EVIDENCE MATTERS: SCIENCE, PROOF, AND TRUTH IN THE LAW
BY SUSAN HAACK
432 pages, $34.99.

Reviewed by Christopher C. Faille

Susan Haack, an Englishwoman who studied philosophy at both Oxford and Cambridge, and who now teaches it at the University of Miami, has produced this book on the philosophy of law or, more strictly, on the philosophy behind the tasks that law assigns to its finders of fact.

Some of her key points are negative. For example, Haack argues that the mathematics of probability doesn’t shed any light on the law’s standards of proof, but rather threatens to obscure them. She also contends that the reliability of scientific testimony is not to be understood in Popperian (falsificationist) terms, although its reliability might be advancing at present due to a sort of rough-and-ready “shadow Popper” who seems to have appeared or evolved by lucky accident.

We’ll take these points in that order.

Bayesian Probability Theory

In the 18th century, British mathematician Thomas Bayes (1702–1761) established an important theorem that allowed for the use of conditional probabilities to update prior probabilities. No one contests the validity of this theorem as a matter of mathematics, but some have built broad philosophical conclusions upon it, and others reject those conclusions.

But what do those strange terms mean? Instead of now defining “conditional” and “prior” probabilities, I will use a noncontroversial example of what Bayes had in mind, one that appeared in the 1967 MacMillan Encyclopedia of Philosophy, and that Susan Haack employs in the book under review.

Suppose we know of a certain population (say, American men with an income above a certain level) that 90 percent of its members own automobiles. We also know that Jones is a member of that population. Our first estimate, then, is that there is a 90 percent likelihood that Jones owns an automobile. If we later seek to gather more facts and clarity on the subject, this 90 percent figure serves as our “prior.”

Now, in this population (P), bike ownership is much less prevalent than automobile ownership. We will say that among those in P who own an automobile, 10 percent also own a bike. Among those in P who don’t own an automobile, 20 percent own a bike. These figures, in decimal form, .10 or .20, are “conditional” probabilities. We do some checking and learn something new about Jones. He owns a bike.

Can we say anything more about the probability that Jones owns a car, using both our prior and the conditionals? Intuitively, you surely sense already that the ownership of bikes in this population loosely correlates with nonownership of cars, so the new datum should bring the probability somewhat lower than the prior. I’ll skip the Bayesian math here, but if we worked through it, we would discover that the new (posterior) probability that Jones owns a car is nine out of 11, or roughly .82.

So far so good. As to the broad philosophical conclusions, what is now known as the Bayesian interpretation of probability is this: Probability is an expression of the level of confidence that a rational person will have in a certain fact or outcome given facts he or she knows. This way of thinking makes statistical inference both more subjective and more historical than otherwise. You, the inquirer, must in principle (to be deemed rational by Bayesians) keep updating your view of the probability that Jones owns a car with every new relevant datum, with each posterior serving as the prior for the next link. Keep that thought in mind.

Sacco and Vanzetti

On April 15, 1920, robbers shot and killed a security guard, Alessandro Berardelli, at the Slater-Morrill Shoe Co. factory in South Braintree, Massachusetts. They also killed that company’s paymaster, Frederick Parmenter. Three weeks later, authorities arrested Nicola Sacco and Bartolomeo Vanzetti for the murders. The Commonwealth of Massachusetts tried, convicted, and, after years of glaring publicity and high-profile appeals, executed Sacco and Vanzetti.

I’ll mention just one of the many hotly contested issues at the trial. Two police officers testified that they saw Sacco put his hand under his coat when they arrived to arrest him. They interpreted this gesture as his effort to draw his revolver. The prosecution suggested to the jury that this was evidence of consciousness of guilt.

Let’s fast forward to the 1990s. Joseph B. Kadane and David A. Schum, two prominent academic statisticians with Bayesian philosophical inclinations, wrote A Probabilistic Analysis of the Sacco and Vanzetti Evidence. In the book, Kadane and Schum don’t seek to resolve the case, but they do believe that analysis in terms of Bayesian probability helps to clarify its many issues.

Their “Chart 25,” for example, walks readers through the links in the inference from Sacco’s gesture to the conclusion that the prosecution wanted the jury to draw: If Sacco put his hand under his coat, he might have been reaching for the revolver; if he was reaching for the revolver, he might have had the further intention of escaping from them; if he had the desire to escape, it might have been because he knew he had committed a crime; if he knew that, then the crime he knew he had committed might have been one of robbery or shooting; and, if that were the case, then he might have had in mind in particular the payroll robbery in South Braintree on April 15, 1920.
There are lots of “ifs” there, and that’s the point. Every “if,” so long as there are plausible alternative explanations, reduces the probative value of the alleged evidence. To take just a couple of these “ifs”: Sacco might have reached into his jacket simply because he felt an itch and wanted to scratch it. Or, if indeed he was reaching for a gun in order to make an escape, then, even if this suggests consciousness of a crime, the crime of which he was conscious at that moment might have been something utterly unrelated to this or any robbery or murder. As Kadane and Schum write, “he might have been involved in other criminal acts such as those connected with anarchistic activities.”

That is just one example of Kadane and Schum’s procedure. The underlying idea is that every datum that might suggest the defendants’ guilt, singly or together, is to be examined for various possible discounts. Once discounted, it joins the pile of the other data, also conceived of as so many discounted atoms, and their compiled weight is to be taken. This weight is to be compared with the legal standard of proof, which, in criminal cases, is proof beyond a reasonable doubt.

In her criticism of Kadane and Schum in Evidence Matters, Haack complains that they “take for granted that legal degrees of proof are mathematical probabilities,” so they are looking for something approximating a .95 probability that these defendants committed the crime as charged.

Their book offers no categorical conclusions, but only (in Haacks’ paraphrase, worded to emphasize its Bayesian purposes) “various posterior probabilities that Sacco was involved in the crime, or that Vanzetti was, given various assignments of prior probabilities to various items of evidence and various assignments of conditional probabilities.”

Foundherentism

Haack is perhaps best known for an epistemological view she set out in 1993 under the ungainly name “foundherentism.” It is an answer to, and a combination of, “foundationalist” views of knowledge on the one hand and “coherentist” views on the other. A foundationalist looks for an unquestionable first premise, one that lies low and level on firm ground, and then builds up knowledge from there, creating an edifice akin to a pyramid.

One form of foundationalism is empiricist. It looks to sense perception as the bottom layer of the pyramid. An alternative conception of foundationalism is rationalist. Descartes reasoned from what he took to be the unquestionable first premise, “I think,” and built the world on top of that.

A coherentialist opposes both sorts of foundationalism and looks instead to the logical consistency and the general cohesion of his or her system of ideas for their warrant. Knowledge is not a pyramid, but a raft, as one coherentialist has put it, and the success of a raft depends upon its builders’ and users’ ability to keep the different logs together.

Foundherentism seeks to draw on the strengths of both views. Knowledge is neither a pyramid nor a raft: It’s the grid of a crossword puzzle. On the one hand, crossword puzzles have to be solved in accord with external realities (the clues printed along the side of the grid). On the other hand, a key feature of the puzzle is that the words intersect with one another, making consistency within the grid necessary for success, and an important metacleue.

Someone solving a crossword puzzle will look for the easiest answers to get a start. A clue might say, “quadraped, unlucky if black.” “Aha!” the puzzle solver says—“Cat”—and fills in that answer first. The first answer becomes, if you like, foundational. Any other answers that intersect with it on the grid must be consistent with it, and because the puzzle solver is confident in that one, he or she may proceed to words that intersect with it and work outward.

Evidence Matters is Haack’s effort to apply foundherentism to the world of forensic evidence.

Broad Objections

Haack has several objections to Kadane and Schum’s procedure, but two broad objections confuse her particular objections. First, she does not believe that “probability” in the mathematical sense can translate into any one of the three legal burdens of proof in Anglo-American law. She would no more agree to identifying “beyond a reasonable doubt” with 95 percent than she would with identifying “clear and convincing” with 67 percent or “preponderance of the evidence” with 51 percent.

Second, and relatedly, she thinks that the atomistic approach to accumulating and weighing evidence is all wrong. It misses out on what to Haack’s foundherentism is the key thing, namely the way that evidence must interlock, so the distinct bits of data acquire force, if they do, not simply through addition but through the way they, as do words in a puzzle, intersect with and reinforce one another.

On her first point, about probability, Haack observes that, in the mathematical study of probabilities (whether understood in Bayesian fashion or not), the probability of an assertion and of its negation must add up to 1. The probability that the top face of the die when it comes to rest will read “5” and the probability that it won’t read “5” together must be certain, as one or the other must be the case.

This does not translate well to the search for what Haack calls “rational credibility,” or, for short, “warrant”; that is, in the search for data that will justify belief in a particular assertion of fact, such as that Sacco shot Berardelli. After all, sometimes “there is no evidence, or only very weak evidence, either way” and in that case neither the proposition nor its negation can be said to be warranted. Although one can be certain (if the proposition is well-defined) that something either happened or it didn’t—that either Sacco shot Berardelli or he didn’t—the evidence for one, added to the evidence for the other, can total something far less than one.

On her second point, about the atomistic approach, Haack says that what makes the collection of reasons offered in support of a claim rise to the level of warrant is “how well the evidence and the conclusion fit together in an explanatory account.” The phrase “fit together” suggests the crossword puzzle paradigm. The “explanatory account” is the whole successfully filled-in grid, where every word is a sensible response to its clue, and every word fits with every other word.

Science and the Expert Witness

Thus far I haven’t said anything about science, despite the prominence of that word in Evidence Matters’ subtitle: Science, Proof, and Truth in the Law. Much of the book takes off from the difficulties created for the law of evidence by a special class of witnesses: credentialed scientific experts. Haack considers what happens, and what should happen, if one impressively credentialed biochemist called by the plaintiff testifies that, yes, substance A can cause disease B, while another impressively credentialed biochemist called by the defendant testifies that, no, there is no good reason to link A with B. The jurors are not paneled because of their biochemical expertise—they are chosen as representatives of the community, which of course consists largely of nonexperts in any technical field.
Haack quotes with apparent approval a lawyer, Marc S. Klein, who wrote in 1990 that such testimony is an “abundant enterprise.” Experts are required in pharmaceutical product liability actions precisely because “the medical and scientific details are well beyond the comprehension of laymen.” So how can we have any confidence that the same laymen with choose rightly between the competing testifying experts?

But then there is Daubert. In Daubert v. Merrell Dow Pharmaceuticals (1993), the United States Supreme Court, in an opinion by Justice Harry Blackmun, transferred some of the decision-making away from the jurors about whom Klein was anguishing, putting it into the laps of the judges. Interpreting the Federal Rules of Evidence, the Court said that a trial judge faced with an offer of expert scientific evidence must ensure that the expert’s testimony is both relevant and rests upon a reliable foundation.

The Rules of Evidence

Federal Rule of Evidence 401 provides that evidence is relevant if “it has any tendency to make a fact more or less probable than it would be without the evidence,” and “the fact is of consequence in determining the action.” That, incidentally, is a definition that might warm the heart of a Bayesian. In our earlier example, Jones’ bicycle is relevant to the question whether Jones has a car in precisely this respect: The one makes the other less probable.

Rule 402 provides that all relevant evidence is admissible unless federal law, including the Federal Rules of Evidence, provides otherwise. That brings us to Rule 702, which specifically concerns expert testimony. It provides that, if “scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue,” then “an expert may testify in the form of an opinion or otherwise.” To support this rule that only expert opinions that will assist the jurors in understanding the evidence are to be admitted, Blackmun’s opinion in Daubert gives the judge the task of ascertaining the “reliability” of the body of knowledge from which the proposed witness is working in the formation of his or her opinion.

Blackmun had apparently been reading up on the philosophy of science. He cited both Karl Popper and Carl Hempel in a single paragraph in support of the proposition that “a key question to be answered in determining whether a theory or technique is scientific knowledge that will assist the trier of fact will be whether it can be (and has been) tested.” As Haack observes at some length, this represents some confusion on Blackmun’s part. Hempel and Popper didn’t agree with each other. Hempel thought that testing could validate a scientific hypothesis. Popper insisted that testing can only falsify, never validate. Blackmun was more or less haphazardly creating a Hempel/Popper hybrid of his own.

What Came of This

More than 20 years on, what has come of Daubert? Haack regards some of its consequences with a mixture of dismay and amusement. For example, soon after Daubert, the United States Court of Appeals for the Sixth Circuit decided United States v. Bonds. The defense in Bonds had challenged the reliability, and so the admissibility, of the DNA analysis of an FBI laboratory using a technique called restriction fragment length polymorphism (RFLP). The defendants produced a report from the National Research Committee of the National Academy of Sciences (NAS) that said that RFLP produced unreliable results.

The court of appeals refused to take judicial notice of the NAS conclusions and said that the district court was right to admit the results of the FBI lab’s analysis. Why? Because, by the very act of offering evidence about the defects of this analysis, the defendants “have conceded that the theory and methods can be tested.” So it is Popperian, and though—or indeed because—it failed the NAS test, it was shown to be scientific. That in turn means that, under Blackmun’s reasoning, it is scientific and reliable.

In sum, then, something can be found to be reliable by being proven wrong. Haack is brought to quoting Charlie Brown here: “Good grief.”

Yet not all is lost. Indeed, Haack seems to believe that, in the two decades since Daubert was decided, the Supreme Court and the federal court system in general have been muddling their way through to something sensible. They have abandoned the real Popper, with or without Hempel’s support, for a sort of “shadow Popper,” yet the shadow Popper turns out to make a good deal of sense.

She approves, for example, of Cloud v. Pfizer, a 2001 decision by a federal district court in Arizona, which excluded the testimony of the plaintiff’s expert, Dr. Johnstone. The court agreed that the proposition that Zoloft causes suicide is testable, but it said that Johnstone wasn’t able to “point to one scientific study that supports his conclusion,” thus deeming his testimony unreliable. This is the opposite of the Bonds reasoning.

In general, the federal courts seem to have embraced Popper’s name rather than what in Haack’s view is the very dubious character of his philosophy of science. In embracing his name, the courts have created for themselves “a more moderate and more plausible Popper” than they could have gotten from the real thing.

The shadow Popper tells us “that the fact that a theory or technique has not been tested is a warning sign, suggesting that investigation is as yet incomplete, or that it has not been as thorough or as honest as it should; but also that the fact that a theory or technique has performed successfully under rigorous testing is an indication of its reliability,” and that the “kinds of test that are appropriate will vary depending on the nature of the evidence in question.” That isn’t a bad place to have ended up.

Conclusion

I won’t second-guess or argue with Haack’s conclusions in this book—not even the two I have discussed at some length, much less the several others I have left unmentioned. I will say only that this is a consistently perceptive and erudite volume. Anyone who wishes to be well-informed on matters such as the adversarial system and its relationship to the question for truth, on what “truth” means to lawyers versus what it means to scientists or philosophers, or on whether the law ought even to concern itself with the task of demarcating science from other sorts of inquiry, should read this book and take account of its arguments.

Personally, I think that Bayes, and modern Bayesians, have more to offer the legal profession than Haack acknowledges. To argue that point, however, I would have to take explicit account of her reasoning here. And that is a discussion for another day, for I fear I have wearied my reader already.

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Lincoln on Law, Leadership, and Life

By Jonathan W. White

Cumberland House, Naperville, IL, 2015.


Reviewed by Henry Cohen

Jonathan White, the author of Lincoln on Law, Leadership, and Life, told me that he had wanted the title of this book to be Lincoln’s Advice for Lawyers, but that the publisher wished to secure a broader audience for it. Although this book is largely about Lincoln’s advice for lawyers, the broader title is legitimate, because much of Lincoln’s advice for lawyers can apply to life in general. As White writes, “Lincoln believed that the highest duty of a lawyer was to be a peacemaker in his community. Therefore, any reader who deals with interpersonal conflict can learn from Lincoln’s insights. Indeed, Lincoln’s lessons for attorneys can apply to almost any walk of life.”

Lincoln advised lawyers to be honest: “If in your own judgment you cannot be an honest lawyer,” he wrote, “resolve to be honest without being a lawyer. Choose some other occupation. . . .” Lincoln’s conception of honesty included believing in the equity and justice of the cases one took. A lawyer who had worked in Lincoln’s law office reported the time that Lincoln told a potential client, “Well, you have a pretty good case in technical law, but a pretty bad one in equity and justice. You’ll have to get some other fellow to win this case for you. I couldn’t do it. All the time while standing talking to that jury I’d be thinking, ‘Lincoln, you’re a liar,’ and I believe I should forget myself and say it out loud.”

Lincoln, however, once accepted a case that did not square with this attitude, and White does not discuss it in the book. In 1847, Lincoln represented a Kentucky slaveholder, Robert Matson, to help him recover a slave family. Lincoln did not condone slavery in 1847, for he later wrote, “I am naturally anti-slavery. If slavery is not wrong, nothing is wrong. I can not remember when I did not so think, and feel.” Lincoln biographer Michael Burlingame writes, “Lincoln’s agreement to represent Matson has been called ‘one of the strangest episodes in Lincoln’s career.’”

Burlingame speculates that, “despite his antislavery convictions, Lincoln accepted the Matson case in keeping with what became known in England as the ‘cab-rank’ rule—stipulating that lawyers must accept the first client who hails them—and with the prevailing Whig view that lawyers should try to settle disputes in an orderly fashion through the courts, trusting in the law and the judges to assure that justice was done. As a colleague at the bar said of Lincoln, he ‘was like the rest of us and took the defense of anyone who had a chance with the law.’” In any event, Burlingame writes, “[h]owever reluctant Lincoln may have been to act on Matson’s behalf, he argued his client’s case forcefully.” He lost, however, and the slave family immigrated to Liberia, where they were observed the following year living “truly in a deplorable condition.”

In general, though, White writes, Lincoln “would reject clients he saw as greedy, dishonest, or in the wrong.” On one occasion, “upon learning that his client was guilty, Lincoln turned to [his co-counsel] and said, ‘You speak to the jury. If I say a word, they will see from my face that the man is guilty and convict him.’”

Lincoln also had advice for young lawyers regarding fees. “An exorbitant fee,” he wrote, “should never be claimed. As a general rule, never take your whole fee in advance, nor any more than a small retainer. When fully paid beforehand, you are more than a common mortal if you can feel the same interest in the case. . . . And when you lack interest in the case the job will very likely lack skill and diligence in the performance.” Lincoln added that, if you take a promissory note in advance, never sell it before the service is performed. But Lincoln apparently allowed an exception for “fees we earn at a distance.” If they are “not paid before, . . . we never hear of [them] after the work is done.” Once, a client paid Lincoln $25 for his legal services, and Lincoln returned $10, writing, “You must think I am a high-priced man. You are too liberal with your money. Fifteen dollars is enough for the job.”

Lincoln, White writes, “often did not even accept a fee when he could settle a case out of court,” and Lincoln tried hard to settle cases or to persuade his clients not to sue at all. He advised young lawyers, “Discourage litigation. Persuade your neighbors to compromise whenever you can. Point out to them how a nominal winner is often a real loser—in fees, expenses, and waste of time.”

White relates how, once, when several lawyers, including Lincoln, and an Illinois judge, David Davis—a close friend whom Lincoln would later appoint to the U.S. Supreme Court—were gathered together, “Lincoln asked the group ‘a novel question regarding court practice’ and was careful not to address the question to anyone in particular. Davis naturally gave his views on the subject.” Lincoln laughed and said, “I asked that question, hoping that you would answer. I have that very question to present to the court in the morning, and I am very glad to find out that the court is on my side.” One wonders whether such ex parte contact with the court was deemed ethical in those days.

In its final two chapters, Lincoln on Law, Leadership, and Life moves from Lincoln’s advice to lawyers to descriptions of, respectively, his courtroom skills and his legal actions as President, such as his suspension of habeas corpus. This little book can be read in a couple of hours and enjoyed by anyone—particularly lawyers, law students, and those contemplating attending law school.

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In 2009, shortly after the U.S. Senate confirmed her appointment to the Supreme Court, Justice Sonia Sotomayor signed a $3 million book deal with Knopf. Other justices had written their memoirs and books about law while serving on the high court, but none had ever received so large an advance, particularly after such a brief period of service. This, like much of Sotomayor’s life, was precedent-shattering. When Sotomayor’s book, My Beloved World, was released in January 2013, it soared to the top of bestseller lists, where it remained for months. (I reviewed it in The Federal Lawyer’s June 2013 issue.) People lined up for hours to greet the justice on her book tour. While Sotomayor was writing and promoting her autobiography, journalist Joan Biskupic was working on the book under review, Breaking In: The Rise of Sonia Sotomayor and the Politics of Justice, and would receive Sotomayor’s assistance in doing so.

Why, you might ask, would I bother to read another book about Sotomayor just two years after reading My Beloved World? What could Biskupic possibly add to our knowledge of Sotomayor? As for the first question, as an autobiography, My Beloved World was written through the lens, indeed, the filter, of its author/subject. Although Sotomayor is frank in My Beloved World, Biskupic can take a more probing look at some of the more controversial aspects of her history, including her decision as a judge on the Second Circuit in the reverse discrimination case of Ricci v. DeStefano, and the criticisms that she lacks the traditional judicial temperament and that she is more concerned with establishing her own identity on the Court than with building consensus among the other justices.

As for what Biskupic’s book adds to our knowledge, she devotes much of its first half describing the political environment for Latinos from the 1960s up to the day that Sotomayor was nominated as the first Hispanic justice by the nation’s first African-American President. In particular, she describes the shrewd political maneuvers Sotomayor made over the years, from her days as a law student at Yale through her service on the Second Circuit. The second half of the book analyzes Sotomayor’s judicial legacy thus far, a legacy that is inextricably bound with her public persona, or what could easily be called her celebrity.

If you are reading Breaking In in order to get a better handle on Sotomayor, however, you will be disappointed. But, then, perhaps her power—indeed, her allure—is that she is not easily categorized. Is she a talented politician, a distinguished jurist, or someone who has parlayed her achievements to celebrity status? From the day when, as a little girl watching Perry Mason, Sotomayor decided to be a lawyer, she knew that her gender, nationality, and economic status could be barriers. Breaking In tells of how she used these to her advantage: by cultivating supporters such as Sen. Daniel Patrick Moynihan, by serving on non-profit boards supporting the Puerto Rican community, and by building a nationwide network of support through speaking engagements.

Breaking In also tells of how Sotomayor built her legal résumé: by thriving in the grittiness, rough and tumble of the Manhattan district attorney’s office led by Robert Morgenthau, and by gaining commercial law litigation experience at a New York City firm. Sotomayor put in her time on the federal benches of the Southern District of New York and the Court of Appeals for the Second Circuit, always looking out of the corner of her eye, Biskupic would have us believe, as to whether the time was right—whether it was her time—to ascend to the Supreme Court.

Make no mistake: Biskupic does not portray Sotomayor as being more flash than substance. Rather, she shows how the little girl from the Bronx afflicted with juvenile diabetes developed a million-dollar personality, which she has used to distinguish herself from her peers, including her colleagues on the Court. In her speeches and in her writings, Sotomayor has been frank that affirmative action opened doors for her. But she emphasizes that her abilities—and her determination to compensate for any shortfalls—enabled her to thrive. Today, she easily moves between writing opinions and pressing the button for the countdown ball for New Year’s Eve in Times Square. And Sotomayor revels in the niche she has created, having become an important voice on the Court and, in public, being treated as a rock star and serving as a role model.

In the opening chapter of Breaking In, Sotomayor is attending the traditional end-of-term party at the Court for the justices and their clerks. The party always features a comedy routine in which staff members parody the habits of their bosses. At the end of this particular party, Sotomayor announces that it has all been too dignified, and she begins to salsa dance. The image of her attempting to get Justice Samuel Alito to dance is priceless. And the image of her coaxing Justice Ruth Ginsburg, who had recently lost her husband, out of her seat and whispering, “Martin would want you to dance,” is touching. This is Justice Sonia Sotomayor: undaunted, and as always, precedent-shattering.

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