

Review Essay

LAW, ECONOMICS, AND POST-REALIST EXPLANATION

JASON SCOTT JOHNSTON

Robert Cooter and Thomas Ulen. *Law and Economics*. Glenview, IL: Scott, Foresman & Co., 1988. 644 pp.

Victor P. Goldberg (ed.). *Readings in the Economics of Contract Law*. Cambridge: Cambridge University Press, 1989. 272 pp. \$44.50 cloth; \$14.95 paper.

William H. Landes and Richard A. Posner. *The Economic Structure of Tort Law*. Cambridge, MA: Harvard University Press, 1987. 352 pp. \$27.50.

Steven Shavell. *Economic Analysis of Accident Law*. Cambridge, MA: Harvard University Press, 1987. 352 pp. \$30.00.

Oliver E. Williamson. *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. New York: Free Press, 1985. 400 pp. \$27.95.

If the publication of books is any measure of a movement's maturity, then the last few years mark a maturation point in the economic analysis of law. The books include a general text by Robert Cooter and Thomas Ulen (1988), studies focusing on tort law by William Landes and Richard Posner (1987) and by Steven Shavell (1987), Oliver Williamson's (1985) synthesis of the transaction cost approach, Victor Goldberg's (1989) volume of readings and exercises applying that approach to contract law, and revisions of Posner's general treatise (1986) and A. Mitchell Polinsky's (1989) introduction to the field. Many of these books have been quite extensively reviewed.¹ As a field, moreover, law and eco-

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¹ See, for instance, Ayres and Donohue (1987) (reviewing Posner's revised treatise); Balkin (1987) (reviewing Landes and Posner); Coleman (1988a) (comparing Landes and Posner with Shavell); Donohue (1989b) (comparing Landes and Posner with Shavell); Lachman (1984) (reviewing first edition of Polinsky). Because the earlier versions of Polinsky (1989) and Posner (1986)

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nomics has been subjected to general critical review ranging from examination of its underlying ethical assumptions (Dworkin, 1980; Coleman, 1984) to essentially economic arguments attacking economic analysis of law as internally inconsistent and/or incomplete (Kelman, 1987: 151–86; Kennedy, 1980).

In this essay, I adopt a rather different perspective and ask a rather different set of questions. The recent wave of law and economics books is both reassuring and potentially dangerous. They are reassuring because they have a certain legitimizing authoritative weight—economics is now undeniably part of the general intellectual study of law. But this same authoritative legitimation threatens to destroy what is most exciting about law and economics: the spark of insight that comes from metaphor, from taking a set of “old” problems—in the law—and looking at them from “new” perspectives—in this case, the economic—depends on the continuing fluidity of inquiry. To say we now have a field called “Law and Economics” may imply instead the crystallization of inquiry around a few mathematically tractable,² established paradigms; such crystallization is, I believe, anathema to the continued general relevance of economic inquiry to the law as an intellectual pursuit.³

In this spirit, the present essay investigates an issue that has never been systematically asked about law and economics as a movement but that can provide both a bridge between economics and other methods of legal analysis and a signpost to new approaches within law and economics: what it means to “explain” the law from an economic point of view.

In unpacking explanation in the economic analysis of law, I rely heavily on the role that explanation, and theories of explanation have played in two more general, internal approaches to legal doctrine, Legal Formalism and Legal Realism. My purpose is not so much to characterize Law and Economics as either neo-Formalist or neo-Realist. Indeed, given the diversity within law and eco-

have been extensively reviewed, discussed, and used in the literature, I focus my attention here on the first editions that have recently appeared.

² By “mathematically tractable,” I mean paradigms that can be reduced to a relatively small number of mathematical expressions, which can be solved, analytically—without the aid of computer-based numerical analysis—to yield interesting qualitative relationships. For example, strict liability and negligence are tractable paradigms, because we can express each as a relatively simple rule about how a tort injurer’s legal liability varies with his level of care. The tort injurer is then presumed to minimize a function that equals the cost of care plus his potential liability; and because this function varies with the form of the liability rule, we can derive a mathematical relationship between the type of liability rule and the injurer’s care level.

³ For a similar view, advocating that economic analysis of law draw and learn from sociology and psychology, see Ellickson (1989); for recognition of the potentially narrowing appeal of law and economics to only those readers with the requisite mathematical skill, see Donohue (1988); for an important recent attempt to enrich economics generally with the sort of insights Ellickson proposes, see Frank (1989).

conomic analysis, one can find varying shades of deductive Formalism and inductive Realism, depending on where one looks. Rather, in Formalism and Realism, as in Law and Economics, explaining legal doctrine is very much a reflection of deeper attitudes toward explanation and understanding. And as the maturing law and economics literature reveals a variety of techniques and greater balance than is sometimes supposed, so, too, does it reveal a variety of methodological objectives. These range from Landes and Posner's (1987) functionalist attempt to show that tort law serves the larger social objective of efficiency, to Shavell's (1987) instrumental use of mathematical models of rational choice to analyze the often nonintuitive incentive effects of legal rules, to Williamson's (1985) and Goldberg's (1989) transaction cost approach, which explains individual contract types and terms as the mutually rational, purposive response to both human limitations and environmental constraints. The movement's balance, moreover, is displayed throughout the general text by Cooter and Ulen (1988), who not only describe and apply all these different methodologies but often pit one against the other.

I argue that in this methodological diversity, law and economics emerges as what Lakatos (1970) called a progressive research program. Its functionalism reveals the correspondence between legal doctrine and the general imperatives of a capitalist economy; its methodological individualism shows that the instrumental use of the law to affect the incentives of rational economic calculators is much more complex than intuition alone would indicate; its emphasis on the complexity of private ordering further cautions against blunt legal engineering.

But, unlike others (see Donohue, 1988), I argue that economics cannot remain merely a tool of analysis when it is applied to gain insight into the law. The very enterprise of applying economics to the law shapes legal thought and language; in framing and detailing an order governed by law, it necessarily frames the objectives of law. But neither are the economic models and insights we apply to legal problems determined by an ineluctable correspondence between legal doctrine and economic method: our understanding of law and the world it governs ultimately determines what we see as valuable in economics for law. I do not think that the economic calculator whose incentives are so much the concern of economic analysis of law is the best that we can be. But neither can we realize the other aspects of ourselves—the sharing, shared “we”—unless we recognize the contemporary dominance of the calculating “I.” Ultimately, then, the methodology of law and economics raises an even larger issue: law as both instrument and symbol; as an agent of deterrence and an agent of education; as a concession to what we are and a proclamation of who we wish to be.

My objectives in this essay are thus both to reveal the diverse meaning of explanation within law and economics and, in so doing,

to broaden the conversation about what economics may ultimately contribute to our understanding of legal rules and institutions. Toward these ends, the essay is organized into five parts. In part I, I discuss Landes and Posner's (1987) functionalist explanation of the common law of torts as roughly consistent with economic efficiency. To the extent that such an explanation attempts to derive tort rules from a logical efficiency calculus, it is a kind of deductive Legal Formalism. But economic functionalism also has the capacity to radically transform the language of the law and to affect how judges decide cases. Thus, despite its apparent formalism, Landes and Posner's (1987) functionalism fits squarely within the post-Realist tradition of policy science.

As I argue in parts II and III, however, the value of law and economics as policy science is not in its facility to justify particular legal rules as efficient. Indeed, with a proper choice of assumptions, any legal rule can be justified as efficient. Rather, economic models of law and behavior must be evaluated on the basis of the soundness of their underlying assumptions and the originality and nonobviousness of their conclusions. This is a dominant theme in Steven Shavell's (1987) work, a theme which distinguishes Shavell's approach quite sharply from that of Landes and Posner (1987). Moreover, in evaluating assumptions underlying and conclusions derived from economic models of law and behavior, it is crucial that the models be formulated with sufficient precision so that assumptions and the relation between assumptions and conclusions can be clearly identified. This explains the importance that mathematical models have assumed in the economic analysis of the law: it is not that such models have yielded a large number of empirically testable hypotheses but rather that they force an openness in argument and analysis often lacking in conventional legal scholarship.

This is not to say that law and economics does not contain a strong, empirical emphasis on the study of particular institutions. Indeed, in contrast both to Landes and Posner's (1987) functional explanation, and Shavell's (1987) normative modeling—both of which examine how tort rules *affect* the behavioral incentives of abstract economic calculators—the economic approach to contract law focuses primarily on understanding particular contract terms and forms as the *product* of economic incentives. In part IV, I discuss illustrations of this approach in Cooter and Ulen (1988), Williamson (1985), and Goldberg (1989). These economic analyses of contracts possess much greater institutional richness than is typical in economic analysis generally and explain a wide variety of contract types as the *product* of rational economic behavior. Still, explaining terms as “rational” is not merely a descriptive project; such an explanation carries normative implications for how courts interpret and enforce contracts.

Finally, in part V, I summarize the ways the diversity within

law and economics helps to illuminate and enrich our understanding of the law. At the same time, however, I recognize the limitations in the model of rationality that is common to all law and economic analysis. And I argue that as an instrument of analysis which inevitably shapes the legal world it analyzes, the economic model alone is not enough: it must be enriched by a broader understanding of the social and cultural context within which law, and economics, operates. Moreover, while I believe that economic analysis of law has made a valuable contribution even without yielding extensively tested empirical hypotheses, I suggest ways in which recent developments in law and economics promise new empirical and experimental evidence on law and behavior.

I. LEGAL REALISM, LEGAL FORMALISM, AND THE ECONOMIC EXPLANATION OF TORT LAW

A. *Legal Formalism and Formal Science*

In Thomas Grey's (1983: 5) exceptionally helpful account, Langdellian formalism attempted to show that law was a science in the peculiarly Victorian sense that correct legal decisions could be deduced from a few high-level general principles. (See also Pound, 1919: 451.) In this scheme, the legal scientist would discover a "few basic top-level categories and principles" and from these derive, analytically, a large number of "bottom-level" rules, with the rules "framed in such terms that decisions followed from them uncontroversially when they were applied to readily ascertainable facts" and which were "ideally, the holdings of established precedent" (Grey, 1983: 11). In contemporary usage, the Langdellian system was "doubly formal": it avoided vague standards that vest discretion in judges and juries and greatly preferred what Frederic Schauer (1988) has called "particularistic" low-level rules. Because such rules were conceptually derived from the top-level principles, the correct rule for new cases could be inferred directly from the general concepts and principles, once the new case was correctly categorized (Grey, 1983: 11).

To us, it may appear odd to call this process a science. It supposes that the analyst can inductively cull general principles from the actual body of case law and then apply these with great precision to deduce very specific low-level rules (*ibid.*, p. 16). It is, moreover, completely internal. In the Langdellian system, the top-level principles were "well-confirmed inductive generalizations" drawn from the cases (*ibid.*, p. 19) rather than from extralegal normative standards. To the limited extent that they were deemed relevant at all, Langdell's system permitted appeals to such external policy concerns only "insofar as they were embodied in *principles*—abstract yet precise norms that were consistent with the other fundamental principles of the system" (*ibid.*)

As I have noted elsewhere (Johnston, 1991), Grey's description

is enormously helpful in understanding what appear now to be the many tensions and internal contradictions in the Langdellian system, in rationalizing what “seems to be an incomprehensible jumble of induction with deduction and norm with fact” (Grey, 1983: 16). Perhaps even more significant for my purpose here, however, is Grey’s persuasive analogy between Langdellian legal “science” and the general Victorian understanding of science. Grey argues that Langdell’s interpretation of law as a science was analogous to the contemporary interpretation of geometry as science in J. S. Mill’s *System of Logic* (1919). In this account, geometric axioms are inductive generalizations from experience, and geometry then essentially consists in the systematic arrangement of deductive consequences of these inductively derived axioms (Grey, 1983: 19). The analogy to law is not quite perfect, because the Langdellian derives his inductive generalizations from the very system which is supposedly the analytic consequence of those generalizations, but is nonetheless helpful at the very least in showing what Langdell meant when he talked about law as science.⁴

B. Transforming Tort Law: Language and the Realism of Landes and Posner

Within this understanding of Langdellian formalism, it is easy to see why Grey would call law and economics a “neorthodox” (one might better say “neoformalist”) school of legal theory. It is easy to see because Grey takes Richard Posner’s work on tort law as indicative of the entire school of law and economics (Grey, 1983: 51, 51 n.182). This work is summarized and extended in the recent book by Posner and the economist William Landes, *The Economic Structure of Tort Law* (1987). Along with Steven Shavell’s *Economic Analysis of Accident Law* (1987), it marks the passage of the first wave of economic analysis of tort law. As I shall argue, however, there are significant methodological differences between these two foundational texts.

Landes and Posner begin their book with a chapter aptly entitled “The Positive Economic Theory of Tort Law,” a chapter that focuses on the fundamental methodological issues raised by their approach. They say that what they, along with others, most notably Shavell, do is to analyze “various areas of tort law with a view to testing their efficiency” (p. 8). They place this project “in the realist tradition in treating law as a manifestation of social policy” but lacking the “skeptical cast of the older legal realism” because it “accepts the existence, validity and importance of legal doctrine, although it seeks to explain it in economic terms” (p. 8). For the

⁴ Grey indeed spends a substantial amount of his essay discussing the circularity problem in Langdellian inductive generalization and, in particular, suggests that the force of precedent might break the circularity problem by providing rules that are not themselves the product of analytical derivation from principles immanent in the body of rules. See Grey (1983: 20–32).

reader with even a passing acquaintance with the philosophy of science, this mission statement is highly ambiguous, for to say that one is interested in “testing” the efficiency of tort law doctrines is not necessarily consistent with the goal of “explaining” those doctrines “in economic terms.”⁵ Moreover, further confusion is brought about by the statement on the very next page that “[e]ven if tort law does not have a significant effect on behavior, the theory advanced in this book is not refuted. Ours is a theory of the rules of tort law rather than of the consequences of those rules for behavior” (p. 13). But then even as we begin to digest this—that a social science which is usually thought of as in some sense explaining behavior will not be used to look at law’s effect on behavior—we are told that the authors’ “theory of tort rules” offers no account of a causal mechanism by which judges might produce efficient tort rules (pp. 14–19).

So what kind of “theory of the rules of tort law” do Landes and Posner provide? It turns out—somewhat surprisingly, given their reference to “testing”—to be a theory about language. Landes and Posner say that even if the law has no effect on behavior, even if we posit that tort law is intended to instead only do corrective justice and to “restore to a person what has been wrongfully taken from him rather than to improve the allocation of resources,” then “[i]t would still be necessary to inquire into the source of the norms on the basis of which certain conduct is deemed wrongful” (p. 14). And they are never more bold and straightforward than in their view on the source of these norms: “We think that economic principles are encoded in the ethical vocabulary that is a staple of judicial language, and that the language of justice and equity that dominates judicial opinions is to a large extent the translation of economic principles into ethical language” (p. 23). Thus their theory or hypothesis is that “the common law of torts is best explained as if the judges who created the law through decisions operating as precedents in later cases were trying to promote efficient resource allocation” (p. 1). But they want both a theory about the language of the common law of torts and a theory which passes muster under some sort of refutability criteria.⁶ Hence, the final version: they claim that “most” tort law

⁵ The distinction between “testing” and “explanation” is especially crucial in the social sciences. Hempel (1968: 185), for example, questioned the “scientific acceptability” of functional theories precisely on the grounds of the ability of such theories to provide statements that could be empirically tested. Others have questioned the very notion of deducing testable predictions in the social sciences. See Brodbeck (1968: 363) for a representative view; for a survey, see Merrilee Salmon (1989).

⁶ Although Landes and Posner say that they want a theory which is falsifiable, they fail to recognize the tension between falsification and their quite overt instrumentalism: as Popper (1962: 113) argued, “a mere instrument for prediction cannot be falsified. What may appear to us at first as its falsification turns out to be no more than a rider cautioning us about its limited applicability.” On the general tendency in law and economics to rely on theory

doctrines are consistent with a simple notion of economic efficiency in which insurance and risk aversion play no role (p. 22); that is, most tort law doctrines operate to minimize the sum of the harm from accidents, the cost of taking care against accidents, and the cost of administering the tort law system. This theory is refutable because “[a] theory that most rules are efficient can be refuted by evidence that most are inefficient or that a nonefficiency theory explains more tort rules than an efficiency theory” (p. 24). It is a theory about language because as theory about legal rules, “the principal evidence for and against it consists of interpretations of rules” (p. 20).

This is not a “neoorthodox” methodological program. Far from admitting (as Grey took Posner to have admitted by early 1983) that “economic analysis cannot supplant, but only predict and criticize, a course of legal decision carried on case-by-case according to orthodox methods” (Grey, 1983: 51), Landes and Posner are out to persuade us by the remarkable coincidence of most tort doctrines with economic efficiency that the language of tort law—however superficially crude and lacking in economic sophistication—in fact has always been the language of efficiency. What Grey missed was the rhetorical power of economics.⁷ If one is indeed persuaded that the logic of tort law is economic, if on close inspection the rules of tort law seem so fabulously coincident with the dictates of economic efficiency, why, then, should one retain the old, orthodox language? This would seem especially attractive if, as Grey argues and as I agree, the dominant constructive doctrinal impact of the Realists’ critique of Langdellian orthodoxy has been to jettison abstract conceptual schemes as a basis for decision in favor of an ad hoc “policy science” that finds expression in the metaphor of “balancing” (Grey, 1983: 49–50). As Judge Frank Easterbrook (1984) has noted, the language of balancing is a kind of informal weighing of costs and benefits that captures the fundamental mathematical intuition behind economic calculus. Thus, to transform the judicial language we *now* have into the language of economics is arguably merely to complete the Realist project, to make of law a mathematically precise and empirically refutable “policy science.”⁸

rather than observation and eschew attempts at rigorous falsification, see Hovenkamp (1990: 822–23).

⁷ On economics as rhetoric, see McCloskey (1985, 1988a); Klamer, McCloskey, and Solow (1988); Klamer (1987); *Economics and Philosophy* (1988). On the rhetoric of law and economics in particular, see McCloskey (1988b) and White (1986).

⁸ This view is confirmed also by a comparison of Judge Posner’s recent opinions with the sample of opinions cited by Grey (1983: 51 n.182). Grey found that his sample confirmed “the traditionalism of [Posner’s] method; they are classical in their austerity, brevity, absence of footnotes, and absence of interdisciplinary apparatus of any kind” (*ibid.*). A more recent sample, however, finds Judge Posner increasingly relying on law and economics tools such as the Coase Theorem as explicit justifications for decision (see, e.g., *McMunn*

I say “arguably” because as Grey points out, the thing that really unified Legal Realists was not a belief in law as policy science but rather a profound sense of dissatisfaction with the method of Langdellian formalism (Grey, 1983: 49; Kalman, 1986; Schlegel, 1980; Twining, 1973). On the Langdellian theory, the law would be predictable and certain because low-level rules and decisions would be logically derived from high-level principles. Judges would deduce rules rather than make policy. The essence of the Realists’ critique was that this system simply didn’t work: as Llewellyn (1940: 595) said, “[d]octrine which purports to cut down all freedom of the judge . . . in practice leads to the production of *de facto* leeways which *de jure* are unmentioned; and *de facto* but unmentioned leeways are both confusing and not subject to easy control” (see also Fuller, 1934). Thus for Llewellyn, as well as other Realists such as Thurman Arnold, the constructive task was to find out what the low-level rules really were, to discover the true bases for legal decision, and then express these in concrete terms that would allow laymen to understand and predict what courts would actually do (Llewellyn, 1931: 1241; Grey, 1983: 49, 49 nn. 117–18).

In contrast with formalism, this sort of Realism is very much an inductive project. The goal is not to find a logical thread running through a system of common law doctrine; it is instead to find out why individual cases are decided in certain ways. The logical order of the doctrinal system as a whole is irrelevant. Realists want facts about decisions and decisions based on facts; a common-sense descriptive explanation of judicial decisions that is then reflected in common-sense judicial justifications for those decisions.

Now it may seem that however much Landes and Posner’s positive theory of tort law might share with the policy science aspect of Legal Realism, it certainly is at odds with this deconstructive, inductive Realism. Once again, however, the disagreement vanishes once we recognize that the Landes/Posner project is not just about explaining a system of doctrine but about transforming the language in which doctrine is expressed and justified. If we ignore this transformative dimension, then we see only differences: Landes and Posner have a theory that says most tort doctrines correspond to a simple notion of efficiency; it is, essentially, a functional explanation, an explanation that explains the role tort law serves in society.⁹ It is not an individualistic explanation, an expla-

v. Hertz Equipment Rental Corp., 1986), transforming traditional legal tests into mathematically paraphrased cost-benefit analysis; *American Hospital Supply Corp. v. Hospital Products Limited*, 1986), citing unpublished economics working papers; *United States v. Rockford Memorial Corp.*, 1990, and engaging in open debate with his colleague Judge Easterbrook over the wisdom of decisions taken by their court, debate which assumes that the economic wisdom of such decisions is the guiding or indeed only relevant issue. *Jordan v. Duff & Phelps*, 1987.

⁹ On functional explanation, see generally the remarks in Wesley Salmon

nation of why cases are decided the way they are, indeed, Landes and Posner (1987: 14–17) admit that they have no theory for what might cause judges to formulate efficient common law rules.

The distinction between functional and particularistic causal explanations has pragmatic significance that depends crucially on the power of economic analysis to transform the language of the law. To see this, consider the position of the practicing torts lawyer, and assume first that she encounters a “traditional” judge. Landes and Posner at most tell her that such a judge will probably choose the efficient rule in her case; but they don’t tell her anything about what sorts of arguments will actually move the court to adopt the efficient rule.¹⁰

Suppose, however, that our hypothetical lawyer encounters a certain sort of judge. This judge has discovered in Landes and Posner a tort law world of marvelous logic and clarity. In contrast with her own torts course—a race through the doctrinal thicket of Prosser (Prosser *et al.*, 1988)—Landes and Posner have provided elegant mathematical models that “test” the efficiency of various torts doctrines by showing how they create efficient incentives for individuals to choose between safety and risk. They have demonstrated to this judge’s satisfaction a remarkable logic running through the body of doctrine. For this judge and perhaps for her law clerks as well, the efficiency of alternative outcomes in a particular case does matter, because *the judge believes that efficient outcomes are consistent with the logic of prior precedent*. Such general, logical consistency, moreover, may be the only sort of consistency our judge can hope to attain, for as Grant Gilmore (1961: 1041–42) maintained, the volume of precedent has become so large that strict precedential consistency may be logically unobtainable.¹¹ Thus, by changing the world view of judges and law clerks and lawyers, what appears to be solely a functional explanation of

(1989: 111–16) and Wright (1976). I am not the first to observe the functional aspect of Landes and Posner’s work. See Elster (1982: 455).

¹⁰ Compare the fascinating discussion in Garfinkel (1981: 52–56), who argues that from the pragmatic point of view, it is sometimes much more helpful to have a functional explanation of macro-level behavior than an explanation of individual behavior. I must confess to being unpersuaded by his particular example, in which the functional explanation is provided by the Lotke-Volterra equations describing the population dynamics in a simple rabbit-fox ecosystem. Garfinkel says that for a rabbit, it is much more useful to know the Lotke-Volterra equations than to be told why a particular fox will eat the rabbit if he goes to a particular place. While this may be true for a rabbit who can hire gunmen to reduce the fox population, for the ordinary rabbit, inhabiting a particular locale populated by particular foxes, it may indeed be better after all to have the more limited explanation of why and how (which is not, of course, the same question) particular foxes will strike.

¹¹ Although no one has yet attempted the task (see Rissland, 1990), Gilmore’s (1961) insight that logical precedential consistency cannot be obtained as the factual dimension and numerical volume of precedents increases seems a fertile hypothesis to test within the confines of developing artificial-intelligence models of legal reasoning.

the role of tort law in capitalist society becomes a theory of individual cases: it predicts and explains the actual outcomes in concrete controversies.¹²

II. MODELS AND METHODS: LAW AND ECONOMICS AS A PROGRESSIVE RESEARCH PROGRAM

Another concept that figures importantly in Landes and Posner's methodology and that stands in need of clarification is that of "testing" the efficiency of the law. What Landes and Posner do not mean by "testing" is rigorous statistical testing. The economic analysis of law has not produced very many hypotheses that are capable of rigorous statistical testing.¹³ They say that by "testing" they mean what they do in their book and what Steven Shavell does in his book: the construction of mathematical models of rational individual choice, within which the effect of alternative legal rules on incentives can be analyzed. The model utilized in these books on tort law has in fact much greater generality; in an important article, Robert Cooter (1985) called this general model the "model of precautions," and both the Cooter and Ulen (1988) and Polinsky (1989) textbooks apply this model to analyze the efficiency of property and contract law doctrines in addition to tort law rules (see especially Cooter and Ulen, 1988: 340–47; Polinsky, 1989: 15–52).

Indeed, the model of precautions is a primary tool in the economic analysis of law, and even a brief description of that model and its applications yields substantial insight into what is often meant by its users when they say they are "testing" for or analyzing the law's efficiency. In particular, while both Landes and Posner (1987) and Shavell (1987) work with the model of precautions, they justify it in very different ways. Landes and Posner take the instrumentalist position that the value of their very simplified version of the model is to be judged entirely on the basis of whether tort law conforms (mostly) to what the model says would be an efficient set of liability rules of accidental harm. Shavell (1987: 291), however, explicitly states that the model is to be judged both on the soundness of its underlying assumptions and on its ability to generate novel, interesting insights into the incentive effects of alternative legal rules, insights that would not be available on the

¹² Compare Garfinkel (1981); and for an argument that economics *should* become the new legal language, see Ackerman (1984).

¹³ One notable exception is the Coase Theorem, which yields a number of hypotheses that have been tested experimentally (see Hoffman and Spitzer, 1986, 1982; Schwab, 1988) and which could, in principle, be subject to statistical analysis (see Donohue, 1989a). However, to the extent that the purpose of statistical testing is to refute or reject hypotheses (an assertion that is surely debatable, see Wesley Salmon, 1984), refutation becomes a poor criterion by which to judge the usefulness of economic theorizing, because virtually any economic theory can be refuted. See the exchange between Caldwell (1984) and Hausman (1985), and see also Hausman (1984).

basis of unguided intuition alone. These are fundamental methodological differences.

The model of precautions posits a self-interested individual who balances the costs of a precautionary action against its benefit in reducing the probability (or amount) of his legal liability. Our individual may be a product manufacturer subject to liability for product malfunction, a factory liable for environmental accidents, or a promisor potentially liable for breach. The actor may interact with others in bringing about the harm that triggers potential liability—as is especially true, for example, in contract law—or it may be that the others are relatively passive victims. All the actors may vary in their preferences toward the risk of suffering harm or bearing legal liability. Once the individual choice problem is specified by making assumptions along these dimensions, the analyst then proceeds to ask how different legal rules affect the individual's choice of precautions.

This model can be made much more precise and tailored to the particular problem under investigation. We could ask how different liability rules affect a corporate director's decision about whether to disclose information relevant to securities prices, or how different rules on sharing the costs of litigation affect a litigant's decision regarding how much to invest in attorneys, or how different contract damage rules affect a promisee's decision about how much to spend in reliance on the promise. The model can be applied to any question of the following general form: a legally conscious, rational person *P* chooses action *A* so as to minimize the sum of the cost of *A* and the amount of legal liability expected to follow from choosing *A*. Note that we have not supposed any particular social choice criterion. The model—in this isolated form—is purely an instrument. It can be used by a policymaker who wants to choose a rule which will induce person *P* to choose the highest action possible (e.g., maximum pollution control) or by a policymaker who wants the actor to choose the efficient level (the level where the marginal social benefit of action *A* in reducing the amount of harm just equals the marginal cost of *A*).

As an isolated instrument, this model has the great virtue of mathematical precision. Its individual is a calculator; the economic investigator can make this person's problem as simple or complex as she likes, subject only to the methodological norm that the problem yield an analytic (i.e., closed-form) mathematical solution. Thus, as is generally true in contemporary economics, a behavioral assumption—that actors are economically rational—becomes methodological: the “rational” thing to do, given potential legal liability, is that action which solves the appropriate optimization problem (Klamer, 1987: 168–69). This is not to say that more traditional forms of rhetoric are not employed to supplement results derived from this model—the Cooter and Ulen text in particular is rhetorically brilliant in its mixture of arguments drawn

from philosophy, economics, and traditional doctrinal analysis.¹⁴ Still, as Robert Solow (1988) has remarked,¹⁵ the mathematical approach has many virtues: it forces one to clearly specify underlying assumptions about behavior and about the legal rules and institutions modeled, and as the assumptions become more complex, the results become less intuitive, even counterintuitive: the mathematical model yields insights not otherwise available.

These are among the methodological justifications provided by Steven Shavell in concluding his book on accident law, which, in its technique, is the most rigorous and sophisticated law and economics text yet published. Shavell (1987: 291) concludes his book by commenting that it is to him “self-evident” that the modeling approach has some value in predicting and understanding behavior, “as it seeks carefully to determine the decisions that calculating actors will make given the rules of liability and opportunities to insure.” He goes on then to add: “How much value the analysis will have will depend on whether the assumptions studied capture important aspects of reality, on the degree to which the analysis helps to organize thought about the effects of liability and the insurance system, and on the extent to which the analysis identifies effects that the reader does not consider obvious” (*ibid.*, p. 291). He then lists a number of points which emerge from the analysis—such as the effect of uncertainty surrounding the determination of negligence on the incentive to take care, and the relationship between the terms of insurance policies and insurers’ ability to obtain information about insureds—points which are indeed at the very least nonobvious (pp. 291–92).

While these views correspond closely to my general defense of the mathematical model of precautions, they also enlarge on them, and in so doing provide an interesting contrast with the methodological goals of Landes and Posner. First, Shavell’s frank admission that the value of the modeling approach depends at least partly on the reality of its assumptions regarding human behavior and legal rules and institutions is at odds with Landes and Posner’s attempt to make these assumptions irrelevant to the validity or importance of their analysis. While they do cite some empirical studies showing that legal rules affect behavior (Landes and Posner, 1987: 11), their essential view on the reality of underlying behavioral assumptions is a mixture of the anti-Realist¹⁶ philosophy of science of Milton Friedman (1953) and the conservative post-

¹⁴ See, e.g., Cooter and Ulen’s (1988: 112–16) discussion of competing economic theories of property rights in information and their digression (pp. 119–22) on the philosophical treatment of property.

¹⁵ For similar views on the merit of mathematical modeling in economics, see Weintraub (1985: 174) and Arrow (1968).

¹⁶ By “anti-Realist” I refer here not to anti-Legal Realism but rather to anti-philosophical Realism. On this characterization of Friedman, see Miller (1987: 511–14).

positivism of Friedrich von Hayek. Friedman's famous essay "The Methodology of Positive Economics" adopts an austere methodological instrumentalism,¹⁷ which holds that the realism of a theory's behavioral assumptions is irrelevant,¹⁸ that among the rather large class of hypotheses whose predictions are consistent with experience, we should ultimately prefer the most simple or fruitful.¹⁹ Hayek does not deny the importance of the realism of assumptions about individual behavior; rather, because economic and other social phenomena are *complex*—depending not only on the character of individual elements but on their connections—he argues that we cannot hope to make simple theories that predict particular economic events. Instead, the most we can get from a simple theory of a complex phenomenon is the prediction of general, recurring abstract patterns (Hayek, 1964: 338; 1989).²⁰ Because it predicts that a "pattern of a certain kind will appear in defined circumstances," such a simple theory of a complex phenomenon "is a falsifiable and therefore empirical prediction," but it will remain a theory "of small empirical content because it enables us to predict or explain only certain general features of a situation which may be compatible with a great many particular circumstances" (*ibid.*, 338).

Landes and Posner "test" the efficiency of tort law the same way that Shavell does—by exploring the effect of alternative tort rules on the behavior of rational, legally aware calculators—but they say that the realism of their model does not matter, while its simplicity is a virtue, provided that it predicts. This is much like Friedman's instrumentalism. But Landes and Posner (1987: 13) quickly add that they are not necessarily interested in predicting tort law's effect on behavior, rather "[e]ven if tort law does not have a significant effect on behavior, the theory advanced in this book is not refuted. Ours is a theory of the rules of tort law rather than the consequences of those rules for behavior." That is, Landes and Posner are using a model of individual behavior to predict a general pattern of efficiency in tort law, which is an en-

¹⁷ This apt characterization comes from Caldwell (1982: ch. 8). On the importance Friedman's essay has assumed in thought about the methodology of economics, see Boland (1982); Blaug (1980); Hausman (1984).

¹⁸ For a penetrating critique of Friedman's argument and a rather different view on the unreality of assumptions, see Nagel (1973).

¹⁹ See Friedman (1953); Caldwell (1982: 174). Simplicity and fruitfulness are important among the general criteria for acceptable hypotheses given in Quine and Ullian (1978: 66–80).

²⁰ See generally Hayek (1952) and compare Miller (1987: 132–35), who rejects Hayek's view that social and economic phenomena are more complex than physical phenomena and explains the difference between historical and physical explanation as due to the "greater freedom that physics and chemistry have to emphasize questions expected to yield appropriately rigorous answers" and to neglect old questions and give new ones a "central place, when the shift makes for more rigorous standard patterns within the field."

deavor very much in the spirit of Hayek's general views on economic explanation.

The way in which this methodological program differs from Shavell's is important. Imagine that countless statistical studies reject the hypothesis that tort law influences behavior in the way the rational calculator model of precautions would predict. Then Shavell would have to admit, I think, and I know I would admit, that the model is of little value. But such studies would neither refute Landes and Posner's theory nor deprive it of its value. Rather, they could still succeed in showing that most tort law rules would create efficient incentives within the context of their simple model of precautions. How, though, can this be of any value if the underlying behavioral model has been rejected? Precisely in the way I argued earlier (by showing that the language of tort law is consistent with efficiency), Landes and Posner have furthered the objective of making economics the language of tort law. There is, then, a final connection between language and refutation here: success in transforming tort language will cause lawyers to adopt the new language in advising clients, and thus cause underlying behavior to conform to the economic model.

This is not the only way in which Shavell's methodology differs from Landes and Posner's. Assuming that the rational calculator model has some reality, at least for some class of actors, Shavell (p. 291) says that its value still depends on its usefulness in organizing thought and in generating nonobvious insights into the behavioral effects of the law. For Shavell, as for me, economics is a valuable tool of legal analysis because it meets general criteria for progressive inquiry: it provides, in Imre Lakatos's (1970: 91) terms, a research program with both a strong positive and a strong negative heuristic. The positive heuristic of a research program serves precisely the function of organizing thought, it "sets out a programme which lists a chain of ever more complicated *models* simulating reality" (*ibid.*, p. 135). Equally significantly,²¹ the positive heuristic *anticipates* that models will be replaced over time, refutations of existing models are "fully expected, the positive heuristic is there as the strategy both for predicting (producing) and digesting them" (*ibid.*, pp. 135–36). In Lakatos's view (*ibid.*, p. 116), scientific progress is measured by the extent to which a succession of models, or problem shifts, "predicts *novel* facts; that is, facts improbable in the light of, or even forbidden" by, the preceding theories.

²¹ Probably more significantly for Lakatos, whose model of progressive scientific research programs was directed in great part to modifying Popper's views on refutability by providing a rational account for the stubborn persistence of theories in the face of apparent empirical refutation. See Lakatos (1970: 176–177). This distinction between Popper and Lakatos is precisely why I prefer Lakatos's views, which have recently supplanted Friedman's "Methodology of Positive Economics" as a standpoint from which to appraise economics and its history. See Rosenberg (1986) and Cross (1982).

There can be little question that in Shavell's version, the economic approach to legal rules and incentives does indeed yield novel predictions regarding the effect of alternative legal rules on incentives, predictions previously unavailable in the legal literature. It must also be acknowledged that many of these predictions are not easily testable. For example, Shavell (pp. 93–99) provides an elegant mathematical demonstration that a small amount of uncertainty in the application of a general legal standard such as "reasonable care" will cause rational calculators to take more than the efficient level of care (see also Craswell and Calfee, 1984; 1986; Johnston, 1987). To test this hypothesis, however, we would need to be able to measure the amount of uncertainty in the legal process and then measure care levels, while allowing only the degree of uncertainty to vary. It is far from clear how we might come up with the necessary measurements.

Still, as a field, the application of mathematical models of rational individual choice to study the incentive effects of alternative legal rules is less than two decades old, dating from Brown's (1973) pathbreaking work. It is far too soon to judge this endeavor by the criterion of empirical refutation: as Lakatos (1970: 151) warned, even in the physical sciences, early versions of a theory "may 'apply' only to non-existing ideal cases; it may take decades of theoretical work to arrive at the first novel facts and still more time to arrive at *interestingly testable* versions," and "to give a stern 'refutable interpretation to fledgling [theory]' is dangerous methodological cruelty." Moreover, as I noted earlier, by stern refutational standards, virtually all economic theories would be rejected. (See the exchange between Caldwell, 1984, and Hausman, 1985). By the more relaxed Lakatosian standard, Shavell's book makes a strong case in support of the research program of formal mathematical analysis of legal incentives, for the program has already predicted and uncovered novel facts about such incentives.

The progressive aspect of such a program, however, is highly dependent on yet another distinction between Shavell's book and Landes and Posner's book. Much of Shavell's project involves carefully working through the significance of various complicating factors such as risk aversion, imperfect insurance markets, limited wealth (the judgment-proof problem) and imperfect litigation for the relative efficiency of "strict" liability and negligence. I have qualified "strict" because what Shavell models and what economists generally model is called absolute liability within mainstream tort doctrine; it is liability based merely on a showing of causation. As explained by Schwartz (1979), many areas of strict liability in the law, such as product design defects, are in fact essentially fault-based. Why, then, should Shavell focus on the efficiency of negligence and absolute liability, when absolute liability is relatively rare in tort law? Because there is not only a sharp conceptual difference between absolute liability and negligence,

but also an exceptionally tractable and, it turns out, profoundly fruitful formal, mathematical difference between absolute liability and negligence; that is, the succession of complicating factors considered by Shavell turn out to have very different consequences for the relative efficiency of absolute liability and negligence.

Now if Shavell, like Landes and Posner, had announced that his goal was to demonstrate the efficiency of existing tort doctrine, then we might say that paying so much attention to the rarely present doctrine of absolute liability was not worth the effort. But this is not Shavell's project. His concern is not to rationalize doctrine but to analyze theoretical constructs that correspond closely to doctrines which we either have or might have. Hence his systematic inclusion of short comparative law notes at the end of each section of formal analysis, many of which point out that although the American law of torts does not conform to the construct he has analyzed, other law systems do have such a rule.²²

III. ANOTHER THEOREM: COASE AND THE INDETERMINACY OF DOCTRINAL EFFICIENCY

This difference in perspective—testing existing doctrine for its efficiency versus testing a variety of alternative doctrinal constructs, some of which are suggested as much by the logic of the analytical model as by existing doctrine—is vital to the progressivity of the law and economics research program. The reason is this: *any legal rule can be shown to be efficient under appropriate background modeling assumptions*. This is a direct and fundamental implication of Ronald Coase's (1960) theorem. That theorem posits that in a perfect and frictionless bargaining environment, the choice of the legal rule does not affect the efficiency of private actions; if the rule is inefficient, say, calling for a polluter to install inefficient scrubbing devices, then by definition the winner from bargaining around (changing) the rule, the polluter, gains more than the losers lose, and with no bargaining impediments, such a mutually beneficial agreement must be reached. With bargaining frictions, the choice of the rule matters, but only because it affects who will bargain around it and at what cost. But, then, in this somewhat more realistic world, any legal rule is efficient if it is what most parties want. Any legal rule, then, is efficient if we simply assume the right kind of underlying values and preferences. Making the polluter install scrubbers will be efficient most of the time if we assume that scrubbers are usually cheap relative to the benefit they bring in reducing the amount of harm from pol-

²² See, e.g., Shavell (1987: 117–18, 139–40). The persuasiveness of Shavell's examples as actual instances of particular liability rules, such as absolute liability, may well be questioned. But this shows even more strongly that his concern is more with hypothetical but efficient rules than with the efficient rationalization of existing American tort law.

lution. But so, too, would the contrary rule be efficient, if we assumed that scrubbers are very expensive relative their benefit.

Because of this fundamental implication of the Coase Theorem, the model of precautions is best viewed as a way of organizing thought and revealing hidden subtleties in the incentive effects of alternative legal rules. It is most questionable when used to argue for the efficiency of outcomes in particular cases or existing doctrine, because the efficiency of actual doctrine depends on the background assumptions in each particular application of the model.

This point is strikingly illustrated by comparing Landes and Posner's efficiency-based justification for modern strict products liability with Cooter and Ulen's (1988) efficiency-based critique of that same doctrine. Product manufacturers and product consumers may not always be closely linked, but there clearly is some sort of relationship between them. Thus by the Coase Theorem, an immediate issue confronting the economic analyst looking at modern products liability law is why we should not simply leave the consumer to whatever remedies he has secured by contract against the manufacturer in the event of product malfunction. The common law privity requirement, which limited the consumer to a suit against the retailer or wholesaler from whom he had purchased, indeed implied that a consumer could get a common law right against the manufacturer only through private contract with the manufacturer (Cooter and Ulen, 1988: 423).

Of all recent law and economics tests, Cooter and Ulen's is the most comprehensive and methodologically eclectic. As I have already noted, they apply the model of precautions at a number of points and, perhaps even more significantly, provide an introductory chapter that carefully and clearly introduces the nontechnical reader to the basics of economic models of this sort (pp. 15–70). They apply not only this model but also techniques drawn from game theory²³ and transaction cost economics (pp. 243–70), and draw freely from variety of noneconomic sources for both empirical and theoretical insights.²⁴

This methodological care and eclecticism pervades their discussion of the efficiency of products liability. They begin with the foregoing series of observations regarding the effect of privity doctrine on the allocation of risk, and then frame their analysis of products liability by noting that the “diversion away from tort law and toward contract law” effected by the privity doctrine “would be efficient only if the allocation of the risks of failure and per-

²³ See especially pp. 93–108, where Cooter and Ulen apply techniques drawn from cooperative game theory to analyze potential bargaining solutions, and pp. 487–492, where they provide a most illuminating introduction to the concept of Bayesian-Nash equilibria in noncooperative litigation games.

²⁴ See, e.g., their discussion on pp. 214–27 of the classical or bargain theory of contract.

sonal injury arising from product use could efficiently be included as part of the contract of sale and if the manufacturing and retailing industries were sufficiently competitive to lead to competition in contract warranty terms" (p. 423). Of course, since the abolition of the privity doctrine, the law has not freely allowed manufacturers and consumers to bargain over the extent of manufacturer liability for personal injuries caused by product malfunction. Thus to determine whether an efficient contractual allocation of such risks would be feasible, Cooter and Ulen "look at the terms of these contracts between customers and sellers regarding allocation of *other* product failures—such as those requiring repair and those causing damage to property" (p. 423). They then suggest: "If manufacturers and consumers allocate those other risks in an efficient way, perhaps they can also allocate the risk of personal injury from product failure" (p. 423). To determine whether existing contractual risk allocation is efficient, they propose simply to "review the empirical literature on risk-allocation between manufacturers and consumers" (*ibid.*).

This method of analysis is precisely what I said earlier is implied by the Coase Theorem. Any legal doctrine can be efficient, depending on the underlying structure of markets and institutions and shape of individual preferences: efficiency is ultimately, as Cooter and Ulen frankly state, an empirical question. According to their analysis, the empirical question on which the efficiency of the privity doctrine hinges is whether "the allocation of the risks of failure and personal injury arising from product use could efficiently be included as part of the contract of sale" (*ibid.*).

Now even without delving too deeply into what remain difficult and unresolved issues regarding the relationship between theories and facts,²⁵ the issue posed by Cooter and Ulen is remarkable. One might well imagine framing a hypothesis like "existing contractual allocations between consumer and manufacturer are efficient" and then testing this hypothesis with empirical data that could refute the hypothesis. But this is not what Cooter and Ulen do. Rather, after telling the reader that the issue is empirical, they review *theories* which try to explain the existing pattern of warranty coverage in contracts for the sale of goods. After rejecting one, they settle on George Priest's (1981) investment or comparative advantage theory, under which

²⁵ As Feyerabend (1988a: 159) has recently written, "Language and perception interact. Every description of observable events has what one might call an 'objective' side—we recognize that it 'fits' a particular situation—and 'subjective' ingredients: the process of fitting description to situation modifies the situation." On the general problem of theory-laden observations in science, see Hanson (1971) and Feyerabend (1988b). There may, however, be more that is objective in our language and thought categories than has often been supposed. See Lakoff (1987).

the terms of express warranties are to be understood as the result of an efficient allocation of the risk of loss from product defects between manufacturer and consumer. Manufacturers assume responsibility for those losses for which, by comparison to consumers, they have a comparative advantage in prevention or correction. . . . On the other hand, consumers assume responsibility for those losses for which *they* have a comparative advantage. (Cooter and Ulen, 1988: 425)

Cooter and Ulen then argue that this comparative advantage theory seems to account for the common terms in standard warranties—a disclaimer of all implied warranties; express warranty that the goods are nondefective; and a limitation of the buyer's remedy to repair or replacement of certain parts within a specified time period (p. 426).

But this final point—that there is a theory which explains the efficiency of commonly occurring risk allocation terms in contracts between manufacturers and consumers—is itself very much a mixture of observation and theory. An argument must be constructed for each of the standard warranty terms. For example, it must be argued, under the comparative advantage theory, that it is efficient for the seller to disclaim all liability for buyer consequential damages, as this is part of the commonly occurring liability limitation (pp. 427–28). Cooter and Ulen do indeed make what has become the established argument supporting the efficiency of such limitations (*ibid.*). But this argument itself has recently undergone serious reexamination in light of game-theoretic models and insights that are just now penetrating mainstream law and economics. (Compare Johnston, 1990, with Ayres and Gertner, 1989). Moreover, while Cooter and Ulen mention the alternative, noneconomic theory that standard warranty terms are imposed on consumers by sellers with greater bargaining power, they curtly remark “that if the warrantor's market is competitive, this hypothesis is unacceptable” (p. 428). However, while this particular hypothesis may be “unacceptable” if markets are competitive, other work (Schwartz and Wilde, 1983: 1414), which Cooter and Ulen (p. 425 n.36) cite a few pages earlier as representative of the comparative advantage theory, in fact demonstrates that warranty coverage may be suboptimal when at least some consumers are uninformed regarding product quality and consumers have positive search costs, *even if* markets are otherwise competitive.

None of this is to deny the force and insight in Cooter and Ulen's discussion. For the student new to law and economics, their application of the comparative advantage theory shows how economics can provide new insights into existing legal doctrine, how contract terms often superficially explained as due to bargaining “unfairness” may in fact reflect economically rational allocation of

risk.²⁶ They accomplish at the level of the individual contract what Landes and Posner accomplish at the level of general doctrine: the revelation of a remarkable coincidence between efficiency and law.

My point is not to deny the power of Cooter and Ulen's argument but rather to uncover its rhetoric. Their ultimate conclusion, that the comparative advantage theory "suggests that products liability law should draw upon contract principles, not just torts, to achieve efficiency" (p. 430), is based on theoretical arguments explaining particular contract terms as consistent with efficient allocation of risk between consumers and manufacturers. It is not the "review of the empirical literature" which they promise at the outset. The only thing "empirical" about their discussion is that it refers to and attempts to explain commonly observed contract terms; that is, they have simply set out a theory of an observational phenomenon. "Empirical literature" would test such a theory, by examining, for example, a randomly selected sample of contract terms or, perhaps even better, by testing the empirical validity of the comparative advantage theory's underlying assumptions—that markets are competitive enough and consumers well enough informed so that risk will be allocated according to comparative advantage.²⁷

The danger in calling a theoretical hypothesis an empirical test is that it tends to diminish and indeed obscure the crucial role of what Lakatos (1970: 129–30) called "interpretative" theories in the economic analysis of law. Cooter and Ulen take the standard warranty terms which they analyze as confirming their underlying model of markets and information. But it is also possible to view the standard terms as representing the outer limits of what courts will allow sellers with unequal bargaining power to include; for example, courts would imply a warranty that goods are nondefective even if it were not express, and refuse to enforce any attempt to waive this particular implied warranty. Moreover, given that the seller excludes liability for consequential damages, courts might not allow the seller to provide less than the promise to repair or replace. But, then, by changing our background assumptions about the existing legal constraints on competitive contracts, we come up with an alternative explanation for the existing pattern of contract terms. To ultimately choose between the comparative advantage and unequal bargaining power theories would therefore require a test of the assumptions about markets and information which un-

²⁶ In applying the comparative advantage theory, Cooter and Ulen also demonstrate the power of an even more powerful heuristic in law and economics, Calabresi's (1970) cheapest cost avoider paradigm, which in a sense underlies the comparative advantage theory.

²⁷ And indeed, as argued by Schwartz and Wilde (1983: 1399–1402), these assumptions are generally false, and yet when they fail to hold, the comparative advantage theory does not yield unambiguous conclusions as to the optimality of warranty terms.

derlie both the unequal bargaining power and the comparative advantage theories. Without this, the choice between theories of standard contract terms turns ultimately on the reader's a priori belief about market efficiency. But the centrality of this belief is not apparent in Cooter and Ulen's analysis: they persuade, ultimately, not with "empirical" evidence but by relying on a deep belief that affects all observation.

Cooter and Ulen do eventually discuss the relevance of systematic empirical evidence to the desirability of the contractual approach to products liability law. They do so in evaluating Landes and Posner's economic version of the unequal bargaining power theory. As part of their general objective of demonstrating the efficiency of the common law of torts, Landes and Posner (pp. 280–93), unlike most economic analysts of products liability, argue for the efficiency of strict products liability and against the contractual approach supported by Cooter and Ulen. Landes and Posner (p. 281) argue that because the risk of personal injury from product malfunction is remote, the cost of generating information about the safety of competing products and brands and the cost to the consumer of absorbing that information "may well be disproportionate to the benefit of a negotiated (as distinct from imposed-by-law) level of safety." For this reason, the law is efficient in its refusal to enforce the seller's disclaimer of liability for personal injury—in refusing to adopt the contractual approach put forward by Cooter and Ulen—because "given the high costs (relative to benefits) of information about an extremely low-probability event, it may not pay the consumer to study a disclaimer of liability carefully even if it is clear and conspicuous. . . . High information costs relative to the benefits of the information may defeat voluntary contracting" (pp. 281–82).

Cooter and Ulen treat this alternative theory seriously. They admit (p. 429) that "empirical evidence shows that people do not estimate low-probability events well; they tend to underestimate the probability of those contingencies and, as a result, to take too little precaution or to under-insure against them." They agree, then (p. 430), that "[i]f product failure . . . is rare, consumers may under-estimate their probability and may, therefore, agree to inefficient warranty terms" but say that "there is not yet sufficient evidence to justify" acceptance of this alternative. They then conclude by noting that beyond its acceptance over this alternative, the comparative advantage theory has larger implications for the revived role of contract principles in products liability (*ibid.*).

Cooter and Ulen's treatment of Landes and Posner's alternative theory of strict products liability exhibits the same balance and attention to competing viewpoints that is characteristic generally of their book, a characteristic which makes it an excellent

general introduction.²⁸ This is not to say, however, that they do not suggest, with considerable rhetorical sophistication, a point of view.²⁹ They admit that Landes and Posner's underlying behavioral assumption that consumers are relatively ignorant of and tend to underestimate the risk of product injury is empirically sound—a hypothesis that has received both experimental and empirical support. But they then say that there is not sufficient evidence to justify acceptance of the Landes/Posner account, whereas *their* preferred theory implies a general and fundamental reevaluation of the doctrinal basis of products liability. But as I have just argued, Cooter and Ulen have adduced little if any empirical evidence for their theory, which in fact depends on an underlying assumption of rational and informed bargaining which they admit is contradicted by systematic empirical study.

Cooter and Ulen thus suggest that the reader reject a theory that is based on an empirically verified behavioral hypothesis in favor of one that is inconsistent with that hypothesis because there is insufficient evidence for the consistent theory. This advice amounts to the subordination of empirical verification as a criterion for the appraisal of theories. Subordinated to what? To another, stronger pragmatic criterion:³⁰ doctrinal significance. The Landes/Posner view essentially confirms what courts have said in adopting strict products liability, whereas the theory advocated by Cooter and Ulen calls the entire movement to strict liability into question. Their theory is better ultimately, because it shows (p. 430) that “the older common law, by basing recovery for product-related harms on contract principles through the requirement of privity, may have had strengths that are not generally appreciated today”; that is, they challenge the conventional doctrinal understanding, whereas Landes and Posner confirm it. And in the area of products liability, theoretical challenges to existing doctrine

²⁸ See, e.g., their discussion on the economics of information which I cited earlier and their treatment of the economic desirability of caps on tort damages, pp. 457-61.

²⁹ For examples of the persuasive style in Cooter and Ulen other than the products liability issue which I treat in my main text, see their discussion on pp. 436-37, where they take the New Jersey Supreme Court's decision in *Beshada v. Johns-Manville Products Corp.* (1982) as indicating a dangerous trend toward absolute liability, and on p. 451, where they point out very clearly to the reader that the “usual contention” is that bankruptcy resulting from judgments like *Beshada* is part of the social cost of a “products liability system gone mad.” It is now abundantly clear that *Beshada* was a peculiar case, reflecting the court's implicit understanding that although it couldn't be proven, there had indeed been knowledge of the product risk in the Manville case. In this section of their book, Cooter and Ulen make a number of points, through rhetorical gestures such as reliance on “the usual contention” that seem part of a general attempt to persuade the reader that modern products liability is economically unsound.

³⁰ The pragmatic approach to explanation has become increasingly prominent. For discussion, see Van Fraassen (1980, 1988); Achinstein (1983); and compare Grimes (1987).

have met an immediate and warm reception from those anxious to “reform” tort law:³¹ explanations of products liability law cannot be divorced from what product liability law is and will become.

IV. TRANSACTION COST ECONOMICS: PRIVATE ORDER AND SOCIAL PRACTICE

As this discussion of alternative theories of products liability undoubtedly shows, I view economic theories of law as intimately related to law as practice.³² The reason why the comparative advantage theory defended by Cooter and Ulen is attractive as an explanation is the same reason why it stimulates and informs law reform: because it explains actual terms appearing in contracts with specificity, as a rational response to basic economic forces rather than as either random or oppressive. It draws, that is, on the sense that within a market economy, private institutions are, however complex, rational responses to the need for cooperation.

To return briefly to the theme of part I.A, this sense too may be seen as part of the intellectual legacy of Legal Realism. As Richard Danzig (1975: 624) has said, Llewellyn rejected both Langdellian formalism and the instrumentalism of law as social planning, and instead “saw law as an articulation and regularization of unconsciously evolved mores—as a crystallization of a generally recognized and almost indisputably right rule (a ‘singing reason’), inherent in, but very possibly obscured by, existing patterns of relationships.” Llewellyn’s Uniform Commercial Code Article II “frequently speaks as though courts should discover the law merchant from a careful, disinterested examination of custom and fact situations. . . . It does not tell judges the law; it tells them how to find the law. The law is not found in doctrine, not in policy, but in directed exploration of the ‘fact-pattern of common life’ ” (*ibid.*, p. 626).

It may be, as Danzig (1975: 625) suggests, that natural tools in this exploration are provided by the methods and messages of sociology and anthropology. And as I noted in discussing the model of precautions, economics may be used to do more than Llewellyn would wish, to provide an explicit normative evaluation of alternative legal rules. It may, as in Cooter and Ulen’s (1988: 99–102) discussion of the origins of private property, provide insights explaining why practices of common life such as bargaining may be ineffective, or unwieldy without the proper supporting institutional framework, and such insights then provide a basis for evalu-

³¹ For a general discussion of the torts crisis of the 1980s see Joyce and Sanders (1990); for a testimony to the influence of ideas on reform, see the discussion in Croley and Hanson (1990) of Priest’s important (1987) theoretical account and subsequent work.

³² I thus agree with much of what is contained in Taylor (1985); on the relevance of Taylor’s views to economics generally, compare Hands (1987) with Berger (1989).

ating alternative institutional practices. But as Cooter and Ulen's discussion of the privity doctrine indicates, economics may also be used in a way more consistent with Llewellyn's project: it can provide an interpretive theory which reveals the essential pattern and rationality in "common life," which the Llewellynian judge may then reflect back in her decisions.

I say "more consistent" because Llewellyn defended Realism as only a method—"a technology"—for comprehending reality (Danzig, 1975: 628). As an interpretive theory, economics quite openly explains existing private arrangements, such as contract, as efficient responses to the larger legal and social environment. Such an explanation thus not only acknowledges but advocates a particular relationship between the inner logic of the practices governed by law and the ends of the law. It is more than "mere" description: In explaining existing private arrangements as efficient, there is the clear implication that those arrangements ought not be disturbed by judicial intervention. Thus the charge leveled against the Realists by Pound (1931: 697)—that they mistakenly thought of law "as a body of devices for the purposes of business instead of as a body of means toward general social ends" (quoted in Danzig, 1975: 628)—has in some sense been answered by an economic approach which understands the devices in light of the presumed end of efficiency.

Cooter and Ulen's text has many examples of this approach,³³ but perhaps the best illustration of this new brand of institutional economics is Oliver Williamson's (1985) transaction cost approach, recently available in a landmark synthesis, *The Economic Institutions of Capitalism*, and, as applied to contract law, in Victor Goldberg's (1989) collection of essays and exercises, *Readings in the Economics of Contract Law*. In distinguishing his transaction cost economics from other varieties of what he calls the New Institutional Economics, Williamson (p. 29) stresses its attention to the institutional detail of contractual arrangements. There is indeed now a subdiscipline within economic theory that studies how varying ownership and payment schemes can be used to create efficient incentives in contractual relationships, say, between a manager of a firm and the firm's owner. But theoretical models of this sort (for a general survey, see Hart and Holmstrom, 1987) usually assume very effective contractual enforcement by judges, whereas transaction cost economics is concerned instead with contractual relationships the length and complexity of which preclude reliance on the enforcement of specific contract provisions. As Williamson (p. 29) says, whereas other economic contract theories "work within the tradition of legal centralism, transaction cost economics disputes that court ordering is efficacious. Attention is shifted in-

³³ See, e.g., their discussion (pp. 243–47) of long-term contracts and hostage-taking.

stead to private ordering. What institutions are created with what adaptive, sequential decision-making and dispute settlement properties?" The perspective of transaction cost economics is that of the "institutional design specialist" who is faced with the problem of designing contract-based governance structures for continuing relationships (*ibid.*). Williamson (p. 32) has identified three key factors that such a designer must take into account: (1) because no person has perfect foresight—people have "bounded rationality"—contracts are necessarily incomplete; (2) because some investments in cooperative relationships can't be recovered outside the relationship (investment is firm- or relationship-specific), the parties develop bargaining power within the context of the relationship even if they originally formed it under competition; and (3) this bargaining power creates an incentive for parties to behave opportunistically and take a greater share of the surplus from cooperation than was originally contemplated. In such a world, the organizational design imperative is to "[o]rganize transactions as to economize on bounded rationality while simultaneously safeguarding them against the hazards of opportunism" (*ibid.*; emphasis in original).

In this world, therefore, we should expect to observe various contractual safeguards. And it is in these observations that Williamson's theory gets its predictive and normative bite. One class of safeguards—typified by "some type of severance payment or penalty for premature termination"—realigns incentives (pp. 33–34). A second deals with bounded rationality by creating a specialized governance structure which resolves unforeseeable disputes (p. 34). A third involves trading regularities—such as reciprocity—that lessen the potential for opportunism by acting as a form of mutual hostage giving (*ibid.*). A somewhat simpler but empirically important implication of the transaction cost approach is that long-term contracts will often be used to deal with problems of opportunism arising from asset-specific investments but that bounded rationality will often mean that such contracts are incomplete.

This should seem rather similar to the relational contracting theory associated with Ian MacNeil and Stewart Macaulay: Williamson (p. 32) specifically notes that the classical market contracting paradigm is inappropriate for the situations he is interested in, and Victor Goldberg (1989) begins his collection of readings with an excerpt from Macaulay's (1963) classic empirical study showing that that paradigm is irrelevant to most business people. This similarity between transaction cost theory and relational contracting is also a pretty fair indication of the normative range of transaction cost economics: as Goldberg's volume illustrates, it can be applied to a wide variety of issues in contract law, ranging from the foreseeability limitation on the recovery of consequential damages (pp. 99–104), to the treatment of penalty

clauses (pp. 137–66), and the explanation of warranties and standard form contracts (pp. 169–73). As for its predictive power, transaction cost economics has created virtually a new field for applied econometricians, who are busy testing hypotheses such as the transaction cost account of long-term contracts.³⁴ And, not unimportantly in a profession that values mathematical rigor as highly as does economics, Williamson's theory has provided a number of hypotheses which are suitable for formal mathematical analysis. (For an example, see Farrell and Shapiro, 1989).

While he does not neglect to cover other approaches—in particular the application to contract law of the model of precautions discussed earlier³⁵—Goldberg's volume of readings, notes, and exercises conveys an excellent sense not only of the range of application of the transaction cost approach but also its underlying methodological perspective. As Goldberg (p. 17) says, the approach supposes that "it is a reasonable research strategy to assume that agreements reflect the purposive behavior of the parties." In assuming "purposive behavior" we assume, more precisely, "that the agreement reflects the balancing of the parties' interests given the tools available, the efficiency of those tools in different contexts, and the constraints facing the decision makers" (*ibid.*). This behavioral assumption provides a general predictive model: "Under conditions M we should expect to observe [contractual] structure N; or if we observe N, the we should expect to find conditions M" (*ibid.*).

This sort of predictive model has the same sort of inherent normative force which I observed earlier in Cooter and Ulen's (1988) argument for the contractual approach to products liability law: if we assume that observed contracts are the product of rational, purposive behavior, and we have as a normative goal the achievement of a legal order that does not frustrate generally desirable private ordering, then at the very least we should require that courts not preclude such rational behavior. Indeed, without such a normative implication, the transaction cost approach veers close to tautology: whatever people do is the best they can, whatever is, is efficient. The tautology disappears when we add the background assumption: People adopt the best contractual arrangements, "*given the opportunities and difficulties confronting them,*" in particular, "*given the social context*" (Goldberg, 1989: 19–20; my emphasis). By altering the social and legal background we can expand the possibilities of private ordering.

Still, as indicated by the title of Benjamin Klein's excellent article in the transaction cost tradition—"Transaction Cost Determi-

³⁴ For examples of the great range of testable hypotheses generated by transaction cost theory, see Joskow (1987) and Pisano (1989).

³⁵ See Goldberg's ch. 2.1, which prints an excerpt from Cooter's article, "The Model of Precautions."

nants of 'Unfair' Contractual Arrangements"³⁶—the normative implication of the underlying assumption that contracts reflect rational, purposive behavior is more often than not that courts should uphold and enforce clauses that might otherwise appear to be unfair, such as clauses giving one party the discretion to terminate the relationship, or assessing penalties for nonperformance. At this level—as an outlook that can drastically affect a judge's attitude toward private contract—transaction cost economics becomes more than a new perspective on the law, it becomes a justification for particular legal outcomes.

V. CONCLUSION: TOOLS, OBJECTS AND UNDERSTANDING

Several themes emerge from this survey of the methodologies of contemporary law and economics. Even the most superficially functional economic analysts of law ultimately adopt a methodological individualist research program:³⁷ They are interested in how legal rules and institutions affect the behavior of rational economic actors. Within this program, there is substantial variety: we may think of the law as directly determining private action, and investigate the impact of legal rules on incentives within the context of mathematical models of individual choice and the legal environment which generate, through their background assumptions, an internally sustaining research program, and which do not need to suppose that efficiency is the goal of the law. If we are interested instead in analyzing areas of the law that involve private ordering through contract, we may turn instead to the transaction cost approach, an approach that explains a quite varied and complex range of contractual relationships as the product of (boundedly) rational planning against the risks inherent in many commitments to cooperate. This approach also does not presuppose that efficiency is the goal of the law; but in emphasizing the rationality of private ordering, it of course provides a framework for evaluating how well the law promotes such ordering.

Especially by comparison with the quiescent relativism (see West, 1990) of traditional doctrinal analysis, there is much that is intellectually attractive in these economic approaches. They reveal in great detail the correspondence between legal doctrine and the general functional imperatives of a capitalist economy; they show also that the instrumental use of law to change the incentives and behavior of rational calculating individuals is a much more complex matter than unguided intuition would suggest; they urge, more generally, that the law be sensitive to a kind of private logic, the economically rational, which is pervasive in American society.

³⁶ Excerpted in Goldberg, ch. 6.1.

³⁷ On methodological individualism, see Watkins, 1968; Brodbeck, 1968c; Levy, 1985.

These are the law and economics paradigms of today. In their general methodological assumptions and techniques, they have paved the way for new methodologies in law and economics. In particular, in viewing law as an environmental variable which affects private ordering, transaction cost economics has made clear the potential enormous relevance of game theory to the law.³⁸ Game theory is concerned with strategic interaction between rational actors, in a world where what is best for me to do depends not only on what you do but what we each believe about what the other will do.³⁹ Many situations with this general strategic structure can also not be fully described without specifying the relevant legal environment: not only in antitrust, where the desirability of cartel and collusive behavior obviously depends in large part on the law's attitude toward such behavior, but also in the law of contracts and cooperative ventures such as corporations, partnerships, and marriages, where negotiations at all stages are importantly influenced by what agreements the law will enforce and how it enforces them.⁴⁰ Game theory is relevant not only to situations involving cooperation,⁴¹ but also conflict, as is indicated by its increasing application to analyze rational behavior by litigants.⁴² Game-theoretic models have also been applied to analyze political processes (see generally Ordeshook, 1986) and this application suggests a further application to public law issues such as the general techniques and principles of statutory interpretation, judicial review of administrative agency action, and the constitutional analysis of separation of powers between the branches. Thus, as it is extended and enriched by models and ideas drawn from game theory, the rational choice research program of the economic analysis of law promises new insights.

As even a casual perusal through *Ethics*, the *American Political Science Review*, or the *Journal of Personality and Social Psychology* reveals, however, game theory is hardly a tool of interest only to economists; indeed a number of economic models—such as the economic theory of collective action—have been extensively utilized and subjected to both experimental and empirical testing by sociologists, political scientists, and psychologists (see, e.g., Orbell *et al.*, 1988). Just as economics has had an effect in these

³⁸ See Ayres, 1990, on the general relevance of game theory: for some accessible recent applications, see Ayres and Gertner, 1989; Johnston, 1990, and Katz, 1990.

³⁹ For an introduction to game theory, particularly as it is practiced by economists, see Rasmussen, 1989.

⁴⁰ On the use of game theory to study bargaining, see Osborne and Rubinstein, 1990.

⁴¹ Indeed, at least since Lewis, 1969, game theory has been an important tool used by moral philosophers in thinking about ethical norms and cooperation.

⁴² For a survey and analysis of this literature, see Cooter and Rubinfeld, 1989, 1990.

related disciplines, so, too, can the economics of law be enriched by methodologies and results from the broader social sciences. By looking at the meaning of explanation in several recent and important law and economics texts, I have attempted to reveal the diversity within law and economics: from Landes and Posner's (1987) functionalist account, where the rational calculator model is used to derive the efficiency of most tort rules, through Williamson (1985) and Goldberg's (1989) transaction cost theory of long-term, relational contracts, a theory which is concerned not with a functional explanation of contract law, but rather with contract terms themselves. Shavell's (1987) text shows that formal mathematical modeling of legal rules and incentives is not tied to the instrumentalist criteria of acceptability proposed by Landes and Posner (1987), but rather may be justified on much more pragmatic grounds, by its revelation of the complexity and often times counterintuitive incentives legal rules create for rational actors. Cooter and Ulen's (1988) comprehensive introduction to the field illustrates both a variety of methodologies and variety of criteria for theoretical acceptability, even as it reveals the relative failure thus far of law and economics to develop a substantial empirical component.

Despite this diversity, from other law and social science perspectives the criteria of theoretical acceptability developed in the law and economics texts I have surveyed may seem a pretext for explanatory failure. Kim Lane Scheppele (1988: 86–104), for example, has recently argued that a (positive) theory of law is to be judged on the basis of how well it “can account for the facts that are selected to sculpted and polished by judges”; that is, facts that judges deem relevant (*ibid.*, p. 104). On this criterion, she says that “the” economic theory of secrecy developed by Kronman (1978) and Posner (1981: 233–34) fails, for it identifies as important facts judges do not seem to deem relevant. But I am unaware of any economic theory of law that explicitly attempts to explain what facts judges deem important; indeed, as Scheppele (*ibid.*, 90–91 n.19) notes, and as I have also noted elsewhere (Johnston, 1990), the economic analysis of law uses cases to suggest idealized, efficient legal rules and to suggest what facts judges *ought* to consider important if they care about efficiency, not to predict what facts judges *will* consider important.

Does the failure of economic analysis of law to meet Scheppele's criterion for theoretical acceptability mean that economic analysis does not “explain” the law? Only if we adopt Scheppele's criterion, which is a severe, particularistic instrumentalism: that a theory is good only if it helps us to predict which facts will be relevant to the judge's decision in an actual case involving the doctrine in question. But by this criterion, the only sort of theory likely to survive is one which, like Scheppele's “contractarian” approach to secrecy problems, is essentially a loose induction from the very

case law it wishes to explain: lawyerly advice for the Holmesian bad man.⁴³ Surely there is still value in normative theory—an economic analysis which tells the social engineer how to achieve certain incentive effects with legal rules. And surely a theory is still positive in some sense if it points out the general consistency between economic efficiency and common law doctrine; indicating that at least sometimes, in some decisions, the common law has approximated efficient rules. And, finally, to the extent that a current or future judge becomes persuaded by economic analysis both that efficiency should matter and that making it matter does no great violence to the body of common law rules, economic analysis can radically transform a judge's view of which facts are relevant.

Thus, I do not wish to argue against Scheppele's emphasis on interpretation. As she notes (*ibid.*, pp. 86–91), broadly construed, text is both law and the factual material to which law applies: not only the facts in the case but the entire cultural and social background against which the particular facts are understood. In this broad sense, text is something to which economic analysis of law can and should pay more attention. As demonstrated throughout Lempert and Sanders's (1986) introduction to law and social science, empirical insight into social and cultural norms and relationships and into the law as actually practiced and applied can inform and inspire the economic theory of law.

This will become increasingly true, I believe, as the economic theory of law becomes increasingly the game-theoretic analysis of law. For example, Lempert and Sanders (*ibid.*, pp. 113–14) argue that empirical studies of the torts claims settlement process show that supposedly very fact-specific negligence rules are reduced to a set of general rules of thumb which lawyers and claims adjusters use to settle cases. An insight such as this can shape and guide game-theoretic modeling of the process of legal negotiation by directing attention toward models which explain why rational actors tend to rely on simple rules of thumb (see, e.g., Heiner, 1983) and toward the study of how varying degrees of uncertainty in the surrounding legal environment affect the strategic behavior of such actors. The compatibility between game theory and empirical studies of culture, society, and law is further reinforced by chapters 6 and 7 of Lempert and Sanders (1986): chapter 6 (pp. 137–95) is an introduction to the game-theoretic analysis of bargaining and

⁴³ Scheppele's (1988: 104) contractarian theory of how the law treats secrecy "takes as central a distinction between deep and shallow secrets, a concern for equal opportunities to acquire information, and the preservation of relationships of trust and confidence." All these factors are relevant in a richer economic model than the very primitive, early economic models Scheppele considers: e.g., as she notes, a shallow secret is probably easy for both parties to acquire information about; thus there is likely to be little efficiency loss if it is not disclosed. On a broader conception of what constitutes an "economic" theory, Scheppele's own theory thus appears to be closely related to economic efficiency.

settlement, while chapter 7 (pp. 196–241) surveys the empirical evidence on settlement techniques across cultures. The central findings in this empirical literature—that there is a general correspondence between settlement techniques and both the density and repetitiveness of the parties’ social relationships—both tend to confirm game-theoretic intuition (that repetitiveness should be crucial) and suggest that future game-theoretic modeling be broadened to take account of the density of social relationships.

Thus, I believe that a broad view of interpretation which emphasizes the importance of culture and society can inform and enrich the economic approach to law, rather than condemn it. For whether viewed as “science” or “nonscience,” economic analysis of law must, I believe, be judged ultimately by whether it serves our purposes (Taylor, 1977). Law, moreover, is an expression of our purposes, and the way we talk about law, as social practice, partly constitutes law (*ibid.*). Within this hermeneutical circle, instrumentalism about the law necessarily partly constitutes an instrumental law. But not wholly: there is room for more than mere instrumentalism in our communities and in our law, and neither our instrumental nor our noninstrumental activities can supplant the need for *understanding*.

To neglect the role of understanding is indeed to doom both the instrumental and constitutive significance of law. Drugs and pollution, for example, top the list of contemporary problems addressed by law. Economic analysis has been, moreover, extensively applied to both: pollution is a classic example of an externality to which the model of precaution applies (see, e.g., the particularly lucid treatment in Polinsky, 1989: 15–25); after developing the general economic model of crime and punishment, Cooter and Ulen (1988: 570–79) apply it to a number of issues, including one which they call “heroin and crime.” We can take the instrumental, economic point of view, and ask how we might control both pollution and drug abuse (and the crime associated with it) by raising the cost of such behavior. We can ask how the quantity of pollution responds to varying effluent charges, how the supply and demand for drugs varies with the penalty for distribution and use. Or, as Albert Hirschman (1985: 10) urged, we may go beyond the economist’s model of instrumental law by recognizing that “[a] principal purpose of publicly proclaimed laws and regulations is to stigmatize antisocial behavior and thereby influence citizens’ values and behavior codes.” But even if we agree that “[t]his educational, value-molding function of the law is as important as its deterrent and repressive functions” (*ibid.*), we still neither deter nor educate unless we first understand: We must understand that for many drug abusers, drugs are an alternative to even greater misery brought on by poverty and hopelessness, that for such a person, “our” legal sanctions neither deter—because the

threat of punishment carries no force—nor educate—because our lesson clearly contradicts personal knowledge.

To understand the plight of others in this way is no more inconsistent with the economic approach to law than is our desire to please our friends and loved ones inconsistent with the fact that personal budgets are limited. Economics does not deny the role of interpretation and value; rather it forces us to clarify what we mean by, and what we want from, our law. As Michael Polyani (1974: 97) has written: “As we know order from disorder, health from sickness, the ingenious from the trivial, we may distinguish with equal authority good from evil, charity from cruelty, justice from injustice.” Like law, economics is both tool and object; it distinguishes and is distinguished, it shapes and is shaped; in our understanding and compassion we are ultimately responsible both for economics and its world.

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