



and all jargon is thoroughly explained in advance. Throughout the 20th Century, courts have been confounded by the question of how to regulate the use of science in the courtroom. Our system of law draws a distinction between "questions of fact" and "questions of law"; judges can generally only rule on latter. Questions of fact are up to the jury, and these are the questions to which scientific testimony is usually directed (e.g. "Did the defendant's pollutant cause the plaintiff's cancer?") But juries are generally no more scientifically literate than the populace at large, and the danger that they will be misled is great. Two questions arise: a) How can good science be distinguished from bad? and b) Who makes these quality judgments? The second question is a legal/policy question, but the first is just classic epistemology. Before Daubert, courts took a hands-off approach, relying on the consensus of the scientific community - effectively on peer review. Daubert revolutionized the federal system by requiring the judge to make preliminary judgments of sound scientific method. But how? This book examines the epistemological approach suggested by the dicta in Daubert, places that approach in intellectual/historical context, and then moves on to criticize it. All of this is done wonderfully, with lots of sidebars and examples. The authors sift the gems from a huge body of literature on law, epistemology and decision science. Brief, inexpensive, and lucid, this would make an excellent text for a college class in the philosophy of law, epistemology or jurisprudence. And don't be scared away by Peter Huber's polarizing reputation. This book's only political agendas are justice and accuracy. 8 of 10 people found the following review helpful. Highlights the problems of much "scientific evidence" By Tung Yin Although non-lawyers can appreciate this book, it is really of use to lawyers in mass tort cases where scientific evidence is used to prove causality issues. Foster and Huber use the litigation over the pregnancy drug Bendectin to explain the ways in which science is used and misused to "prove" cases. In the case of Bendectin, there was no conclusive medical evidence proving that the drug caused birth defects. Rather, there was a statistical association between the use of the drug and birth defects. Does this prove that Bendectin causes birth defects? It might or it might not. The field of epidemiology attempts to answer the question by eliminating other possible explanations for the association. Various techniques of epidemiology include blind (or double-blind) testing, data analysis, and so on. Foster and Huber demonstrate that the scientific techniques are not entirely conducive with the standards of modern litigation. For example, scientists generally do not speak of "proving" an assertion; rather, they "falsify" it. That is, they attempt to disprove it -- it is usually easier to show that something is not true, since you only need to find one example. When an assertion has withstood repeated attempts to falsify it, it becomes generally accepted. This has important ramifications for litigation, however. Litigation -- particularly mass torts -- requires a "yes" or "no" answer: in the scientific opinion of the expert witness, does Bendectin cause birth defects? The expert will of course have explained his or her analysis, but in the end, that analysis must be boiled down into a yes or no answer, regardless of the suitability of such an intellectual liposuction. In summary, this is a fascinating book if you are interested in these sorts of issues. Although the book covers science and scientific inquiry, it does not require a significant amount of scientific knowledge. 5 of 7 people found the following review helpful. Belongs in every critical thinker's library By A Customer I disagree with the previous reviewer's comments that the book is largely of use to the legal profession. I find the law case serves as a great backdrop to understanding science and judging scientific claims. Many great principles are explained in this book.

Attempting to reconcile the law's need for workable rules of evidence with the views of scientific validity and reliability. What is "scientific knowledge" and when is it reliable? These deceptively simple questions have been the source of endless controversy. In 1993, the Supreme Court handed down a landmark ruling on the use of scientific evidence in federal courts. Federal judges may admit expert scientific evidence only if it merits the label "scientific knowledge." The testimony must be scientifically "reliable" and "valid." This book is organized around the criteria set out in the 1993 ruling. Following a general overview, the authors look at issues of fit--whether a plausible theory relates specific facts to the larger factual issues in contention; philosophical concepts such as the falsifiability of scientific claims; scientific error; reliability in science, particularly in fields such as epidemiology and toxicology; the meaning of "scientific validity"; peer review and the problem of boundary setting; and the risks of confusion and prejudice when presenting science to a jury. The book's conclusion attempts to reconcile the law's need for workable rules of evidence with the views of scientific validity and reliability that emerge from science and other disciplines.

Anyone, scientist, jurist, or layman, will better judge the reliability of scientific results from reading the mosaic of quotations from experts, with annotations and expansions by the authors, that make up the core of this important book. (Robert K. Adair, Sterling Professor Emeritus of Physics, Yale University) This book will be very helpful for lawyers and judges, and for others who must evaluate scientific claims in the course of making policy decisions. It also would be a good resource book for courses in the philosophy of science, or in science and technology studies. Eminently readable and engaging, definitely original and well researched, it presents a view of science as the product of consensus and convergence that goes beyond anything in the current literature. (Bert Black, Partner, Hughes Luce, LLP) One of the primary criticisms of the former Frye standard was that general acceptance was a crude, indirect gauge of scientific merit. In effect, the standard allowed judges and litigators to hide from science. Daubert now mandates that in

assessing the admissibility of proffered scientific testimony, judges consider many of the same methods which scientists employ. In that light, this book will be highly useful to federal judges and litigators; they need to familiarize themselves with the very type of literature from which authors draw their experience. This book will make many of the leading scientific articles and texts far more accessible to federal judges and litigators. (Edward J. Imwinkelried, Professor of Law, University of California, Davis) This book will be a valuable resource for those who are interested in the intersection of science and the law. In this wide-ranging book, Foster and Huber have used the Supreme Court opinion in *Daubert v. Merrell Dow Pharmaceuticals* as a vehicle for a sophisticated discussion of what makes science good or bad and how the courts should assess whether an expert's testimony is admissible in court. (Joseph Sanders, A.A. White Professor of Law, University of Houston Law Center) Perhaps somewhat paradoxically, scientific evidence has become one of the most speculative and subjective components in American litigation. Foster and Huber's impressive book documents these numerous transgressions against scientific norms with a wealth of case studies. *Judging Science* will establish the frames of reference for the current debate over promoting scientific objectivity in the courtroom. (W. Kip Viscusi, Cogan Professor of Law and Economics, Director on The Program on Empirical Legal Studies, Harvard Law School) *Judging Science* is informative and scholarly, yet engagingly written, free of the jargon that often mars legal and scientific writings. The authors have an effective grasp of the ways of science and its use in the courts of law, and do explain it all with clarity and depth. (Francisco J. Ayala, Donald Bren Professor of Biological Sciences, University of California, Irvine) This scholarly volume tackles what may be the toughest dilemma facing courts in the twenty-first century: How do judges and juries separate genuine, reliable scientific evidence from political and social commentary masquerading as science? The answer to this question affects almost every aspect of human existence, from the quality of our doctors and reliability of our drugs, to our ability to tell the guilty from the innocent. The book will serve as a beacon to judges and lawyers who must struggle to find their way in this wilderness. (Alex Kozinski, Circuit Judge, United States Court of Appeals for the Ninth Circuit) Foster and Huber brilliantly illuminate the landscape of courtroom debates about the consequences and uncertainties of using science and technology in society. This tour de force is both a practical guide for citizens and journalists as well as a path-breaking clarification for judges and policy analysts. (Rodney W. Nichols, President and Chief Executive Officer, New York Academy of Sciences) About the Author Kenneth R. Foster is Associate Professor in the Department of Bioengineering at the University of Pennsylvania.