Science and Tort Law

Galileo's Revenge. Junk Science in the Courtroom. PETER W. HUBER. Basic Books, New York, 1991. viii, 274 pp. $23.

Galileo's Revenge: Junk Science in the Courtroom is an important and timely work by one of our tort system's most strident critics. Its focus is the use by plaintiffs' attorneys of expert scientific testimony in personal injury litigation, or, as Huber would have it, of "junk science in the courtroom." Its position on the use of expert testimony parallels that of the Bush Administration, as articulated by Vice President Quayle in his recent widely publicized appearance before the American Bar Association. In arguing this position Huber speaks glowingly of what might be called traditional tort law, and especially the *Frye* rule, named for a 1923 federal appellate court decision that, as he describes it, permitted experts to testify in court "only if their testimony was founded on theories, methods, and procedures 'generally accepted' as valid among other scientists in the same field." In Huber's view, this legal framework no longer exists, largely as a result of efforts on the part of "an aspiring new generation of legal academics," led by Yale professor Guido Calabresi under the banner of economic efficiency, that encouraged "social engineering" under which courts would determine "who was best positioned to reduce the social costs of accidents" and would impose liability accordingly. This so-called "liability science" collided with the *Frye* rule. First in courts and then in the 1975 Federal Rules of Evidence, liability science prevailed. The Federal Rules made no mention of *Frye*, and they allow expert testimony if "scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact." In Huber's view these developments created a blueprint for disaster. On the evidentiary front, "mainstream scientific consensus didn't matter any more" and a "let-it-all-in" approach toward expert testimony prevailed under which "hired gun" experts proliferated. There emerged, as a consequence, "new go-after-everyone possibilities." The result was a liability explosion, made possible by courts' allowing practitioners of "junk science" to testify about "the science of things that aren't so" (a phrase Huber quotes from Irwin Langmuir).

Having established these themes, Huber next devotes the bulk of his book to what is emerging as his specialty: the Macro-Anecdote. In situations ranging from claims that trauma produces cancer to the Dalkon Shield litigation, Huber colorfully paints a portrait of junk science influencing legal outcomes for the worse. Then Huber offers readers his conclusions, analysis, and recommendations. He asserts that there is "no systematic empirical evidence—not a shred—that liability science applied to anything but the utterly obvious case has in fact improved the efficient control of accidents." Moreover, the taxpayer and consumer end up paying what Huber in his 1988 book *Liability: The Revolution and Its Consequences* called a "tort tax," and procedures are encouraged that may in fact harm their intended beneficiaries. Huber rejects the claim of trial lawyers that science has been advanced by the "maverick" expert, the "mini Galileo." Citing Thomas Kuhn for the proposition that "a scientific 'fact' is the collective judgment of a specialized community," Huber writes that "good science is defined not by credentials but by consensus." And this "means giving much less attention to the self proclaimed new Galileos, and far more to the reticent stalwarts of the mainstream scientific community." Huber thus would return to *Frye* and require that experts "report not their own, personal views, but the consensus views of that community." A judge would ascertain "who speaks for mainstream science . . . and who does not" and could rely on an "authoritative scientific pronouncement" of such governmental bodies as the Food and Drug Administration or the National Institutes of Health or on peer-reviewed scientific literature. And, Huber writes, expert testimony "about the causes of disease will be based on systematic observation of many patients or test subjects, not on off-the-cuff impressions developed in the course of clinical treatment," thus distinguishing "between the clinician and the scientist."

As in his past writings, Huber presents his case with verve, forcefully utilizing the Macro-Anecdote in support of his conclusions. In our view, however, Huber's indictment is based on exaggeration, caricature, and selective use of anecdote and fact; and his recommendations are misguided, leading away from more promising paths to tort reform.

In his anecdotes Huber fails to credit the legal system where credit would seem due. His discussion of the Dalkon Shield, which was linked with pelvic inflammatory disease and was pulled from the market in the midst of litigation, concedes that the Shield contributed to "real hazards and grave harms." Furthermore, during this litigation there occurred "appalling" revelations that "officials at Robins had known about the Shield's problem well before the information was made public" and "had obviously done serious wrong in covering up the hazard." Rather than chalk these up as victories of tort litigation, Huber complains that plaintiffs' lawyers "went after" other IUDs that did not have troublesome nylon filaments like the Dalkon Shield's. The claim with respect to these other IUDs, however, was that they were negligently marketed to a much larger group of women than the limited group (women who had already borne children and had stable sexual relationships) who could safely use them. Joseph Page has argued that these events "cast a shadow . . . upon the manufacturer," rather than the tort system (review of Huber's *Liability* in **78**, *Georgetown Law Journal*, 650, 686–87 [1990]).

The overall impression given by Huber's anecdotes is that the judiciary has somehow become populated with eccentric Calabresian legal scientists who have utilized their esoteric academic theories to make tort recovery as easy as applying for unemployment benefits. The fact is, however, that Huber has set up and defeated a straw man. Calabresian liability scientists may today hold positions on law faculties, but they did not create or provide the premises for our expansive modern tort system. As Huber himself has recognized (in the present book as well as in *Liability*), that was the accomplishment of a previous generation of judges and legal scholars whose goal was to achieve greater assurance of adequate compensation in the face of a traditional tort law that in practice often immunized even negligent actors or enterprises from liability. In fact, the onerous requirements of traditional tort law that plaintiffs establish negligence and causation are still very much in place in the broad array of tort cases outside the realm of products liability, and even in that realm proving that a product is defective is a complex, difficult, and costly task. It is simply not the case that experts are readily available to accident victims to process their

claims for compensation painlessly in a plaintiff-friendly legal environment. It is often difficult or impossible to locate experts willing to testify, even in well-founded cases. And the expense of employing such experts—as well as other staggering costs of litigation—poses a formidable obstacle to claiming damages.

Huber relies on Thomas Kuhn to support his view that it is scientific consensus, not the views of some new Galileo, that should count. One of Kuhn's key insights, however, is that the scientific community is stubbornly resistant to the new Galileo who presents valid evidence that challenges an existing scientific paradigm. Moreover, a central fact of contemporary legal/scientific controversies is the massive array of industry-supported research and political clout supporting the status quo in opposition to the new Galileo. In this regard we have our own anecdote, drawn from J. E. Krier and E. Ursin, *Pollution and Policy* (1977). In 1950 A. J. Haagen-Smit, a professor of biochemistry at the California Institute of Technology, discovered that smog was produced by a photochemical process, thus linking it to oil refineries and the automobile. In a period when the nation's pioneering air pollution control agency, the Los Angeles Air Pollution Control District, had discounted the automobile as a principal source of smog, one wonders whether Haagen-Smit would qualify as an expert under *Frye* or would be rejected in a regime giving "much less attention to the self-proclaimed new Galileo." Even more interesting, however, is the response to Haagen-Smit of scientists funded by the oil companies and auto manufacturers. From the start, the petroleum industry tried to shoot his findings down, funding research at the Stanford Research Institute that concluded that Haagen-Smit was all wet. By 1954, SRI's conclusion appeared to be the prevailing view. In the end, of course, Haagen-Smit's view prevailed in both the scientific and the political communities. But it took an extraordinary use of governmental and extragovernmental mechanisms to achieve this result. In 1953 a special committee appointed by the governor affirmed Haagen-Smit's research. At the same time, a group of civic leaders organized the Air Pollution Foundation, which funded research that by 1957 established that auto exhaust is the major factor in Los Angeles smog. Even then, however, it would be years until the auto companies admitted they were convinced. With its own well-financed scientists, the auto industry strategy was to insist that the automobile's role be clearly proved and to construe any proof as narrowly as possible.

In our view, the Haagen-Smit episode casts doubt on Huber's views as to proof requirements in tort cases and his proposal to reinstate the *Frye* rule. Like the victim of a defective pharmaceutical product, Haagen-Smit was confronted by an industry's well-financed cadre of scientists and political operatives whose goal was to depict his theory as junk science. The personal injury victim, however, cannot avail herself of the sort of governmental and quasi-governmental machinery that eventually vindicated Haagen-Smit. The governmental institutions available to serve as the equivalent of the Air Pollution Foundation for such a person are the judge and jury. The Federal Rule to which Huber objects simply allows a jury to *hear* from the victim's expert witness. Juries are not required to, and often do not, believe the plaintiff's witness in the face of the barrage of conflicting expert testimony offered by a well-financed defense team.

The undesirable consequences of adopting Huber's approach can be illustrated in the area of medical malpractice, where he writes that "medical experts can be screened along the same lines as all others." For one who demands "systematic empirical evidence" from others, Huber himself seems peculiarly immune to the implications of such evidence. Studies have indicated, for example, that about 1 percent of patients admitted to hospitals incur negligently caused injuries. Of these only a small fraction file lawsuits, and most of those who do file suit receive no compensation through the tort system. These studies have been widely reported, most recently in the excellent two-volume *Reporters' Study on Enterprise Responsibility for Personal Injury* (American Law Institute, 1991). One might well conclude from this evidence that the problem is too few, not too many, malpractice suits. It has long been recognized that the difficulty of bringing and winning malpractice cases is due in large part to the notorious conspiracy of silence among doctors and the difficulty of finding *any* expert willing to testify against a negligent colleague. Huber, however, finds it "encouraging" that some state legislatures have recently made it even more difficult for plaintiffs to obtain expert testimony, barring for example "any malpractice expert who spends more than 20 percent of his time in court" and "academics who do not practice at all." Such "reforms," in our view, go in the wrong direction, unless one's goal is to restore to doctors the virtual immunity to tort liability that they enjoyed as recently as the 1950s.

Our criticisms of *Galileo's Revenge* are not meant as a complacent endorsement of the present tort system. Indeed, we saw promise in Huber's earlier *Liability*, despite its biting attack on the tort system as a "poisonous swamp." Calling for courts to "rediscover the respect they once had for contract," Huber there assured readers that such a respect would not "require us to return to a legal world in which every provider can flatly disclaim liability and leave things at that." The legal world Huber envisioned was based on proposals for a contractual "neo-no-fault," derived from the path-breaking work of Jeffrey O'Connell, under which victims of particular types of accidents would receive compensation similar to that available under no-fault auto insurance. Contract in this view would "prescribe how reasonable compensation for well defined contingencies could best be expedited," with compensation "severed from questions of negligence, defect, or fault" and not including "open-ended damages for pain and suffering." That proposal met the criterion of balanced reform widely accepted among tort reformers, trading off amount of tort benefits for an assurance of compensation. *Galileo's Revenge*, in contrast, is a blueprint for the denial of benefits conferred by the tort system, with no trade-off. In *Liability*, Huber wrote that the "measure of a Society's decency is how well it takes care of those most in need of help." The approach to tort reform of *Galileo's Revenge* would not take care of such persons well at all.

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The New Genetics

Genes and Genomes. A Changing Perspective. MAXINE SINGER and PAUL BERG. University Science Books, Mill Valley, CA, 1990. xxx, 929 pp., illus. $52.

Genes and Genomes, the new textbook by Singer and Berg, provides a well-directed excursion into the realms of modern-day molecular genetics with all the excitement of new discoveries clearly and succinctly presented to the reader. As I progressed through this comprehensive volume, I had the feeling of being on a well-guided, step-by-step tour showing me how current concepts of the eukaryotic genome have painstakingly been arrived at in a surprisingly short span of time. The book is divided into four main sections, each beginning with a perspective of what is to come in the chapters immediately following. Although somewhat redundant in that much of the information in them is repeated later, these short introductions are well written and provide an integration of the more detailed material to follow. The first 215 pages of the book present a review of basic genetic concepts that laid the groundwork for the approaches and techniques that have led to an explosion of knowledge in