BOOK REVIEWS

Causation in the Courts

Bendectin and Birth Defects. The Challenges of Mass Toxic Substances Litigation. MICHAEL D. GREEN. University of Pennsylvania Press, Philadelphia, 1996. xiv, 368 pp. $29.95 or £28.50.

Bendectin, an antinausea drug widely prescribed to pregnant women in the 1970s, was alleged to have a role in causing birth defects. Merrell, the producer of the drug, took it off the market, endured nearly 20 years of litigation, and incurred millions of dollars in legal costs. Although about 40 percent of the plaintiffs won damage awards, there was never any scientifically compelling evidence that the drug caused the defects.

There is a large legal and scientific literature examining aspects of this case. Much of it is inflammatory. Peter W. Huber, a well-known critic of toxic tort cases, uses Bendectin litigation as a classic case of "junk science in the courtroom." Defenders of tort law have responded with impassioned attacks on Huber's arguments. Green's contribution is to tell the story of Bendectin in a well-researched and studiously balanced fashion.

Understanding the issues in the Bendectin case requires knowledge of science, specifically toxicology and epidemiology, of the intricacies of toxic substances law, and of the regulatory role of the Food and Drug Administration (FDA). Green provides careful explication of each area and helpfully suggests in his preface which chapters readers with expertise in one or another might skip. The chapters of technical background will be slow going for some readers, but the story is never lost. Green captures the personalities and motivations of many of the key players, from the Mekdeci family, who brought the first case, to a cast of lawyers whose tenacity, creativity, and competitiveness sustained the litigation in the absence of credible evidence of causation. The story acquires power not from colorful or imaginative writing but because it emerges from the facts and observations set forth dispassionately.

Perhaps the most valuable lesson from Green's study is the pivotal importance of individuals and serendipitous events. Mrs. Mekdeci's agony at the birth of her defective child drives her to try to uncover causation. Her persistence keeps the momentum up despite the overwhelming odds. Her chance call to "king of torts" Melvin Belli, who neglects the plaintiffs while titillating the tabloid press, expands one family's sorrow into a nationwide hunt for victims. The vulnerabilities of the defendant company, with its ties to thalidomide and its cavalier attitude toward research, provide "an attractive allegory for lawyers."

There are no winners in the Bendectin story. Most children with birth defects go home with nothing. The lawyers come across as crass competitors who view their plaintiffs as inventory, not people. The drug manufacturer appears to be driven primarily by profit, and loses millions of dollars. The law fails to find the truth. The biggest loser, however, appears to be "science." Toxicology, epidemiology, and teratology are all perverted by the inexorable demands of law.

We like to think of science as a tool for understanding the universe. In a courtroom, it is harnessed to a need to find winners and losers. It is all black and white, there are no shades of gray. Green explains well how the courts have struggled in the causation quagmire. With regard to the Supreme Court's recent effort to establish criteria for evaluating scientific evidence he writes, "Science is a multifaceted discipline, the potential for error or abuse quite variegated, and its application in litigation quite diverse. Broad standards . . . will inevitably require substantial amplification with more specific and contextual principles." From a reading of this book, it is hard to have confidence in the judiciary's ability to develop those standards.

Green's knowledge of the particulars in this case makes him cautious about drawing broad lessons from it. Indeed, the measures he suggests for improving the legal environment are by his own admission marginal. He recommends developing some form of "regulatory standards" defense in court. Such a defense would allow defendants to assert that compliance with FDA requirements shelters them, in varying degrees, from liability. He also suggests greater consideration and use of court-appointed experts rather than individuals hired by one side or the other. Each of these suggestions is raised and briefly discussed. The lesson is that there are few lessons that can be generalized from this case. The danger, according to Green, is overreaction. This conclusion is in stark contrast to the work of Huber and others who see Bendectin as illustrative of the sins of tort law. Green's message is that improvement is most likely to occur through the evolution of rules on a case-by-case basis in the courts.

His conclusions are sobering. Solutions are not close at hand. Indeed, this year's congressional debate over product liability reform reinforces the lack of consensus on the problems in the law. A modest reform bill narrowly passed the Congress in March 1996 and was vetoed by the president in May. The rhetoric was divisive and emotions ran high.

Green offers no panacea in his book, but what he does give us, balanced information and appeals to caution, are important contributions in their own right.

Susan Bartlett Foote
APCO Associates, Inc., Washington, DC 20036, USA

Also Noteworthy

The Mismeasure of Man. STEPHEN JAY GOULD. Second edition. Norton, New York, 1996. 444 pp., illus. $25 or C$33.99; paper, $13.95.

This new edition of Stephen Jay Gould's widely noted (see for example *Science* **215**, 656 [1982]) work of 15 years ago was prompted, according to the author, by the "latest cyclic episode of biodeterminism" represented by Herrnstein and Murray's *The Bell Curve*. In a 32-page introductory essay in the new edition Gould discusses the rationale for the original work, which he emphasizes was not a critique of biodeterminism generally but an examination of "*one particular form of quantified* claim about the ranking of human groups: the argument that intelligence can be meaningfully abstracted as a single number capable of ranking all people on a linear scale of intrinsic and unalterable mental worth"; defends his credentials as a critic; and gives some of the background of the new edition. "Since I wrote about the great and original arguments, and virtually ignored the modern avatars of 1981," he writes, "this revision required few changes, and the main text of the current version differs very little from the original book," which included accounts of pre-Darwinian craniometry, late-19th- and early-20th-century craniology, American intelligence testing, and factor analysis as developed and used by Cyril Burt