

## Claims of Injury

**Agent Orange on Trial.** Mass Toxic Disasters in the Courts. PETER H. SCHUCK. Belknap (Harvard University Press), Cambridge, MA, 1986. xii, 347 pp. \$25.

The organic insecticides and herbicides developed commercially after World War II were a tremendous improvement over the lead and arsenic compounds widely used in the first half of the century. The new pesticides were highly effective and relatively cheap and exhibited very low acute toxicity in humans. They were credited with staving off epidemics and vastly improving agricultural production.

Public perceptions and attitudes about pesticides began to change in the 1960s, in part because of the publicity generated by litigation. Believing themselves to be frozen out of the political process, activists in the nascent environmental movement turned to litigation to reform governmental regulation, first of pesticides and then of other chemicals. Encouraged by judicial rulings that opened the courthouse door to a wider variety of claimants, these litigant/lawyers used the courts to force government agencies to enforce or modify government regulatory programs.

Following these early successes, many environmentalists returned to the legislatures and agencies to secure a broad range of federal and state laws setting emissions and exposure standards for chemicals. Other environmentalists began to bring "toxic tort" suits, in which plaintiffs sue to recover damages for injuries purportedly caused by exposure to hazardous substances. Famous examples include the trichloroethylene case in Woburn, Massachusetts (see *Science*, 24 October 1986, p. 418), and the Agent Orange case. The Agent Orange case may be the most poignant of these cases because it involves tens of thousands of Vietnam veterans who were exposed to a mixture of the phenoxyherbicides 2,4-D and 2,4,5-T (as well as the dioxin contaminants) during their military service. Nevertheless, the case is characteristic of many toxic tort cases in that the lawyers never persuasively established a causal link between exposure and injury. There was very little evidence showing a statistical correlation between exposure and injury, and there was no evidence proving that any individual's injury was the product of exposure to Agent Orange.

*Agent Orange on Trial* is an engaging

account of the veterans' suit for compensation and vindication. Not surprisingly, given that the author is a law professor, the book focuses on the lawyers, judges, and legal proceedings in the case. Schuck's careful reporting and clear analysis expose the legal system's weaknesses in handling mass toxic torts and thus provide a valuable case study highlighting knotty policy and legal issues that will recur in other cases.

Schuck's story principally is about three groups of people: the veterans' lawyers, the chemical companies' lawyers, and the trial judges. Although the veterans are the *raison d'être* for the case, they have only a peripheral role in the book and the legal proceedings. As Schuck notes, a class action involving tens of thousands of potential plaintiffs (many of whom never know they are plaintiffs) is a "lawyers' case."

Schuck skillfully describes the disarray within the plaintiffs' camp. Almost from the beginning, the veterans' lawyers were divided by ideology and personal ambition. Schuck relates how some lawyers constantly battled for control of the litigation, driven by ideological conviction and the potential for fame and financial reward, as well as by the usual differences over strategy. In addition to the internal divisions, the veterans' lawyers faced external problems that undermined their chances for success. The amount of money available was inadequate to enable them to prepare the case properly. They conducted virtually no discovery and never developed a firm estimate of the number or distribution of injuries. Moreover, they faced enormous legal obstacles to a favorable jury verdict. One of the most significant problems was the need to prove "causation"—that is, to prove that exposure to Agent Orange in some sense "caused" the carcinogenic, teratogenic, and neurological problems that many veterans and their families suffered. According to many observers, including the trial judge who eventually approved the settlement, the lawyers never overcame this obstacle.

The chemical companies' lawyers, by contrast, suffered from neither financial constraints nor serious internal divisions about their goal (at least until it was time to allocate financial responsibility, and even then, with the judge's assistance, they were able to work out their differences). Rather, they faced the prospect that, if the judge submitted the case to the jury, the jury

would sympathize with the veterans' plight and return a staggering verdict. Although they had some reason to believe the judge would give them a summary judgment, thus ruling for the defendants and avoiding a jury trial, there was always the chance he would let the jury decide the case.

At the center of this case, and Schuck's book, is Jack Weinstein, the judge who took over the case midway through the pretrial litigation. Schuck plainly admires the judge, describing him as having a "vast imagination," "almost blinding brilliance," and "keen political and strategic awareness." Yet his account of the judge's handling of the case raises serious questions about a judge's proper role in class action suits.

From the time he assumed control of the case, Weinstein worked hard to force the parties to agree to a settlement. For example, he set a trial date only six months away and refused to change it, telling the lawyers that if they did not complete discovery by the first day of the trial they could conduct it during the trial. He indicated how he probably would rule on some issues, thereby reducing uncertainty and facilitating bargaining, but preventing the parties from seeking appellate review. And, just days before the trial was to begin, he had the lawyers meet for the entire weekend at the courthouse while he and his "special masters" conducted "shuttle diplomacy" between the two sides to work out a settlement.

Not only did the judge go to great lengths to force a settlement, he effectively dictated some of its principal terms. For example, although the chemical companies were prepared at one point to increase their offer (indeed, there is evidence they were prepared to double it), Weinstein stopped them, believing the existing offer of \$180 million was sufficient in light of the weaknesses of the plaintiffs' case.

To some legal scholars, Schuck's description is a disturbing portrait of a judge abandoning the traditional neutral role. By involving himself so heavily in the negotiations, Weinstein compromised his impartiality. For example, because the case was a class action, the judge was required to hold a post-settlement "fairness" hearing to ensure the class members' interests were adequately protected. Given Weinstein's deep involvement in forcing and structuring the settlement, the outcome of the hearing was never in doubt.

Schuck's book captures the essence of Weinstein's approach to judging in this case. Throughout the case Weinstein imposed his own vision of proper public policy, regardless of congressional action or appellate court rulings. Schuck accurately describes

Weinstein's decisions as an "exercise of policy discretion masquerading as the rule of law."

Despite this compelling picture of lawyers, judges, and the dynamics of a difficult, sprawling case, the book is, in the end, unsatisfying. Schuck persuades the reader that the existing tort system is grossly inadequate in dealing with claims of mass toxic injuries, but he presents only the most general suggestions for improvement.

Schuck defines the core issue as finding a means both to compensate injured persons and to deter unwanted, risky behavior. Addressing compensation first, he points to proposals for greater reliance on first-party insurance, workers' compensation, and social insurance to "make whole" diseased persons. By compensating injury regardless of the source, such schemes circumvent the causation issue that haunted the Agent Orange case.

Schuck recognizes the limitations of such proposals (for example, they may have unexpected economic consequences) and instead presses for a system of "prelitigation settlement incentives." Under one variant, for example, defendants would be required to offer to pay for the plaintiffs' net economic losses or lose the option to present certain defenses should the case go to trial. Plaintiffs would be required to accept such offers or face a more difficult standard of proof at trial. The suggestions are not novel (indeed, Schuck draws heavily on the work of others), and they suffer from well-recognized difficulties of implementation (for example, to work properly the scheme requires an impossibly precise calculation of incentives and damage schedules). Schuck, however, does not address these problems, stating only that "some such structure probably can be designed . . . that will be superior to the status quo on balance." This is hardly a persuasive argument to revamp the legal system.

Regarding deterrence, Schuck notes that tort litigation has no predictable effect on risky behavior; in some cases it underdeters (thus failing to achieve a principal goal), and in others it overdeters (forcing enterprises to forgo socially useful activity). As a result, he favors administrative regulation to set the limits on corporate behavior, using litigation only as a backup. Yet he does not pursue the implications of his own observation that administrative regulation also suffers from numerous problems, including many of those that plague tort litigation. Inadequate information and resources, resulting in both underdeterrence and overdeterrence, characterize the present regulatory process. As Schuck candidly notes, the regulatory history of 2,4,5-T counsels against

naive reliance on regulation to deter risky behavior. His solution to these shortcomings is as straightforward as it is unhelpful: The government should spend more money on research and pay more attention to finding the most effective means of implementing regulatory policy. For years, scholars and policymakers have debated both the need for additional research and the proper approaches to enforcing existing statutes and regulations. It is well-traveled ground in need of fresh insights. Although he clearly sets forth the issues, Schuck gives us no new ideas.

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## Learners from Nature

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**Leaders in the Study of Animal Behavior.** Autobiographical Perspectives. DONALD A. DEWSBURY, Ed. Bucknell University Press, Lewisburg, PA, 1985 (distributor, Associated University Presses, Cranbury, NJ). 512 pp., illus. \$59.50. Animal Behavior Series.

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The study of animal behavior must be one of the oldest human efforts to observe and analyze the world around us: Humans could not have survived for millions of years as gatherers and hunters without some solid knowledge of how animals behave, as sources of food or danger, as pets or parasites, as competitors or companions. Tales and descriptions of animal behavior abound in the writings of ancient and medieval authors—not always correct, of course, but clearly demonstrating the lively interest of investigative minds. With the progress of scientific methodology, fantastic hearsay and colorful native lore could no longer carry the day. Respectable scholars aimed for confirmed facts, preferably from their own experience. Names like Buffon, Rösel, Spallanzani, von Perna, Reimar, and Réaumur come to mind. Later on, but still more than a century ago, Charles Darwin set the mark for the truly scientific study of all aspects of the behavior of animals and even the biological foundations of human behavior.

How does it happen, then, that there is a widespread impression, fostered even by the leading experts, that this field of research was invented *de novo* in this century? Nobody can deny that scientific inquiry and formal teaching concerning animal behavior have recently expanded tremendously. Most probably, future historians of this branch of

the tree of life sciences will find that its rapid growth was caused by the same forces that stimulated the growth of that whole tree in our century: the application of the Darwinian and the Cartesian paradigms. It was unavoidable that with the progress of evolutionary genetics and of the physiology of the sensory, nervous, muscular, and endocrine systems, animal behavior would finally become a territory to be explored, conquered, and colonized, having hitherto only been superficially scanned by adventurous travelers.

Anybody really interested in animal behavior should also be interested in human behavior, at least in that of those scientific conquistadores to whom we owe so much of our understanding of behavior in general. What makes a collection of autobiographic reminiscences of such scientists fascinating reading is the glimpses it provides of the feelings that moved them as they approached the subject with new and powerful tools of inquiry, realizing that the behavior of living beings could be just as objectively and critically investigated as any other natural phenomenon. This excitement can be found vividly expressed in some of these researchers' efforts to look back over their shoulders. Most of these recollections are highly interesting, some are moving expressions of humanity, and some in addition are elegant examples of literary style. It is remarkable to see that these scholars—different as they may be in personal and cultural background or training—have almost without exception one characteristic in common: a very early enchantment with living creatures, an almost obsessive urge to observe them, to keep them, and to live with them. Evidently, the desire to immerse themselves in nature, to see, to hear, to feel and smell every detail of it, to understand it, to literally become part of it, was so strong and authentic for some of these scientists that the feeling of having discovered some privileged, private access to the behavior of our fellow creatures seems to have become almost overwhelming even when tempered by scientific self-criticism and methodological rigor. The sense that animal behavior has been discovered in this century by a few individuals (among them prominent authors of this book) might have its roots in this deep feeling. It is said that only one who loves can really understand. No doubt about it: a true-blooded ethologist loves his or her study animals; how could the ethologist help the feeling of understanding them better than anyone else?

The selection of those to be invited to partake in the enterprise of pondering their lives and personal development must have been a difficult task. The editor asked for the