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The Impending Train Wreck in Current Legal Education: How We Might Teach Law as the Scientific Study of Social Governance

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ARTICLE

**THE IMPENDING TRAIN WRECK IN
CURRENT LEGAL EDUCATION:
HOW WE MIGHT TEACH LAW AS
THE SCIENTIFIC STUDY OF
SOCIAL GOVERNANCE**

THOMAS S. ULEN*

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I. INTRODUCTION

Everyone who has spent even a few years in the legal academy is aware of two things about the first-year curriculum. First, that curriculum has a fixed-in-stone aspect. The courses that we insist on teaching to our entering students have been more or less the same for at least one hundred years. The methods by which we teach those (and other) courses—Socratic dialogue and the reading of appellate opinions—also have an immutable and immortal aspect. And second, altering that curriculum or the method by which we instruct law students is, like a national legislator attempting to reform Social Security, the third-rail of law-school administrative life: one engages in that alteration at nearly mortal cost.

Our methods of teaching law students and the material that we teach them are seriously out of alignment with recent developments in the legal academy and legal scholarship. Unless we rethink legal education fairly comprehensively and reform it in light of new realities, legal education risks becoming a train wreck. My thesis in brief is that the academic study of law has been moving from a relentlessly doctrinal focus to one in which, although doctrine figures importantly and necessarily, knowledge of other disciplines has become an increasingly important part of the well-educated lawyer’s toolkit. In the future, the knowledgeable lawyer will need to know, I believe, some economics, history, political science, empirical techniques, anthropology, sociology, basic science, and more. Moreover, in order to be effective, a lawyer will need to know how to learn the gist of other disciplines quickly, thoroughly, and with nuance.

In what follows, I argue that this change is good, that it will lead to better lawyering and to better law, that the change foreshadows a new understanding of what it means to be a lawyer, and importantly, that the change necessitates rethinking the time-honored practices of training lawyers.

I am fully aware that in making these claims, I am wading into already troubled waters and further roiling them. I shall revisit some old controversies and pick at wounds that may have begun to heal. For example, I shall look anew at Judge Edwards’s claim that there is a “growing disjunction”

between what we do in law schools and what the practice of law demands.¹ I shall also re-examine the importance of law and economics and other interdisciplinary innovations in legal scholarship. Finally, I will remind you of the findings of a former dean of the University of St. Thomas School of Law—now federal district judge Patrick Schiltz—about the kind of citizens that we are forming in our law school education.²

In the next section I describe the profound changes that I believe law and economics has brought about in legal scholarship. In Part III, I broaden that account of the changes in legal education to include a new theme of where law fits into the academic universe and what that might imply for the practice of law. I also lay out an expansive and novel theme for legal education, describing the study of law as the study of the mechanisms of social governance. I end the section by addressing some of the criticisms that might be raised to my broadly stated theme for legal education. In Part IV, I begin with a brief empirical account of the changes in the makeup of the modern U.S. law faculty and brief criticism of the train wreck facing legal education unless we accommodate to the changes that are taking place. Finally, I attempt to describe, in both a general and practical manner, what changes in the future law school curriculum might address the changes that the previous parts of the article have outlined. A concluding section summarizes.

II. THE TRAIN LEAVES THE STATION

When Thomas Newcomen developed a steam-powered engine in 1712 to remove water from coal mines, thereby lowering the costs of mining coal and allowing coal to replace ever-more-expensive wood as fuel, there was no way to predict all that would follow—the Industrial Revolution; the steamship allowing people, including armies, to move all over the world; modern, sustained growth; and the increase in CO₂ emissions that has created the greatest issue ever to face humanity, global warming.³

So it often is with intellectual innovations—a thoughtful innovation addressing a particular problem revolutionizes an entire academic disci-

1. See Harry Edwards, *The Growing Disjunction Between Legal Education and the Legal Profession*, 91 MICH. L. REV. 34 (1992). There were many responses to Judge Edwards's article, including a symposium issue of the *Stanford Law Review* in 1994. Symposium, *Civil Justice Reform*, 46 STAN. L. REV. 1285 (1994). I discuss the growing disjunction hypothesis more fully at *infra* note 62 and the accompanying text.

2. Patrick J. Schiltz, *On Being a Happy, Healthy, and Ethical Member of an Unhappy, Unhealthy, and Unethical Profession*, 52 VAND. L. REV. 871 (1999). Judge Schiltz stresses the hyper-competitive nature of law school and of big-firm law practice as being responsible for the unfortunate health and ethical profile of the legal profession. I cannot confidently argue that the changes in legal education for which I will argue will necessarily correct the shortcomings to which Judge Schiltz points. Additional changes in legal education (such as doing away with grades and class rank) and in the organization of the practice of law may be necessary.

3. See generally Y.S. BRENNER, A SHORT HISTORY OF ECONOMIC PROGRESS 37–38 (1969).

pline.⁴ My strong sense is that law and economics is in the process of working such a revolution in the legal academy.⁵ For my ultimate discussion of what is wrong with legal education, it is necessary to point out that a common understanding of the impact of law and economics on legal education and scholarship is significantly incomplete or wrong. Only when we see what I think is the true impact of law and economics (and other disciplines recently brought to bear on the study of law) in the legal academy will we be in a position to understand its implications for legal education.

A. *Law and Economics*

When law and economics first appeared as a standard part of law school curricula in the early 1980s, there was nothing about the field to suggest that it was likely to make a profound difference in legal education or in the manner in which legal scholars approached legal questions. Quite to the contrary, the field seemed a bit ill-formed, closely tied to antitrust law and the legal consideration of regulatory issues, and carrying with it a distinct whiff of free-market ideology. A sensible bet at the time would have been that law and economics, if it survived at all, would likely do so as a niche specialty.

Events have proved this prediction to be wrong. The impact of law and economics has been far-reaching within both the legal academy and within lawmaking generally. Why this has happened is, no doubt, a fascinating story in intellectual history, but it is beyond my focus in this article. Instead, I want to focus on what I think has been the most important change to the law that law and economics has caused—the importation of the scientific method into the study of law. By the “scientific method” I mean a two-step process of investigation. The first step is the articulation of a theory or hypothesis about some real phenomenon. To consider a legal example, one might hypothesize that the purpose of the tort liability system is to minimize the social costs of accidents.⁶ The theory must simplify the complexities of the real phenomena to be explained, but it must capture the most important aspects of life for the particular problem at hand. The theory must be “realistic,” by which I mean that it must have a clear and intuitively plausible idea of how human beings actually behave and the constraints under which they make decisions. And finally, the theory must be couched

4. See THOMAS S. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* (3d ed. 1996).

5. I have elaborated on this argument in Thomas S. Ulen, *A Nobel Prize in Legal Science: Theory, Empirical Work, and the Scientific Method in the Study of Law*, 2002 U. ILL. L. REV. 875 (2002). Some of this section draws closely on portions of that article.

6. This is the conventional assumption in law and economics, stemming from GUIDO CALABRESI, *THE COSTS OF ACCIDENTS* (1970), about the goal of the tort liability system. The “social costs of accidents” are the precaution expenses of the potential victim and injurer, the accident losses suffered by all parties, and the administrative costs of determining who is to bear the previous two elements of the social costs. See, e.g., ROBERT D. COOTER & THOMAS S. ULEN, *LAW AND ECONOMICS* 332–66 (5th ed. 2007).

in real concepts that are susceptible to measurement and falsification. An otherwise coherent theory that attributes an important causal role in explaining tortious accidents to the malicious actions of gremlins is not one that commands serious attention.

The second step in applying the scientific method is gathering data and performing meaningful statistical tests to see if the theory or hypothesis is believable. To be “believable” the theory or hypothesis must, according to well-recognized statistical standards, explain and predict (or retrodict) the phenomena that it undertook to investigate.

From, roughly, the mid-1970s through the mid-1990s, those proficient in law and economics spent almost all of their time and efforts on the first of these two tasks—articulating with increasing sophistication the differences between an economic account and the traditional accounts of various legal doctrines.⁷

The critics of law and economics focused almost all their shafts on dissatisfaction with the theoretical bases of the inquiry.⁸ Some argued, almost surreally, that economics was a flawed social science and, therefore, inappropriate for studying the law (and presumably anything else, including the economy). Some argued that the standard economic assumption of rational decision making was inapposite for the real people with whom the law dealt. Some held that efficiency was not a suitable legal norm.

In my view, all of this intellectual sparring missed the most important thing that law and economics was doing to the world of legal scholarship—the importation of the scientific method into the study of law. And of that importation, the only aspect that was at first evident was the theoretical or hypothetical part. Because the law had not paid attention to empirical work (as I shall show), the legal critics of law and economics thought that attacking the theoretical assumptions would stop the entire enterprise. A larger elephant was brought into the study of law—the scientific method. Very few realized that there were other, better assumptions⁹ and an inevitable second step—empirical studies of law—that did not necessarily rely on economic theory as its guide, at least not on the economic theory that seemed to attract much criticism.¹⁰

7. This activity is the distinguishing feature of the law-and-economics scholarly literature of that period and of the various editions of RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* (1972), and of COOTER & ULEN, *supra* note 6.

8. For criticisms of law and economics, see, e.g., *Symposium on Efficiency as a Legal Concern*, 8 HOFSTRA L. REV. (1980); Mark Kelman, *Misunderstanding Social Life: A Critique of the Core Premises of Law and Economics*, 33 J. LEGAL EDUC. 274 (1983); Richard A. Posner, *The Strangest Attack Yet on Law and Economics*, 20 HOFSTRA L. REV. 933 (1992); and Spencer Weber Waller, *The Law and Economics Virus* (Loyola Univ. Sch. of Law, Working Paper Series, Paper No. 1017882, 2007), available at <http://ssrn.com/abstract=1017882>.

9. See Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051 (2000).

10. I find the blindness of previous generations of the law to the value of empirical work to be very puzzling. Why the puzzlement? For two reasons: First, Langdell’s arguments for the case

I have written elsewhere about the puzzling (to me) lack of interest in such empirical research in the law before the 1990s and about the connection between the development of theoretical law and economics, and empirical law and economics.¹¹ I shall summarize those relationships by looking at and contrasting the reaction to two seminal pieces of empirical scholarship of the 1980s.

1. *A Lack of Response to an Empirical Study of Contract Law*

The theory upon which a court may enforce a contractual promise on the basis of promissory estoppel is well known. In relatively rare cases, reasonable detrimental reliance by the promisee forms the basis for contract enforcement. Offer, acceptance, and consideration is the more common basis for enforcement.

In the mid-1980s, Professors Daniel Farber and John Matheson—both then of the University of Minnesota Law School—conducted a survey of actions in which plaintiffs asked for enforcement of a contractual promise on the basis of promissory estoppel.¹² Farber and Matheson examined every case in which section 90 of either *Restatement of Contracts* was cited—over two hundred cases—in the ten years prior to their article.¹³ They drew four important conclusions. First, “promissory estoppel is regularly applied to the gamut of commercial contexts”—to cases involving construction

method of learning the law in the late nineteenth century were explicitly scientific. Just as scientists go to the woods to study birds in order to understand their lives, so, Langdell implicitly argued, do we read what judges say in order to understand what the law is. See ROBERT STEVENS, *LAW SCHOOL: LEGAL EDUCATION IN AMERICA FROM THE 1850S TO THE 1980S* 53 (1983); Paul Brest, *The Responsibility of Law Schools: Educating Lawyers as Counselors and Problem Solvers*, 58 *LAW & CONTEMP. PROBS.* 5, 6 (1995).

Similarly, Roscoe Pound, a scientist before he became a distinguished legal scholar and dean, noted the implicitly scientific nature of the law. Roscoe Pound had a PhD in botany that he received from the University of Nebraska in 1898. Pound, who never completed law school, was one of the founders of “sociological jurisprudence,” which held that an important object of legal inquiry is the actual effect of law on the attitudes and beliefs of people. He articulated this vision in *SOCIAL CONTROL THROUGH LAW* (Transaction Publishers 1996) (1942).

And the legal realists, on one understanding of their innovations of the 1920s and 1930s, raised a concern for knowing the practical consequences of the law—did, for example, proscriptions on child labor law actually work to the benefit of children and families? The legal realists evidenced no deep interest in empirical methods per se, nor in gathering data systematically, nor in making empirical methods more commonplace in the study or evaluation of law. JOHN HENRY SCHLEGEL, *AMERICAN LEGAL REALISM AND EMPIRICAL SOCIAL SCIENCE* (1995). Finally, lawyers are at such pains to draw attention to the centrality of the facts of a case or controversy that their failure to take a deep interest in systematic methods of gathering, organizing, and analyzing facts is surprising.

11. See Ulen, *supra* note 5.

12. Daniel A. Farber & John H. Matheson, *Beyond Promissory Estoppel: Contract Law and the “Invisible Handshake,”* 52 *U. CHI. L. REV.* 903 (1985). They were pursuing a theme and an empirical finding from Stanley Henderson, *Promissory Estoppel and Traditional Contract Doctrine*, 78 *YALE L.J.* 343 (1969).

13. Farber & Matheson, *supra* note 12, at 907.

bids, employee compensation, lease agreements, stock purchases, and the like.¹⁴

Second, “promissory estoppel is no longer merely a fall-back theory of recovery.”¹⁵ That is, courts are now comfortable enough with the doctrine to apply it in virtually any contract dispute. This finding is, of course, at odds with contracts casebooks stating that promissory estoppel is inappropriate or unnecessary in bargain promises. The law in action is apparently different from the law on the books.

Third, “reliance plays little role in the determination of remedies.”¹⁶ This, perhaps, should come as no surprise. The first *Restatement* held that an innocent party was entitled to full expectation damages even if reasonable detrimental reliance was the basis for enforcement. But some subsequent cases allowed for the recovery only of reliance expenditures, and the second *Restatement* apparently recognized this development by allowing for partial (rather than full) recovery of expectation damages.

Fourth, and in the opinion of Farber and Matheson the most important finding, reliance no longer matters very much in determining contractual liability under section 90.¹⁷ Rather, courts are apparently willing to premise liability on factors other than detrimental reliance.¹⁸

The authors noted that there are two notable characteristics of the cases that have expanded promissory obligation. First, “the promisor’s primary motive for making the promise is typically to obtain an economic benefit.”¹⁹ Second, “the enforced promises generally occur in the context of a relationship that is or is expected to be ongoing rather than in the context of a discrete transaction.”²⁰ Farber and Matheson contended that these relational contracts have become more common and that they require the parties to have a high level of trust in one another.²¹ Commitments are therefore made to “promote economic activity and obtain economic benefits without any specific bargained-for exchange.”²² This led them to draft a hypothetical section 71 on “Enforceability of Promises” for the *Restatement (Third) of Contracts*: “A promise is enforceable when made in furtherance of an economic activity.”²³

14. *Id.*

15. *Id.* at 908.

16. *Id.* at 909.

17. *Id.* at 910.

18. Farber and Matheson give an extended analysis of *Vastoler v. American Can Co.*, 700 F.2d 916 (3d Cir. 1983), as an example of this proposition. Farber & Matheson, *supra* note 12, at 910–13.

19. *Id.* at 925.

20. *Id.*

21. *Id.* at 925–29.

22. *Id.* at 929.

23. *Id.* at 930.

This is a dramatic revision of the traditional contract theory to take account of their empirical findings: “The proposed rule is a major departure from traditional contract law in that it requires neither satisfaction of traditional notions of consideration nor the specific showing of detriment associated with promissory estoppel.”²⁴ Farber and Matheson argued that this theory fits not only with what courts are doing but that it normatively fits the increasing need in a complex and impersonal society for mutual trust.²⁵

Before turning to the second example of empirical scholarship, let me comment very briefly on the influence of the Farber and Matheson article. To me the astonishing thing about this superb article is how little it has influenced contract doctrine. To be more precise—how little it has influenced what contract law we teach students. I would have thought that contract texts would have reported something to the effect that Farber and Matheson have found the role of promissory estoppel as a contract enforcement device has been misunderstood and needs to be revised in light of their empirical work.²⁶ It is as if we taught medical students that the application of leeches was still sound medical practice, the intervening learning notwithstanding.

2. *The Vigorous Response to an Empirical Study of the Coase Theorem*

Contrast the lack of response to Farber and Matheson’s rich empirical work with the response to Professor Robert Ellickson’s remarkable study of the Coase theorem in action.²⁷

Law and economics can be said, without exaggeration, to have stemmed largely from one article, Ronald A. Coase’s “The Problem of Social Cost.”²⁸ The article may contain the most significant theoretical claim made in the modern law school curriculum—the Coase theorem.²⁹ That the-

24. Farber & Matheson, *supra* note 12, at 929.

25. *Id.* at 929, 945.

26. There has been a rich literature on the empirics of promissory estoppel since Farber and Matheson. See, e.g., Edward Yorio & Steve Thel, *The Promissory Basis of Section 90*, 101 YALE L.J. 111 (1991); James Gordley, *Enforcing Promises*, 83 CAL. L. REV. 547 (1995); Randy E. Barnett, *The Death of Reliance*, 46 J. LEGAL EDUC. 518 (1996); Sidney W. DeLong, *The New Requirement of Enforcement Reliance in Commercial Promissory Estoppel: Section 90 as Catch-22*, 1997 WIS. L. REV. 943 (1997); Robert Hillman, *Questioning the “New Consensus” on Promissory Estoppel: An Empirical and Theoretical Study*, 98 COLUM. L. REV. 580 (1998); and Juliet P. Kostritsky, *The Rise and Fall of Promissory Estoppel or Is Promissory Estoppel Really as Unsuccessful as Scholars Say It Is: A New Look at the Data*, 37 WAKE FOREST L. REV. 531 (2002). My point still holds: despite all this marvelous literature, we teach promissory estoppel as if it were 1950.

27. Robert C. Ellickson, *Of Coase and Cattle: Dispute Resolution Among Neighbors in Shasta County*, 38 STAN. L. REV. 623 (1986); see also ROBERT C. ELICKSON, *ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES* (1991).

28. Ronald A. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

29. I say that the article “may” contain the theorem because the article contains no explicit statement of what has come to be known as the Coase theorem. Like any sacred text, there is a

orem holds that when transaction costs (the costs of searching for, bargaining with, and monitoring the performance of contractual partners) are zero or very low, bargaining can lead to the efficient use of resources, regardless of the law.³⁰ The implications of the theorem for legal analysis are profound, in two senses. First, the theorem suggests that there may be a set of circumstances under which, if efficiency is one's legal goal, achieving efficiency occurs without any help from law (and, by implication, might be impeded or made more costly to achieve by an inefficient law).³¹ Second, when transaction costs are high, achieving an efficient allocation of resources may depend crucially on law.³²

As I have indicated, for many years, legal scholars examined and criticized the Coase theorem largely through deductive argumentation.³³ Then in the 1980s there were two important attempts to confirm the Coase theorem through empirical and experimental techniques. In the former, Robert Ellickson examined the practices of cattle ranchers and farmers in Shasta County, California, in regards to harms done by cattle.³⁴ Ellickson's findings not only failed to confirm the predictions of the Coase theorem but also opened up an entirely new and important area of scholarship. In the latter, Elizabeth Hoffman and Matthew Spitzer conducted a series of experiments designed to see the extent to which bargaining occurred in settings of zero or very low transaction costs.³⁵ By and large, their experiments confirmed the predictions of the Coase theorem.

Ellickson decided to investigate the practices of cattle ranchers and others in Shasta County, California, to see if law or private bargaining was the method by which those parties resolved disputes about harms done by cattle to others' property. The prototypical harm occurred when, during the summer months, cattle ranchers herded their cattle into the foothills of the Sierra Nevada in order to let those cattle forage for food in common areas.

great deal of interpretive activity over "The Problem of Social Cost." See, e.g., David de Meza, *Coase Theorem*, in 1 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 270, 270-82 (Peter Newman ed., 1998). For a more complete statement of the theorem and a summary of the subsequent scholarly literature, see COOTER & ULEN, *supra* note 6, at 85-100.

30. COOTER & ULEN, *supra* note 6, at 85-100.

31. *Id.*

32. *Id.*

33. See, e.g., Daniel Q. Posin, *The Coase Theorem: Through a Glass Darkly*, 61 TENN. L. REV. 790 (1993); Pierre Schlag, *The Problem of Transaction Costs*, 62 S. CAL. L. REV. 1661 (1989); and Guido Calabresi, *The Pointlessness of Pareto: Carrying Coase Further*, 100 YALE L.J. 1211 (1991).

34. Ellickson, *Of Coase and Cattle*, *supra* note 27, at 624-29.

35. See Elizabeth Hoffman & Matthew Spitzer, *The Coase Theorem: Some Experimental Tests*, 25 J.L. & ECON. 73 (1982); Elizabeth Hoffman & Matthew Spitzer, *Experimental Law and Economics: An Introduction*, 85 COLUM. L. REV. 991 (1985); Elizabeth Hoffman & Matthew Spitzer, *Experimental Tests of the Coase Theorem with Large Bargaining Groups*, 15 J. LEGAL STUD. 149 (1986); and Daniel Coursey, Elizabeth Hoffman, & Matthew Spitzer, *Fear and Loathing in the Coase Theorem: Experimental Tests Involving Physical Discomfort*, 16 J. LEGAL STUD. 217 (1987).

Harm then sometimes occurred when those untended cattle wandered onto farmers' or other private, nonranch, noncommon property. The Coase theorem had famously used a similar hypothetical example of cattle straying onto neighboring grain farms and doing damage to illustrate that when transaction costs were zero, the rancher and the farmer would bargain to a resolution of their conflicting property uses without any regard to whether the farmer had the right to be free from invasion and damage or the rancher had no legal obligation to supervise his cattle.

Shasta County was a particularly apt place to test the Coase theorem because the prevailing law on liability for damage done by unsupervised cattle varied across the county. Roughly speaking, the law in the eastern part of the county was that the cattle owner was not responsible for damage done by the owner's unsupervised cattle, while in the western part of the county, the cattle owner had a duty to supervise the owner's cattle and was, therefore, liable for any damage done by his or her cattle.³⁶

In a sense, Ellickson found evidence confirming the Coase theorem in that the practices of ranchers and others with regard to straying cattle were the same throughout the county, regardless of the legal obligations.³⁷

But even more surprising to Ellickson, the potential disputants did not seem to know the legal obligations for stray cattle; indeed, attorneys in private practice in Shasta County did not know or were mistaken about the law.³⁸ Apparently, ranchers and others in the county were conforming their behavior not to the law but to a widely respected social norm of "neighborliness."³⁹ Good neighbors, the norm directed, did not sue one another; they helped each other. So, if a farmer found stray cattle on his property, he did not call his attorney and commence an action for damages. Instead, the farmer typically called the rancher-owner, informed him that he had his cattle and would feed and shelter them until the rancher could come to pick them up.⁴⁰ If the straying cattle had caused damage, the person who had suffered the damage typically took care of it himself and never asked for indemnification.⁴¹ In some instances, weeks passed till the rancher picked up his cattle. And yet almost no one who sheltered cattle, whether for a long or a short time, asked for compensation from the owner.⁴²

If there was litigation about damage done by or compensation for feed and shelter provided to stray cattle, one of the parties to the litigation was

36. Ellickson, *Of Coase and Cattle*, *supra* note 27, at 626.

37. *Id.* at 685–87. An additional surprise to most readers of Ellickson's famous study was that this private ordering occurred despite the fact that the transaction costs of bargaining between ranchers and others were certainly not zero and might have been substantial.

38. *Id.* at 670.

39. *Id.* at 672–76. Ellickson referred to the prevailing philosophy as "live and let live." *Id.* at 673.

40. *Id.* at 673.

41. *Id.* at 674.

42. Ellickson, *Of Coase and Cattle*, *supra* note 27, at 680–81.

almost invariably a newcomer to the county or a long-time resident recognized by his neighbors to be churlish and a bad neighbor.⁴³ Consultation with an attorney regarding these matters and litigation was thought to be a sign that the social norm of “neighborliness” had broken down.⁴⁴ The implication was that in the normal course of rancher-farmer affairs, neighbors did not often use law to order their affairs and to resolve disputes. They used shared social norms and resorted to law only when those norms had broken down.⁴⁵

What is remarkable about this particular piece of empirical work is that it revealed so much about the legal phenomena involved, much of it not the subject of the initial inquiry. Indeed, Ellickson’s article has become part of the law-and-economics canon not for what it set out to find—namely, whether the Coase theorem applied in a particular setting in California—but for its collateral finding—namely, that people typically seek to conform their behavior to social norms rather than to the law. The literature on law and social norms that Ellickson’s study spawned is one of the most significant strands of recent legal scholarship.⁴⁶

B. Summary

There is a significant scholarly revolution occurring in the law. That revolution can best be characterized as the adoption of the scientific method of inquiry to the investigation of matters of law. That method consists of framing a theory or hypothesis and then confronting that hypothesis with data to see whether the data confirm or refute the theory or hypothesis. Law and economics began this process of bringing the scientific method into the study of law. My contention is that it is the importation of that methodology into the study of law, and not any particular conclusions or theories, that will prove to be the lasting contribution of law and economics. I have tried to contrast this thrust of law and economics with doctrinal scholarship by examining how doctrinal scholars and those familiar with law and economics have responded to significant empirical findings. When doctrinalism or legal formalism was the dominant scholarly technique, there was no particular interest in either pursuing empirical studies as a routine matter of legal

43. *Id.* at 676–80.

44. *Id.* at 681.

45. Among the many interesting lines of inquiry opened by Ellickson’s article were inquiries into the practices of particular organizations to see the extent to which they ordered their affairs by appeal to norms or to law. *See, e.g.*, Lisa Bernstein, *Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. LEGAL STUD. 115 (1992); Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code’s Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765 (1996). An important question raised by Bernstein and others—such as Jody Kraus, *Legal Design and the Evolution of Commercial Norms*, 26 J. LEGAL STUD. 377 (1997)—is whether law is a complement to or a substitute for social norms.

46. *See, e.g.*, Richard H. McAdams, *The Origin, Development, and Regulation of Social Norms*, 96 MICH. L. REV. 338 (1997); ERIC POSNER, *LAW AND SOCIAL NORMS* (2000).

inquiry or incorporating those empirical studies that fortuitously appeared. However, when the scientific methodology, through law and economics, became an important technique of legal inquiry, empirical studies became a natural, inevitable core part of legal scholarship.⁴⁷

III. THE TRAIN GATHERS SPEED BUT LOSES PASSENGERS

My central point, so far, is that law and economics has signaled a change in the way the legal academy approaches questions of law. Legal scholars are beginning to approach those questions in the same manner in which scientists approach their disciplinary issues—namely, by articulating hypotheses and then subjecting those hypotheses to empirical tests for confirmation or refutation.

I do not want to be misunderstood to be making a case in favor of law and economics *per se*. Nor am I suggesting that economic analysis should be the core methodology in the study of law. In fact, I deeply believe that our understanding of law will be advanced most adventitiously by bringing to bear whichever social, behavioral, and natural sciences help us to understand how best to govern ourselves.

One more disclaimer: I am not pointing out the change in the nature of legal inquiry to create better law professors or better legal scholarship. My contention is that recognizing the importance and promise of the scientific method of pursuing legal issues should help legal educators redesign legal education so as to produce better lawyers. The nature of legal inquiry has changed, will continue to change, and the change is irreversible.

In this section I pursue two goals. First, I want to characterize the subject matter that we pursue in the law much more broadly (but, I believe, accurately) than has been done before by characterizing law as the study of the mechanisms of social governance. Second, I want to anticipate and address some of the criticisms, including Judge Edwards's famous view of the "growing disjunction" between law schools and the practice of law, that I suspect will be leveled against my broad characterization of law.

47. An extremely important result of the importation of the scientific method into the study of law has been the first steps toward creating a common language in which to discuss the law across national (and jurisdictional) boundaries. I have remarked elsewhere—see Ulen, *supra* note 5, and Thomas Ulen, *The Unexpected Guest: Law and Economics, Law and Other Cognate Disciplines, and the Future of Legal Scholarship*, 79 CHI.-KENT L. REV. 403 (2004)—that one of the distinctive aspects of doctrinal or formalistic law as a scholarly field was that it tended to be nation- or jurisdiction-specific; law professors in different countries, for instance, did not have the same ease of communication about their subject matter as did scholars in other disciplines, such as anthropology, political science, economics, business, and medicine. In those other disciplines, there was a singularity of methodology and subject matter in the field that allowed scholars from all over the world to interact productively. That was not so clearly the case under formalism and doctrinalism in the law. But law and economics (and other interdisciplinary approaches to law) are creating the same sort of singularity of methodology and subject matter that characterizes other scholarly disciplines.

A. *Law as the Study of Social Governance*

I take a very expansive view of the subject matter of law. Namely, I believe the core subject we teach and study in law schools is social governance. By that phrase I mean all the procedures and institutions we use to advance our individual, familial, and collective ends. So, I sweep within the purview of “social governance” the processes and institutions of private and public law, social norms, legislation, constitution, international private and public law, and the like. And I include not just descriptions of what these rules, practices, and institutions of social governance are but also explicit normative concerns about how we ought to govern ourselves—what we ought to delegate to private law and what to public law, how resources should be distributed (and redistributed), and what obligations we owe each other today and to future generations. I include not just how our practices of social governance work now or might work in the future but also historical issues of how they worked in the past and how past practices have evolved into and explain present practices. Finally, I include matters of social governance advocacy—for example, how one might best prepare written and oral communications on social well-being.

Clearly this definition of the subject matters of legal inquiry is extremely broad. And it is certainly different from what might be the conventional definition. A conventional definition might stress the practice-oriented character of the law—its focus on advocacy and the representation of client interests before a legal body. That conventional account might also stress the importance of a focus on positive law—law as it is—and not on normative law—law as it ought to be. In brief, and perhaps unfairly, that conventional account might place much greater emphasis on the trade-school aspect of law than does my account.

Nonetheless, I defend my description of the appropriate scope of law as the mechanisms of social governance as being both factually accurate—that is, recognizably within the ambit of what law schools are striving to do as their educational mission—and a widely shared aspiration: it is the realm of inquiry that legal scholarship does and ought to strive to explain. But the claim is novel and, therefore, needs defending.

The principal defense of my view is that our societies—whether local, state, regional, national, or international—are faced with problems and opportunities that are beyond the ability of any single academic discipline to analyze or solve. Almost invariably those problems and opportunities require societies to assemble knowledge from a large number of academic disciplines. Law is the only discipline within the modern research university that is capable of consolidating information and scholarly knowledge to address modern problems and opportunities.

Let me give an example of what I mean. During the fall semester of 2008, I taught a course that I entitled, “The Law and Economics of Global

Warming.” Because the course was new and, to my knowledge, not taught in other law schools, there was neither a text that I could assign to the students nor someone else’s reading list that I could borrow to suit my purposes. Instead, I had to devise a structure for the course and then assemble readings that would help me and the students come to grips with the topic. I had casually read about climate change, participated in the creation of a multidisciplinary institute on environmental change at the University of Illinois at Urbana-Champaign,⁴⁸ followed the public debate about climate change policy and greenhouse gas emissions, and was aware of the Supreme Court’s decision in *Massachusetts v. EPA*.⁴⁹ But, of course, providing material for a fourteen-week-long course required both filling in lots of gaps in my knowledge and generating a structured presentation of a great deal of material.

While putting together the materials for the course on global warming, I realized that in order for me and the students to understand the issues of climate change, we would have to inform ourselves about a large number of topics. We would, for instance, need to understand the role that carbon dioxide plays in making the planet habitable and, more generally, the role of greenhouse gases in influencing temperatures at various points on Earth; about the history of the Earth’s climate and the causes for the variations in the climate; about the methods for modeling climate change and for evaluating the veracity of those models; about the costs that climate change might impose on the planet and when and where those costs might fall; about acceptable methods for discounting future costs to present value so as to be able to decide what policy changes to address climate change make sense at various points in the next century; about the various policy options available to slow or adapt to global warming (such as the fostering of alternative energy sources (nuclear, tidal, wind-powered, and solar), the prospects for relatively inexpensive carbon-capture-and-sequestration (CCS) systems that would allow continued use of coal-powered utilities, geoengineering, cap-and-trade systems, carbon taxes, private liability actions against those emitting temperature-raising gases, and more); about the various national policies to address climate change and their lack of success; about the United Nations Framework Convention on Climate Change of 1992 and the Kyoto Protocol of 1997 and why the United States did not accede to that Protocol; and about the grave difficulties and daunting prospects of an international agreement addressing global warming.

As a reading of that list makes abundantly clear, the tools necessary for addressing the problems of climate change are many and varied. Although many different academic and scholarly communities were contributing

48. See University of Illinois at Urbana-Champaign, Environmental Change Institute, <http://eci.illinois.edu> (last visited July 12, 2009).

49. 549 U.S. 497 (2007).

pieces to the complete picture of climate change, it was clear to me that there was no one discipline whose subject-matter emphasis drove it to be able to answer all the issues that I had just posed. For instance, political scientists have a great deal to say about achieving cooperative agreements at the state, regional, national, and international levels. But they could not evaluate the scientific models of climate change. And the atmospheric and other scientists who devised those very complex models of Earth's climate had no expertise at translating those findings into costs and benefits.⁵⁰ Economists had the tools for performing that aspect of the study. Lawyers knew better than anyone else what the possibilities of private litigation, agency regulation, and international treaties were in addressing the issues.

In articulating my view of lawyers as consolidators of scholarly information from across many disciplines, I do not want to put too much emphasis on huge issues such as global warming. Lawyers face problems that demand knowledge in disciplines other than the law but not at the extremely broad gauge that global warming demands. Take, for instance, issues in antitrust law, environmental law, corporate financial matters, and intellectual property. In each of those areas a mere knowledge of the relevant law is necessary to be a valuable counselor. But the antitrust advocate who is also familiar with economics and with empirical methods of measuring market impact is a better counselor. The environmental lawyer who knows the chemistry of pollution and the costs and techniques of avoiding pollution can provide better counsel than one who does not know those fields. A lawyer who is advising a client with respect to a merger or acquisition and who is also familiar with financial matters is a more valuable counselor than one who is mystified by finance. And a patent lawyer who understands the underlying science of a client's patent claim is likely to be an abler advocate on her client's behalf. Thus, the lawyer who can marshal learning from across the scholarly spectrum is a better lawyer in dealing with both large-scale social issues like global warming and narrower legal issues in specialties such as antitrust, environmental matters, finance, and intellectual property.

In summary, the subject matter of law and, therefore, of a legal education is the mechanisms of social governance, all the many institutions, rules, organizations, and techniques for helping human beings in society work together for mutual and collective benefit. As society's issues grow more complex, so, too, grows the need to broaden the range of scholarly tools that bear on the resolution of those issues. Law is the only discipline within the modern research university that is well positioned to bring together all these bits of knowledge into workable solutions—that is, to solve the schol-

50. See, e.g., Daniel A. Farber, *Climate Models: A User's Guide* (UC-Berkeley Pub. L. Working Paper No. 1030607, 2007), available at www.ssrn.com/abstract=1030607. Remarkably, this excellent article about climate models was written by an accomplished legal scholar.

arly anticommons problem—for many of those problems. The fact that law school faculties are becoming populated by economists, political scientists, philosophers, anthropologists, sociologists, psychologists, and others, many of whom are committed to empirical research, is a measure of legal education's having gotten things right, not, as critics allege, of its having gone astray.

B. Law as Solving a Scholarly Anticommons Problem.

I might characterize the view of law as the study of the mechanisms of social governance as an attempt to solve a problem of the scholarly anticommons. Michael Heller, in a famous article⁵¹ and now in a best-selling book,⁵² has drawn our attention to the fact that inefficiencies can arise from having too many property interests just as surely as inefficiencies can arise from having too few property interests.⁵³ Heller characterizes an anticommons as a situation in which “multiple owners are each endowed with the right to exclude others from the use of a scarce resource, and no one has an effective privilege of use.”⁵⁴ As a result, otherwise valuable resources are not put to their highest and best use because of the difficulty of reassembling the property interests into an efficient aggregate form. The solution to the problem of the anticommons is to assemble the disparate rights into a more valuable configuration under the control of a single decision-maker, who controls this assembled bundle of rights.⁵⁵ But the transaction costs of assembly may be so considerable as to preclude the assemblage.

Consider Heller's example of the difficulty in making the most efficient use of large apartments in Moscow after the breakup of the Soviet Union in 1991. Central Moscow prior to the revolution of 1917 had buildings containing large, luxurious apartments where the very well-to-do lived.⁵⁶ Between the October Revolution and 1991, these apartments, called *komunalkas*, had become dwellings for several dozen people, frequently organized into several different families, with each family often spanning three generations.⁵⁷ Parts of the apartments, such as the bedrooms, were private spaces for the families, but other parts, such as the living rooms, kitchens, and bathrooms, were shared by all the families.⁵⁸ With the privatization that followed the breakup of the Soviet Union in 1991, the several dozen tenants received property interests in their portions of the

51. Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621 (1998).

52. MICHAEL HELLER, *THE GRIDLOCK ECONOMY: HOW TOO MUCH PROPERTY WRECKS MARKETS, STOPS INNOVATION, AND COSTS LIVES* (2008).

53. *Id.* at xiv.

54. Heller, *supra* note 51, at 624–25.

55. *Id.* at 640.

56. *Id.* at 650.

57. *Id.* at 650–51.

58. *Id.*

komunalkas.⁵⁹ These disparate property interests made the use of the apartment as a single-family dwelling almost impossible, even if that had been the most valuable configuration of the space.⁶⁰

Heller illustrated this with the following example.⁶¹ Suppose that the most valuable configuration of the space in the large apartment was as a single-family dwelling and that people were prepared to pay \$500,000 to acquire the property in that configuration. Assume, for illustrative purposes, that there are four current tenants, each with rights to a private room and rights to communal spaces within the large apartment. Further assume that each of the private interests in the apartment has a market value of \$25,000. So, setting aside the value of the right to use the common areas, the total value of the apartment in its current, four-tenant configuration is \$100,000. As a result, the increase in the value of that resource by moving from the current configuration to the single-owner configuration is \$400,000.

It seems obvious that on these facts it would behoove each current tenant to relinquish her property rights in exchange for \$25,000 plus a share of the \$400,000 surplus. But Heller found that most tenants were reluctant to do this.⁶² Most wanted a substitute place to live that had the same amenities as they would be giving up, but those substitutes were rare and expensive, on the order of \$75,000 each.⁶³ The cost of four such apartments would be \$300,000. Assuming that an intermediary bundler would be willing to find and pay for these substitute apartments and then give one to each of the current tenants of the *komunalka* in exchange for their room and entitlement to the common areas, he would be spending \$300,000 so as to resell the apartment to a single buyer for \$500,000—thereby realizing a profit of \$200,000.⁶⁴

That profit would seem to be enough to justify undertaking the cumbersome task of reassembling the disparate property interests into a more valuable whole. But the profit may not be \$200,000. We have not accounted for the possibility that the tenants may demand a portion of that \$200,000. Nor have we accounted for the (no doubt) sizeable costs that the intermediary bundler has to incur in bringing this transaction to fruition—the costs of finding and bargaining for the substitute apartments and of negotiating with the *komunalka* tenants. In the end, the bundler's profit could be significantly less than \$200,000—so much so that the transaction may not be worth the candle.

How does the notion of an anticommons apply to my notion of law as the study of social governance? My argument in favor of law as the study of

59. *Id.*

60. Heller, *supra* note 51, at 671–72.

61. *Id.* at 652–53.

62. *Id.* at 653–54.

63. *Id.* at 652.

64. *Id.* at 651–52.

the mechanisms of social governance is largely motivated by a desire to solve what I take to be a scholarly anticommons problem. As was the case with regard to global warming, social governance problems require insights from a wide range of scholarly disciplines. No one of them has a privileged or more accurate view of matters than do the others. Something is almost certainly necessary from many of them. But aggregating those relevant portions of information from different disciplines into a useful whole presents similar challenges to those that face the intermediary bundler in the *komunalka* example.

The costs of scholarly consolidation or knowledge assembly are considerable. One significant element of those costs arises from the structure of the modern research university. Over the past one hundred or so years, academic disciplines narrowed their focus and specialized in creating and disseminating knowledge within that focus. The benefits of narrowing and specializing have been very, very large.

But there have also been costs. One is the danger that opportunities to throw light on an important subject will be lost because of the scholar's fear of stepping outside his own discipline. I am not aware of any innovations that were delayed by this trepidation, but there may be some. A second cost is that the ground across which a discipline is treading can become boringly well trodden. There is less and less room for innovative scholarship, and, as a result, the work may become narrower and narrower and less and less interesting.⁶⁵

Additionally, the rewards system in the modern research university does not encourage interdisciplinary innovation. A scholar who strays too far beyond the narrow focus of the discipline risks a great deal. The scholar's work is difficult for colleagues to evaluate and may not be welcomed by those into whose domain the scholar may have strayed. Generally speaking, being a productive scholar in one discipline is a far safer route for success than being a productive scholar (or innovator) across disciplines.

This is not to say that interdisciplinary innovation does not happen. It clearly does (as law and economics demonstrates), and when it does happen, it is usually very important.⁶⁶ To illustrate, although the field of economic history is now highly respected and well established, it was, in its modern infancy, neither economics nor history, even though the field was a marvelous scholarly innovation. As a result, the early innovators were incurring significant career risks. Happily, they persevered, so that economic

65. The tedium of seeing yet another application of a discipline's core methodology to yet another small problem is the source of the psychologist Abraham Maslow's famous quote: "If the only tool you have is a hammer, every problem is a nail." (Exact quote unknown; see Maslow's Maxim/Maslow's Hammer, http://www.abraham-maslow.com/m_motivation/Maslows_Hammer.asp (last visited July 12, 2009).)

66. Nuno Garoupa and I explore these matters in *The Market for Legal Innovation: Law and Economics in Europe and the United States*, 59 ALA. L. REV. 1555 (2008).

history now has a secure place in both economics and history departments.⁶⁷

Even if I am overstating the reception that might come from innovating across disciplinary boundaries, what I am advocating as the proper scope of study for the law goes far beyond something as minimally invasive as plucking a useful concept from contiguous disciplines. Rather, I am advocating for lawyers to become familiar with a broad range of scholarly disciplines and to gather concepts from as many of those disciplines as seem to be able to provide insight into the social or client-centric problems regarding which the lawyer must counsel. This goes beyond law-and-(some other single discipline) to law-and-all-other-scholarly-knowledge.⁶⁸

Let me conclude with two final points that might make the lawyer as the consolidator of a scholarly anticommons a plausible notion. The first is that because there is no core methodology that defines the study of law, consolidating knowledge from other disciplines will not present a conflict with the existing methodology of law. Those scholarly conflicts of methodology are frequent in other cross-disciplinary collaborations. For example, fruitful as the intersection of economics and psychology has been, there are significant methodological differences between those disciplines. Economists, for example, are highly skeptical of interviewing subjects to discover why they behaved in a particular way, preferring instead to observe their actions.⁶⁹ Other social scientists are more willing than are economists to engage in subjective interviews for data, although they may recognize that, because subjects may not make reliable statements, interviews must be conducted very carefully.⁷⁰

Second, there is no discipline other than law in the modern research university that would be so bold as to stride across disciplinary boundaries in search of insights useful to answering questions regarding social governance. In brief, if law does not perform this function, then I fear that it will not be done at all.

67. In 1993 the Royal Swedish Academy recognized the achievements of the field by awarding the Nobel Prize in Economics (the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel) to Robert W. Fogel and Douglass C. North. See Nobelprize.org, The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1993, http://nobelprize.org/nobel_prizes/economics/laureates/1993/index.html (last visited July 12, 2009).

68. For a view that is similar to mine, see JON ELSTER, *EXPLAINING SOCIAL BEHAVIOR: MORE NUTS AND BOLTS FOR THE SOCIAL SCIENCES* (2007).

69. Marianne Bertrand & Sendhil Mullainathan, *Do People Mean What They Say? Implications for Subjective Survey Data*, 91 AM. ECON. REV. 67 (2001).

70. On the techniques of surveying, see Shari Seidman Diamond, *Survey Research*, in *SCIENCE IN THE LAW: STANDARDS, STATISTICS, AND RESEARCH ISSUES* (David L. Faigman et al. eds., 2002). For a classic statement of the need for caution in interviewing subjects, see Richard E. Nisbett & Timothy D. Wilson, *Telling More Than We Can Know: Verbal Reports on Mental Processes*, 84 PSYCHOL. REV. 231 (1977).

C. *Support for the View of Law as the Study of Social Governance*

The broad notion of law that I am championing has been written about by previous authors. As early as the late 1950s, Henry Hart and Albert Sacks articulated a vision of the lawyer's function that is very close to the one that I have just laid out.⁷¹ Hart and Sacks note that law is, and has long been, everywhere (*Ubi societas ibi lex*), so that it is difficult to conceive how one could perform historical, economic, and other studies without taking due account of the legal setting.⁷² "A framework of law—that is, a legal order—encloses and conditions everything that people living in an organized society do and do not do."⁷³

Recognizing this centrality of law, Hart and Sacks then ask, "[W]hat is the distinctive function of the lawyer as a specialist, and how is it related to the functions of those who are specialists in other social sciences?"⁷⁴ Most significantly for my contention, Hart and Sacks say this:

A lawyer is an 'architect of social structures,' an expert in the design of frameworks of collaboration for all kinds of purposes, a specialist in the high art of speaking to the future, knowing when and how to try to bind it and when not to try at all. The difference between a legal mechanic and a legal craftsman turns largely on awareness of this point.⁷⁵

They describe "law [as] applied social science"⁷⁶ and the "professional lawyer [as] essentially a problem solver, dealing with concrete and immediate problems which somehow or other must be solved."⁷⁷

In a more contemporary account, Ron Gilson and Robert Mnookin describe the role of legal academics as follows:

[They] are particularly well suited to the interdisciplinary effort necessary to exploring how our legal system, and private parties transacting in its shadow, behave. To the extent that legal academics share a common disciplinary core beyond facility with the output of courts and legislatures, it is a commitment to the importance of a deep and sensitive institutional knowledge. However, as legal scholars we are reasonably free of disciplinary restrictions on the tools that can be deployed in aid of our task. Legal academics may take economic analysis as far as it goes, but then switch to cognitive psychology or sociology to fully close the

71. See HENRY M. HART, JR., & ALBERT M. SACKS, *THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW* 174–81 (William N. Eskridge, Jr. & Phillip P. Frickey eds., 1994). I am extremely grateful to Professor Marcio Grandchamp of FGV–Direito–Rio for this reference and an enlightening discussion.

72. *Id.* at 176.

73. *Id.* at 175.

74. *Id.*

75. *Id.* at 176.

76. *Id.* at 177–78.

77. HART & SACKS, *supra* note 71, at 178.

jaws of our analytic vice. In this respect we have the opportunity to use borrowed concepts with a freedom that our sisters and brothers in particular social science disciplines probably cannot.⁷⁸

Paul Brest and Linda Hamilton Krieger have begun a project that focuses on “lawyers as problem solvers.”⁷⁹ They remark that “of the ten ‘fundamental lawyering skills’ identified by the ABA’s MacCrate Commission Report, fewer than half relate exclusively to the law. And it is noteworthy that the report places the skill of ‘problem solving’ at the very top of the list—even before legal analysis.”⁸⁰ They also assert that “[a]t their best, lawyers serve as society’s general problem solvers, skilled in avoiding as well as resolving disputes and in facilitating public and private ordering.”⁸¹

Finally, Judge Richard A. Posner has made an argument about broadening the toolkit of lawyers that is very similar to mine but with an emphasis on the valuable connection between science and law.⁸² In the course of discussing some catastrophic risks (such as that of global warming) that face humanity, Judge Posner makes his usual startlingly insightful observations. He characterizes the prevailing legal culture as one of “advocacy and doctrinal manipulation,”⁸³ and notes that because neither the lawyer (who is committed to his client’s interests) nor the judge (who is committed to deciding) is focused on the truth,⁸⁴ and because science focuses on truth and knowledge, there is a fundamental mismatch between the role of the lawyer and judge and the tenets of science.⁸⁵ These differences in goals give rise to a paradox: “[D]espite their much more powerful apparatus of inquiry, scientists are more tentative than lawyers. Scientists talk more in terms of ‘theory’ and ‘hypothesis’ and ‘data’ and ‘belief’ than of ‘fact’ and ‘truth,’ which are terms that pervade legal discourse.”⁸⁶ Lawyers are better trained for and more adept at speaking on the policy implications of science than are scientists, in no small part because the narrow specialization that has

78. Ronald Gilson & Robert Mnookin, *Foreword: Business Lawyers and Value Creation for Clients*, 74 OR. L. REV. 1, 13–14 (1995); see also Brest, *supra* note 10, at 12.

79. See Paul Brest & Linda Hamilton Krieger, *Lawyers as Problem Solvers*, 72 TEMP. L. REV. 811 (1999). Those authors also have a book forthcoming entitled PROBLEM SOLVING, DECISION MAKING, AND PROFESSIONAL JUDGMENT. For a table of contents and drafts of chapters, see <http://www.professionaljudgment.org/Chapters/301.aspx>.

80. *Id.* at 811. The report referred to is AMERICAN BAR ASSOCIATION SECTION ON LEGAL EDUCATION AND ADMISSION TO THE BAR, LEGAL EDUCATION AND PROFESSIONAL DEVELOPMENT—AN EDUCATION CONTINUUM (REPORT OF THE TASK FORCE ON LAW SCHOOLS AND THE PROFESSION: NARROWING THE GAP) 135 (1992). The report is named for Robert MacCrate, Chair of the Task Force.

81. Brest & Krieger, *supra* note 79, at 811.

82. RICHARD A. POSNER, CATASTROPHE: RISK AND RESPONSE (2004).

83. *Id.* at 201.

84. *Id.* at 202.

85. *Id.* at 201–02.

86. *Id.*

allowed scientists to learn so much makes them wary of speaking on the policy implications of their learning.⁸⁷

Judge Posner makes this remarkable and, I think, accurate claim about law and legal education:

A striking feature of law that is largely invisible to its practitioners and to most outsiders as well is that it has (except perhaps where it has embraced the economic approach) no theoretical core or empirical methodology. Law is more like a language than a science. It is important to know the rules of a language as codified in a grammar, lexicon, and textbook, but that knowledge is only the first step in learning how to *use* the language. From the standpoint of the practitioner law is not only, or even mainly, a set of rules, but a knack for bending the rules, for fitting them to goals. The rules are resources in much the same way that the formal rules of a language are resources. All this is remote from the physical sciences.⁸⁸

Nonetheless, because scientists are timid about making public policy pronouncements, and because lawyers are skilled at advocacy, Judge Posner suggests that lawyers take on the role of learning enough science to be in a position to offer scientifically knowledgeable counsel.⁸⁹ To that end, he suggests that it “would be entirely feasible to require that a substantial fraction of law students be able to demonstrate by the time they graduated from law school a basic competence in college-level math and statistics plus one science such as physics, chemistry, biology, computer science, medicine, public health, or geophysics.”⁹⁰

D. *Criticisms of the View of Law as the Study of Social Governance*

There are several criticisms that have implicitly been made and might be made of my broad definition of the appropriate realm of legal inquiry. The first is the contention, leveled by Judge Harry Edwards in the early 1990s,⁹¹ that legal education is no longer seeking to satisfy the demands by law firms, judges, and others for well-trained young lawyers. Law professors seemed to Judge Edwards to have distanced themselves from the bench and bar in order to pursue their own scholarly interests.⁹² Those interests

87. *Id.* at 208.

88. POSNER, *supra* note 82, at 202.

89. *Id.* at 203.

90. *Id.* Judge Posner goes on to suggest that a very small number (11 percent) of students matriculating in ABA-accredited law schools in fall 2002 had majored in a science as undergraduates. *Id.* at 203–04.

91. See Edwards, *supra* note 1. For another criticism of modern legal education that particularly implicates law and economics as having a leading role in causing the problems of the modern law school, see ANTHONY KRONMAN, *THE LOST LAWYER* (1993).

92. Edwards, *supra* note 1, at 34–36.

seemed to be far too theoretical to be of much value to actual practitioners.⁹³

Clearly, this view of a “growing disjunction” between the law schools and the practice of law and art of judging appealed to many. The article gave heart to those within the academy who were unhappy with the scholarly drift of modern legal scholarship (for example, those who thought law and economics to be unwelcome in legal education) and induced action by the American Bar Association, among others, to get law schools to take “skills training” more seriously.⁹⁴

As an economist who left an economics department in order to teach law students, I had long been aware of and troubled that I seemed to be precisely the sort of intruder at whom Judge Edwards’s criticism of legal education was directed. Nonetheless, I have also had a nagging sense that the criticism was somehow missing something valuable about what has been going on in U.S. law schools for the past thirty years. I have long felt that the movement of law schools from being trade schools to being more scholarly enterprises (but with elements of a trade school) was a step in the right direction. Part of my reason for feeling this way was my sense that doctrinalism, although important, was missing much of interest about the law. Another, larger part of the reason was my fascination with the economic analysis of law, whose insights I have championed earlier in this piece and elsewhere. But, importantly, I have never felt that the movement to a more scholarly law school was directed at or needed to entail a disdain for or a disrespect of the practicing legal profession. Quite to the contrary, I have, like many in law and economics, felt that law and economics had a great deal to offer to practitioners.⁹⁵

In light of those views, I had never found the “growing disjunction” to be worrisome. Rather, it seemed to me that those who were in favor of the changing nature ought to do a better job of explaining why the change was a good idea. A few tried, but no consensus academic defense of the chang-

93. *Id.*

94. This was one of the important recommendations of the ABA’s MacCrate Commission Report, *supra* note 80, at 123–33.

95. To give but one example and a suggestive empirical test, Ronald Gilson’s characterization of transactional lawyers as “transaction cost engineers” seems to me to be accurate, insightful, and felicitous. It suggests that a study of the economic analysis of law will acquaint the attentive student to the vital role that an attorney might play in identifying transaction costs that might impede a bargain from occurring and also in devising work-arounds to avoid or reduce those transaction costs (as by instituting a voting mechanism such as simple majority rather than unanimity). An empirical test that might demonstrate that this view from law and economics has had a desirable effect on the practice of law would be to test the extent to which better lawyering (through the recognition of and explicit reckoning for transaction costs) has reduced the number and extent of inefficient transactions in some sector of the economy, such as in Silicon Valley. See Ronald Gilson, *Value Creation by Business Lawyers: Legal Skills and Asset Pricing*, 94 *YALE L.J.* 239 (1984).

ing nature of legal education emerged.⁹⁶ Instead, the change simply happened. The exercise of putting together and teaching the class on global warming helped me to formulate an idea about legal education that had been nagging at me for a long time and that, I believe, helps to answer Judge Edwards's criticism.

Second, one might argue that even if there is some sense in broadening the scope of law as I propose, law schools are not in a position to do so. The costs of accommodating this proposal may be excessively high. Redesigning the curriculum to make lawyers better able to deal with the many scholarly disciplines whose work is pertinent to the lawyer's tasks would necessitate some extraordinary soul-searching among law school faculties. And that soul-searching (typically done by a committee that must then report to the faculty for further discussion and action) would take away from the scarce time that law professors have to write and prepare for class. It might be better simply to stumble along in an incremental fashion rather than contemplate a complete makeover of legal education.⁹⁷ Providing broader educational experiences to law students might also require hiring more or very different law professors than has long been the case. That change is also problematic.

In brief, changes to the curriculum (about which I warned at the beginning of this article) are likely to be taken only when the need to do so is so compelling as to engage the administration and faculty in the necessity of doing so. We are probably not yet at the point where the train wreck of current legal education is so imminent that the necessity of diversionary action is compelling. We are, I think, stumbling in the right direction, and we may in fact stumble to a better method of educating law students to be adept at scholarly consolidation. I only wish that we would find a method of getting to that goal more directly and with less stumbling.

Third, one might argue that there is no need for law to adopt a broad scope like the one I advocate because there are already other units within the great modern research universities that are studying these areas. Public policy schools, for example, already assemble scholars from different disciplines with a view to creating multidisciplinary views on issues of public importance. Why are they not only well suited to performing the scholarly consolidation that I propose but, in fact, already doing it?⁹⁸

96. See Symposium, *Legal Education*, 91 MICH. L. REV. 1921 (1993). Judge Edwards responded again to some of his critics in *Another 'Postscript' to 'The Growing Disjunction Between Legal Education and the Legal Profession,'* 69 WASH. L. REV. 561 (1994), and *A New View of the Legal Profession*, 72 N.Y.U. L. REV. 567 (1997).

97. As my proposals in the next part of this article will indicate, I am in complete sympathy with this criticism and will, as a result, propose only incremental changes in the curriculum.

98. I am grateful to Professor Lino Graglia of the University of Texas School of Law for raising this point.

I do not believe that there are other units in the research university that are either performing this function or capable of doing so. My experience as a member of a public policy school faculty was that it was exhilarating to consider public issues with the help of knowledge from other disciplines but that there was no core learning or consolidated discipline that was emerging from those considerations. The public policy school was a convenient venue in which to learn what other disciplines were thinking about an issue, but no one there was relinquishing disciplinary learning in favor of a broader discipline.

By contrast, my experience in a law school faculty of philosophers, economists, psychologists, historians, and other disciplinarians has been that they bring their disciplinary learning to the task of addressing a legal issue and that their contribution is part of a broader construction for addressing that issue. True, the gravitational pull of the discipline from which the legal scholar originates is strong, but the scholarly task of providing a description of and predictions about the legal phenomenon seems to unite across disciplinary boundaries with no one of those disciplines being privileged about others. Everyone seems to recognize that the multiple views expressed are *all* relevant—indeed, *indispensable*—to understanding the phenomenon at issue.

Fourth, one might suggest a more cautious strategy of asking legal scholars either to limit their interests in contiguous disciplines to borrowing from or, possibly, collaborating with members of those other disciplines. That is, in fact, what many people have done. But I would argue that this is only a stopgap measure, a first step that we must get beyond. The interactions with other disciplines that will well serve legal education and scholarship need to be more sustained and marriage-like, rather than like the periodic dating that is appropriate at the beginning of a relationship. In large part this is because the creative value of these interactions is now, I believe, beyond question, and that being so, law school faculties need to formalize the relationships. We have done this to a degree by having people familiar with the law but trained in other disciplines join law school faculties—a trend I explore in the next part. There truly is a distinctive style of scholarship and inquiry within law schools, and one must be within the walls of a law school in order to learn that style and incorporate one's training in another discipline to the style and needs of legal education and scholarship. Mere collaboration and part-time sojourning in or from other disciplines is no longer enough.

Fifth and finally, if legal education and scholarship were to adopt my view, there is a danger that a lawyer will become a “jack of all trades, and a master of none.”⁹⁹ The danger in simply borrowing from other disciplines is the danger of amateurism, of misunderstanding and therefore inappropri-

99. See discussion *infra* Part IV.A.

ately using learning from a discipline with which one is not fully conversant. There are at least two protections against this unfortunate outcome. The first is to bring onto law school faculties scholars who are familiar with other disciplines and can help their colleagues and students learn other disciplines and avoid making inappropriate use of scholarship from other fields. The second is to cultivate scholarly humility, as the best legal scholars already do. A humble scholar—in almost any discipline, not just law—makes the strongest argument possible but is also careful not to go farther than the arguments or results warrant. Humility leads one to treat one's potential and actual critics with respect and recognizes that the future may bring better arguments (both for and against), new methods of inquiry that throw illumination on the topic, and better data with which to confront one's arguments. Because the best legal scholars are aware of the dangers of misusing the findings of other disciplines and of claiming too much for one's work, I think that the prospect of this possibility, although not large, is something about which to be vigilant.

IV. ON THE RIGHT TRACK

I have admonished readers to be wary of the impending train wreck in legal education, and it is now time to be more explicit both about why a train wreck is imminent and how it might be averted.

In the first section, I give some brief statistics to suggest that the composition of U.S. law faculties is changing to reflect the changing nature of legal scholarship.

In the second section, I give a brief account of what is missing in current legal education and how that may—allowing for some authorial puffery—lead to a train wreck.

In the final section, I give some guidance about how legal education might make some relatively modest changes so as to accommodate the changes I have been outlining and to better prepare law students for the complex topics that face human societies.

A. *The Increasingly Interdisciplinary Law School Faculty*

If the changes I outlined in Part II have been real, then they ought to alter the composition of U.S. law faculties. In particular, there ought to be more people with advanced training in the cognate disciplines that contribute to the broadening of legal education. This change might manifest as an increase in scholars from different disciplines teaching or cross listing more courses for law school credit; it might also consist of a broadening of the range of topics covered in the law school curriculum by tenure-track law school faculty; and it might also manifest itself as an increase in the number of law school faculty who have a PhD in some field other than law.

There is both anecdotal and systematic evidence to support at least the last of these possible effects. Let me begin with the small-scale anecdotal picture. In the 1980s there were only two people on the faculty of the University of Illinois College of Law who had PhDs—Francis Boyle, who has a PhD from the Department of Government at Harvard University and a JD from Harvard, and me. Today, the University of Illinois College of Law has four PhD economists (Dhammika Dharmapala, Nuno Garoupa, Andrew Morriss, and me, with only Morriss also having a JD), three PhD historians (Dean Bruce Smith, Dan Hamilton, and Richard Ross, all of whom also have JDs), three PhD philosophers (former Dean Heidi Hurd, Rob Kar, and Michael Moore (an SJD), all of whom have JDs), one PhD in psychology (Jennifer Robbennolt, who also has a JD), one PhD in electrical and computer engineering (Jay Kesan, who also has a JD), and one PhD in government (Francis Boyle). That is more than one-third of the faculty—thirteen of thirty-six—and must count as one of the most thorough transformations of any faculty in the United States.

Impressive as it is, I would argue that this anecdotal evidence of transformation understates the extent of the change. It does not, for example, include the course offering changes I mentioned above. More importantly, it does not account for the fact that of the twenty-three faculty members who do not have PhDs, all of them have become conversant with philosophy, political science, psychology, economics, and the other disciplines that they have heard their colleagues use. Simply having an intellectually diverse faculty helps us all learn much more about other disciplines than would be possible, I hazard, in any other department within the University of Illinois.

The more systematic evidence regarding the changing composition of U.S. law school faculties comes from Judge Posner's *Catastrophe: Risk and Response* (2004).¹⁰⁰ Posner wished to show that the scientific, particularly the *social* scientific, character of U.S. law school faculties was changing. To make that demonstration, he compared the relative growth rates of four different areas of specialization within academic law over the decade from 1992 to 2002:

100. See also Garoupa & Ulen, *supra* note 66.

TABLE 1: SIZE OF FIELDS OF ACADEMIC LAW, 1992–1993 AND 2002–2003

	1992–1993	2002–2003	Difference	Percent increase
<i>Jurisprudence</i>	658	808	150	22.80%
<i>Law and economics</i>	123	209	86	69.92%
<i>Law and science</i>	107	136	29	27.10%
<i>Constitutional law</i>	1452	1679	227	15.63%

Source: Posner, *Catastrophe*, and *Directory of Law Teachers 1992–1993* and *Directory of Law Teachers 2002–2003*.

Note that law professors self-identified as being in law and economics have shown far and away the greatest rate of growth in the decade from 1992 to 2002 of any of the fields considered. The second-largest increase is for the category “law and science.” Together, “law and economics” and “law and science” account for about 23 percent of the increase in law professors in these four categories.¹⁰¹

As I suggested in my discussion of the anecdotal material, these figures are merely suggestive—there were clearly lots of other “law and” fields besides these two—but they do supplement the point I made earlier with respect just to the faculty of the University of Illinois College of Law. So, these figures, too, are an understatement of the increasing presence of “law and” fields in recent law school hiring. Moreover, the figures understate the fact that awareness of and scholarly use of “law and” fields has become widespread in the legal academy, even among those who are not necessarily specialists in the area.¹⁰²

B. *What’s Wrong with the Current State of Legal Education*

My title describes current legal education as an impending train wreck. What I mean by that dire prediction is that our legal curriculum today pays very little attention to the changes in how we study law that have characterized the past thirty years. We teach law today in an almost indistinguishable way from how it was taught fifty years ago (or so I am led to believe). And although there are, as I shall argue, some good things to be maintained from those older methods of instruction, we are not doing enough to equip our students with the learning that has come from the legal scholarship revolu-

101. There were a total of 492 new law professors hired over the decade that Judge Posner examined. “Law and economics” and “law and science” together accounted for 115 of the 492 hires, still less than the total number of hires under either of the other two headings. Clearly, constitutional law specialists accounted for the bulk of the increase (as they account for the bulk of the entire sample). POSNER, *supra* note 82, at 206.

102. To illustrate with regard to one field, my Illinois colleagues Amitai Aviram, David Hyman, Paul Stancil, and Larry Ribstein are so well-grounded in law and economics that they use economic tools routinely in their scholarship and all of them could teach a course in law and economics.

tion of the past twenty-five years. We are not adequately equipping our students to deal ably with the complex problems that face clients and society today. And finally, the manner in which we teach is pedagogically out of date: it stultifies and discourages our students without teaching them the skills they need to be professionally successful and personally happy.

These harsh comments notwithstanding, I do not want to advocate for root-and-branch reform of legal education. For both pragmatic and substantive reasons, I want to argue for something more modest. The pragmatic reason for my being more modest is that no one is going to join a crusade to scrap the current curriculum and start all over with a completely novel design.¹⁰³ The ability to attract students might be compromised by offering such a radically different curriculum.

The substantive reason for being modest is that there is much of great value that is taught in the current legal curriculum. Larry Sager, Dean of the University of Texas School of Law, pointed out to me that when we examine appellate opinions, we are teaching our students how to give reasons for things, how to distinguish instances (or cases); we are inculcating skills of discernment and thinking that may look as if they are directed at preparing appellate briefs but are really of very wide applicability. Anyone who has sat through the rigors of the first-year law school curriculum realizes that there are special skills being imparted in those courses. In some ways, the actual doctrines that are being taught are not as important as the critical methods by which they are being taught. In brief, it would be a great mistake to abandon the rigorous methods of inquiry and thought that characterize the first year, particularly, of law school education.

Considerations of pragmatism and admiration for the skills imparted lead me to believe that what we are doing in the first-year curriculum is worth sustaining or that if we modify it, we do so cautiously and marginally—in ways that I will suggest in the next section.¹⁰⁴ But given the changes in the style of legal inquiry that I have tried to document above, we ought to spend the second and third year of law school more directly teaching our students to deal with the complex issues likely to face their clients and society. I shall turn shortly to some explicit recommendations along these lines.

103. The course offerings and style of education at the new law school of the University of California, Irvine, are indistinguishable from those at the oldest law schools in the country, Dean Chemerinsky's homepage assertion notwithstanding. See University of California-Irvine, School of Law, <http://www.law.uci.edu/> (last visited July 12, 2009).

104. I do have great reservations about teaching students the law by having them read appellate litigation. It conveys the impression that litigation is at the heart of law, when in fact litigation is relatively rare (accounting for less than 5 percent of dispute resolutions), and avoiding litigation is one of the best things a transactional lawyer can do. Studying litigation to find out how to practice law is like studying airplane crashes in order to find out how to fly. Judge Posner, in *CATASTROPHE*, *supra* note 82, at 204, says, "[t]he American legal profession, especially its academic branch, is court-centric to an obsessive degree."

The final point I want to make is that the manner in which we teach law does not seem to make our students better people than when we took them in. If the statistics in Judge Schiltz's 1999 article are still accurate,¹⁰⁵ we take bright and otherwise normal people and turn them into alcoholics, people likely to commit suicide, and miserably unhappy adults. I recognize that this is a very different criticism of legal education than what I have been making heretofore. Be that as it may, I think that it is fair to invoke this important point when I am characterizing current legal education as a train wreck.

C. Implications of the View of Law as Social Governance Scholarship for Legal Education

Before I get to the proposals, let me make some more general points. First, as I have just indicated in the previous section of this part, there is much that is worth preserving in current legal education. Second, these changes are directed principally at the second and third years of law school. Third, I consider these changes to illustrate what that great pragmatist Deng Xiaoping called, "Crossing the river by feeling for the stones."¹⁰⁶ That is, these are incremental changes that, taken small step by small step, will allow us to get to a very different place in legal education. Fourth, I think that the real test of whether these changes are valuable is whether they help our students get better jobs as lawyers and perform their jobs as lawyers more effectively. Finally, if the changes that I believe are necessary are to be implemented, then we need the full three years of law school to equip our students with all the learning that we are well positioned to provide them. Some have proposed that law school be scaled back to an intensive two years;¹⁰⁷ I think that that would be a mistake.

The view of law as the study of the many and varied mechanisms of social governance has important implications for both how we study law and how we teach our students. In this section I want to focus on the implications for education. I shall make three concrete suggestions. Two of them are for particular new courses in the curriculum designed to make law students better able to speak on broad matters of social governance mechanisms. The final proposal is not directed explicitly at an intramural educational matter but rather at an extramural education mission.

105. See Schiltz, *supra* note 2, at 874–88.

106. Deng Xiaoping cited this popular Chinese saying in a speech titled "The Economic Situation and Our Experience and Lessons." See HENRY YUHUAI HE, *DICTIONARY OF THE POLITICAL THOUGHT OF THE PEOPLE'S REPUBLIC OF CHINA* 287 (2001) (citing Chen Yun Wenxuan, 1956–1985, *SELECTED WORKS OF CHEN YUN*, 1956–1985, 251 (1995)).

107. RICHARD POSNER, *THE PROBLEMATICS OF MORAL AND LEGAL THEORY* 281 (1999).

1. *A Required Empirical Methods Course*

My first proposal is to incorporate an empirical methods course in our core curricula for law students. The burgeoning area of empirical legal studies may well prove to be so transformative of what we know about the law and how we learn about it that a well-equipped lawyer ought to have familiarity with the broad range of methods of conducting empirical inquiry. For instance, she would need to know what constitutes valid techniques of empirical verification, the role of interviews and surveys, how to design and conduct experiments, descriptive and inferential statistics, what a regression analysis is and how to read its results, and how to communicate empirical results effectively. The lawyer of the near future does not need to be adept at performing these studies, any more than she needs to be an economist or psychologist or physicist. Rather, she needs to know enough about these areas to be an intelligent consumer of empirical studies to perform the duties of a lawyer.

As my earlier discussion of global warming indicated, and as many additional examples would indicate, empirical studies figure prominently in the complex issues that face society. They already are important in many legal cases and controversies, and, as more and more lawyers and judges become adept at interpreting empirical studies, they are likely to become more so.

We are now perhaps also nearing the point at which we can talk about the advisability of a law on the basis not just of competing theories but also on the basis of empirical studies about the effectiveness and consequences of that law. As a prime example, consider the recent literature on the causes of the recent decline in crime. With respect to the causes of crime, the recent record is that both violent and nonviolent crime have declined significantly since 1991—rapidly in the 1990s, and more slowly since 2000.¹⁰⁸ There are plausible competing explanations for this decline—the robust economy of the 1990s and early 2000s, the vigor with which courts sent convicted criminals to prison (resulting in a fourfold increase in our prison population between 1980 and 2002 and our now having the highest per capita prison population in the world¹⁰⁹), a significant increase in the number of local police in major cities,¹¹⁰ the declining crack cocaine epi-

108. See Steven D. Levitt, *Understanding Why Crime Fell in the 1990s: Four Factors That Explain the Decline, and Six That Do Not*, 18 J. ECON. PERSP. 163, 163 (2004).

109. See Adam Liptak, *U.S. Prison Population Dwarfs That of Other Nations*, N.Y. TIMES, Apr. 23, 2008, available at <http://www.nytimes.com/2008/04/23/world/americas/23iht-23prison.12253738.html>.

110. See Levitt, *supra* note 108, at 176–77.

demic,¹¹¹ and the increase in technological methods of detecting and deterring crime, such as more cameras and better trauma care.¹¹²

In a famous empirical study, John Donohue and Steven Levitt demonstrated that there may have been another factor that contributed to the decline in crime, beginning in 1991—the legalization of abortion in 1973 and the consequent decline in the number of young males (the most crime-prone group in any society, typically responsible for almost 50 percent of crime) beginning in 1991.¹¹³

In no small part, the course on empirical methods is meant to be an introduction to the scientific method of inquiry. It might make sense to supplement the course with (or to offer as a strongly recommended second semester course) an explicit and required course on science and law. Science and scientists are likely to figure in some of the most vexing social issues of the twenty-first century. Knowing not just the empirical methods that they favor but also something more directly about what they study, what the core of learning is in that scientific field, what the controversies and pressing questions are, and so on—all this could be valuable to the practitioner. Just as valuable would be learning how to learn about a scientific field quickly, a talent that my next proposal addresses but that a course on science could also feature.

A recent article in the *Journal of Legal Education* took stock of science education in law schools.¹¹⁴ The authors, under the sponsorship of the Federal Judicial Center and following up on 1992 and 2000 studies, surveyed 172 ABA-accredited law schools to gather information about the availability of courses offering some component of science education for law students. In the early 1990s very few law schools offered courses specifically designed to give their students a basic understanding of the philosophies and methods of science.¹¹⁵ The number of schools offering such courses had increased slowly through 2008, but “the number of students enrolling in the courses identified was relatively small.”¹¹⁶ So, although there has been some improvement in the degree to which law students can

111. *Id.* at 179–81.

112. See John J. Donohue III, *Fighting Crime: An Economist's View*, 7 MILLIKEN INST. REV. 46 (2005).

113. John J. Donohue III, & Steven D. Levitt, *The Impact of Legalized Abortion on Crime*, 116 Q.J. ECON. 379 (2001). Donohue and Levitt estimate that 50 percent of the decline in crime since 1991 is attributable to the legalization of abortion. *Id.* at 379.

114. Mara Merlino, James T. Richardson, Jared Chamberlain & Victoria Springer, *Science in the Law School Curriculum: A Snapshot of the Legal Education Landscape*, 58 J. LEGAL EDUC. 190 (2008); see also Merlino, Richardson, Chamberlain & Springer, *Science Education for Judges: What, Where, and by Whom?*, 86 JUDICATURE 210 (2003). This latter survey was conducted as part of a replication of the 1992 study conducted by the Judicial Education Committee of the Carnegie Commission's Task Force on Judicial and Regulatory Decision Making, which reviewed science education opportunities for the state and federal judiciary.

115. See Merlino et al., *Science in the Law School Curriculum*, *supra* note 114, at 193.

116. *Id.*

and do have access to scientific and empirical courses, there is still much improvement to be done.

2. *A Capstone Problems Course*

If it is the case that dealing with complex modern issues requires lawyers to be reasonably learned in a wide range of academic subjects, then law school ought to give students the ability to come to grips, quickly, with a wide range of academic topics and to apply them to their clients' and society's needs. How should we do that?

One way would be to create a single course—frequently called a “perspectives” course—that seeks to give students a glimpse at each of the relevant academic disciplines. So, for example, this course might focus on teaching students microeconomics, cognitive and social psychology, sociology, anthropology, political science, and whatever else could be shoehorned into a fourteen-week semester. Frankly, this sounds impossible. To the extent that it can be managed, it is likely to be far more disorienting than enlightening.

Another and far better way would be to create a class that centers on a real legal issue in the course of which the students, with guidance, would need to learn a wide range of relevant academic disciplines. Let me sketch what I have in mind. Suppose that third-year students had to take a “capstone” course that would last an entire semester, be taught by two professors, and have no more than ten students.¹¹⁷ The professors would focus the course by identifying a single problem that would cover as broad a set of issues as feasible. To take one example, imagine a course that deals with the issues surrounding the construction of a new nuclear power plant. The range of issues that the students would have to address would include the following: dealing with the relevant state and federal regulatory agencies in order to get a license of public convenience and necessity; learning enough about the science of producing nuclear power so as to be able to persuade local environmental groups and neighbors that there are minimal dangers; acquiring the appropriate land for the construction; arranging for the construction contract; developing a schedule of utility rates for consumer and business consumers; advising the utility company on the labor and employment issues of staffing the new plant; dealing with the political powers of the region, municipality, and state; hiring expert witnesses to address the technical issues that the plant raises; arranging for the financing and insurance for the plant; planning for the possible bankruptcy of the utility if things do not work out; and so on.

117. To accommodate, say, seventy third-year students, for example, would require seven of these capstone courses, and a total of fourteen professors. Perhaps three of the courses could be taught in the first semester, and four in the second.

As appealing as such a course may be, instituting it may not be easy. Consider the telling fact that I have not put together such a course myself. And why not? There are three reasons: (1) it would take a great deal of time and effort, including that of persuading one or more colleagues from the law faculty and the larger university faculty to join me; (2) the payoff to the course is uncertain; and (3) the returns to my continuing the courses that I now routinely teach are very comfortable. I could easily imagine being financially persuaded to drop some of the things that I am teaching in favor of developing these courses, but that makes my point: developing these capstone courses will not be inexpensive.

3. *Extramural Explanations of What We're Doing*

The third educational implication of my argument for broadening the scope of legal education does not recommend a particular course but, rather, a strategy for law school administration. That is to explain more frequently and cogently why we are doing the things that we are doing within the legal academy to those outside the academy. The most obvious extramural audience for us to educate about what we are doing is the practicing bench and bar. Not only can they tell us, from time to time, what kinds of instruction we ought to be giving our students, but we can also allay the fears that they might have that we have gone off on a self-serving toot that has no connection to what they are doing. In so doing, I am hoping that we can forestall the sort of disaffection that gave rise to Judge Edwards's "growing disjunction" plaint.

Another important external audience is our colleagues within the great research universities. Those colleagues are engaged in the production of knowledge that may be, as I have argued above, useful to effective social governance. We need to let them know that we value what they are doing, that we stand ready to absorb their learning for the purposes of improving the analysis and practice of social governance, and that we would greatly value engaging in joint research with them to coproduce new knowledge.

V. CONCLUSION

In describing current legal education as a "train wreck," I am indulging in authorial license. But I am also seeking to draw attention to changes in the gravitational center of legal scholarship that are real and that ought to cause us to rethink our educational mission. One thing that I am emphatically not doing is denigrating the teaching, practicing, or judging of law. I have the highest imaginable regard for the law and for the legal profession, even though I am only an adopted son of that profession. Law schools attract some of the very best and brightest people in our society, people who will be leaders of local, state, regional, national, and international private and public organizations. If our graduates are to continue to be social lead-

ers, then we must equip them to take on the new and complex problems that challenge us today and that will appear in the future.

One of the most exciting aspects of the turmoil in the U.S. legal academy is the opportunity to explore topics beyond the traditional core curriculum and the strictly professional. There is, of course, still much to explain in those core and strictly professional areas without venturing into new, previously unexplored (by legal scholars) areas. The argument in favor of going further than the core is twofold—(1) in expanding legal inquiry into broader fields, we may find new tools of explanation, new methods of inquiry, that help us to throw new light on old controversies and to see previously unseen aspects of the core areas of the law; and (2) scholars may see previously unremarked connections between aspects of social governance, such as the interactions between social norms and law that I noted earlier. It is crucial to remember that the academic life is a collaborative and cumulative enterprise in which we all “stand on the shoulders of giants.”