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BOOK REVIEW

Laudan, Stein, and the Limits of Theorizing About Juridical Proof.

When asked by the editors of Law & Philosophy to do a comparative review of recent books by Larry Laudan[1] and Alex Stein,[2] I immediately accepted, viewing the assignment with the same pleasure as though I had received an invitation to a dinner party with two old and interesting friends. They actually are both friends, whom, and whose work, I have known and admired for decades. Reading their books was very much like a congenial and spirited dinner party among close friends who simultaneously amaze, shock, amuse, astound, and most importantly of all, provoke you. There is a sense in which such dinner parties are microcosms of the social aspect to the growth of knowledge.[3] But, alas, I was alone as I read these two important books, and all the thoughts that I had—the praise for deep insights, the clarifying questions, the mild skepticism here and there, and the fundamental disagreements—went unheard. I had no chance to benefit from their thoughts, and (probably no great loss) they had no chance to benefit from mine. The deeper I went into their arguments, the more convinced I became of the significance of these efforts, and the greater my gratitude to the editors for inviting me to make public aspects of the dinner conversation that regrettably, to me in any event, occurred only inside my head. This

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[1] Laudan, Larry, *Truth, Error, and Criminal Law* (2006).

[2] Stein, Alex, *Foundations of Evidence Law* (2006).

[3] See, e.g., Toulmin, Stephen, *Human Understanding* (1972). See also Lakatos, I., and Musgrave, A., (eds.), *Criticism and the Growth of Knowledge*.

invitation allows me to do two tasks in particular, to explain first why I think these are truly important books, and second why I am persuaded by the central thesis of neither. Perhaps making my part of the imaginary dinner conversation public will prompt clarifying responses and possibly indicate the direction in which scholarship stimulated by these books might fruitfully go.

The books are important for a number of reasons. They both contribute to and reflect the enormous transformation of the study of juridical proof. Evidence scholarship was—while of enormous practical importance—a bit intellectually tedious for decades during and following the great codification movement in this country.[4] It was only in the mid-eighties that some of the doldrums were shaken off with the introduction of systematic examination of aspects of the law of evidence from a probabilistic perspective.[5] That seemed to unleash pent up creative forces, leading to numerous interesting and useful contributions from multi-disciplinary perspectives ranging from feminism to micro-economics. Recent years have seen insightful contributions

[4] Following the systematizing of the common law of evidence by the generation of scholars of whom John Henry Wigmore was the intellectual leader, work in the United States began on converting the systematized legal doctrines into workable legal codes. This resulted in the Model Code of Evidence (1942), the Uniform Rules of Evidence (1953), and culminated in the Federal Rules of Evidence (1975). Much of the scholarship during this period was focused on detailed critiques of differing versions of doctrines and rules.

[5] The normal starting date for this revolution is 1986 with the publication of the symposium on Probability and Inference in the Law of Evidence in 66 B.U.L.Rev. 3&4 (May/July 1986). It is in that symposium, in a comment on one of the articles, that Rich Lempert coined the phrase ''the new evidence scholarship'' to describe the changes that were occurring in the field. Lempert, Rich, 'The New Evidence Scholarship: Analyzing the Process of Proof', *Boston University Law Review* 66 (1986): 439, commenting on Allen, Ronald J., 'A Reconceptualization of Civil Trials', *Boston University Law Review* 66 (1986): 401. As always, there were earlier and important intellectual antecedents, such as Kaplan, John, 'Decision Theory and the Fact-finding Process', *Stanford Law Review* 20 (1968): 1065.

to the literature from game theory, jurisprudence, and other related fields.[6]

The two books under review are in one sense extensions of this now two decades' old dynamic that has considerably broadened what it means to do evidence scholarship while contributing substantially to our understanding of the evidentiary process, and in another sense they take scholarly efforts to an entirely new level of depth and sophistication. Much important work has been done over the last two decades (and before, of course), but it is not too much to say that nothing of the sort represented by these two books has been seen since the publication of Wigmore's The Science of Judicial Proof. That book, like these, marked a radical departure from what had come before. These books, unlike that one, in my opinion will stimulate new work for decades to come.[7] To see why this is so, I must now explain briefly the project that each of these authors has undertaken.

Larry Laudan is a distinguished epistemologist who over the last decade became interested in juridical proof. He has brought his well developed conceptual apparatus honed in battles with some of the finest philosophical minds of the last fifty years over the meaning of truth and the justification of knowledge in the scientific arena to bear on the analogous questions generated by the legal system. In the scientific arena, truth, whether at the end of the day that term refers to knowledge of real entities or merely the effective control of the environment, is paramount. Philosophers may quibble over whether quarks ''really'' exist or are just useful placeholders in powerful

[6] For a compendious discussion of the present state of evidence scholarship, see Park, Roger C., and Saks, Michael J., 'Evidence Scholarship Reconsidered: Results of the Interdisciplinary Turn', *Boston University Law Review* 47 (2006): 949. Scholars whose main work is in fields other than evidence have also shown an interest in and made interesting contributions to the study of evidence. A few examples are Schauer, Frederick, *Profiles, Probabilities, and Stereotypes* (2003); and Harcourt, Bernard, *Against Prediction* (2007); Slobogin, Christopher, *Proving the Unprovable* (2007).

[7] The Science of Judicial Proof was largely ignored for decades following its publication. In recent decades, a few scholars have shown an interest in it, but their work, in turn, has stimulated very little interest in the larger field. Like many classics, it is more praised than read.

theoretical constructs, but modern science has transformed the human condition largely because of its relentless pursuit of either ever improving descriptions of, or ability to make predictions about and control, the universe we inhabit. The results are obvious, from the astonishing discoveries of the physical sciences to the equally astonishing achievements of medicine, to, well, just about anything that you can think of, leading one to think that perhaps there is something to be said for the single minded pursuit of truth.

There is certainly something to be said about the pursuit of juridical truth. Quite simply our entire legal system—indeed our form of government and way of life—depends on accurate factual determinations—the truth, in other words (accepting for now a naive realist view of truth). This may strike some as a strange claim, and they may retort that the point is not only a bit overly dramatic, but in addition that it is wrong—that at the heart of western civilization is not the pursuit of factual accuracy but instead the commitment to the rule of law, the guarantee of human rights, and the preservation of a certain relationship between the citizen and the government in which the government serves the interests of the citizenry rather than the other way around. In short, it is the political, not the epistemological, side of the enlightenment that best characterizes and contributes to the preservation of our way of life.

But, without factual accuracy, the rule of law, human rights, and limits on the prerogatives of governments are literally meaningless. An example makes the point clear. Imagine you claim ownership of some property and somebody contests it. How will the claim be resolved? By the presentation of evidence to a fact finder whose determination of how the universe was at a particular moment in time (did you actually buy, make, find, or receive the property as a gift?) will determine your right to possess, consume and dispose (the meaning of property rights) of the property in question. Your property right, in short, is hostage to a legal system's ability to get the facts right. So too is every other example of either a right or an obligation. Rights and obligations are dependant on facts, and in that sense facts are more fundamental. So factual accuracy matters not just to

debates over things like global warming but to the very creation and preservation of social, economic, and political ways of life.

Enter Laudan, the distinguished epistemologist, training his sophisticated analytical apparatus on the legal system. Laudan does not so much defend the primacy of factual accuracy but assumes it, and then—and this is the central contribution of the book—engages in a thought experiment by which the legal system as he understands it is judged by its capacity to get the facts right. The result is an insightful, trenchant, exhilarating, bracing, disturbing exploration of the legal system that leaves no doubt that factual accuracy could be pursued considerably more ruthlessly, and that Laudan thinks it is a reproach to the legal system that it does not do so.[8]

Laudan's book has already gotten much attention, and thus I can be brief in identifying its major achievements[9]:

– He makes a powerfully useful distinction between material guilt (did the guy actually do the crime) and probatory guilt (does the evidence satisfactorily prove that the guy actually did the crime) and shows, convincingly, how much present confusion rests upon the failure of legal scholars to have previously made and understood the significance of this distinction. He demonstrates, for example, how the until now universally accepted canon that a person is to be presumed factually innocent until proven guilty makes, literally, no sense at all. Quite to the contrary, one can only get to probatory guilt by slowly modifying one's judgment of material guilt under the pressure of the evidence.

[8] To my knowledge, Laudan has no formal legal training, but he nonetheless has a sophisticated grasp of the law. There are some trivial legal errors here and there, (such as inappropriate references to courts or failing to provide the proper citation at p. 92; suggesting that illegally seized evidence cannot be used even if rights of the defendants were not violated, p. 18; conflating the inability of the government to take a criminal defendant's deposition with an inability to obtain discovery, which can occur in myriad ways such as searches, grand jury hearings, and the like, p. 142), but none of these have any impact on his argument.

[9] For an excellent, and more detailed, overview of Laudan's book, see Pardo, Michael S., 'On Misshapen Stones and Criminal Law's Epistemology', *Texas Law Review* (forthcoming). See also Ho, H. L., Review, 11 E & P 354 (2007); Nicolson, Donald, 'Review', *Legal Studies* 26 (2006): 294.

– He makes another powerful argument that the universal approach to evidence outside the law—the more relevant evidence the better—almost surely applies within the law as well, and thus exclusionary rules should be pared back to the absolute minimum.[10] All exclusionary rules should be eliminated for which there is not good empirical evidence that they advance factual accuracy or unless the policy advanced by exclusion plainly outweighs the cost.
– He is refreshingly unromantic in emphasizing that society is equally concerned with convicting the guilty as acquitting the innocent, and that it is just nonsense to think that a rule should be adopted because it reduces false convictions without taking into account false acquittals. Relatedly, he makes a strong argument that error distribution occurs through setting burdens of persuasion, and that, with that work done, rules of evidence should be judged by their truth inducing capacity and not by whether they still more protect against the conviction of innocent people.
– He demonstrates the deep conceptual problems in the current understanding of proof beyond reasonable doubt, ranging from the legal system's refusal to be clear about what it means to the, as Laudan presents them, almost comically inappropriate descriptions of what it might mean. How, for example, could a juror both presume innocence and have an "abiding", i.e., persisting over time, conviction of the defendant's guilt?[11] Or similarly, is the standard of proof beyond reasonable doubt really so low that we should convict so long as our doubts are of the sort that would not impede making important decisions in life, such as whom to marry, whether to have children, where to live, or whether to have surgery, chemotherapy or radiation, decisions that people make all the time with all kinds of quite serious doubts?
– He attacks with gusto the, in some circles, cherished legacy of the Warren Court's attack on factual accuracy in the name of human rights, but, showing that he is an equal opportunity critic who goes where the analysis leads, he labels as perverse and bizarre the law's toleration of affirmative defenses. It is, after all, somewhat peculiar to say on the one hand that the law requires proof beyond

[10] Laudan (2006, p. 118).
[11] Laudan (2006, p. 39).

reasonable doubt of murder, but on the other that a person can be convicted of murder even if the fact finder believes that the probability of self-defense is .5.[12]

– He concludes, true to his principles, that much of the American approach to criminal litigation is unjustifiably truth defeating and should be scrapped.

Laudan, in short, dissects the odd structure of American criminal litigation with an unsentimental, hard-edged and cold-blooded philosophical eye that brings to the task the hallmarks of modern philosophical work—well trained, deeply intelligent, and remarkably disciplined minds focusing with laser like intensity on the object of inquiry, going as deeply analytically into the matter under investigation as it is possible to do. This impressive philosophical tour-de-force concludes that the criminal justice system "is not a system that anyone principally concerned with finding out the truth about crimes would have devised" and that "the rules of evidence and procedure…need to be drastically rethought."[13]

He may be right that the rules of evidence and procedure need to be drastically rethought, but I think that he is wrong to think that the reason is because of a disconnect between what a rational person would have devised and what is observed. Notwithstanding the impressive philosophical apparatus at play—indeed I suspect because of the impressive philosophical apparatus—Laudan has in one important sense misconceived the object of inquiry. He has conceived it as though it were, in Hayak's famous metaphor, a made system that somebody devised and thus that was suitable for top down theoretical inquiry. It is not; it is, to continue the Hayakian metaphor, a grown system responding to untold variables with enormous complexity that almost surely cannot be captured by a simple theory. One example of the consequence of this misconception is the implicit assumption of the book that the proper object of inquiry is the criminal trial, but again I think that this is wrong. Criminal trials are but one aspect of a complex web of social institutions and controls, and indeed plausibly a perverse aspect. One should not equate trial related rules with truth determination of the legal system as a whole. For example, one

[12] See, e.g., Martin v. Ohio, 480 U.S. 228 (1987).
[13] Laudan (2006, p. 232).

should not criticize a rule excluding statements made during plea bargaining without examining the consequences and implications of guilty pleas, and whether the one contributes to the other.[14]

I will return to these two interrelated points and their consequences below, but first we turn to Alex Stein's new book. I defer discussion until later because the same issues are pertinent to Stein's effort as well.

Stein's book is much harder to encapsulate briefly. If Laudan is the clear-eyed philosopher bringing to bear the single-mindedness of philosophical discourse to his topic, Stein is the brilliant scientist whose laboratory churns out hundreds of ideas, all of them intriguing, some of them powerful, others non-starters, some carried to convincing logical conclusions while others seem curiously self-defeating and contradictory. To mix metaphors a bit, reading Stein's book is like watching a craftsman at the forge with sparks going everywhere, some landing harmlessly but others igniting powder kegs. This makes the book hard to read, for one is never sure which spark to watch to see where it lands, and one is constantly fearful that perhaps a conflagration will ensue, but it is also why I believe the work will meet the true test of time of academic research—it will stimulate further inquiry in a number of different, even if at the moment unpredictable, directions.

The nature of the book reflects Stein's background. He is a distinguished professor of law who has made useful contributions to a number of fields,[15] but whose main interest is evidence. Professor Stein did his legal studies in Israel and subsequently obtained a Ph.D. from the University of London. Thus, unlike many American evidence scholars, Stein is well versed in economics and game theory, among others disciplines, and he brings to bear the conceptual apparatus of those and other fields to his legal studies. Stein's book is a bit harder to characterize than Laudan's not only because of the multitude of ideas in play, but also because his writing is less clear. With

[14] Laudan is beginning to do just this. See, e.g., The Social Contract and the Rules of Trial: Re-Thinking Procedural Rights (in preparation).

[15] See, e.g., Porat, A., and Stein, A., *Tort Liability Under Uncertainty* (2001).

Laudan, there is never a question of what he is saying or where he is going, when he is being descriptive and when he is editorializing, whatever one thinks of it, but with Stein there is. Steins central thesis is either that the legal system does or that it should (one cannot tell for sure) pursue not factual accuracy but the allocation of risk at trial. He recognizes the significance of accuracy, of course, but sees this as less fundamental than risk allocation. Legal decision typically and maybe invariably will be decision under uncertainty, and thus moral decisions concerning who must bear what risk must be made. In civil cases this is straight forward enough—the parties should bear the risk of erroneous outcomes equally. In criminal cases, it is a bit more complicated. According to Stein, a defendant must never bear an evidentiary risk of a false conviction, or as he puts it "The ultimate objective of all rules and principles regulating criminal proof is to provide defendants with a both comprehensive and unyielding immunity from"[16] "any doubt substantiated by the evidence."[17]

Like Laudan's, Stein's book has much to commend it:

- He makes a robust argument that the modern tendency toward minimizing the regulation of evidence is ill-conceived and that "evidence law should develop in exactly the opposite direction."[18]
- He articulates an elegant unified theory of evidence law, whose central component is the principle of maximal individualization.[19] This principle requires that fact finders receive all but only what he calls "case specific" evidence, and no fact can be found against a litigant unless evidence pertinent to that fact was "exposed to and survived maximal individualized examination," which means basically that it could be effectively responded to by the other side. For example, an eyewitness can be cross-examined but pure statistical evidence cannot be.
- He uses these various ideas to resolve some of the troubling paradoxes of the law of evidence, well captured by the famous blue bus hypothetical.

[16] Porat and Stein (2001, p. 177).
[17] Porat and Stein (2001, p. 173).
[18] Porat and Stein (2001, p. 107).
[19] Porat and Stein (2001, pp. 91–102).

– He advances the notion of a general best evidence rule, previously championed by Prof. Dale Nance.[20]
– From these theoretical perspectives, he brilliantly critiques various evidentiary rules, sometimes justifying and sometimes condemning those rules.
– He provides a creative theoretical foundation for both civil and criminal litigation. Nowhere should general evidence be sufficient for a verdict. In civil cases, only evidence that can be subjected to maximal individualized examination can be admitted. In criminal cases, the state likewise may only rely on evidence that can be submitted to maximal individualized examination, but, so far as I can tell, the defendant can pretty much do whatever she likes in order to ensure that the defendant is insulated from "any doubt substantiated by the evidence."

Both books do considerably more, and in considerably more detail, than my abbreviated lists, of course, but the lists give a flavor of the depth, insight, creativity, and power of these two books. And not surprisingly, the two analysts agree on some points. They both think that the allocation of risk involves social policy that should be decided typically by legislatures, that affirmative defenses in criminal cases are more problematic than generally recognized, and that, most generally, subjecting the evidentiary process to analysis from external perspectives (epistemology, moral philosophy, game theory, economics, whatever) is likely to yield fruitful insights. And they agree that the legal process is in great need of fundamental reform

But note how fundamentally they disagree. Laudan focuses on the truth generating capacity of evidence law, whereas Stein thinks it is not accurate fact finding but the allocation of the risk of mistakes that motivates the law of evidence. For Laudan, the appropriate tests to which the law of evidence should be put are epistemological, whereas to Stein they are primarily moral (although he notes that evidence law serves utilitarian purposes such as cost reduction). Although they agree that reform is urgently needed, their prescriptions are totally at odds with each other. Laudan thinks much, maybe most, of the present exclusionary rules, including those constitutionally

[20] Porat and Stein (2001, p. 39).

based, should be scrapped, whereas Stein thinks that what we have is only a beginning and the regulation of the evidentiary process should be exponentially more robust than it is. Stein thinks conventional probability in general, and Bayes' theorem in particular, are useful analytical tools, whereas Laudan thinks that applied to these problems they are pretty much useless. Stein is at pains to give what he thinks is an adequate account of proof beyond reasonable doubt, suggesting to be sure modifications of its present understanding, whereas Laudan, I think, believes the legal system's entire flirtation with the concept has been pretty much an unmitigated disaster. Laudan thinks that virtually all relevant evidence should be admitted, that doing so will advance factual accuracy, and that the admission process has nothing really to do with the allocation of the risk of error. Stein thinks whole truckloads of evidence that virtually everybody would find persuasive should be excluded—unless you happen to be a criminal defendant, in which case all the previous analysis apparently does not apply—and that doing so will advance fact accuracy, in addition to appropriately allocating the risk of error. I am fairly sure that Laudan would find the exception for the criminal defendant to be somewhat incredible.[21]

The preceding paragraph was fairly long, and it could be extended considerably further. So we face a puzzle. Two very competent, well-trained, and well informed scholars each write a major book more or less analyzing the same phenomena, and they disagree on virtually everything that matters. Why? It is not because one is right and one is wrong, I don't believe; rather, it is for the reasons I alluded to above. Both books rest on an abiding faith in the power of analysis. Both invoke here and there empirical data, but mostly as an afterthought. These are for the most part conceptual enterprises that are attempting to theorize about the litigation process. Laudan explicitly

[21] He would find it incredible for a number of reasons. First, simply in terms of exclusionary rules, Laudan would basically eliminate them all (except relevancy) for both defendants and the state. Second, Stein would go further, I think, and let the defendant present any evidence, no matter how worthless or misleading, and at that stop I believe Laudan would get off the bus.

recognizes this when he labels his project a thought experiment. I am less sure that Stein sees the point. This may explain why Laudan's book is so conceptually tight, for he is perfectly aware of what he is doing, whereas Stein's is really all over the map with ideas jumping helter-skelter off of every page. Stein, I think, believes he is either accurately describing or thoroughly prescribing for the legal system, or perhaps some combination of the two.

Now stop for a moment and reflect on the concept of the "legal system." The legal system in the United States is the product of centuries, indeed in a way millennia, of development. It has been influenced by countless variables that change over time. It is the repository of vast clinical knowledge, and virtually no organized empirical (statistical) knowledge testing that clinical knowledge. It is asked to do countless numbers of things, from organizing political arrangements at the highest levels to facilitating the smallest commercial transaction such as the purchase of chewing gum. Virtually every human interaction, and most of the moments spent in solitude, are governed by a complex web of legal regulation composed of strands ranging from grand constitutional pronouncements to legislative edicts to regulatory rule making to executive directives to the exercise of executive, administrative, and judicial discretion. The legal system orders politics; it orders the economy; it orders public life significantly; and it orders private law to a considerable degree. Making matters more complex still, social, economic, and political conceptions of how this ordering should be done are constantly changing and occasionally change radically in a short period of time (the Civil War, the New Deal, the Great Society, the Reagan Revolution). Such an entity does not have a "point" or even a hundred "points." It is like asking what the point of a rain forest is. There isn't one, although maybe there are a million. That does not mean that you cannot say useful and interesting things about rain forests; it just means that subjecting rain forests to conceptual analysis *simplicitor* is likely to misconceive either the nature of rain forests or the utility of conceptual analysis.

That Laudan and Stein purport to analyze more or less the same phenomena and yet provide radically different analyses is thus no surprise. Hundreds, maybe thousands, of similar efforts could reach still radically different conclusions, precisely because of the complexity of the pertinent considerations. Imagine, for example, the prodigious complexity of the research that is done on rain forests. Yet, I doubt there is much scholarship directed to discerning the point, and carrying it through to logical conclusions, of rain forests. To be sure, Stein and Laudan are working well within the normal conventions of legal scholarship, but those normal conventions, I think, explain why legal scholarship is notoriously ineffectual in virtually every respect that one can imagine (apart from getting tenure and invitations to conferences).[22]

The ill-fit of the tool to its object explains why both books have been subjected to considerable criticism, but this is symptomatic of the broader phenomenon of why so much of legal scholarship is easy to criticize. Invariably the object of investigation is a highly complex entity that is reduced to a simple theory, and it becomes child's play to articulate different perspectives, implications, and so on. And I confess that I intend to give some examples shortly of criticisms that can be made of both Laudan and Stein, although my intent will be to identify what I perceive to be areas where useful work may very well be done. Before I do, though, I want to elaborate briefly my other major point that the authors have made what I think is a virtually impossible task anyway (to conceptualize a rain forest basically) more difficult because of their choice of focus, which in essence is the trial of a dispute.

No doubt trials are important. Equally clearly, trials are not equivalent to dispute resolution, or more importantly dispute avoidance, and furthermore they are perverse.[23] While by no means irrelevant, but they are but a small part of what the

[22] See my lament, 'Two Aspects of Law and Theory', *U. San Diego Law Review* 37 (2000): 743. Perhaps Laudan and Stein should be seen as the advance party of numerous similar inquiries from varying perspectives that eventually may be synthesized in some fashion.

[23] Laudan knows this. See pp. 10–11, but so far as I can tell the remainder of the book for the most part neglects the point.

"legal system" is doing. They deal with situations where not only has something gone wrong, but the responsible party is either unwilling to take responsibility for it or it is simply unclear who the responsible party is. The legal system as a whole must promise among other things that, if cases are litigated, most of them will be decided in a factually accurate manner, for otherwise, as I noted at the beginning of this review, rights and obligations are meaningless. Thus, the legal system must make it clear that it is almost pointless to litigate in the typical case because the outcome is foreordained. Looking at the country as a whole, it is pretty obvious that the legal system does this reasonably well. For every litigated case, there are literally billions of transactions that play out just fine in that everyone lives up to their obligations; the ones that actually get to court are strange and rare exceptions to the normal course of affairs. Viewed from this perspective, it is hard to conclude anything other than that the system works fantastically well. If the rules of evidence and procedure really were quite truth defeating, as Laudan fears, or created too unbalanced a risk of error, as Stein fears, then one would predict a quite different set of observations. The best explanation of what we see is that their fears are likely unjustified.

Seeing trials as perverse puts things in a considerably different light. For either Laudan or Stein to make policy prescriptions, it is not enough to focus on trials themselves but to ask what affect change in trial related rules may have elsewhere. These effects may be located simply in errors and risk allocation, but they could be located over the untold number of other policies that are affected one way or the other by trial rules. For example, a change in the fourth amendment exclusionary rule may very well result in an increased number of correct convictions, but it might also result in an even larger number of false convictions (from, for example, the increased ease of planting evidence if illegal entries are no longer a problem). Eliminating the exclusion of statements made without counsel or warnings during an interrogation may very well increase the number of correct convictions, but it may result in a huge

increase in the number of innocent people subjected to police interrogation. And so on.

Now, bring these two points together. Trials are but a small and dependent part of the sprawling and unruly mass of the legal system. Trials are not the means by which accurate outcomes in interpersonal matters are guaranteed. Rather, they deal with the perverse, and few, cases in which the promise of the legal system to facilitate transactions, punish crime, and so on, is called into question.[24] They are thus the medium in which thousands of variables can interact that reflect the larger legal system of which trials are a part. Consider Laudan's complaint about the fourth amendment exclusionary rule, for example. Looking just at a certain set of trials, this rule looks truth defeating, but in the larger society it has a multitude of other purposes. It reflects, first of all, a possible meaning of a constitutional command; it implicitly deals with the right/remedy problem; it is part of a long historical development in institutions that for the most part respect their own history; it does not seem to obstruct the total number of convictions, even if it directs prosecutorial resources in one direction rather than another; it is not even clear how many cases are lost rather than weakened but won (or would have been lost anyway) as a result; and as I suggested above, to some extent the exclusionary rule may very well be truth conducive.[25] Moreover, even if law enforcement is made more inefficient, perhaps the resultant gain in personal freedom more than

[24] Looking at trials is also likely to inflate the significance of exclusionary rules. Trials as a set will dominated by cases in which the facts are not clear in the first place. Exclusionary rules of any sort are more likely to effect the outcome in closely contested cases. Looking just at trials, one might conclude that they are radically truth defeating, whereas in fact it is whatever resulted in the thin evidentiary base of the particular trial that is more to blame.

[25] Estimates of arrests that do not result in prosecution due to the exclusionary rule are from 0.6% to 2.35%. Davies, Thomas, 'A Hard Look at What we Know (and still Need to Learn) about the "Costs" of the Exclusionary Rule: The NIJ Study and Other Studies of "Lost" Arrests', *American Bar Foundation Research Journal* (1983): 611. *See generally* Uphoff, Rodney, 'Convicting the Innocent', 2006 *Wisconsin Law Review* (2006): 739; Dripps, Donald, 'The Case for the Contingent Exclusionary Rule', *American Criminal Law Review* 38 (2001): 1; Maclin, Tracey, 'When the Cure for the Fourth Amendment is Worse than the Disease',

compensates. In light of this, one can reasonably respond to the allegation that fourth amendment exclusion results in some wrongful acquittals or failures to prosecute with a shrug of the shoulders and a dismissive "so what?". Millions of other cases are handled properly, and a few errors here and there may just be the price we pay; and of course, it is not at all clear that eliminating the exclusionary rule would reduce errors so much as merely shift them around.

Perhaps my absent dinner partners would have responded that my arguments are the counsel of despair which if true may mean that knowledge may not progress, and thus neither may intelligent reform, but I think to the contrary. General academic theorizing of this sort, what I refer to as top-down theorizing, implicitly embraces the model of particles physics as its inspiration. And for good reason. The science of particle physics is an astonishing achievement, and a good portion of that achievement came through mathematical modeling that is the quintessential example of top-down reasoning. There are other intellectual successes and models, though, such as the biological sciences. There is no serious question that knowledge in the biological sciences has advanced rapidly, and in its own way as astonishingly as physics. The path has not for the most part been through paradigmatic shifts akin to the serial introduction of new explanations of matter and energy, but instead

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Footnote 25 continued
Southern California Law Review 68 (1994): 1. If a system with a surplus of crime, and thus where prosecutors and police may make choices as to which crimes to pursue, exclusionary rulings may simply divert resources from one set of crimes to a different one, rather than have a linear effect on outcomes. See, e.g., Stuntz, William, 'The Uneasy Relationship Between Criminal Procedure and Criminal Justice', *Yale Law Journal* 107 (1997): 1. See also Stuntz, 'The Political Constitution of Criminal Justice', *Harvard Law Review* 119 (2006): 780, arguing that exclusionary rules and constitutional protections have caused an unjust and inefficient reallocation with criminal enforcement resources shifted toward prosecution of the poor, and to the use of lengthy and excessive prison terms. Rules, in other words, have results well-beyond the four walls of the court rooms, and these effects are often wide-spread and somewhat unpredictable.

through incremental advances across a multitude of discrete problems.[26]

At my imaginary dinner party, Laudan or Stein would have had the opportunity to respond to these two global points, and perhaps their responses would have been telling (and I look forward to them). In their absence, I must press on to their implications for these two projects. In Laudan's case, this is easy to answer. Taken at face value, Laudan's thought experiment is interesting, insightful, and even compelling, but throughout it he puts aside all other variables than fact finding.[27] He puts aside all the complexity that I introduced above.[28] But, he concludes in light of his thought experiment, that the rules of evidence and procedure should be reformed. For reasons I hope I have made clear, this is a *non sequitur*. Perhaps the rules should be reformed if truth determination were the only goal of the legal system, but it is not. It competes with all those policies, and others, that Laudan puts aside, and again trials are but one small manifestation of the legal system.

So, my advice to Laudan is that he must put all those policies back on the table, and then reask his question about the significance of fact finding from a considerably broader perspective.[29] He might retort that in his last chapter he does just that where he lists a number of variables, such as safeguarding defendants' rights and providing incentives for the police, that might offset the value of accuracy. His treatment of these issues,

[26] I suppose the theory of evolution might be offered as a counter example, but it is the exception that proves the rule, I would suggest.

[27] Laudan (2006, p. 5).

[28] "[I]t will be a recurring theme of this book, that leaving redundancy aside, the only factor that should determine the admissibility or inadmissibility of a bit of evidence is its relevance to the hypothesis that a crime occurred and the defendant committed it." p. 25.

[29] Laudan does address some of these issues. At p. 219, for example, he notes that there is no "omnibus solution" to the interaction of error reduction and other policies, but he then offers one for the fourth amendment—enforce it in other ways than exclusion. The difficulty is that the country has experimented with other means of enforcing the fourth amendment and they did not work very well. Mapp v. Ohio, 367 U.S. 643 (1961), for example, was in large measure a reflection of the Supreme Court's frustration with the failure of other means of enforcement.

though, is cursory, and the list itself quite abbreviated. Consider again the example of the fourth amendment. Both substantive interpretations of the fourth amendment and remedies for violations do not just deal with the "rights of defendants" or "policing the police." Rather, they are constituent of ways of life; they create in part the boundary between the citizen and the government. They are part of the means by which contested views of dignity, autonomy, and privacy become part of the legal landscape, and thus determine the expectations around which people can negotiate their lives. They make an appearance in criminal trials from time to time, but I suggest that those occasional appearances belie rather than explicate their real significance.

I have a few discrete suggestions for Laudan or those will be inspired by this work (of which I hope they are many). The critiques and the proposed solutions are treated differently. The proposed solutions are not subjected to the same probing skepticism that characterizes the critiques. I think this is regrettable; it is often beneficial to subject positive solutions to the same analytical testing ground as that which is being criticized. I will give one example of where the failure to do so is detrimental to his argument. His attack on the concept of proof beyond reasonable doubt picks up on the literature demonstrating the distance between subjective and objective probabilities.[30] It is false that pegging proof beyond reasonable doubt at, say, the 95% level means that there will be 95 accurate verdicts for every 5 inaccurate ones, or that there will be five erroneously convicted defendants out of every 100, or that the ratio of false convictions to false acquittals will be 10 to 1, or anything else for that matter. The consequences of the burden of persuasion depend on the baseline of guilty and innocent defendants who go to trial and on the probability assessments that fact finders make. Suppose no innocent defendants go to trial; or that no guilty ones do. Or suppose that there is an inverse relationship between factual findings and guilt. In either case, and an infinite number of other possibilities, different error ratios will obtain. One of the tragic dilemmas of the legal

[30] Laudan (2006, p. 73).

system is that we lack good knowledge about just the variables that would allow us to regulate sensibly.

Because of all these difficulties, Laudan suggests replacing our current probabilistic focus with a different understanding of proof beyond reasonable doubt. He suggests that the "obvious alternative…is the ratio of true acquittals to false convictions."[31] There are many difficulties with this, including the one he recognizes that we need to worry about false acquittals and true convictions as well.[32] He asserts, though, that at least this standard avoids the formal problems of the probabilistic account,[33] but it does so only if one assumes that fact finders have the appropriate knowledge. Again, he sees this point, and says that "we have to find out by empirical research"[34] how to construct trials so that the appropriate ratio of true acquittals to false convictions obtains. But, if empirical research can determine that, why can't it determine all the variables, including the rates of true convictions and false acquittals? Indeed, why can't it determine why mistakes of any kind are made and eliminate them? The hope of future empiricism can save any programmatic proposal. Laudan could just as easily have made this point with respect to the conventional understanding of proof beyond reasonable doubt as to his own, and with the right kind of knowledge, any conception of burdens of persuasion can easily be adjusted to accomplish our purposes.

I have a few other quibbles. I believe that Laudan implicitly models the criminal justice process as a zero sum game—there can be either more or less errors and exclusionary rules will be one of the primary determinants of the actual number.

The reality is probably quite different. First, it is not altogether clear what a "mistake" is. Many criminals—thieves and drug dealers are prime examples—are repeat players. The probability that a thief will be convicted of any particular theft may be extremely low, but the probability that he will be convicted of theft at some point—and usually early on in his

[31] Laudan (2006, p. 74).
[32] Laudan (2006, p. 130).
[33] Laudan (2006, p. 75).
[34] Laudan (2006, p. 85).

career—is probably extremely high. Moreover, sentencing judges, legislatures, and parol boards are fully aware of who is likely a recidivist and surely take that information into account in sentencing and release decisions. Some may complain that they shouldn't; that doing so punishes a person for a crime for which he has not been convicted. The complaint is both accurate and will fall on deaf ears. But, return to the point. What exactly is a ''mistake'' in this context? All things considered, maybe conviction of a thief for one act of thievery in 300 is just about right. More fundamentally, as Bill Stuntz has explored, there is a surplus of crime.[35] Rather than affecting outcomes at trial, exclusionary rulings may very well just affect resource allocations, determining for example what crimes are pursued and prosecuted. Both points indicate how focusing on discrete ''mistakes'' at trial may be somewhat beside the point.

I will close my discussion of Laudan's book with brief remarks about two other objects of his ire—affirmative defenses and appeals—again purely for the point of demonstrating the significance of embedding them in the larger issues of which they are a part. Recall that Laudan complains that affirmative defenses offend against the principle that a person should be convicted beyond reasonable doubt. His reasoning is worth quoting in full:

> If 'innocence' is to have a univocal meaning, and only chaos can ensue if it does not, then we must hew to the line that convicting a person [who is in fact innocent] of a given crime brings the same costs, independently of the specific attributes that render [him innocent]…Likewise, acquitting a [factually guilty person] arguably generally brings the same costs, whether he adopts an affirmative defense or simply denies his guilty. To hold that convicting the innocent is sometimes much worse than acquitting the guilty other times saying that convicting the innocent is no worse (or perhaps even better) than acquitting the guilty is to fall into babbling incoherence; even worse, it is unjust.[36]

[35] Stuntz, supra, n. *. Stuntz's work supports Laudan's concerns in another interesting way, however. As Stuntz points out, the existence of cheap procedural devices may divert scarce defense resources to them and away from factual investigation that might otherwise have established innocence.

[36] Laudan (2006, p. 113).

To the argument that affirmative defenses have long and existed and not been perceived or condemned as unjust, he forthrightly replies that this "seems an extraordinarily jejune criterion to apply to the evaluation of any public policy."[37]

Laudan's treatment of affirmative defenses captures what is exhilarating about his book, as well as why it fails at times to persuade (at least me). On the exhilarating side is the ruthless analytical pursuit of the logical conclusion of ideas, the willingness to burst pretentious bubbles of the legal academia, and the take-no-prisoners attitude with regard to sweeping away the accumulated misguided detritus of legal thought. Here, though, there is more to be said about the matter. Take the second of Laudan's point first, that public acceptance of an unjust and/or incoherent practice is an absurd justification for it. Here we see where the analytical rigor of the philosopher leads astray. Quite to the contrary of Laudan's point, public acceptance of legal provisions is not only perhaps the best justification for them, but is indispensable to an orderly society. In virtually any competition between analytical purity and public discontent on the one side, and some or even a lot of analytical impurity but public acceptance on the other, the law not only should but generally must come down on the side of public acceptance. The law, again, is a web of regulations governing life. Analytical purity in it is an attractive feature, but without the allegiance of the citizenry the web will be ripped asunder.[38]

But what about the claims of incoherence and injustice? They are, I think, just wrong, but again the way in which they are wrong is instructive. An affirmative defense results in incoherence only if, as Laudan puts it, what it means to be innocent must be "univocal," but who says that it has to be? Certainly not Anglo-American society, which from the beginning has said that it need not be; and notwithstanding Laudan's concern about chaos, so far as I can tell not much chaos has resulted as a consequence of this legal practice. Moreover, that both judges and legislatures relentlessly bring into existence

[37] Laudan (2006, p. 112, n. 55).

[38] Here is where Stein's emphasis on the moral underpinnings of evidence law is helpful, which leads to a larger point. In interesting ways, these two books stand not only as contrasts but useful complements.

affirmative defenses without any apparent increase in social chaos or any other perceptible cost seems to me to be definitive of the meaning of "justice" held by society and it further seems to me to be a better and more important indicator of the contours of the concept than the logical consistency that Laudan is insisting on. In any event, here much more work needs to be done justifying the claims that are being made.

One last example: appeals. The inability of the government "to appeal an acquittal, even when a trial is riddled with serious errors,"[39] may be another example of a truth defeating rule, but it is also another example of where considerably more must be done to establish that the rule should be different. First, though, a clarification. Actually nothing forbids government appeals in criminal cases; rather, current interpretations of the double jeopardy clause forbid appeals of acquittals followed by a retrial. Even though an erroneous acquittal cannot be "corrected," governments may appeal to straighten out what might be systematic error, and a number of jurisdictions permit such appeals.[40]

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[39] 142.

[40] The Federal Government, for instance, may appeal a dismissed indictment, a j.n.o.v overturning a verdict of guilty, or the suppression of evidence under an exclusionary rule. 18 U.S.C. § 3731. *Cf* United States v. Wilson, 420 U.S. 332, 337 (1975) ("the legislative history [of § 3731] makes it clear that Congress intended to remove all barriers to government appeals and to allow appeals whenever the Constitution would permit). Many states have statutes allowing for government appeals in certain situations. *See, e.g.* IND. CODE ANN §35-38-4-2 (West 2007) (allowing appeals in six instances, including suppression of evidence and, in limited cases, interlocutory orders); MINN. STAT. ANN. RULES OF CRIM. PRO. R. 28-04-01 (outlining the circumstances in which a prosecuting attorney may appeal); OR. REV. STAT ANN § 138.60 (1) (West 2005) (outlining nine situations where a state may appeal a pro-defendant ruling); CAL PENAL CODE § 1238 (West 2007) (outlining twelve instances where the state may appeal); People v. Sutton, 874 N.E2d 212, 217-18 (Ill. App. Ct. 2007) (finding that Rule 604 of the Rules of the Illinois Supreme Court permit the state to appeal a pretrial suppression order if suppression substantially impairs the state's ability to try their case). Finally, states may allow appeal and retrial in the case of an acquittal received in a sham trial or by fraud, reasoning that jeopardy has not attached in those cases. People v. Aleman 667 N.E 2d 615 (Ill. App. Ct. 1996).

More importantly, it is not at all clear how truth conducive governmental appeals would be. That depends, of course, on how many acquittals in trials "riddled with error" are of guilty people—we are back to the same baseline problem discussed above. I assume some would be, but I also suspect some would not. And of course government appeals can lead to increased errors as well, if an innocent person is nonetheless convicted on retrial. However all this plays out, there is a more powerful concern. Trials and their attendant circumstances (anxiety, loss of reputation, and so on) are costly events. Government appeals and retrials can drain a person of any assets he may possess, and even if indigent keep his life in a state of suspended animation. Seriatim trials, even if each results in an acquittal, can ruin a life as much as a criminal conviction. These are real costs. No plausible claim can be made that our current practice should be changed without addressing them.

So, there you have why Laudan's book is so important. Reading it is like being doused with cold water as this powerful intellect exposes the vacuousness of many cherished legal conventions and identifies much of what is so profoundly wrong with the American legal system's pursuit of truth in criminal cases. The first reaction is to be shocked, disoriented, and left reeling, but then recovery sets in and the counter-punches begin: What about this and what about that? Who says? Yes, but, and similar phrases stream through the mind. No matter the intensity of the struggle, though, the overall reaction that colors everything else is admiration for the power of many of his insights, even if in some quarters there are limitations of the approach. And one very much looks forward to the next part of the conversation where Laudan can clarify, extend, and (it must be said!) correct the mistakes of his critics.

And now Stein. It is more difficult to succinctly critique and respond to Stein than Laudan, precisely because there are so many interesting ideas at play that stimulate, shock, and amaze you, and in some cases all at the same time. One could provide quite a litany of new ideas, and compliment, criticize, and extend them. Indeed, in large measure, stimulating such future work may eventually be this book's greatest asset.

Stein's book has already received considerable attention, and the tones of the review have been relentlessly critical.[41] The reason is that there are so many creative and counter-intuitive ideas, and that each can prompt a critical discussion in its own right. Stein should be justifiably proud of the reception his book has received; in a short time, it has stimulated a large secondary literature, which is probably the truest test of the significance of scholarly work. Because there have already been numerous critical review of many of the discrete ideas Stein develops, I will focus on three global issues, with only occasional exemplifying reference to more discrete topics. It is the cumulative effect of these three issues that give me pause about Stein's general program, notwithstanding the rich treasure trove of creativity that lies behind it. The three global issues are the relationship between the prescriptive and the descriptive, the *ad hoc* quality of a significant amount of the argumentation in the book, and whether the call for greatly intensified regulation of the evidentiary process is really impossible to implement at all, but particularly so in the context of a jury system.

First, the normative and the descriptive. It is quite unclear when Stein is attempting to, on the one hand, accurately describe or explain the Anglo-American evidentiary process and, on the other, when he is trying to provide a normative justification for it or its reform. This conflation begins in the Preface, where he says first that his "book tells readers about evidence law generally," that "begins with identifying the core features of the Anglo-American systems of evidence," that in turn "exhibits the foundations of evidence law."[42] This is quickly followed by the observation that the "book offers a normative

[41] Pardo, Michael, 'The Political Morality of Evidence Law', *** *International Commentary on Evidence* *** (forthcoming); Hamer, David, 'The Truth Will Out? Incoherence and Scepticism', in *Foundations of Evidence Law*, 70 MLR 318 (2007); Pundik, Amit, Epistemology & The Law of Evidence: Four Doubts about Alex Stein's *Foundations of Evidence Law*, 25 C.J.Q. 504 (2006); Dwyer, Deirdre, *Foundations of Evidence Law*, 5 L.P. & Risk 75 (2006); Redmayne, Mike, 'The Structure of Evidence Law', 26 *Oxford Journal of Legal Studies* 805 (2006).

[42] Stein (2006, p. ix).

analysis of evidence law that is both new and comprehensive,''[43] and that on the basis of this analysis he can ''justify and explain many evidential rules and doctrines in the Anglo-American legal systems.''[44] Yet, concurrently, he ''analyzes the conventional evidence doctrine and criticizes it for insufficiently regulating adjudicative fact-finding.''[45]

To be sure, one can describe and then explain or critique, but that is not what happens here. While there are plenty of standard descriptions of discrete rules (like the hearsay or character evidence rules, for example), most of what passes for description is anything but. For example, Stein, in a critical part of his argument, ''identifies the fundamental function of evidence law: apportionment of the risk of error under uncertainty.''[46] He goes on to say that his ''analysis sets aside the traditional vision of evidence law as facilitating the discovery of the truth.''[47] Does this mean that the ''traditional vision'' is wrong, or that the new one is better in some sense? If the former, one needs a demonstration of the error that is corrected by the analysis; if the latter, one needs a demonstration that the new vision is superior to the old.

Neither is forthcoming. No effort is made to establish that all the rules of evidence that look like they are supposed to be truth conducive (the relevancy rule, for example) really are

[43] Ibid.

[44] Stein (2006, p. xiii).

[45] Stein (2006, p. xi). For an example of the conflating of the normative and descriptive, see p. 138, where he says of chapter 5, 6, and 7, that they:are predominantly normative and only partly descriptive. They analyse the central tenets of the Anglo-American systems of evidence. This analysis demonstrates that evidential rules and principles affiliating to these systems have a single all-important function: allocation of the risk of error. Perhaps this is descriptive or perhaps ''have'' in the second full sentence really means ''should have''; whatever the case, this level of ambiguity can become distracting.

[46] Stein (2006, p. 64). It is, however, unclear how one can sort out risks appropriately without paying very careful attention to the facts. Using the preponderance standard in civil cases, for example, will allocate errors equally over the parties or reduce the total number of errors only under very stringent assumptions about accuracy in fact finding. Stein needs to say more about this relationship.

[47] Ibid.

something else. This can be most dramatically and succinctly demonstrated through Stein's discussion of the criminal process, of which he asserts that the "ultimate objective of all rules and principles regulating criminal proof is to provide defendants with a both comprehensive and unyielding immunity from" evidentially confirmed risk of erroneous conviction.[48] On the basis of this principle, Stein explains some things that go on during criminal trials in a creative and interesting way, but mostly he argues for a fundamental change in the manner in which criminal trials are conducted.

But, that means it is not presently the case that the "ultimate objective of all rules and principles regulating criminal proof is to provide defendants with a both comprehensive and unyielding immunity from…any doubt substantiated by the evidence"; quite the contrary, a radical reformulation of criminal trials is proposed that would result in considerably more robust exclusionary rules applied against the government and virtually none against defendants. That is perfectly coherent, but why would it be an improvement over the present state of affairs? Stein may answer that he thinks morality demands it, but, as with Laudan, plainly the rest of the Anglo-American culture disagrees. To convince them (you and me) will require considerably more than articulating this personal vision of morality unaccompanied by any effort to establish what the present problem is that needs radical repair or why this proposal would accomplish the purpose.

There are other examples where greater discipline in sorting out the descriptive from the prescriptive would be helpful. Critical to Stein's development of the interesting idea of the Principle of Maximal Individualization is his claim that the "best evidence principle requires each party to a civil or criminal litigation to produce the best evidence available,"[49] and that "the court excludes evidence if the party could produce

[48] Stein (2006, p. 177). See also p. 138 "This analysis demonstrates that evidential rules and principles…have a single all-important function: allocation of the risk of error."

[49] Stein (2006, p. 39).

different evidence that classifies as the best.''[50] This builds on and extends Professor Dale Nance's argument that the best, in various ways, organizing principle of the rules of evidence is just this requirement that the party produce the best evidence of which the case permits.[51] Many rules of evidence plainly are rules of preference, like some of the hearsay rule, certain aspects of the character evidence rules, the original writing rule, and the like. Equally clearly, there is no best evidence rule. Case after case after case has reiterated that ''there is no general rule that proof of a fact will be excluded unless its proponent furnishes the best evidence in his power.''[52] Maybe there should be, but there is not. That in turn means that any argument premised upon a general best evidence rules does not rest upon secure empirical foundations.

And Stein rests much upon this foundation. The most creative aspect of the book is his articulation of the Principle of Maximal Individualization that I just referred to. This is complicated, but in brief it means that evidence may not be admitted unless it may be subjected to meaningful adversarial probing. The Principle of Maximal Individualization is in the fact the mechanism by which his risk preferences are implemented. Stein then creates a vision of the trial over this concept, with suitable distinctions drawn between civil and criminal trials; but again this is not a description or justification of the present system, and it is impossible to tell whether it would be an improvement. Maybe it would be, but Stein and those inspired by his work need to make the case.

In making the case that any proposed reform should be adopted, dealing with practical consequences is critical, for that

[50] Stein (2006, p. 40). And again at p. 135, ''Whenever such best evidence is available, any alternative evidence should be excluded.'' Here he may be making a normative argument; elsewhere he appears to be making a positive one.

[51] Nance, Dale, 'The Best Evidence Principle', *Iowa Law Review* 73 (1988): 227. But see Imwinkelried, Edward, 'The Worst Evidence Principle: The Best Hypothesis as to the Logical Structure of Evidence Law', *University of Miami Law Review* 46 (1992): 1069.

[52] See Allstate Ins. Co. v. Swann, 27 F.3d 1539, 1543 (11th Cir.1994) (citation omitted).

is what persuades people (whether rightly or wrongly). Foundations of Evidence Law simply does not operate on that plane, and perhaps intentionally so. Although, unlike Laudan, Stein does not say so explicitly, the book reads more like a thought experiment than either a serious appraisal of the present circumstances or a proposal for reform. At the level of a thought experiment (really, a hundred different thought experiments), the book succeeds mightily, but as either an appraisal or reform project, there is a second difficulty in addition to failing to sort out carefully those two different enterprises, which is the *ad hoc* flavor of critical aspects of the book.

A few examples. Stein has a very interesting and creative discussion of the inferential process. He, like all of us, struggles with the implications of statistical evidence and the problem of induction, among other difficulties. To try to solve some of the problems, he makes a series of distinctions between evidenced and unevidenced probability estimates,[53] between rudimentary and inferential categories of evidence that are connected through "fact-generating arguments,"[54] and between case specific and general evidence.[55] All of these interconnected distinctions, if I understand him correctly,[56] are designed to help resolve or limit the naked statistical evidence and induction problems, to then in turn help build the foundation for his

[53] Stein (2006, p. 81–81).

[54] Stein (2006, p. 95).

[55] Chapter 3, generally.

[56] I confess that I fear I may not understand him correctly in all particulars. Stein has a lengthy discussion of what he calls "fact generating arguments." See, e.g., pp. 71, 95. These are critical to permitting inferences from unadorned data that Stein refers to as "rudimentary evidence." I can see no purpose to all this apparatus. It is merely a prolix way of describing the common sense process of drawing inferences from observations in light of generalizations formed through experience. He similarly has a very difficult to follow discussion of why some of what I would call "naked statistical" presentations are better than others that has to do with the derived probability of guilt from these statistics "attaching" or not to other evidence in the case. What the word "attach" means in this context is completely unexplained, and thus one has literally no idea how to apply the concept in an orderly fashion. Thus, it all looks, again, like *ad hoc* justifications for allowing statistical evidence to have its obvious force in appropriate cases. Similarly, Stein straight forwardly says at times that he would reject his own

Principle of Maximal Individualization. The problem more or less reduces to whether Stein's assertion is true that, while any "generalization deriving from experience is nakedly statistical[,]…not any piece of naked statistical evidence qualifies as a generalization."[57] The difficulty is that none of the distinctions Stein invokes supports that proposition.

The field of evidence has long been struggling with the implications, as Stein says, that any "generalization deriving from experience" does indeed appear to be "nakedly statistical" at bottom. An eyewitness testifies to X. Whether a fact finder concludes X is true depends on a range of generalizations about witnesses, perceptual ability, memory and so on. These generalizations are not in statistical form only because of our ignorance of the relevant data (what is the probability of memory decaying under these circumstances, for example). Compare this to the famous Blue Bus hypothetical, where a witness claims a bus hit her, and 80% of the buses in town are owned by the Blue Bus Company (or 80% of the accidents are caused by blue buses, or whatever). Some have the intuition that the latter is sufficiently different from the former to justify different treatment, but it is very hard—I would say impossible—to articulate what that difference is.[58] Some further assert that courts would not allow a verdict in the latter case, even though

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Footnote 56 continued
analysis because if it would generate more rather than fewer errors. See p. 91. That calls into question all the distinctions he advances to try to explain a prohibition on naked statistics.

[57] Stein (2006, p. 69).

[58] And curiously Stein seems to agree: "from a purely epistemological perspective, statistical evidence is no different from other evidence." p. 206. This is curious because it seems as though the epistemological similarity should trump all other issues in an analysis dominated by error and risk allocation. Suppose, for example, a set of cases for which there is good naked statistics that plaintiffs should win 55% of the time, but for which there is no other evidence. How does the inability of the defendants to "maximally test" this evidence outweigh the increased errors that will result from its exclusion? One would think that testing the evidence would be in an instrumental relationship with the very risks the legal system is attempting to regulate. One would think, in short, that there is a point to testing the evidence that is satisfied by error reduction.

they would in the former, and so a serious puzzle is presented, which Stein wants to solve.

The trouble is that his distinctions don't solve the puzzle, if there is one to solve. There may not be because that disinclination to allow verdicts on naked statistics is grossly overstated.[59] That in part is probably because, if there is a difference between these two cases, it favors the "statistical" evidence.[60] The eyewitness testimony is, as all concede, just as statistical, but we are ignorant of its parameters. Stein's distinctions in no way provide leverage on this problem.

Nor do they justify that some statistics may not be generalizations. Here the insight (which it is, even if it does not persuade) is that some statistics simply cannot be probed further, such as the number of buses owned by the Blue Bus Company. Note, though, that at the end of the day the statistical basis of the witnesses testimony cannot be probed, either. To be sure, she can be cross-examined and more possible generalizations may be uncovered pertinent to the case, but again at the end of the day these will be intractably naked, just like the number of buses. Moreover, it is interestingly false that the naked statistic of the number of buses cannot be probed. Nothing stops the opponent from producing accident statistics, or information about routes, or from calling all the bus drivers to testify, or…an endless list of possibilities.

The point, just to be clear, is that all the distinctions Stein draws do not help resolve this problem. One can assert something is more evidenced, or case specific, or that a fact generating argument exists, but so far as I can tell these can only be invoked in an *ad hoc* fashion to label something as this or that,

[59] Statistics form a staple of modern litigation. The only case that clearly supports all the evidentiary angst about statistics is the "blue bus" case, Smith v. Rapid Transit, Inc., 58 N.E. 2d 754 (Mass. 1945), but that case does not bear the interpretation given it, and there are cases going the other way. See Allen, supra n. *, at 428–430, n. 68.

[60] See, e.g., Allen, Ronald J., 'On the Significance of Batting Averages and Strikeout Totals: A Clarification of the "Naked Statistical Evidence" Debate, the Meaning of "Evidence," and the Requirement of Proof Beyond Reasonable Doubt', *Tulane Law Review* 65 (1991): 1093–1110.

as all evidence will always be one of these three things from one perspective and, from another perspective, their opposites.

Another example of an *ad hoc* argument is Stein's treatment of the conjunction paradox involving the implications of causes of action having multiple elements, each of which under conventional doctrine must be established to the requisite burden of persuasion. Stein must solve this, as his analysis is driven by error allocation, and the whole point of the conjunction paradox is that error allocation is ambiguous because of the effects of conjunction. To solve the paradox, Stein asserts that, *pace* all modern tort law, all torts really have only two elements, plus a damages calculation, which are an *ex post* probability of breach and entitlement. These do not lead to the conjunction problem, according to Stein, because the probability of breach should really be an *ex ante* probability (because of the deterrent purposes of tort law). Therefore, the "law uses the probability of entitlement to attain the desired alignment."[61]

This brief description demonstrates once more how interesting Stein's arguments are, and how potentially fruitful, yet also their often *ad hoc* nature. Two problems have been pointed out in Stein's analysis. First, his assertion of the structure of tort law is belied by the universal law in this country, in which there are considerably more than two elements plus damages. Second, his claim that the finding of entitlement discounts the finding of breach neglects that it must discount it in precisely the correct way or else the desired effect will not be accomplished.[62]

Stein responds to these two points in his book. As to the first, he gives an example of how the multiple elements of a standard torts case can be reclassified as parts of the two issues he asserts are the true elements of such a case.[63] He asserts that each of those "sub-elements" would have to be found by a preponderance, and that the conjunction effect would apply to their constituent parts but not to the ultimate element (either

[61] Stein (2006, p. 54).

[62] Allen, Ronald J., and Jehl, Sarah A., 'Burdens of Persuasion in Civil Cases: Algorithms v. Explanations', *Michigan State Law Review* 2003 (2004): 893, 922–999.

[63] Stein (2006, p. 53, n. 70).

breach or entitlement) which they constitute. As to the second, he says that his "point is analytical and normative"[64] and thus not vulnerable to an empirical objection.

Both points are doubtful. As to the first, when I and my co-author looked at the tort law across the United States, we found literally nothing remotely like his redescription of tort law. No state divides up the multiple elements of their causes of actions and sorts them into breach and entitlement master categories. Thus, he cannot be discussing what tort law does; at best he can be discussing what it should do. In any event, he cannot avoid the force of the objection that he has misconstrued tort law in this fashion.

Similarly, and perhaps more to the point, labeling his argument as "analytical" does not avoid the force of the objection that the extent of the discounting depends on the empirical relationship between findings of breach and entitlement. The relationship is not analytical. "Analytical" means true by virtue of the meaning of the terms of a proposition, rather than true because of consistency with observations. Ironically, the criticism is "analytical", to-wit that the discount rate must be correct in order to get cases decided in an error reduction fashion, and so too is the further assertion that the discount rate could be literally anything. There is nothing in either the breach element or the entitlement element that guarantees that the finding of one will be in a certain relationship to the finding of the other. The proportion of cases decided accurately by applying his reformulation of tort law could, analytically, range from 0 to 100%, as is true of any subset of these cases. Any assertion as to what those proportions actually are is obviously not "analytical," but instead is asserting the existence of a contingent fact.[65]

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[64] Stein (2006, p. 54).

[65] Stein makes a second argument to avoid the force of the conjunction problem. He says it is no different from a party suing in three separate law suits first for a declaratory judgment that there is a binding contract, second for a finding of breach, and third for assessment of damages. p. 49–50. I am not entirely sure of his point, because the conjunction problem plainly would operate in this hypothetical if prior cases were taken as establishing the relevant element. In any event, this would never arise in reality because

I could give other examples of the tendency to invoke what appears to me to be *ad hoc* propositions to advance various arguments or avoid objections.[66] In one sense, this is not surprising, given the nature of the book. With ideas almost literally flying off of every page, it may be asking too much that each of them be fully developed, as many of them are deserving of book length treatment in their own right. Moreover, one of the great strengths of the book is its enormous fecundity, and so my points here should be better understood more as questions for future work to answer than substantial criticisms.

My last point has a sharper edge. Foundations of Evidence Law constitutes the most sophisticated and persuasive argument for enormously enhanced legal control over the evidentiary process in recent memory, and stands in marked contrast

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Footnote 65 continued
of res judicata. Thus, the system must face squarely that, on these facts, a finding of duty and breach each can lead to error, which is simply a restatement of the conjunction problem.

[66] Another important example is Stein's distinction in criminal cases between what he calls "evidenced" and "unevidenced" errors. p. 81–81. His moral objections to mistakes are limited to the former category, but literally no reason is given for this. Nor is the obvious point acknowledged that, whatever the categories may mean, what case fits into which category is going often to be determined by the effort of the parties rather than by "analytical" differences. Thus, the distinction in practice is going to be *ad hoc*. Last, one would think that a concern for errors would lead in turn to a concern about the relationship of these two sets, however they are constituted, which again is missing.Others have claimed that Stein's definition of evidence law, which excludes rules that "promote objectives altogether alien and even antithetical to fact-finding" p. 3, see also p. 27, is ad hoc. I do not think it so much *ad hoc* as curiously inconsistent with much of his project. He puts aside truth defeating rules and then theorizes over truth conducing and error allocating rules, to reach the not surprising conclusion that they are, and asserts that they should be, truth conducive and error allocating. Fine, but all the rules he puts aside are not, whatever they are called. Coexisting with the rules he examines are those fundamentally at odds with his basic approach, and they are obviously an important part of the legal landscape. It thus becomes unclear exactly what he is theorizing about, because it is plainly not the Anglo-American legal system, but only a part of it. If a large part of it can merrily subvert truth and proper error allocation, it is completely unclear why that part labeled "evidence" should labor under different standards.

to the progression of the law of evidence in the Anglo-American world.[67] I suspect that in large part the audacity and power of the argument explain why it has generated so much opposition in a very short time. Foundational to his call for intense control over the evidentiary process is his deep insight that rules of evidence do not just do what they purport to do; they also allocate error, like it or not. He is right on this point.[68] Take an extreme example that succinctly makes the point. If the judge excludes all of one side's evidence, it is pretty predictable who is likely to win. Some rules of evidence explicitly are designed to increase the chances of one side winning.[69] Certainly the effect on the relative chances of winning can and should be taken into account in the articulation of the law of evidence. Stein is arguing for much more than that, though. He is arguing for intensive scrutiny of the evidence by the trial judge. Most dramatically, the relevance rule would have to be rewritten to change its now lax standard of admissibility to preclude any but the best evidence possible (although it is unclear whether the standard would be theoretically or practically the best possible). Evidence has to be maximally individualizing, not just potentially individuating, and this is so not only for cases in chief but rebuttal and credibility evidence as well.[70] At every moment in the trial, every question would have to be scrutinized to ensure that it would not call forth the disfavored, and thus immoral, form of evidence that might disrupt the moral scheme. As he says: ''My descriptive argument holds that [the principles he

[67] Stein (2006, p. 107–140).

[68] Stein (2006, p. 64). Envy rather than imitation is the most sincere form of academic flattery, and I am quite envious of this analytical advance. Many years ago, I identified the shift in the relative burden of persuasion that occurs through inferences and presumptions. Shifts in the relative burden of persuasion can affect outcomes, and thus I identified an example of the larger category that Stein has now developed. I did not, to my regret and Stein's credit, generalize the point. Allen, Ronald J., 'Structuring Jury Decisionmaking in Criminal Cases: A Unified Constitutional Analysis of Evidentiary Devices', *Harvard Law Review* 94 (1980): 321.

[69] See, e.g., the sexual politics rules of the Federal Rules of Evidence, 412–415.

[70] Stein holds up the possibility of qualifying the rigor of his approach, p. 72–73, but the text captures the essence of his approach accurately.

elucidates] explain many of the existing evidential rules and doctrines. My normative theory holds that evidence law ought to afford formal recognition to these principles and apply them across the board.''[71]

Consider what it might mean to apply his conception of the best evidence principle or the Principle of Maximum Individualization ''across the board.'' The trial judge would have to know the case as well or better than the parties. She would have to know what discovery was done and what was forgone. She would have to know how every evidentiary proffer fits in with both the remainder of that party's case, and its rebuttal by the other side. She would have to anticipate all the contingencies of the trial process that baffle at times even the most experienced litigator. She would have to be one astonishing judicial figure, much like Dworkin's Hercules, but with even more impressive cognitive capacity. Like Hercules, she's a mythical figure. Nor can legislation approximate her contours. No code could possibly deal with the complexities of what the ''best evidence'' in the possession, or that could have been in the possession, or whatever the standard is, of a party. How would the legislators know that in advance of a case that has not even ripened yet? Or in advance of millions of cases that have not ripened yet? Unlike Dworkin's Hercules, who thankfully must deal only with preexisting social practices and beliefs, regulating the trial process requires anticipating in advance what might occur, and not just to the parties but also to those social practices and beliefs. Impossibility compounded, I fear.

There is yet a deeper conceptual problem. What is the best evidence of what, and whether the risk is fairly or unfairly allocated, depends crucially on what is true.

So, to answer the question of the admission of evidence would require trying the case first. Having tried the case first in order to apply Stein's approach to the question of admissibility, what would be the point of trying it again? And if for some reason that is wrong, what could possibly generate a higher risk of idiosyncratic ''risk allocation'' (which simply means

[71] Stein (2006, p. 139).

appraising the evidence) than black box jury decision making?[72] So, no more juries.

Suppose to the contrary, and that either the judges in individual cases or legislatures through massive codes could spell out in advance sufficiently complex rules of evidence and inference to approximate Stein's ideal. Rather plainly, application of those "rules" would answer the questions being litigated. They would have to be of the sort "If X testifies to Y, then Z, unless A testifies to B, then C" and so on. Again, no more juries.

But, maybe I'm wrong. Or maybe pursing the unobtainable ideal will pull society toward a higher plane of justice. In either event, Stein and those influenced by this most provocative of evidence books, have their work to do, and I look forward to seeing the results.

I end where I began. Laudan and Stein have each produced enormously valuable books. They are both interesting, deep, insightful, subversive, provocative and a delight to anyone interested in the profound epistemological and moral problems of juridical proof. They are wonderful additions to the evidence literature. I am skeptical of their central theses—which stand in stark contrast with each other—but as I have said a number of times, maybe I am wrong, and one of them is right. Regardless, they advance our knowledge dramatically on many, many issues. They should be read by anyone interested in expanding their, and our, knowledge of juridical proof, and I predict that they will be the inspiration for fruitful research programs in the future.

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[72] See Pardo, supra n. *, for an elaboration of this point.