Although what science knows about chemicals in the environment suggests that they are actually a relatively minor source of risks to our health,<sup>15</sup> many Americans are nonetheless very concerned about toxic chemicals.

While I have no firm evidence to back up this speculation, I believe that one factor stimulating our collective chemophobia is press coverage of toxic tort cases and precautionary government regulatory actions.<sup>16</sup> Hardly a day goes by without headlines reporting either some new government action against a substance that supposedly causes cancer, or a multi-million dollar jury verdict in a toxic tort case. Is it any wonder, then, that much of our population is convinced that "everything causes cancer"?

Prevailing standards of substantive law in toxic tort cases are stimulating an increasing flow of misinformation to the public about the risks of chemicals in the environment. The reasons are clear. Normally, in our current legal system, persons who have been involuntarily exposed to chemicals are allowed to recover

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14. See generally E. WHELAN, TOXIC TERROR 19-23 (1985) (noting and criticizing the proponents of a "poison conspiracy" based on a parallel between the general increase in cancer cases and the deterioration of the environment); M. DOUGLAS & A. WILDAVSKY, RISK AND CULTURE: AN ESSAY ON THE SELECTION OF TECHNICAL AND ENVIRONMENTAL DANGERS 10-11 (1982) (society's present sectarian outlook views industrialization as a conspiracy intent on technological contamination of the body of nature and of man).

15. See Ames, Magaw, & Gold, *Ranking Possible Carcinogenic Hazards*, 236 Sci. 271, 277 (1987).

16. See Elliott, Book Review, 92 YALE L. J. 888, 896-97 (1983) (reviewing M. DOUGLAS & A. WILDAVSKY, RISK AND CULTURE: AN ESSAY ON THE SELECTION OF TECHNICAL AND ENVIRONMENTAL DANGERS (1982)).

compensation only if they claim that they have suffered bodily injuries.<sup>17</sup> As a consequence, only several years ago, most knowledgeable lawyers thought that it would be very difficult to win chemical exposure cases under traditional principles of tort law.<sup>18</sup> Except where exposure to a toxic substance causes a rare disease with virtually no other known causes,<sup>19</sup> conventional science generally cannot make the showing traditionally required by tort law—namely, that it is more likely than not that a particular plaintiff's illness was caused by exposure to a particular substance.<sup>20</sup>

When applied to chemical exposures, the traditional tort standard of proof is unduly harsh and unreasonable. In theory, it places the entire burden of scientific uncertainty on the plaintiff. This has extremely unfortunate consequences. First, the unreasonably demanding standard of traditional tort law virtually compels plaintiffs' lawyers to use experts who will distort the available scientific evidence — or, at the very least, present a very extreme view of what the available evidence shows — in order to get to the jury in toxic tort cases.<sup>21</sup> For example, plaintiffs in toxic tort cases are increasingly relying on testimony by a small group of professional witnesses called "clinical ecologists" (whose views are repu-

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17. Recently a few doctrines have begun to develop which expand on the traditional focus on physical injury. See, e.g., *Ayers v. Jackson Township*, 525 A.2d 287 (N.J. 1987) (medical monitoring); *Jackson v. Johns-Manville Sales Corp.*, 781 F.2d 394, 413-15 (5th Cir.) (en banc), cert. denied, 106 S.Ct. 3339 (1986) (persons exposed to asbestos, who have a probability greater than 50% of developing cancer in the future, can recover for risk of cancer); *Dartez v. Fibreboard Corp.*, 765 F.2d 456, 467-68 (5th Cir. 1985) (allowing persons exposed to asbestos to recover for fear of developing cancer in the future). To date, however, physical injury tends to remain the primary claim in most toxic tort cases.

18. Udall, *Toxic Chemicals and Radiation*, 38 MERCER L. REV. 511, 517 (1987); Ginsberg & Weiss, *Common Law Liability for Toxic Torts: A Phantom Remedy*, 9 HOFSTRA L. REV. 859, 922-25 (1981). See also *Grad Report*, supra note 8, at 55-56.

19. For a description of the factors that determine whether conventional science can relate diseases to particular chemical exposures, see *Goal Analysis*, supra note 1, at 1369-1372 (rare disease, with relatively few known causes, and a clear exposure route). See also Black & Lilienfeld, *Epidemiologic Proof in Toxic Tort Litigation*, 52 FORDHAM L. REV. 732, 769-70 (1984) (courts have generally accepted epidemiological evidence in cases involving diseases caused by viruses or bacteria). Recently, the term *signature diseases* has been coined to describe a few diseases, such as mesothelioma, following asbestos exposure, which can be reliably related to chemical exposure because they have virtually no other known causes. Abraham & Merrill, supra note 10, at 101; Farber, supra note 10, at 1251-52.

20. Refer to note 13 supra and accompanying text.

21. For an exceptional case in which the court granted summary judgment despite the existence of several expert affidavits for the plaintiffs, see *In re Agent Orange Prod. Liab. Litig.*, 611 F. Supp. 1223, 1258-59 (E.D.N.Y. 1985), aff'd, 818 F.2d 187, 193 (2d Cir. 1987), appeal pending. The evidence of causation is no stronger in many cases that go to juries and result in plaintiffs' verdicts.

diated by the scientific establishment).<sup>22</sup> Lay juries and the public are vulnerable to being misled by such "experts."<sup>23</sup>

Even more important, however, the standard of proof theoretically required in toxic tort cases is so harsh and unrealistic that many juries will not abide by it. In a few exceptional cases, such as asbestos, the scientific evidence is overwhelming. But by and large, plaintiffs are winning large verdicts in toxic tort cases not because it is easier to make the scientific showing which is theoretically required; instead, today's plaintiffs are winning toxic tort cases because juries are nullifying the formal law<sup>24</sup> and holding defendants liable even in the absence of persuasive proof of causation that meets the theoretical standards of tort law. The traditional rule of tort law, that it is "unfair to require an individual to pay for another's tragedy unless it is shown that it is more likely than not that he caused it,"<sup>25</sup> no longer captures our society's prevailing sense of justice in cases where innocent people have been involuntarily exposed to substances that are potentially dangerous to their health.<sup>26</sup>

A hypothetical example may help to illustrate why juries are refusing to follow the traditional tort standard in toxics cases.<sup>27</sup> Suppose that before the session today I sneaked into the room and put some white powder from my daughter's chemistry set into the water pitchers from which the audience has been drinking. I then said to you: "I don't know what it was, and I don't know if it will harm you. It's your problem. You prove that whatever I put into

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22. *Immune System Theories on Trial*, 234 Sci. 1490, 1491 (1986); *Science and Toxic Tort Law: Novel Strategies in the Woburn Litigation*, 1 Toxic L. Rep. 374 (BNA) (Sept. 10, 1986)[hereinafter *Novel Strategies*]. For an extended discussion of the role of clinical ecology in toxic tort litigation, see *Three Approaches supra* note 9, at 5-12.

23. Address by J. Weinstein, ABA Annual Meeting 12 (Aug. 9, 1987):

[A]n expert can be found to testify to the truth of almost any factual theory, no matter how frivolous, thus validating the case sufficiently to avoid summary judgment and forcing the matter to trial. At the trial itself, an expert's testimony can be used to obfuscate what would otherwise be a simple case. . . . Juries and judges can be, and sometimes are, misled by such experts-for-hire.

24. See generally M. KADISH & S. KADISH, *DISCRETION TO DISOBEY: A STUDY OF LAWFUL DEPARTURES FROM LEGAL RULES* 45-66 (1973)(discussing jury readiness to abandon applicable legal doctrine, even in criminal cases); Schefflin, *Jury Nullification: The Right to Say No*, 45 S. CAL. L. REV. 168 (1972)(historical perspective on jury nullification).

25. *In re Agent Orange Prod. Liab. Litig.*, 597 F.Supp. 740, 781 (E.D.N.Y. 1984), *aff'd*, 818 F.2d 145 (2d Cir. 1987)(appeal pending).

26. *Why Courts?*, *supra* note 1, at 800.

27. The analysis in the next few paragraphs is drawn from *Science Panels, supra* note 3, at 20-22.

your water did something bad to you. If you can't, then I haven't done anything wrong."

Those of you who have been drinking the water might feel that I had done something wrong, even if no one ever proved that your health had been adversely affected by the incident. You would justifiably feel that your right to bodily autonomy had been violated, that I had turned you into "human guinea pigs" without your consent. As a general matter, if a person's body has been invaded and she has been subjected without her consent to an avoidable and uncompensated risk, including the risk of uncertainty as to what the ultimate consequences to health may be, she has been injured in a way that should be compensated by the legal system where possible. Two distinct harms are involved when people are exposed to chemicals without their consent: (1) the involuntary exposure to risk; and (2) any physical harm to health that may be provable.

I think that juries in toxic tort cases intuitively understand this distinction. Normally, juries feel that it is morally wrong to put trichloroethylene (TCE) into someone's well water, even if today's best scientists can't yet say for sure whether the TCE actually caused the leukemia in the children who drank the water from the well.<sup>28</sup> As a result, the central issue that is actually litigated in today's toxic tort cases is not the formal legal/scientific issue: "can the plaintiff prove that it is more likely than not that there is a causal connection between exposure to a particular substance and a particular disease." Rather, today's toxic tort cases are really white-collar crime cases; they have a lot more to do with the morality of the defendants' conduct than they do with estimating dose-response relationships.

In part, this is as it should be. The common law has traditionally recognized that serious bodily injury itself and the threat of serious bodily injury are two separate, compensable harms. The traditional distinction is between assault, which consists of putting someone in fear of serious bodily injury, and battery, which consists of actually striking them.<sup>29</sup> My sometime colleague at Yale, the philosopher Judith Jarvis Thomson, has written on this clear

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28. See *Novel Strategies*, *supra* note 22, at 378-80.

29. PROSSER AND KEETON ON THE LAW OF TORTS, §§ 9-10 (5th ed. 1984). In civil, as opposed to criminal, law, even pointing an unloaded revolver at someone which puts them in fear of harm constitutes an actionable assault. See G. CHRISTIE, *CASES AND MATERIALS ON THE LAW OF TORTS* 53 (1983).



distinction between the risk of injury and the injury itself.<sup>30</sup>

My objection is not that juries are compensating plaintiffs for involuntary exposure to risks but that the formal law forces juries to compensate for involuntary exposure to risk under the guise that it is awarding damages for proven bodily harm. This charade serves to reinforce public misperceptions and chemophobia.

We should purge toxic tort law of the unfortunate and legally anomalous doctrine that no harm is suffered unless the plaintiff can prove that it is more likely than not that involuntary exposure to the chemical caused a recognized disease or other form of physical harm. The violation of a person's bodily autonomy, the affront to one's dignity that occurs when one is assaulted with a potentially hazardous chemical, is also an injury that the law should recognize and compensate.

Of course, the difficulty would be in putting a price on intangible injuries of this type. Perhaps it would help to remind ourselves that juries put prices on intangible injuries such as these every day, but that is certainly not a completely satisfactory answer. Previous legal authors who have advocated compensation for risk have tried to value risk solely by evaluating the likelihood of physical injury.<sup>31</sup> Although the likelihood of physical harm is obviously a relevant factor, it is not the only factor that should be considered when determining fair compensation for involuntary exposure to risk. Persons who have been unreasonably exposed, without their consent, to chemicals that may be hazardous, are entitled to be compensated for the violation of their personal autonomy and dignity, and their justifiable fear and uncertainty, even if it later turns out that the risks to their physical health are trivial or nonexistent. Moreover, focusing exclusively on provable risks of physical injury, as these authors advocate, places the entire cost of scientific uncertainty on the victim, which is "a result as inefficient as it is unfair."<sup>32</sup>

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30. THOMSON, *Imposing Risks*, in *RIGHTS, RESTITUTION & RISK: ESSAYS IN MORAL THEORY* 173, 191 (W. Parent ed. 1986). "[T]he most that can be said of [the workman in a risky factory] is this: knowing the factory is risky, he consents to work in it." *Id.*

31. Farber, *supra* note 10, at 1243-51; Robinson, *Probabilistic Causation and Compensation for Tortious Risk*, 14 *J. LEGAL STUD.* 779, 786 (1985); Rosenberg, *The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System*, 97 *HARV. L. REV.* 849 (1984); Landes & Posner, *Tort Law as a Regulatory Regime for Catastrophic Personal Injuries*, 13 *J. LEGAL STUD.* 417, 425-31 (1984); Estep, *Radiation Injuries and Statistics: The Need for a New Approach*, 59 *MICH. L. REV.* 259, 262-68 (1960).

32. Tribe, *Trial by Mathematics: Precision and Ritual in the Legal Process*, 84 *HARV.*

Paying larger numbers of people some compensation for involuntary exposure to chemical risks would not necessarily cost more than the present system — in which a few plaintiffs in toxic tort cases recover enormous verdicts. In arriving at a fair valuation for involuntary exposure to risk, juries could be directed to consider the actual level of risk that arises from chemical exposures in relation to other risks that we normally encounter in our every day lives.<sup>33</sup> This could bring a welcome note of realism to the evidence in toxic tort cases.<sup>34</sup> Alternatively, in a form of hybrid compensation system, generic estimates of the risks to health associated with various levels of exposure to particular chemicals could be developed through administrative rulemaking and introduced as evidence in court.<sup>35</sup>

## II. THE CURIOUS EVOLUTION OF ENVIRONMENTAL INSTITUTIONS

Comparing environmental institutions today with those of two decades ago produces a curious sense of *deja vu*. Now, as then, courts are struggling with issues on the frontiers of science. In the interim, of course, a vast regulatory bureaucracy has been created to set and enforce environmental standards. The curiosity from a historical perspective, however, is not that “expert agencies” such as the EPA (and OSHA, CPSC, *etc.*) were developed in the 1970’s to deal with highly technical issues of environmental law. Rather, the oddity is that, after creating the expert environmental agencies in the 1970s, we have chosen in the 1980s to “return to common law”<sup>36</sup> — to case-by-case litigation before traditional courts — as the mainstay for making much of our legal policy relating to chemicals in the environment. The regulatory apparatus still exists, but

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L. Rev. 1329, 1349-50 (1971). (discussing a famous hypothetical in which too large a share of accident costs are allocated to a bus company). If plaintiffs must bear the full burden of uncertainty, too little of the costs of chemical injuries will be borne by defendants.

33. See Ames, Magaw, & Gold, *supra* note 15, at 276-77.

34. In some recent cases, defendants have successfully introduced comparative risk assessments. Munter & DeVries, *Higgins v. Aerojet Corporation: Successfully Defending a Toxic Tort Case*, 1 TOXICS L. REP. (BNA) 874, 875-76 (Jan. 14, 1987).

35. Cf. Orphan Drug Act, Pub. L. No. 97-414, 96 Stat. 2059, § 7(b)(1) (1983), 42 U.S.C. § 241 note (1982) (directs Health and Human Services to prepare radio-epidemiological tables estimating probability that persons exposed to various doses of radiation from atmospheric testing of atomic weapons will develop cancer).

36. See J. BONINE & T. MCGARITY, *THE LAW OF ENVIRONMENTAL PROTECTION: CASES, LEGISLATION, POLICIES 1007-08* (1984) (part of the rationale for creating regulatory agencies was “to get the courts out of the business of setting environmental policy on an ad hoc basis,” but the case-by-case common law is still a viable alternative).

it is the courts in toxic tort cases, natural resources damage actions under CERCLA, and judicial review of administrative action that increasingly constitute the law's "cutting edge." Courts in these cases are struggling to deal with issues on the frontiers of science and technology just as they were twenty years ago in cases like *Reserve Mining Co. v. Environmental Protection Agency*,<sup>37</sup> prior to the creation of EPA. Over the last two decades, the center of gravity for policymaking about chemicals in the environment has shifted from courts to administrative agencies, but now seems to be shifting back to the courts. This poses an embarrassing question for those of us<sup>38</sup> who believe that administrative institutions are inherently superior to courts for resolving policy questions with important technical and scientific components: *If administrative agencies are so great, why are they being rejected by history?*

#### A. *The Theoretical Superiority of Administrative Institutions*

Let us begin by considering why, *in theory*, administrative institutions are inherently superior to case-by-case litigation in courts as mechanisms for dealing with issues of toxic substances in the environment.

The essential difference between courts and administrative agencies is that courts have certain fundamental institutional characteristics that cannot be altered, whereas administrative agencies created by statute can assume virtually any form imaginable. By definition, a court consists of lay judges and juries who decide cases between identifiable plaintiffs and defendants. The defining characteristic of administrative agencies, on the other hand, is that they are not alike.<sup>39</sup> The concept of an "administrative agency" is one of the weakest residual categories in American law; we call any governmental entity that makes or applies law but is not a traditional court, legislature, or executive department an "administrative agency."

The theoretical superiority of administrative institutions to

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37. 514 F.2d 492, 500, 519 (8th Cir. 1975).

38. See *Goal Analysis*, *supra* note 1, at 1375; *Why Courts?*, *supra* note 1, at 804-05.

39. The variability of administrative institutions should be obvious to anyone who has listened to the debate about administrative compensation systems for toxic exposures: conservatives oppose them because the Black Lung program "proves" that administrative programs pay too much to claimants; liberals oppose them because worker's compensation programs "prove" that administrative programs pay too little to claimants. They can't both be right. *Why Courts?*, *supra* note 1, at 804.

deal with policy questions with significant components of a scientific nature flows from the fact that the institutional characteristics of administrative entities are variable, while those of courts are more fixed. Proponents of administrative alternatives to traditional litigation have recommended a number of modifications which, *in theory*, ought to improve the performance of governmental institutions dealing with problems relating to chemicals in the environment. Most of these suggestions focus on two central features of courts: lay decisionmakers and case-by-case adjudication of controversies. By incorporating various forms of "expertness" in place of lay decisionmaking and by shifting the focus from adversary litigation of particular cases to generic policymaking, proponents of the administrative institutions hoped to improve the legal process for dealing with problems of chemicals in the environment.

On the other hand, those who maintain that courts are superior to agencies for dealing with these questions, are reduced to the claim that courts, if not perfect, are at least the optimal institution imaginable.<sup>40</sup> Any statutory change in the fundamental institutional features of courts (which would, by definition, convert them into agencies) would therefore detract from their performance. So

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40. For example, Don Stever suggests that judges and juries do just fine at handling scientific controversies, citing a comment by the Chairman of the Department of Epidemiology at Johns Hopkins, Dr. Leon Gordis, that Judge Weinstein's opinions in the *Agent Orange* case showed a good understanding of epidemiological evidence. Stever, *Remedies for Hazardous or Toxic-Substance-Related Personal Injury*, 25 Hous. L. Rev. 801, 813 n.72. I think that Dr. Gordis's remarks actually support just the opposite conclusion: apparently it is sufficiently rare that judges and lawyers "get their epidemiology right" that Dr. Gordis considers it worth mentioning that an individual case could be found in which the trial judge did a pretty good job of handling scientific evidence. In any event, *Agent Orange* was an extraordinary case and Judge Weinstein is an extraordinary trial judge. See P. Schuck, *AGENT ORANGE ON TRIAL: MASS TOXIC DISASTERS IN THE COURTS* 12-13 (1986).

The appeal in *Agent Orange* was more typical of the usual judicial tendency to distort or misunderstand the import of technical evidence. See Ashford, Ryan & Caldart, *Law and Science Policy in Federal Regulation of Formaldehyde*, 222 *SCIENCE* 894 (Nov. 25, 1983). At oral argument the Second Circuit misunderstood and dismissed the very epidemiological evidence that Dr. Gordis found persuasive. For example, Judge Ralph Winter offered the following grossly simplistic criticism (which is totally innocent of the concept of dose-response relationship): "What good are studies that show that veterans exposed to Agent Orange do not suffer these diseases in any greater proportion than the civilian population of the United States, when in fact it may be the case that the proportion of the civilian population of the United States exposed to these chemicals may be roughly the same proportion as Viet Nam veterans who were exposed to these chemicals?" Transcript of Argument, In Re "Agent Orange" (Nos. 84-6273 etc. 2d Cir., April 9, 1986) at p. 53. The court of appeals pointedly refused to endorse Judge Weinstein's analysis of the epidemiological studies, and affirmed on an alternate ground. In re *Agent Orange Prod. Liab. Litig.*, 818 F. 2d 145 (2d Cir. 1987), *app. pending*.

framed, the procourt position is theoretically dubious. It seems unlikely that any human institution, particularly one that deals with a broad range of controversies, is so perfectly suited to every task that it cannot be improved.

*B. "None of This Would Have Happened If We Had Invented Administrative Agencies."*

To me, the abstract, theoretical case that one could improve on the performance of courts by greater infusions of expertise and by expanding the focus for policymaking beyond the artificial framework of a "case" is compelling.<sup>41</sup> Contrast these abstract, theoretical advantages of administrative institutions, however, with the actual record of administrative decisionmaking during, for example, the Gorsuch era at the EPA, and the case for administrative institutions becomes much less clear. For the moment, leave aside whether the Gorsuch EPA was really as bad as the press made it out to be. In politics, appearances *are* reality, and the undeniable political reality is that, when it comes to credibility, administrative institutions have lost out to courts — with the public and the Congress — in recent years.

There are several reasons for this widening "credibility gap." First, to a significant degree, our culture no longer recognizes the authority of experts. According to modern philosophers of science, there is no such thing as a scientific truth that is absolute and immutable.<sup>42</sup> This perspective, sound in itself, has been carried to ridiculous extremes of know-nothing-ism by people who contend that *because* there is no absolute truth, *then* anyone's opinion on a question of scientific fact is equally likely to be true.<sup>43</sup> This position is as destructive as it is illogical, but it commands many adherents today. Many of us now believe that the judgment of a lay jury on what caused a particular cancer stands as good a chance of being correct as that of a panel of the National Academy of Sciences. Science is seen as another form of politics. In such a populist, anti-intellectual milieu, proposals to substitute "experts" for juries are not seen as merely misguided but as evidence of a con-

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41. Science Panels, *supra* note 3, at 8, 12.

42. See, e.g., T. KUHN, THE STRUCTURE OF SCIENTIFIC REVOLUTIONS 3-7 (2d ed. 1970).

43. Cf. Carter, *supra* note 6, at 361 (scientific judgment generally suspect among public).

spiracy by the barons of industry and their running dogs.<sup>44</sup>

In addition, there are also institutional causes for the loss of faith in administrative decisionmaking. It is hard to argue that actual decisions by administrative agencies in the United States are entitled to whatever deference scientific expertise still commands. For example, five case studies of standard-setting in the health and safety area prior to the Reagan administration concluded that "data and analysis are not the sole basis for setting standards; indeed, *they often do not even serve as an important resource.*"<sup>45</sup> The history of administrative regulation in the environmental area is largely a history of regulatory decisions made on political grounds, than rationalized on scientific ones.<sup>46</sup>

Perhaps this is as it should be. Perhaps decision by "experts" is too undemocratic for the United States, particularly where emotional issues of health and safety are involved. Perhaps a wise decision was made in 1970 when it was decided to place EPA under a single politically-responsible administrator. The consequence of these institutional decisions has been, however, to reinforce the political nature of administrative decisions in the environmental area. And the palpably political nature of administrative decisions in the environmental area has in turn led the public and the Congress to look back to the courts for decisions that are perceived as relatively insulated from politics,<sup>47</sup> even if ill-informed.

The mixed record of administrative decisionmaking in the health and safety area cannot be considered a refutation of the New Deal Ideal of administrative decisions based on expertise and insulated from political control;<sup>48</sup> the truth is that the New Deal

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44. See P. BRODEUR, *OUTRAGEOUS MISCONDUCT: THE ASBESTOS INDUSTRY ON TRIAL* 312-14 (1985) (proposals for administrative compensation systems portrayed as an attempt by industry to escape tort liability).

45. THE BROOKINGS INSTITUTION, *THE SCIENTIFIC BASIS OF HEALTH AND SAFETY REGULATION* 16 (Studies in the Regulation of Economic Activity, R. Crandall & L. Lave eds. (1981) (emphasis added).

46. See E. Burger, *Human Health: A Surrogate for the Environment, The Evolution of Environmental Legislation and Regulation During the 1970's* 16 (unpublished paper originally presented at the Cornell University Institute for Comparative and Environmental Toxicology Conference "Immunotoxicology: From Lab to Law" (Oct. 16, 1987).

47. See Resnik, *The Mythic Meaning of Article III Courts*, 56 U. COLO. L. REV. 581 (1985) (Central purpose of Article III courts provide independent assessment of acts of government).

48. For further elaboration on the New Deal Ideal, see generally B. ACKERMAN & W. HASSLER, *CLEAN COAL/DIRTY AIR* 4-6 (1981) (New Deal Ideal of administrative decisionmaking defined by affirmation of expertise, agency insulation from central political control, and insulation from judicial oversight).

Ideal of decisions based on administrative expertise has never been tried, at least not in the United States.

In a real sense, American law still has not managed to invent the administrative agency, at least not in the ideal form envisioned by James Landis and the other New Deal reformers. Instead, these reformers compromised their creations, from the moment of their birth, with consequences that are still being felt. Rather than acknowledge that the entities created by statute in the 1930's and 1970's represented new types of legal institutions not envisaged by the framers of the Constitution, activist lawyers attempted to legitimate their creations by a legal fiction called the "delegation doctrine." The basic strategy has been to deny that administrative agencies represent anything fundamentally new in American law by analogizing them to traditional parts of the executive branch. Over time, however, this fiction tends to become a self-fulfilling prophecy. American lawyers find it increasingly difficult to imagine insulating administrative decisions from political control — because administrative agencies are *in* the executive branch.

One illustration of the long-term consequences of the unholy compromise struck in creating the administrative agency is the so-called *Morgan* doctrine.<sup>49</sup> Most of us who teach environmental law sense that judicial review of the technical facts underlying administrative decisions has become a joke. Administrators reach their decisions on political grounds, then instruct their lawyers to write opinions rationalizing them in terms of the relevant scientific and technical facts. Under *Morgan*, courts are restricted to reviewing the adequacy of the written opinion rationalizing the decision; except in exceptional circumstances, they may not inquire into what factors were actually taken into account in reaching a decision. This creates the bizarre prospect that courts must defer to the scientific and technical expertise of an agency ruling even when the agency's own scientists disagreed but were overruled by the political appointees who made the final decision.

This doctrine applies to administrative decisions in the environmental area, not because courts have decided that it makes sense in this context but because courts developed the principle that it was inappropriate to "probe the mind of the decisionmaker" in the context of cabinet officials. Because the legal fiction of the delegation doctrine insists that the EPA is "just like"

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49. See *United States v. Morgan*, 313 U.S. 409, 422 (1941).

the Secretary of Transportation, courts have applied the *Morgan* doctrine to a broad range of administrative agencies. The consequence is that courts are powerless to reverse the dominance of politics over expertise.

C. *The Ritual Significance of "Judgment in a Court of Law"*

There is a second reason — perhaps really just a corollary of the first — that explains why Congress and the public have been inclined to prefer judicial to administrative decisions when issues of compensation are concerned. Imagine the perfect compensation decision rendered by a neutral administrative expert. Such a decision would use expert knowledge to implement the governing legal standard for fair and efficient compensation. The goal would be to pay no one too little, and no one too much, while keeping transaction costs to a minimum.

Now contrast this image of antiseptic, neat, and soulless bureaucratic efficiency in delivering mathematically correct compensation to claimants with the agony and fury of the Woburn mother who has lost her only child to leukemia and brings a toxic tort case against those she perceives as responsible. Her stated goal is to give some meaning to her own suffering by making sure that no other mother will ever have to go through what she has endured.

There is a fundamental *mismatch* between the ideal of administrative expertise and efficiency and the symbolic and political issues that underlie claims for compensation from exposure to toxic substances. The Woburn mother, like the Agent Orange vet and the asbestos widow, is seeking to make a point about morality, about good and evil, and about callousness toward the risks of causing great suffering to other human beings. For the Woburn mother and the others, the prompt and efficient award of just compensation is not the point; instead, money is a way of keeping score. They view toxic tort litigation as a form of politics. They simply do not share the goal of minimizing transaction costs, which appeals to many of us in industry and the academy.

Those who perceive themselves as the victims of industrial atrocities reject the notion that they should be bought off quietly, out of sight and out of mind in some obscure government or private "compensation program." They demand the right to call those whom they perceive as their tormentors to account in the ritual setting in which our society has traditionally held such public morality plays — a courtroom before a jury of their peers.



For people who view toxic tort litigation this way — my colleague Jerry Mashaw calls it the “guerilla warfare” view<sup>50</sup> — there is no such thing as an error by a jury in a toxic tort case; whatever the jury decides is, by definition, correct because the jury is the representative of the community.

Democracy is a fine thing, but as we should have learned when men feared witches and burned women, there are also risks to deciding important public issues based on popular prejudices and superstitions. Jury verdicts in cancer cases, decided only a generation ago, have a similarly superstitious smell today — everything from cuts and bruises to sand has been found by a jury somewhere to have caused cancer. The verdicts in these cases were usually affirmed on appeal.<sup>51</sup> I suspect that many of today’s toxic tort verdicts will appear similarly primitive when future observers look back on them.

What’s wrong with this? One answer to this question, of course, is that defendants — usually corporations or insurance companies — end up paying for some injuries that they did not cause. This is unfortunate, but if this were the only issue, perhaps the problem of erroneous jury verdicts would not be too serious. Because traditional rules of tort law cast the entire burden of uncertainty on the victim and because causation is often difficult to prove, corporations and insurance companies do not pay for all the injuries that they *do* cause.

To me, the more compelling objection to verdicts that are not based on good science is premised on the idea that the courts *are* the forum in which our society holds ritual morality plays to redefine and reaffirm its collective vision of public values. What takes place in the courtrooms of this country is reported in the press and becomes a major determinant of how the public views issues of risk. If the American people are ever going to have a more informed, mature, and balanced attitude toward the risks of chemicals in the environment, toxic tort litigation, like other forms of our public discourse, must educate the public, not pander to its fears and prejudices.<sup>52</sup>

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50. Mashaw, *A Comment on Causation, Law Reform, and Guerilla Warfare*, 73 *Geo. L. J.* 1393, 1395 (1985).

51. See Black & Lilienfeld, *supra* note 19, at 739-741 & nn.18-29 (collecting cases).

52. Cf. Burt, *Constitutional Law and the Teaching of the Parables*, 93 *YALE L. J.* 455, 500-01 (1984) (the courts offer society an opportunity to second-guess itself and learn from its mistakes); Rostow, *The Democratic Character of Judicial Review*, 66 *HARV. L. REV.* 193,

## III. TOWARD "HYBRID" COMPENSATION INSTITUTIONS

In light of the real strengths and weaknesses that affect both traditional litigation and traditional administrative compensation systems, I do not believe that either "alternative" in its pure form will constitute the future's answer to the problem of compensation for exposure to toxic substances in the environment. Rather, we seem to be moving toward an institutional synthesis which incorporates aspects of both traditional litigation and the administrative process.

There are many signs of this evolution toward "hybrid" institutions for dealing with toxic compensation claims. In bankruptcy proceedings and class action suits, for example, courts are increasingly adopting techniques developed in the administrative process to deal with mass claim processing and reduce transaction costs.<sup>53</sup>

A more striking sign that "hybrid" institutional solutions are developing is the growing use of administrative "science panels" to make generic assessments of risks that can be used as evidence in individual tort cases. A number of these hybrid compensation systems, using administrative science panels to develop generic scientific evidence for use in individual tort cases, are evolving.<sup>54</sup> Epidemiological studies by the federal Centers for Disease Control (CDC) have been accepted by the courts as evidence and have become the mainstays of the plaintiffs' cases for toxic shock syndrome<sup>55</sup> and swine flu.<sup>56</sup> A recent statute mandates the federal Department of Health and Human Services (HHS) to compile estimates of the probability that persons exposed to various levels of radiation from atmospheric testing of nuclear weapons will develop cancer.<sup>57</sup> The 1986 amendments to the "Superfund" statute mandate the Agency for Toxic Substances and Disease Registry (ATSDR),<sup>58</sup> to compile toxicological profiles on the one hundred

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208 (1952) (Supreme Court Justices are "teachers in a vital national seminar").

53. See McGovern, *Management of Multiparty Toxic Tort Litigation: Case Law and Trends Affecting Management*, 19 FORUM 1, 5 (1983) (detailing a trend toward streamlining legal processes with centralized rule-making systems).

54. The discussion of hybrid compensation systems that follows is adapted from Three Approaches, *supra* note 9, at 35-38.

55. *Ellis v. International Playtex, Inc.*, 745 F.2d 292, 301 (4th Cir. 1984); *Kehm v. Proctor & Gamble Mfg. Co.*, 724 F.2d 613, 619 (8th Cir. 1983).

56. *In re Swine Flu Immunization Prod. Liab. Litig.*, 508 F.Supp. 897, 907 (D.Colo. 1981), *aff'd sub nom. Lima v. United States*, 708 F.2d 502 (10th Cir. 1983).

57. Refer to note 35 *supra*.

58. Until recently, the Agency for Toxic Substances was part of Center for Disease

most significant hazardous substances.<sup>59</sup> These "tox profiles" are to include an "interpretation of available toxicological information and epidemiologic evaluations . . . in order to ascertain the levels of significant human exposure . . . and the associated . . . health effects."<sup>60</sup> In essence, then, ATSDR is to provide an official distillation of the scientific literature and to define what health problems are known to be caused by dangerous chemicals and what levels of exposure are needed to produce adverse effects on health. This amounts to generic expert testimony by a neutral administrative science panel which may be admitted in order to guide the jury's consideration of partisan expert testimony. In addition, ATSDR also has discretionary authority to "perform health assessment for releases [of hazardous wastes from facilities where] . . . individuals have been exposed."<sup>61</sup> This means that ATSDR can be called in to study a group of plaintiffs who claim to have been injured by exposure to hazardous wastes.

How well these generic risk assessments by administrative science panels will work, and what effect they will ultimately have on litigation in the courts, remains to be seen. There are obvious difficulties to drawing conclusions in specific cases from generic information. In addition, at least in the regulatory context, administrative agencies are often influenced by political considerations rather than "good science."<sup>62</sup> Moreover, in the past, courts have been unreceptive to the development of specialized administrative institutions which could aid them by providing an independent assessment of questions of scientific fact.<sup>63</sup>

While the development of administrative science panels to work in conjunction with courts and juries is obviously no panacea, the future of toxic torts lies in hybrid compensation systems and the recognition of involuntary exposure to risk as a compensable injury.

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Control but is now a separate agency.

59. Superfund Amendments and Reauthorization Act of 1986, § 110(3)(A), (42 U.S.C. § 9604(i)(3)(A)(Supp. IV 1986)).

60. *Id.*

61. *Id.* § 9604(i)(6)(B).

62. Refer to notes 41-49 *supra* and accompanying text; see Latin, *supra* note 6, at 94.

63. See *American Petroleum Institute v. Costle*, 665 F.2d 1176, 1188 (D.C. Cir. 1981), *cert. denied*, 102 S.Ct. 1737 (1982) (review of revised ozone standard by EPA Science Advisory Board was not necessary, since SAB's role is "merely advisory").

