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LEGAL PHENOMENA, KNOWLEDGE, AND THEORY: A CAUTIONARY TALE OF HEDGEHOGS AND FOXES*

RONALD J. ALLEN** & ROSS M. ROSENBERG***

INTRODUCTION

Our thesis: A portion, perhaps a substantial portion, of legal theory, and thus derivatively much of what passes for legal knowledge, systematically misconceives the nature of the legal phenomena (human interactions and the resultant legal regulation) under investigation and thus generates false conclusions. Alternatively: A portion of legal scholarship mismodels the phenomena under investigation, with untoward results as judged by the accuracy of the explanations or predictions generated by the model.1

Some portion of legal scholarship and legal theorizing involves the articulation of general theoretical approaches to legal regulation of human interactions. Many of these theories are top-down theories meant to apply deductively to phenomena within their domain. We are presently indifferent to the size of this portion, although there is reason to believe it is substantial.2 Frequently, and again we are

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* SIR ISAIAH BERLIN, THE HEDGEHOG AND THE FOX (1953), noted the difference between intellectual hedgehogs, who relate everything to single organizing principles, and intellectual foxes, who pursue many unrelated and contradictory ends.

** John Henry Wigmore Professor of Law, Northwestern University School of Law. We are indebted to Jaime Jarvill, Ian Logan, Brian Nolan, and William Rohner for their superb research assistance. We also are indebted to Craig Callen and Richard Posner for their comments on an earlier draft, and to the participants at workshops at Emory University, Washington University, University of Texas, University of San Diego, and the Chicago-Kent College of Law Symposium on Negligence.

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1. Because of the untoward results, we do not need to deal directly with Milton Friedman’s well-known description of the role false assumptions play in useful models. MILTON FRIEDMAN, The Methodology of Positive Economics, in ESSAYS IN POSITIVE ECONOMICS 3–46 (1953); see also George R. Boyer & Robert S. Smith, The Development of the Neoclassical Tradition in Labor Economics, 54 INDUS. & LAB. REL. REV. 199 (2001).

indifferent to how frequently, these general top-down theories are advanced as explanations of, or ordering mechanisms for, particular legal regulation. The theorizing also may be intended to, and perhaps does, influence the evolution of the legal regulation. This Article analyzes the susceptibility of legal regulation of differing types of human interaction to being organized or explained by top-down deductive theories of general applicability. We concentrate on two related examples: the Learned Hand theory of negligence and the microeconomic approach to Sherman Act antitrust claims. Numerous additional examples are at hand ranging from the grand jurisprudential theories of Ronald Dworkin or Joseph Raz, to the equally ambitious economic theories of Richard Posner and Stephen Shavell and the ambitious challenges to them from behavioral economics, to mid-level theories offered as “reconceptualizations” of some more modest slice of the legal pie.3

We think that there is reason to believe that some portion of these theoretical efforts generate false conclusions4 because of the incompatibility between the nature of the legal phenomena under consideration and the analytical tool of the generalized, top-down theory.5 Moreover, we think we can identify some of the aspects of legal phenomena that determine, in part, their amenability to differing kinds of analyses. We make no claim that we have a complete taxonomy of the attributes of legal phenomena; we do believe we can identify some of their critical aspects, however, and


4. We are not claiming that all efforts at legal theorizing generate false results, and we presently are not able to estimate what proportion does. That is not the burden of this Article in any event. The burden of this Article is to lay out a potentially fruitful way of thinking about legal knowledge.

5. The complex relationship between top-down, deductive theory and the phenomenon being theorized about has been analyzed most in depth in the field of evidence with respect to the implications of Bayes’ Theorem for the evidentiary process at trial. See, e.g., Ronald J. Allen, Rationality, Algorithms and Juridical Proof: A Preliminary Inquiry, 1 INT’L J. EVID. & PROOF 254 (1997); see also Ronald J. Allen, Clarifying the Burden of Persuasion and Bayesian Decision Rules: A Response to Professor Kaye, 4 INT’L J. EVID. & PROOF 246 (2000); David H. Kaye, Bayes, Burdens and Base Rates, 4 INT’L J. EVID. & PROOF 260 (2000). The theoretical chaos of Fourth Amendment jurisprudence has been examined from a similar perspective. Ronald J. Allen & Ross M. Rosenberg, The Fourth Amendment and the Limits of Theory: Local Versus General Theoretical Knowledge, 72 ST. JOHN’S L. REV. 1190 (1998). These earlier works did not identify nor attempt to test the variables that may determine the utility of top-down theories, as the present work does.
that we can demonstrate some of their implications. In particular, at least three variables seem to be consistently at play with respect to legal phenomena: ambiguity, unpredictability, and common sense.

By "ambiguity" we mean that the true state of the law is ambiguous at the time of decision; that it does not literally come into being until a decision is reached. There is a gap, and perhaps it is accurate to say that the relevant law does not exist. Gaps are plausibly ubiquitous in the law. Every "reasonableness" standard is a potential occasion of ambiguity, of a case in which a significant portion, if not the entire relevant standard, is not known in advance. Negligence is thus a possible example of ambiguity in the law, and one to which we return later. Tax regulations seem to identify another example. As fast as the regulations are churned out, tax lawyers concoct avoidance mechanisms, one plausible explanation of which may be ambiguity. Antitrust regulation, by contrast, may not involve as much ambiguity as negligence due to the dominant role of economic theory in dictating a standard of decision and a measure for lawful competition, and again we return to this example below.

The common law is, in a sense, a formalized means of dealing with gaps in the existing regulation of behavior by creating law out of a vacuum. Much the same is true of administrative law, statutory interpretation, and constitutional law. In virtually every legal field, the application of case law or statutes to an unanticipated problem is commonplace. What sense can be given to the notion of applying the intent of the drafters to wiretapping, for example? Not even Ben Franklin, as he was flying his kites in rough weather, was thinking of electronic surveillance. Although some might deny that the law has gaps, we think it is plain that it does. Perhaps the Dworkinian claim (not obviously held by Dworkin himself) is less that the law has gaps, and more that when it does they should be filled in a particular way. This brings us to the second aspect of legal phenomena, unpredictability.

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6. Although our view is that much of the law is "objective" in one sense or another, nothing much turns on the matter for this Article. It does matter if the law is knowable. Much has been said on the objectivity of the law. See, e.g., Ronald Dworkin, Objectivity and Truth: You'd Better Believe It, 25 PHIL. & PUB. AFF. 87 (1996); Kent Greenawalt, Law and Objectivity (1992); Law and Interpretation: Essays in Legal Philosophy (Andrei Marmor ed., 1995); Law, Interpretation and Reality: Essays in Epistemology, Hermeneutics, and Jurisprudence (Patrick Nerhot ed., 1990). We also do not see that we are committed to any particular perspective on justice. See generally John Rawls, Political Liberalism (1993).

7. See generally Ronald Dworkin, Law's Empire (1986).
By "unpredictability" we mean computational intractability. By computationally intractability, we mean not only problems that cannot possibly be computed in real time, but also problems that realistically defy human computational capacity for whatever reason. Some problems have formal solutions, but the solutions are so complicated that they could not realistically be computed. A simple example of this kind of complexity is chess. Every move in chess is formally determined; there is no known ambiguity as we previously defined it. Moreover, there are at any one time relatively few moves that can be made. There are only twenty possible opening moves, and only twenty possible responses. However, the possible combinations of moves increase algorithmically. For example, there are twenty times twenty, or four hundred, combinations of the first two moves, and it all goes downhill ("uphill" probably better captures the point) at an increasing rate (the number of possible moves increases). For all the increases in computer speed, it remains true that all the possible combinations of chess moves cannot be computed in real time, which is why a computer has beaten a grand master in a match but one time (and there is some doubt about the fairness of that match). Computers compute and humans think, which are related, but different functions. In this one small area, with a limited number of variables, only recently has formal computational capacity begun to substitute for whatever it is that expert chess players do in addition to computation. We think there is evidence indicating that the difference between computation and thought is relevant to legal regulation in predictable ways.

Much of life is considerably more complicated than chess. If it is complicated because no formal rules apply, then it is ambiguous in our terms. If formal rules apply, often the implications of those rules will be computationally intractable in the manner we just explained. Perhaps negligence involves ambiguity in the sense that the parameters of a community's standards may not be knowable in advance of decision. Maybe they are, however, in which case computational

8. See generally Allen & Rosenberg, supra note 5.
9. For example, Kasporov was denied access to any previous games played by Big Blue, whereas the IBM team could study Kasporov's prior games. All of this is detailed on various web sites, such as http://whyfiles.org/040chess/. It should be noted as well that IBM declined a rematch on Kasporov's conditions (disclosing prior games, for example).
10. There are substantial complexities here, of course.
11. If formal rules, the basis of decision, or the criteria to be employed are not knowable in advance, nothing but banal top-down theories can explain legal decision making (e.g., "The judge decides as he pleases.").
intractability will be an issue. How does one accommodate ("compute") the views of the approximately seven million people in the greater Chicago area, for example? By contrast, whether some arrangement is anticompetitive (to return to the antitrust example) may be comparatively straightforward (which is not to say it is simple on some absolute scale). If ambiguity, unpredictability, or both, characterize or suffuse an area of law, we predict that formal top-down theories will be relatively uninformative about the area.

The third variable that bears upon the regulation of legal phenomena is whether something is amenable to common-sense understanding or instead requires specialized knowledge to comprehend. Negligence and antitrust regulation again provide useful examples. If negligence means something captured by either reasonableness or community standards, it does not typically require expertise to identify or apply to the facts of a case. To identify anticompetitive practices, by contrast, plausibly requires a grounding in economics beyond that held by a large portion of the public.

As our examples of negligence and antitrust regulation imply, we think these three variables—ambiguity, unpredictability and common-sense reasoning—determine to a significant extent the explanatory power and usefulness of top-down, generalized theories to legal phenomena. We hypothesize that top-down theories increase in utility as the relevant legal phenomena decrease in ambiguity, unpredictability, and the amenability to common-sense reasoning. As these variables go in the opposite direction, with ambiguity and unpredictability increasing, and the need for specialized knowledge decreasing, we predict that top-down theories of the

12. We mean by "common sense" not just the collection of conventional biases but at least the elaborated meaning contained in the work of Lynd Ferguson, Common Sense (1989). See, e.g., Ronald J. Allen, Common Sense, Rationality, and the Legal Process, 22 CARDozo L. REV. 1417, 1423–24 (2001); see also Brian Grant, The Virtues of Common Sense, 76 PHILOSOPHY 191 (2001). We thus see common sense as different from public or popular opinion. Argumentative appeals to popular opinion have long been viewed as logically fallacious, leading some to view it as substantively misguided reliance on collections of myths and superstitions. See, e.g., IRVING M. COPI & CARL COHEN, INTRODUCTION TO LOGIC 91–107 (8th ed. 1990). This has, in part, fueled scientism within some legal circles, but unfortunately appeals to authority are just as much logically flawed. Id. at 95–96. For interesting and thorough treatments of these two topics, see the two books by Douglas N. Walton, Appeal to Popular Opinion (1999) and Appeal to Expert Opinion (1997).

13. Our hypothesis thus differs from the conventional argument over common-sense reasoning and pragmatism. We are trying to determine whether the variables that lead to common sense and algorithmic approaches can be identified; we are not claiming that legal theory is, whole-hog, futile or useless. For a general discussion of the argument from pragmatism, see David E. Van Zandt, An Alternative Theory of Practical Reason in Judicial Decisions, 65 TUL. L. REV. 775 (1991).
standard legal academic sort will prove less valuable. We make no claim here about the interactions of these variables, in particular of the relationship between ambiguity and unpredictability on the one hand and common-sense reasoning on the other. Perhaps they are independent, perhaps not.  

In the remainder of this Article, we test our hypothesis in the following two ways. First, we predict that courts and legislatures will systematically ignore theoretical legal scholarship precisely because it often fails to account for the nature of the legal phenomenon supposedly under investigation. The analytical tools entailed by top-down theorizing brought to the task of explicating legal phenomena are often not suited to it, in other words. We provide evidence supporting this prediction that shows the astonishing disparity in the citations to academic work among academics as compared to citations to the same work by courts or references to it in legislative histories. There is an abundance of evidence that even the academic work of the theoretical giants of the law, such as Dworkin and Posner, is virtually ignored by the vast majority of individuals and institutions that create and enforce the law. By contrast, courts have cited the work of the doctrinalists, such as Corbin, Wigmore, and Wright, hundreds of thousands of times.

Perhaps this first test of our thesis misses the manner in which advances in legal knowledge get assimilated by the system as a whole. Perhaps it is not through engagement with the primary sources themselves but instead through the inculcation of new ideas in the minds of law students, or through exposure at conferences and the like, that the judiciary and the legislature become swayed by academic theory.

Perhaps, but this, too, we think is subject to testing. The microeconomic explanations of negligence and antitrust have existed for roughly the same length of time, and thus have had similar opportunities to work their way indirectly into the law. If anything, the microeconomic explanation of negligence has had a greater opportu-

14. We also are not making any essentialist claims that legal phenomena necessarily have certain attributes. We are analyzing what we observe under present circumstances.
15. We make no prediction about whether any legal scholar cares about this, or whether the lack of citation is a badge of honor in some fashion.
16. For a useful discussion of the institutional factors that may structure the absorption of economics into antitrust law, see William E. Kovacic, The Influence of Economics on Antitrust Law, 30 ECON. INQUIRY 294 (1992).
nity, as apparently more students study torts than antitrust.\textsuperscript{17} We predict, however, that the impact of microeconomics on negligence and antitrust will vary considerably. Negligence involves highly ambiguous and unpredictable matters because it ranges over virtually all of human affairs. Moreover, if it involves reasonableness as conventionally understood, it does not require any specialized knowledge to identify or apply; common sense is typically all it takes. Therefore, we predict that the law of negligence will be largely oblivious to the microeconomic analysis. By contrast, antitrust involves a much smaller slice of human affairs than negligence (as complicated as the economy is, the economy is a subset of human interactions), is reducible to a smaller set of variables, and requires some expertise to grasp. Thus, we predict that antitrust law will show considerably greater colonization by economics than negligence law. Since both areas have had a considerable time to be colonized by the students of the proponents of these ideas, this provides a natural test of whether our citation analysis misconceives how legal knowledge is disseminated. In sum, our data show striking differences between these two fields.

Perhaps the problem is not with theoretical top-down theories of negligence but with the microeconomic theory of negligence. Negligence has inspired numerous current theories, and perhaps one of those has succeeded where microeconomics has failed. This is a more difficult issue to test, but there is at least some evidence. That evidence shows that instructions on negligence have remained stable over an extended period, indicating a general indifference to academic discourse.\textsuperscript{18}

Even if instructions have remained stable, perhaps courts of appeals fashion negligence cases to fit the economic mold. We give good reason to doubt this by comparing the treatment of negligence in Illinois and a state that has explicitly adopted the economic approach, Louisiana.

First, we present our citation data, which can be done quite succinctly. We then turn to negligence. We review our understanding of the debates over the nature of negligence, and then present the data

\footnotesize{\textsuperscript{17} We base this assumption on the fact that torts is generally and maybe universally a required law school course, while antitrust is not.}

\footnotesize{\textsuperscript{18} Other areas of tort law may have different implications. That, of course, is part of our point. In any event, evidence exists of the effect of scholars on workmen's compensation legislation, strict liability for abnormally dangerous activities, defective products, and "no-fault" automobile accident compensation. See White, \textit{supra} note 2, at 1342.}
indicating the general irrelevance of that debate for the courts and for the jury instructions in typical negligence-based torts actions.\textsuperscript{19} We then look at a series of Illinois Supreme Court cases dealing with negligence, searching for some sign of a systematic economic approach, of which there is essentially none. We compare the Illinois cases with negligence jurisprudence in Louisiana, for Louisiana seems to be the one state that has adopted the economic approach to negligence. The significance of the Louisiana cases is that they show judges are capable of employing the economic approach directly, thus suggesting that those who do not—the rest of the nation, basically—are doing so because of choice rather than necessity. Last, we present the results of a comparative search for the impact of microeconomics on antitrust law and find a different picture.

I. COMPARATIVE CITATIONS BY ACADEMICS, JUDGES, AND LEGISLATORS

There are claims for the significance of legal theory,\textsuperscript{20} and there is also much bemoaning of the irrelevance of legal scholarship.\textsuperscript{21} One obvious source of data bearing on this disagreement is citation practices by judges and references in legislative history. If the legal theorists have an impact, their work plausibly would appear in the work product of the legal system. It doesn't.

We have examined the relationship between citations in law reviews and citations by judges and legislators in legislative records.\textsuperscript{22} There is no direct relationship between the two that we can find; indeed, the relationship may be inverse.\textsuperscript{23} The renowned theorists who get thousands of citations in the legal literature, including perhaps the two giants of modern American legal theory, Posner and Dworkin, received relatively few citations in cases or legislative reports (excluding Posner's judicial opinions, of course). Through July 2000, Posner's academic work gathered close to 9,000 citations in law reviews, but only 628 in cases. Dworkin received, by our count, about 4,000 citations in law reviews, and 87 in the cases. Other legal

\textsuperscript{19} Of course, litigation and regulation are different, but one must start somewhere.


\textsuperscript{21} \textit{See} Edwards, \textit{ supra} note 2; \textit{Postscript, supra} note 2.


\textsuperscript{23} We say "may" because we have not checked for citations of the doctrinalists in academic work, as we are indifferent to what it shows.
heavy hitters fared similarly. Cass Sunstein received approximately 5,000 citations in law reviews, but only 227 in cases. Richard Delgado had been cited in law reviews over 2,000 times, and in cases only 4 times.\footnote{24} Both Catherine MacKinnon and Jack Balkin had been cited in law reviews close to a 1,000 times each, but received only scattered cites in cases (MacKinnon 12, and Balkin 3). This is as we would predict.

Also consistent with our thesis, the single most cited authority for an argument that we have been able to identify is common sense.\footnote{25} The words and phrases "common sense," "commonsensical," and "sensible," used as an argument (based on a crude sampling\footnote{26}), appear upwards of 70,000 times in WESTLAW.\footnote{27} And again consistent with our thesis, the only close competitors that we have been able to identify are treatises. Wright & Miller is cited about 35,000 times. Wigmore is next with about 22,000 cites, Corbin gets about 1,000, and almost no one who is or was not an established treatise writer gets more than 100.\footnote{28} This is not because law reviews are not cited. Cases cite treatises and law reviews hundreds of

\footnote{24}{24. We gathered the citation data from standard WESTLAW searches. However, we could not create a computer search methodology that permitted us perfectly accurately to sort things such as people with the same surname but different first names. In the legal literature, we searched for first and last names, and excluded all the first and last names that might confound the study (such as Gerald Dworkin and Victor Posner). This would result in underestimating the number of academic citations. Another problem was sorting out citations to Posner's cases from citations to his academic work. So, we checked each judicial citation individually to confirm the numbers. We tried no similar strategy with academic citations since the numbers were overwhelming, and our only interest is in the magnitudes. So, case citations should be accurate as of the date we did the work, and the legal citations may be low, but the magnitudes are accurate. In any event, the possible direction of the error would be detrimental to our argument.}

\footnote{25}{25. Surely precedent would topple even common sense. We just could not come up with an efficient method of getting a count of case citations as authority, but William M. Landes & Richard A. Posner, Legal Precedent: A Theoretical and Empirical Analysis, 19 J.L. & ECON. 249 (1976), provides evidence that this is correct.}

\footnote{26}{26. We generated a list and looked at them in an ad hoc way. Virtually all references to "common sense" and related terms employ them as arguments. Again, what matters here is the magnitude, and if anything our number is probably low. See supra note 24.}

\footnote{27}{27. This almost surely grossly understates the reliance on common sense as an argument. for the concept is often invoked in different terms. For example, in Balderos v. City Chevrolet, 214 F.3d 849, 854 (7th Cir. 2000), Judge Posner disposed of one legal contention by arguing: "If there were such a relationship it would mean that the buyer could tell the dealer to shop the retail sales contract among finance companies and to disclose the various offers the dealer obtained to him, and no one dealing with an automobile dealer expects that kind of service." No one with common sense, in any event.}

\footnote{28}{28. Believing our point was satisfactorily made, we did not check other treatises, such as Moore's Federal Practice. We also did not check the extent to which treatises are cited by legal academics, as our thesis is indifferent to that.}
thousands of times. They just don’t cite what passes for high theory very much. Perhaps the zenith of the neglect of the legal academy, or nadir depending upon your point of view, are the cases of *Vacco v. Quill*[^30] and *Washington v. Glucksberg*,[^31] in which the Supreme Court held that state bans on assisted suicide do not violate the Fourteenth Amendment. A distinguished group of American philosophers[^32] wrote an amicus brief to the contrary (this being perhaps the only issue on which they have agreed in quite some time), which the Court did not even mention in reaching its unanimously opposite conclusion.[^33]

Some legislative history is available online.[^34] We have searched this as well, and again can find virtually no signs that the grand theorists are having a noticeable impact on legislation. A few scholars are politically active and appear as witnesses or provide

[^29]: As discussed in the text, treatises are cited a couple hundred thousand times themselves. However, determining the number of times legal materials are cited is not determinable except by manual search. Computer searches generate case hits but do not disclose how many times within a case a source is cited. Getting an accurate number of cases that have cited legal materials is also challenging because virtually all search terms generate false positives. We thus enlisted the assistance of Marcia Lehr, the Reference Librarian at Northwestern University School of Law to help us gain an approximation of the number of cases citing to law reviews. She tested various search terms and checked them for accuracy. Despite careful construction of this search and much trial and error, there were some false hits. After removing from the search the terms causing the most false hits, the amount of false hits was small. However, truly problematic search terms had to be removed even though they would have also generated many legitimate hits. These include, for example: (“B.J.”), (“B. J.”), *Criminology*, *Briefcase*, *Antitrust*, *Litigation*, *Taxes*, *Trial*, etc. Thus, the number of hits generated is a substantially low approximation. In any event, the following search was done in the WESTLAW ALLCASES database. It had to be run year by year because of the WESTLAW limitation of reporting no more than 10,000 hits. For the years between and including 1970 to 2001, the following search yielded 55,908 hits: (“L.Rev.”) (“L. Rev.”) (“L.J.”) (“L.O.”) (“L. Q.”) (“Am. Law.”) (“J. Legal”) (“Int’l L.”) (“Corp. L.”) (“Int’l”) (“J. /3 Crim.”) (“ABA J.”) (“J. Corp.”) (“Lab. /3 L.”) (“Bus. Law.”) (“Transnat’l L.”) (“Envt’l L.”) (“L. /3 Pol’y”) (“gender /3 L.”) (“Sc. /3 L.”) (“L. /3 Tech.”) (“J. /3 Legis.”) (“Tax’n”) (“Contemp.”) (“L. /3 Social”) (“L. /3 Arts”) (“L. /3 Psych.”) (“L. /3 Econ.”) (“L. /3 Fam.”) (“L. /3 Health”) (“Tax Notes”) (“Hum. Rts.”) (“Blackletter J.”) (“Disp. Resol.”) (“Bankr. /3 J.”) and Date (____). Again, this is a serious undercount justifying the textual assertion that treatises and law reviews are cited hundreds of thousands of times. See Deborah Merritt & Melanie Putnam, *Judges and Scholars: Do Courts and Scholarly Journals Cite the Same Law Review Articles?*, 71 CHI.-KENT L. REV. 871 (1996).


[^34]: We searched in the legislative history congressional reports, congressional testimony, and state archives databases contained on WESTLAW, and turned up only a scattering of hits.
written testimony with some frequency, but legislative reports are bereft of any reliance on legal academic scholarship.35 There are a few examples of academics directly influencing legislative enactments; the most notable being the Indianapolis ordinance on pornography, but given the quick demise of that statute, perhaps these are taken as lessons of perils to avoid rather than examples to emulate.36

These data are striking. Courts at all levels, and apparently legislators, ignore the theorists, while citing the practitioners. The judges apparently, and not surprisingly, are looking for answers to discrete questions, not solutions grounded in grand theory.37 Moreover, we have begun searching the treatises in particular for signs of being influenced by the grand theorists. We do not yet believe we can do this systematically and reliably, but anecdotally there is not much evidence that we can find indicating that the treatise writers are under the influence of anyone remotely like (in relevant respects) Posner, Dworkin, or MacKinnon.38

This absence of evidence of judicial attention is evidence of both the direct and indirect lack of influence of the theorists on the law. If the indirect influence theory were correct, there would be some sign of an increasing effect of the work of the theorists. Posner, Dworkin, and MacKinnon have surely had no lack of opportunity to promote their views. If anybody's ideas would slowly seep into legal consciousness through their effect on students or as a result of being discussed at conferences, it would be theirs.39

It is, of course, entirely possible that courts cite to precedent instead of top-down theory for a variety of reasons unrelated to the relative merits of a specific precedent or theory to solve a particular

35. Posner is cited 23 times (and we did not try to determine if any of these were from testimony as a judge concerning the judiciary, for example); Dworkin is cited 26 times (21 in the Congressional Record); Sunstein is the winner with 113, which struck us as impressive; Balkin is cited 3 times; and MacKinnon 2 times.

36. Am. Booksellers Ass'n, Inc. v. Hudnut, 771 F.2d 323 (7th Cir. 1985), aff'd without opinion, 475 U.S. 1001 (1986). For the continuing travails of this academically inspired legislation, see American Amusement Machine Ass'n v. Kendrick, 244 F.3d 572 (7th Cir. 2001).

37. For an extended discussion of an analogous point, see Allen & Rosenberg, supra note 5.

38. Some of Posner's work can be characterized as a treatise, which causes some complexities here.

39. There is evidence of social change, of course, of which the movement toward equality for women and minorities is a good example. We do not have a good answer to how to sort the cause of general social change of this kind from legal academic writing. We do note, however, that the legal feminist movement appears to be the result of centuries of social and political change rather than the cause.
issue. They may prefer precedent to theory because of institutional, rule of law, or due process concerns. Citation to precedent is also such a well-entrenched process that other forms of authority may be choked off by the practices and culture of courts. Finally, precedent provides good ideological cover. We personally do not doubt that courts cite to precedent for these reasons as well as a good many others. The matter is obviously complex, as the varied literature on the subject demonstrates.\textsuperscript{40} We recognize that inferences drawn from citation rates cannot support, by themselves, the conclusion that courts do not cite top-down theories because many of these theories are amazingly inaccurate descriptions of the legal problems confronted by courts. There are clearly other reasons that courts fail to cite top-down legal theory.

There are significant reasons to believe, however, that the inaccuracy of top-down theories is a strong reason that courts ignore them. The restraints placed upon courts by institutional, rule of law, or due process concerns do not restrain legislative bodies as tightly or in the same fashion. The ambit of explicit policy decisions is greater for legislative bodies, so one would expect that top-down theories authored by legal scholars would have more sway in legislative debates. Yet the same pattern of citation practices appears to repeat itself.\textsuperscript{41} Moreover, courts cite a variety of authorities that do not carry the weight of precedent, such as treatises. There appears to be no great reticence to cite sources outside of traditional case law or statutory law.

Nor do we think that politics, or simple prejudices, fail to play a role. Although we find it to be a stretch, it would not be entirely unreasonable to define broad political beliefs as a species of top-down theories. In this vein, a court's stance on, for example, prosecutorial discretion or health care could be characterized as a form of general theory. Undoubtedly, such beliefs influence courts, administrative bodies, and legislatures, and admittedly we have not tested for this in any way. Nevertheless, the patterns of citation practices do not provide evidence that courts, administrative bodies or legislatures are


\textsuperscript{41} Again, we have not systematically searched for citations to case precedent and practical writing in legislative history because we formally are indifferent to the matter. The anecdotal evidence is overwhelming, however, as even a cursory review of advisory committee notes to such codifications as the rules of evidence and procedure indicates.
drawing top-down theories from the standard theoretical work of academics.

II. THE MEANING OF NEGLIGENCE

Tort scholarship, along with much of the rest of legal scholarship, is driven by top-down theorizing. The overriding goal appears to be identifying a simple model or algorithm that "explains" the field. Two competing camps dominate the contemporary scholarship addressing the meaning of negligence: the microeconomic theorists who largely rely on the Learned Hand/Carroll Towing Formula for their inspiration, and corrective justice theorists of one hue or another. Naturally, scholars locate themselves in the spectrum between these positions, drawing from each in diverse ways. Significantly, only a few skeptical voices have been raised to this dominant tendency in the field.

There are, of course, a variety of distinctly different versions of the Hand formula and corrective justice theory. We will not focus on the depth of this scholarship except to note several points that are necessary to evaluating the effect of the Hand formula on courts. To begin with, the bare bones of the Hand formula is the well-known relationship posited between the probability of harm, the cost of harm, and the cost of prevention. This relationship is often referred to as the "risk-benefit test," "balancing approach," or "cost-benefit test." As the names imply, any (theoretically) operative version of this relationship requires, among other things, standards for measuring what does and what does not count as a risk or a benefit. Thus, whether a court deploys the language of balancing risk against harm does not necessarily imply that the Hand formula has been deployed to resolve the case. Rather obviously, assumptions about efficiency or social welfare, or a variety of other yardsticks, are required. Without such assumptions, the Hand formula may be a useful way to evaluate the facts of the case, but it remains something less than a rule of decision. We return to this point when we examine a series

44. See RESTATEMENT (THIRD) OF TORTS § 3 cmt. e (Tentative Draft No. 1, 1999).
of recent Illinois Supreme Court cases in which balancing risks against harm plays a role, but by no means a dominant one.

The bare bones of the Hand formula, of course, have a long tradition in American tort law.\textsuperscript{46} At least since the pioneering work of Francis Bohlen, American tort scholars have contended that an important aspect of determining whether an act is negligent is determining its economic implications. Bohlen was the reporter for the First Restatement and, in part due to his influence, both the First and Second Restatements include explicit commentary that invites courts to determine whether the risks associated with an activity are worth the costs of harm imposed by that activity. Nonetheless, the reasonability standard of the First and Second Restatements explicitly asks courts to balance risk against harm, and to measure what counts as a risk of harm against the actions of a reasonable prudent person.\textsuperscript{47} We find Stephen Gilles's perspective, couched in terms of the First Restatement but equally true of the Second, to be on target: "[T]he immediate point is that the risk-utility test is clearly meant to be an aspect of the reasonable person standard, rather than a replacement for it."\textsuperscript{48}

It is also true that corrective justice theory plays a role in the Restatements and the case law. Although it is more difficult to point to a common denominator among corrective justice theories, for the most part they share the imperative to ground negligence in concepts of fairness or rights. The reasonable person standard of the Restatements clearly invites such normative considerations. There are numerous cases that also depend on such considerations. The point is the same for corrective justice theory and the Hand formula. Undoubtedly a variety of common sense considerations about costs, consequences and norms play a role in the decisions of negligence cases; we just do not find much evidence that any one of these factors has been blown into a general theory and successfully pressed upon the courts or legislatures. For what it is worth, we suspect, but cannot now show, that the success of the Restatements has resided, in large

\textsuperscript{46} Id.

\textsuperscript{47} See \textit{Restatement of Torts} § 75 cmt. b (1934); \textit{Restatement (Second) of Torts} § 283 cmt. e (1965).

\textsuperscript{48} Gilles, \textit{supra} note 45, at 824.
measure, in their capacity to encompass this variety of common sense values.

There are only a few voices doubting the utility or accuracy of conceptualizing negligence in terms of a top-down theory. Take Steven Sugarman's noted attack on the entire regime of private law centered tort adjudication: "Tort law is failing—failing to promote better conduct, failing to compensate sensibly at acceptable costs, and failing to do meaningful justice to either plaintiffs or defendants."\footnote{Stephen D. Sugarman. \textit{Doing Away with Tort Law}, 73 CAL. L. REV. 555, 664 (1985).} Sugarman's remedy, nonetheless, is to argue for a sweeping revolution of the tort system modeled on principles of social insurance and employee benefits.\footnote{Id. at 661-64.} We are not concerned with the merits of this proposal; what interests us is the characterization of torts, including negligence law, as a systemic failure and the attempt to replace it with another system.

We have been able to identify only a small handful of scholars who have argued that tort law cannot be governed by a general top-down theory. Perhaps the most notable is Richard Epstein. After pioneering the use of corrective justice theory in the 1970s, it now appears that Epstein has repudiated his earlier work insofar as it set out a general theory for substantial parts, if not all, of tort law. As he recently wrote:

Most modern legal theory is system building that seeks to locate the dominant features of legal rules in comprehensive, if not formal, models of economic thought or political theory. This recent move toward constructing wide-ranging theories represents a significant departure from the traditional mode of tort scholarship, which directed its attention to analyzing and resolving marginal cases that did not fit easily within conventional doctrines.\footnote{Richard A. Epstein, \textit{The Temporal Dimension in Tort Law}, 53 U. CHI. L. REV. 1175, 1175-76 (1986); see also Richard A. Epstein, \textit{Nuisance Law: Corrective Justice and Its Utilitarian Constraints}, 8 J. LEGAL STUD. 49 (1979); Richard A. Epstein, \textit{A Theory of Strict Liability}, 2 J. LEGAL STUD. 151 (1973); Richard A. Epstein, \textit{Defenses and Subsequent Pleas in a System of Strict Liability}, 3 J. LEGAL STUD. 165 (1974); Richard A. Epstein, \textit{Causation and Corrective Justice: A Reply to Two Critics}, 8 J. LEGAL STUD. 477 (1979).}

Yet the emergence of mass torts in the last generation raises a very different set of questions. "In dealing with such complex cases, the object of the system is not perfect justice, but damage control. The right intellectual orientation is not to set the aspirations of the
system too high. Trying to get the right result in all cases is noble, but it is also unattainable."

A few others have moved in the same direction. For John Hasnas, academic tort theory and the reforms based on it have failed to accomplish much because central government planning, in the form of a sweeping overhaul of the tort system, is incapable of directing the complexity of social interaction. Christine Pierce Wells contends that "rule based theories do not provide adequate justification for the tort system," and in their place suggest that tort verdicts may be justified, in a normative way, only if decision makers are allowed to take into account a long list of complex issues.

Two studies that attempted to measure the effect of law and economics (a form of top-down theorizing) on torts scholars and courts are also on the skeptical side about the significance of top-down theorizing. The first polled law and economics scholars to find if there was any consensus among them about the efficiency of a variety of tort doctrines. The survey included a question that asked whether "[t]he standard of care under a negligence rule does induce an optimal level of activity." The study found that there was no consensus among tort scholars about whether negligence rules produced optimal activity. Moreover, the study found that there was "no grand consensus about [the efficacy of] common law tort rules" in general. While allusive, not much should be made of this because of its methodology. The study was based on the return of approximately 65 surveys out of 389 mailed to members of the American Law and Economics Association.

The second attempt to quantify the impact of economics is by Izhak Englard, an Israeli legal scholar who surveyed the impact of economic theory on judges in American tort cases from 1970 through the 1990s. Englard has provided strong evidence "that the law and

56. Id. at 667.
57. Id. at 694.
58. Id. at 668–69.
economics movement has had little but a rhetorical effect upon contemporary processes of tort adjudication."60

Virtually all legal scholars have ignored these skeptics.61 Despite the rather unified structure of this debate, with its easily identifiable positions, the impact has been meager. As we suggest below, there has been essentially no change to negligence instructions and the law simply does not embody a corrective justice theory to the exclusion of many other concerns (although we are unclear how good a test that is), indicating the relative lack of practical significance to the theorizing of either camp.

III. THE TREATMENT OF NEGLIGENCE BY THE COURTS

The conceptual structure of the Hand formula is reasonably straightforward; if it captures the relevant phenomena, one would expect the courts to employ it in their opinions and jury instructions, and for legislatures to mandate its use. There is very little support for either proposition. Courts do not rely heavily on the Hand Formula, and every state that we have identified so far uses the traditional reasonable person standard in its jury instructions.62 If the reasonable


61. We ignore many currents and tributaries, such as (1) scholars who criticize the expansion of tort liability over the last forty years from a political or public policy perspective, e.g., the expansion of tort liability has hurt innovation or closed down specific industries; (2) scholars who contend that the tort system in the United States is built on essentially flawed assumptions because it is a private law solution to a public problem that could better be solved through no-fault accident insurance, e.g., accident victims of many types, or perhaps all types, could be compensated by the government, see Sugarman, supra note 49 (recommending that the private tort regime be junked); (3) scholars who agree with the basic principles behind normative or economic theories of tort law, but disagree with the specific mechanics of a theory or theories created by other scholars, e.g., Mark F. Grady claims that the economic theory of torts, in general, and the work of Posner, in particular, “took a wrong turn at an early point. The commendable purpose was to develop a parsimonious model that would lay bare the basic structure of negligence doctrine. . . . [A]s the theory has evolved, it has yielded . . . assumptions that are . . . harmful to further progress.” Grady, supra note 42, at 398; see also Mark F. Grady, Why Are People Negligent? Technology, Nondurable Precautions, and the Medical Malpractice Explosion, 82 NW. U. L. REV. 293, 294–96 (1988); (4) scholars who describe the relationship between the recent history of tort doctrine and the developments in academic discourse, e.g., Gary T. Schwartz and George L. Priest have engaged in a lengthy debate about whether the recent growth in liability rests on negligence or strict liability principles. See Gary T. Schwartz, The Vitality of Negligence and the Ethics of Strict Liability, 15 GA. L. REV. 963 (1981); George L. Priest & David G. Owen, The Invention of Enterprise Liability: A Critical History of the Intellectual Foundations of Modern Tort Law, 14 J. LEGAL STUD. 461 (1985); Gary T. Schwartz, The Beginning and the Possible End of the Rise of Modern American Tort Law, 26 GA. L. REV. 601 (1992).

62. Louisiana allows a version of the Hand Formula as an optional instruction. See infra note 76. We have not been able to identify the highest court of a state that disapproves of the use of the Restatement (first or second) definition of negligence.
person standard meant nothing more than the utility maximizing outcome, the least cost avoider, or something similar, eventually that is what juries would be instructed. No such trend is discernable. Some support for the proposition that the legal system would migrate to the straightforward economic instruction, if that accurately captured what was intended to be conveyed, is provided by comparing the fate of the microeconomic arguments about negligence to the analogous arguments about antitrust. In antitrust, instructions in economic terms abound. Many rationalizations for this state of affairs may be given, but one explanation leaps out: the economic theorists got antitrust right and negligence wrong, which we explain in part by the relative ambiguity and unpredictability of the two areas, and by the relative role of common-sense reasoning. Other theorizing about negligence seems to have had very little impact as well. This is demonstrated by the longevity and stability of the reasonable person standard. We presently have no further tests of this proposition, however.

In this Section, we present the data indicating the relative lack of significance of the Hand Formula on the courts. In the next Section, we present the startling lack of any echoes of the Hand Formula in jury instructions, save only in Louisiana, which in our judgment is the exception that proves the rule. In Section V, we search a single state's negligence jurisprudence (Illinois) for some signs of having been affected by the Hand Formula, and compare this data to the data from the one state that has been colonized (Louisiana). In Section VI, we compare all of this to the obvious colonization of antitrust by microeconomics.

A. Data

The impact of legal theorizing has been minimal on the courts. Outside of the Seventh Circuit, the ambit of Judge Posner, and the Louisiana state courts, the Hand formula, as a robust, primary rule of

decision, is a virtual nonentity. Moreover, the evidence indicates that instructions on negligence have remained stable over the last fifty years, suggesting that the corrective justice theorists have not had a noticeable impact, either.64

We searched for the impact of the Hand test in various ways, and were struck by its insignificance. Few cases actually rely on the formula; indeed, few cite it. Nor do they cite the relevant legal theorists. A search for “Hand formula,” “Hand /3 formula” and “Hand test”65 came up with approximately 30 federal court of appeals references, 15 of which were from the Seventh Circuit following the arrival of Judge Posner. There were 27 such cites in state cases, with 21 from a single jurisdiction (Louisiana). The Carroll Towing66 case is cited once by the United States Supreme Court, approximately 50 times by United States courts of appeals, 38 times by United States district courts, and 47 times by state courts. Out of an excess of caution, perhaps, we also Shepardized the related T.J. Hooper67 decision. It has been cited 8 times by the Supreme Court, 72 times by courts of appeals, 67 times by district courts, and 185 times by state courts.68 These are not the numbers of a revolutionary or path-breaking decision.69

B. The Hand Formula in the Cases of Judge Hand and Judge Posner

As one can tell from the foregoing data, Judge Posner is the principal exponent of the Hand formula, which is surely no great surprise. Significantly, the use Judge Posner makes of the formula contrasts sharply with Judge Hand’s application. Judge Hand explicitly recognized one of the difficulties inherent in applying the Hand formula (a name he did not use) to the facts of a given case. He understood that it is frequently impossible to quantify the variables. In his words:

The difficulties are in applying the rule, as the Supreme Court observed in Conway v. O’Brien, . . . they arise from the necessity of

64. We base this conclusion on the widespread acceptance of the First and Second Restatement of Torts.
65. These have to be looked at individually to exclude such phrases as “on the other hand, tests. . . .”
67. 60 F.2d 737 (2d Cir. 1932).
68. And, interestingly, 323 times in law reviews.
69. Upon request, the authors will provide any interested scholar with the relevant lists of cases.
applying a quantitative test to an incommensurable subject matter; and the same difficulties inhere in the concept of "ordinary" negligence. It is indeed possible to state an equation for negligence in the form, \( C = P \times D \), in which the \( C \) is the care required to avoid risk, \( D \), the possible injuries, and \( P \), the probability that the injuries will occur, if the requisite care is not taken. But of these factors care is the only one ever susceptible of quantitative estimate, and often that is not. The injuries are always a variable within limits, which do not admit of even approximate ascertainment; and, although probability might theoretically be estimated, if any statistics were available, they never are; and, besides, probability varies with the severity of the injuries. It follows that all such attempts are illusory; and, if serviceable at all, are so only to center attention upon which one of the factors may be determinative in any given situation....

Judge Posner's application of the formula is less shot through with skepticism. His statement and application of the formula in the most recent case is telling. *Navarro v. Fuji Heavy Industries* involved negligent product design, but the facts and procedural posture of the case allowed the issue of product liability to be reduced to the standard issue of negligence. As Posner summed up the Hand formula:

As we said, this suit is based on negligence rather than on strict products liability. But there is little or no practical difference in a case of defective design, at least so far as the standard of liability is concerned (we have just seen that there is a big difference with respect to the deadline for bringing suit): you must prove that the design was defective in either kind of case, and whether the design was defective is determined by use of the same Hand-formula or cost-benefit approach that is used to determine negligence in a tort case not involving a product. ...

70. Moisan v. Loftus, 178 F.2d 148, 149 (2d Cir. 1949).
71. A search of the WESTLAW ALLFEDS database returned the following list of opinions in which Posner was listed as the judge and the words Judge /3 Hand and Carroll (for *Carroll Towing*) appeared—the actual search string was Ju (Posner) & Negligence & (Judge /3 Hand) Carroll: Halek v. United States, 178 F.3d 481 (7th Cir. 1999); Matter of Linton, 136 F.3d 544 (7th Cir. 1998); Vande Zande v. Wis. Dep't. of Admin., 44 F.3d 538 (7th Cir. 1995); Winskunas v. Birnbaum, 23 F.3d 1264 (7th Cir. 1994); Bhd. Shipping Co. v. St. Paul Fire & Marine Ins. Co., 935 F.2d 323 (7th Cir. 1991); Villanova v. Abrams, 972 F.2d 792 (7th Cir. 1992); United States v. Giovannetti, 919 F.2d 1223 (7th Cir. 1990); Krist v. Eli Lilly & Co., 897 F.2d 293 (7th Cir. 1990); McCarty v. Pleasants Run, Inc., 826 F.2d 1554 (7th Cir. 1987); Hill v. Norfolk & W. Ry. Co., 814 F.2d 1192 (7th Cir. 1987); Wright v. United States, 809 F.2d 425 (7th Cir. 1987); Davis v. Consol. Rail Corp., 788 F.2d 1260 (7th Cir. 1986); Am. Hosp. Supply Corp. v. Hosp. Prods. Ltd., 780 F.2d 589 (7th Cir. 1986); Duckworth v. Franzen, 780 F.2d 645 (7th Cir. 1985); Flynn v. Merrick, 776 F.2d 184 (7th Cir. 1985); Llaguno v. Mingeys, 763 F.2d 1560 (7th Cir. 1985); United States Fid. & Guar. Co. v. Plovidba, 683 F.2d 1022 (7th Cir. 1982); Evra Corp. v. Swiss Bank Corp., 673 F.2d 951 (7th Cir. 1982).
72. 117 F.3d 1027 (7th Cir. 1997).
73. Id. at 1029 (citations omitted).
Despite Posner's typically strong and sweeping insistence that the Hand formula is the legal standard for negligence, he has qualified his views on at least one occasion: *McCarty v. Pheasant Run, Inc.* 74 a case involving the application of Illinois law to a negligence claim made by a hotel guest assaulted in her room. Posner's holding mirrors Hand's admission that it is difficult to put values to a formula defining negligence and, at best, any formula merely serves to focus the issues. Posner adds the thought that this practical problem may only be an impediment for some time. As Posner puts the matter:

> There are various ways in which courts formulate the negligence standard. The analytically (not necessarily the operationally) most precise is that it involves determining whether the burden of precaution is less than the magnitude of the accident, if it occurs, multiplied by the probability of occurrence. (The product of this multiplication, or "discounting," is what economists call an expected accident cost.) If the burden is less, the precaution should be taken. This is the famous "Hand Formula" announced in *United States v. Carroll Towing Co.* (L. Hand, J.), an admiralty case, and since applied in a variety of cases not limited to admiralty.

We are not authorized to change the common law of Illinois, however, and Illinois courts do not cite the Hand Formula but instead define negligence as failure to use reasonable care, a term left undefined. But as this is a distinction without a substantive difference, we have not hesitated to use the Hand Formula in cases governed by Illinois law. The formula translates into economic terms the conventional legal test for negligence. This can be seen by considering the factors that the Illinois courts take into account in negligence cases: the same factors, and in the same relation, as in the Hand Formula. Unreasonable conduct is merely the failure to take precautions that would generate greater benefits in avoiding accidents than the precautions would cost.

Ordinarily, and here, the parties do not give the jury the information required to quantify the variables that the Hand Formula picks out as relevant. That is why the formula has greater analytic than operational significance. Conceptual as well as practical difficulties in monetizing personal injuries may continue to frustrate efforts to measure expected accident costs with the precision that is possible, in principle at least, in measuring the other side of the equation—the cost or burden of precaution. For many years to come juries may be forced to make rough judgments of reasonableness, intu~ting rather than measuring the factors in the Hand Formula; and so long as their judgment is reasonable, the trial judge has no right to set it aside, let alone substitute his own judgment.75

74. 826 F.2d 1554 (7th Cir. 1987).
75. *Id.* at 1556–57 (citations omitted).
It is simply not clear how Posner reconciles his insistence that the Hand formula accurately models negligence and his concession that "for many years to come" juries will have to make rough judgments based on intuitions of reasonableness. Perhaps an argument could be made that the unseen and implicit working of the common law system may reconcile the gap between the difficulty of implementing the Hand formula and its pristine conceptual logic.

Whatever time may bring, it is tolerably clear that Posner has underestimated the real problems which would confront a decision maker attempting to apply the Hand formula. Even in a perfect environment, however that might be defined, there is an abundance of evidence suggesting that jurors, or judges for that matter, may not be able to conduct anything approaching a reliable application of the Hand formula. The many variables involved in applying the Hand formula would, in all probability, involve decision makers in the snare of computation intractability. This may be why the real world of negligence litigation has largely been immune to Hand’s and Posner’s theorizing, as evidenced by the relatively few citations in the courts. There is other evidence of this minimal impact as well, to which we now turn.

IV. JURY INSTRUCTIONS

In addition to searching for cases that adopted or applied the Hand formula, we searched for jury instructions that adopt either some strong version of the Hand formula or corrective justice theory. The Hand formula is straightforward, and easy to grasp, as are many of the positions of the corrective justice theorists. Besides the use of the term "reasonable," there is no indication in the jury instructions that we have located indicating that they were shaped along the lines of an articulated, general theory or influenced by the corrective justice theorists (and use of the word “reasonable” long preceded these writings). "Reasonable person" by contrast, is considerably less precise if what is meant is utility maximization, cost/benefit, “least cost avoider,” etc. Were judges, legislators, and the practicing bar to come to realize, as Posner asserts, that “reasonable person” and some economic concept are synonymous, one would predict that the more precise and easy-to-understand language would supplant the less
precise and opaque language.\textsuperscript{76} This has not happened. Not only has the Hand formula not become the standard jury instruction, but also we could find almost no evidence of its use. Louisiana is the only state to our knowledge that employs a variant of the Hand instruction as an optional instruction at trial.\textsuperscript{77}

We conducted our research using the WESTLAW database and a variety of standard jury instruction treatises. The WESTLAW JI-ALL database contains jury instructions for California, Florida, Illinois, Maryland, New York and Washington, as well as a hodgepodge of Federal Instructions. Stephen G. Gilles has also examined jury instructions, many of which are not on WESTLAW. They all use the reasonable man standard.\textsuperscript{78}

The typical negligence jury instruction is similar to those of California, Florida and Illinois.

California:

Negligence is the doing of something which a reasonably prudent person would not do, or the failure to do something which a reasonably prudent person would do, under circumstances similar to those shown by the evidence.

It is the failure to use ordinary or reasonable care.

Ordinary or reasonable care is that care which persons of ordinary prudence would use in order to avoid injury to themselves or others under circumstances similar to those shown by the evidence.

[You will note that the person whose conduct we set up as a standard is not the extraordinarily cautious individual, nor the exceptionally skillful one, but a person of reasonable and ordinary prudence.]\textsuperscript{79}

Florida:

Negligence is the failure to use reasonable care. Reasonable care is that degree of care which a reasonably careful person would use under like circumstances. Negligence may consist either in do-

\textsuperscript{77} We didn't find this, actually; Patrick Kelley did.
\textsuperscript{78} Gilles, supra note 63, at 1016.
ing something that a reasonably careful person would not do under like circumstances, or in failing to do something that a reasonably careful person would do under like circumstances.80

Illinois:

When I use the word negligence in these instructions, I mean the failure to do something which a reasonably careful person would do, or the doing of something which a reasonably careful person would not do, under circumstances similar to those shown by the evidence. The law does not say how a reasonably careful person would act under those circumstances. That is for you to decide.81

This similarity, of course, is not an accident. The majority of states and United States courts follow the widely successful Second Restatement of Torts.82

The upshot of this data is that jury instructions uniformly refer to the reasonable person standard, and have done so since before the dawn of the modern crop of legal economists,83 and only a few appellate courts cite to the Hand formula. The evidence to date suggests that both the corrective justice theories and the formula are largely irrelevant to the actual operation of the legal system.84 As we said previously, we think this is because both rest upon a model that misconceives the phenomena under investigation. Matters involving high degrees of ambiguity and unpredictability, and amenable to common-sense reasoning, will be decided, quite sensibly, through the exercise of common-sense judgments rather than the application of ill-fitting and computationally intractable formulas. Negligence can arise in virtually any human interaction, and thus its contours cannot be known in advance. The relevant variables are too numerous to allow computation, and thus again some form of judgment must be exercised. Last, and probably most importantly, judgments of negligence involve how people should muddle through in life. This is

82. We base this point on the near universal acceptance of the First and Second Restatements of Torts basic definition of negligence. See Gilles, supra note 45.
83. The First Restatement, embracing the reasonable person standard, was published in 1934, for example.
largely a matter of common sense understanding of society rather than a technical question requiring expertise.

Another natural test of our hypothesis will soon be run. The negligence section of the proposed draft of the Third Restatement of Torts includes a strongly worded, explicit endorsement of the Hand formula.\(^8\) This constitutes a significant departure from the negligence section of the Second Restatement of Torts:86

A person acts with negligence if the person does not exercise reasonable care under all the circumstances. Primary factors to consider in ascertaining whether the person's conduct lacks reasonable care are the foreseeable likelihood that it will result in harm, the foreseeable severity of the harm that may ensue, and the burden that would be borne by the person and others if the person takes precautions that eliminate or reduce the possibility of harm.\(^8\)

If anything could boost the Hand formula, we suspect it is the approval of the American Law Institute. For reasons we have identified, we doubt even this will be sufficient, but we shall see. We note, as well, the temporizing of the Third Restatement; the Hand formula is a primary factor, but certainly not an exclusive one.\(^8\)

V. THE ILLINOIS AND LOUISIANA CASES: A NATURAL EXPERIMENT

Some have claimed that cases actually are decided consistently with the Hand formula, regardless of how juries are instructed.\(^8\) This could be because juries instinctively return verdicts consistently with

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85. Restatement (Third) of Torts: Liability for Physical Harm (Basic Principles) § 3 (Tentative Draft. No. 1, May 2001).

86. See Restatement (Second) of Torts § 283 (1965). The reporter for the Third Restatement is Professor Gary T. Schwartz. Schwartz has been a cautious critic of private-law-centered tort law regimes. See, e.g., Gary T. Schwartz, Reality in the Economic Analysis of Tort Law: Does Tort Law Really Deter?, 42 UCLA L. REV. 377 (1994). He does believe, nonetheless, that the present tort system may be "moderately successful" and that it is based on some implicit and loose notion of economic efficiency. He rests these beliefs on a few studies of the costs and benefits of various tort regimes, such as medical malpractice. Although his conclusions are tentative, it appears to Schwartz that what little is known about the tort system shows that economic incentives do deter, a point which he takes, for unexplained reasons, to support the conclusion that efficiency motivates tort law and serves as its goal.

87. Restatement (Third) of Torts: Liability for Physical Harm (Basic Principles) § 3 (Tentative Draft. No. 1, May 2001).


89. We do not see how to test the claim that the results in tort cases are consistent with any particular corrective justice model. We suspect in any event that such a claim would be circular (juries are the voice of the community, and so on).
the Hand formula or because judges revise verdicts to bring them in line with the formula. The first strikes us as exceedingly unlikely for various psychological and sociological reasons, and little more than a wishful expression of faith from the (supposedly scientific) economists. It is similarly unclear to us how judges might bring Hand-like rigor to verdicts, as the judges, trial and appellate, are limited in their capacity to change jury verdicts.

Accordingly, we decided to search for evidence supporting this theory of appellate decisions conforming negligence cases to the Hand formula by examining a sample of negligence cases to see if one could tell from their facts and judicial treatment of the verdicts whether the Hand formula or a proxy seemed to be integral to the decisions. The difficulty with this, of course, is that, as Judge Hand himself pointed out, the data do not exist, which one would think would be a devastating critique of the economic position. Still, this opens the field for creative explanations as to why liability served economic efficiency just right. We must say that looking at the Illinois cases leads to the distinct impression that a justification for them in terms of economic efficiency can only lead to great admiration for the creativity but not the veracity of the effort. Indeed, for the cases that we looked at, we suspect it would be hard to make such arguments with a straight face.

Our interest in the veracity of the economic explanation of negligence was sparked in part by the notorious and shocking case of Lee v. Chicago Transit Authority. As we describe below, Lee cannot be explained by the microeconomic arguments. Perhaps, though, Lee is an aberration. To search for evidence of this possibility, we searched for the word "negligence" in the Illinois Supreme Court cases from December 1, 1991 through December 7, 1993 (the two years surrounding the Lee case). The search generated forty-seven cases. In thirty-eight of the cases, not even the most creative interpreter could find a hint of a reference to economic theories of negligence (the cases largely deal with other issues). Of the remaining nine cases dealing more fully with negligence, eight give no support to the economic argument whatsoever, and one gives only mild support.

90. 605 N.E.2d 493 (Ill. 1992).
91. Search String: All Sources > States Legal - U.S. > Illinois > Cases and Court Rules > By Court > IL Supreme Court Cases. Terms: negligence and date (geq (12/1/1991) and leq (12/7/1993)) (Edit Search). Results: 47.
92. The word appeared in the opinions for various reasons, such as simply noting the underlying cause of action.
Perhaps this two-year period is aberrational. To account for this possibility, we expanded our search to a ten-year period. The ten-year search confirmed that the original two-year study was representative of Illinois jurisprudence. We report the details of the cases in the two-year sample below.

Louisiana is different. The appellate courts in Louisiana have both accepted the Hand formula as the meaning of negligence and attempted to employ it directly in their decisions, and it seems that it is the only state that does so. We give examples of this below, as well, for it indicates that courts can, indeed, attempt to mold negligence cases into the economic form. That every other state but Louisiana does not is good evidence of the limited impact of this version of microeconomic reasoning.

We start with the Lee case, as it first brought our attention to this issue, and we then discuss the eight other cases from this two-year sample.

1. Lee v. Chicago Transit Authority dealt with the following facts, taken from the dissenting justices' opinion:

This case demonstrates once again the casino-like atmosphere of our tort system. A drunken 46-year-old Korean immigrant whose blood alcohol was 0.341, or three times the legal limit for intoxication under the motor vehicle code, walked off the sidewalk and up the Chicago Transit Authority railroad tracks where he was electrocuted by the so-called third rail which supplies power to the electric trains. At his point of entry, the decedent walked past three warning signs, "DANGER," "KEEP OUT" and "ELECTRIC CURRENT." These signs were printed in English which the decedent could not read. With a 0.341 concentration of blood alcohol, however, it is questionable whether it would have

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93. We searched the WESTLAW Supreme Court of Illinois database for the term "negligence" for the period beginning December 1, 1991 and ending December 1, 2001. This search produced 248 cases, including the cases from the 1992 to 1993 time period examined above. Obviously, this search produced a variety of cases dealing with torts as well as many other substantive legal issues, such as post-conviction review of criminal cases. In order to throw the net as widely as possible, each of the 248 cases was read to determine if the Hand formula or an implicit equivalent formed the basis of a rule of decision or the reasoning behind the holding. In no case did the Hand formula, or any form of balancing consequences, form the sole basis of the rule or rationale of the case. At best, the Supreme Court of Illinois balanced the consequences flowing from the case at hand in the context of a variety of other prominent facts, including the reasonable person standard, the relevant precedent, and the expectations of the parties. Upon request, the authors will provide interested scholars with the list of cases the search generated.

94. Mr. Rosenberg will provide our research notes on the remaining eight-year sample to any interested scholar.

mattered if the signs had been printed in Korean or even in pictures. The decedent was virtually blind drunk.

In addition to the signing, sharp triangular shaped boards had been installed between the sidewalk and the third rail to make it extremely difficult and awkward for a person to walk up the tracks. Nonetheless, the decedent walked up the tracks approximately 6 1/2 feet to the point where the third rail began. There, attempting to urinate, he was electrocuted.96

We think it rather plain that it cannot be established that utility is maximized here. Mr. Lee had available to him numerous cheap methods of avoiding this accident, such as not getting blind drunk, having someone look after him, relieving himself anywhere but on the electrified rail of the Chicago Transit Authority ("CTA"), etc. The CTA, by contrast, would have had to anticipate all ways in which blind drunks might hurt themselves and provide nearly foolproof mechanisms for stopping them from doing so. In fact, the CTA presented evidence of the substantial cost of providing alternative security methods that would keep the blindly drunk from urinating on the third rail. This considerably understates the cost to the CTA, however, as a priori the CTA had no knowledge that this is how a blindly drunk person would be electrified. Apparently Mr. Lee's representatives did not contest cost. Nonetheless, the Supreme Court of Illinois affirmed a jury verdict for Mr. Lee without anything remotely like an economic cost-benefit analysis. Although it mentioned some of the economic factors, the court explicitly disregarded the cost to the CTA rather than attempt to determine relative costs and benefits:

Here, the close proximity of the third rail to the sidewalk significantly increased the likelihood of injury to pedestrians who used the sidewalk. At trial, the CTA presented evidence that alternate means of guarding the right-of-way against pedestrian entry could be problematic to install and maintain. That notwithstanding, we believe that the risk of serious injury or death to a pedestrian as a result of contact with a third rail located at grade level, in close proximity to a sidewalk, outweighs any burdens associated with more formidable safeguards or, at the least, adequate warning.97

Perhaps the CTA should be insurers against blind drunks coming into contact with the third rail, but there is nothing in this case indicating that their doing so is utility maximizing or economically efficient. That there is not even a discussion in the case of the a priori

96. Id. at 512–13 (Heiple, J., dissenting).
97. Id. at 502.
risk, obviously a necessary component in a cost/benefit analysis, supports this conclusion.

The eight cases decided within a year of *Lee* likewise give essentially no support for the economic argument:

2. *Gill v. Foster*
   
   *Gill v. Foster* was a medical malpractice suit disposed of on summary judgment. The plaintiff failed to follow his doctor’s repeated advice to transfer facilities. Injury to the plaintiff occurred shortly after a nurse failed to diagnose a pre-existing problem. The appellate court and the Supreme Court upheld the dismissal without any reference to costs or economic efficiency.

   
   *Uhrhan v. Union Pacific Railroad Co.* was a railroad worker injured when he tripped over debris in the night. The issue was whether the trial court correctly instructed the jury on contributory negligence. The appellate court determined the trial court had erred and that contributory negligence was not at issue in the case. The plaintiff could not have been expected to be more careful than he was because his job was to keep an eye on the train signals, not on the ground. The Illinois Supreme Court observed that contributory negligence instructions are appropriate if there is something to suggest the plaintiff did not follow the rules set by the employer. In this case, there was a rule to watch out for and report any debris on the ground. It was thus a question for the jury, not the appellate court, whether the plaintiff had acted reasonably. The opinion contains no discussion of comparative costs and benefits.

4. *Curatola v. Village of Niles*
   
   *Curatola v. Village of Niles* focused on whether the plaintiff was an intended and permitted user of the part of the road of which he sustained injury, but there is a short discussion of negligence. The plaintiff injured his ankle when he stepped out of his truck and into a pothole after unloading goods while parked on the street. Economic efficiency clearly does not explain the outcome:

   We do not consider lightly the claim by Niles and the City that a duty to maintain the streets for persons exiting and entering lawfully parked vehicles is burdensome. Today, the resources of many local governmental entities are reduced even as insurance costs rise. Thus, we carefully consider the relevant factors pertaining to the imposition of a duty: (1) foreseeability that the defendant’s conduct will result in injury to another; (2) likelihood of injury; (3) the magnitude of guarding against it; and (4) the consequences of placing

98. 626 N.E.2d 190 (Ill. 1993).
100. 608 N.E.2d 882 (Ill. 1993).
that burden upon the defendant. As the parties admit and our case law demonstrates, it is entirely foreseeable as well as likely that such injuries will occur. We note that municipalities are at present charged with the duty to maintain parking lanes for vehicles. We fail to appreciate that costs to maintain those areas for the operators and occupants getting into and out of those same vehicles are prohibitive of any duty to those persons. Further, contrary to the City’s assertion, the standard of reasonable care to maintain parking lanes for such users is not equivalent to the standard of care owed to pedestrians on sidewalks. We note, too, that regardless of the burden, the entire community ultimately bears the risk. To that end, the risk under these circumstances is best spread among all members of the community by imposing such duty upon local entities. “‘Duty’ is not sacrosanct in itself, but is only an expression of the sum total of those considerations of policy which lead the law to say that the plaintiff is entitled to protection.” We believe that public policy and social considerations of these times and of our community require that a duty to maintain the immediate street around lawfully parked vehicles be placed upon local governmental entities.101

5. In Thompson v. County of Cook,102 Thompson, a passenger, was killed in a single car accident when the driver of the car missed a curve while trying to evade a police car in pursuit. The driver was legally intoxicated. Thompson’s family alleged negligence against the county for failing to post adequate warning at the approach to the curve. In disposing of the case, the court said, without mentioning anything remotely related to economic efficiency:

The plaintiffs nonetheless contend that the signs at the curve where the accident occurred were inadequate and that the county’s negligence caused the accident which resulted in Thompson’s death. Illinois courts have long distinguished, however, between condition and causation. This court recognized that distinction…defining proximate cause as follows: “The cause of an injury is that which actually produces it, while the occasion is that which provides an opportunity for causal agencies to act.” If a defendant’s negligence does nothing more than furnish a condition by which injury is made possible, that negligence is not the proximate cause of injury.

Proximate cause is also absent where the independent acts of a third person break the causal connection between the alleged original wrong and the injury. When that occurs, the independent act itself becomes a proximate or immediate cause.

[The driver’s] actions in driving while drunk, speeding, eluding the police, and disregarding traffic signs were the sole proximate

101. Id. at 888–89 (citations omitted).
102. 609 N.E.2d 290 (Ill. 1993).
cause of this accident. Sutton Road provided nothing more than a location where [the driver’s] negligence came to fruition.103

6. DiBenedetto v. Flora Township,104 is yet another negligence case with no obvious connection to the economic arguments:

The gist of the complaint in this case was that the ditch along the road was not safe to be driven in. The question is, Does the defendant township have a duty to the motoring public to make its drainage ditches which run parallel to the traveled way to be safe for vehicular traffic? We hold not. There is no claim here that the traveled portion of the road, including the shoulder, was anything but safe. The drainage ditch was there for the purpose of receiving surface water and thereby protecting the traveled way from flooding. It was not designed to carry vehicular traffic. The right-of-way had three component parts, namely, the traveled way, the shoulder and the drainage ditch. Each of the parts was fulfilling its intended function. What happened in this case was that decedent, for whatever reason, lost control of his car, drove across an oncoming lane of the roadway, on across the shoulder and into the ditch where his car overturned and he was killed. . . .

Drainage ditches along streets and highways are both commonplace and necessary. People are not expected to drive in them and the public cannot be an insurer of those who do. Although there is a paucity of cases on this issue, we interpret that lack to the fact that the conclusion is obvious and that the opposite result would be contrary to normal expectations and experience in the affairs of life. . . .

Neither a township nor a municipality is an insurer against all accidents occurring on the public way. . . .105

7. In Hutchings v. Bauer,106 the defendants operated a horse training business, part of which was located near a curve in the public road. Cars had missed the curve a number of times over the years, so the defendants asked the township to install a guardrail. The township denied the request and the defendants built their own barrier in order to protect themselves, their property, and their horses. They “notified the Lake County highway department by letter that they had built a ‘barricade of large posts’ on their property to stop drivers who failed to make the curve.”107 The court included some language consistent with the economic arguments, but largely seemed to ignore them:

103. Id. at 294 (citations omitted).
105. Id. at 573–74.
107. Id. at 934–35.
The plaintiff... was driving his motorcycle along Callahan Road. The speed limit for this area was 35 miles per hour, but the "advisory" speed limit as posted for the curve he was entering was 25 miles per hour. In order to warn motorists of the curve, several signs were posted along the road... Plaintiff was negotiating the curve at a speed which he estimated to be 35 to 37 miles per hour when he hit some loose gravel, slid across the gravel shoulder for 10 or 15 feet, and then went onto the grass to the right of the shoulder where he traveled some 50 to 100 yards. Then, still upright and traveling on the grassy area at a speed between 15 and 20 miles per hour, plaintiff felt that he was still going too fast to safely turn back onto the road. Instead of either slowing or stopping, he decided to drive between two of the defendants' vertical posts. As plaintiff attempted to pass through the posts at a speed of about 15 miles per hour, he hit a horizontal log or post which ran between the vertical posts. Plaintiff was unable to see the log due to the grass which had grown up around it. As a result of striking the barrier, plaintiff sustained severe and permanent injuries....

Defendants had a right to operate their horse training farm and to take reasonable precautions to protect themselves, their fencing and their horses from incursions of motor vehicles over and across their land. The defendants were under no duty to dedicate and donate their land to the public without compensation for use as a travelled way. To hold otherwise would constitute a denial of substantive due process....

It is also to be noted that the barrier which the defendants constructed was a reasonable barrier. It was not designed to cause injury or harm. It was not a pit or a trap. Except for the bottom horizontal log which was obscured by tall grass, it was quite visible. It was intended solely to stop the movement of vehicles across the defendants' property for the protection of the defendants. It was not dangerous, save in the sense that it was a barrier. Needless to say, when a moving vehicle strikes any immovable or fixed object with sufficient force, some damage or injury from the collision would be expected, the extent of damage depending on a variety of factors including speed.

It is also to be noted that the plaintiff chose to drive his motorcycle around the curve at a speed 10 to 12 miles above the "advisory" speed limit posted for the curve....

8. In American National Bank & Trust Co. of Chicago v. National Advertising Co., the court mentioned that the cost to the defendant of avoiding the accident were low. However, that was just one factor among many that the court viewed as relevant to the nature of negligence. Lukas was electrocuted while working on a

108. Id. at 935-36.
billboard scaffold, and the administrator of his estate sought to collect damages from the lessee of the sign.

The parties agree that decedent came into contact with the electrical wire as he was transferring from the walkrail to the ladder. Photographs of the accident site reveal that, at least in the light and from the angle at which the photographs were taken, the wire is clearly visible. Thus the danger was arguably open and obvious.

'Foreseeability means that which it is objectively reasonable to expect, not merely what might conceivably occur.' Since the purpose of the walkrail was to allow workers to walk the full length of the sign in order to make repairs, it was objectively reasonable to expect that a worker could come into contact with a power line that hung only 4 1/2 to 5 feet above the walkrail. It was also reasonable to expect that a worker might be distracted by having to watch where to place his feet, and consequently would not be aware of or remember the presence of the electric wires. Thus, defendant had reason to anticipate an injury such as the one which occurred.

Further, the burden on defendant to protect workers against the hazardous power line would not have been heavy. National might have shortened the walkrail so that it no longer ran under the power line. Alternatively, National might have demanded that the utility company relocate the power line. At very little expense or inconvenience, National might have warned workers of the hazard. For the above reasons, we find that National owed a duty of reasonable care to the decedent.

The record reveals that some workers on the sign had not noticed the overhanging wires; there is also testimony from one worker that he had seen the wires and was aware of the danger they represented. The trier of fact must evaluate all the evidence.

9. In Wojdyla v. City of Park Ridge, a car hit the plaintiff's decedent while he was walking across the street to his own parked car. The plaintiff alleged negligence on the part of the city for not providing adequate lighting. The court decided in favor of the city, holding that the city had no duty of care because decedent was not an intended user of the street, as he was not crossing at a crosswalk. The court stated, "[t]his court long ago recognized that a municipality is not required to provide improvements such as lights or crosswalks, although where it endeavors to do so it must not be negligent in this undertaking." The plaintiff did make an argument consistent with an economic analysis, which the court rejected:

110. Id. at 319-20 (citations omitted).
111. 592 N.E.2d 1098 (Ill. 1992).
112. Id. at 1103 (citations omitted).
Plaintiff also asserts that it would be unreasonable to expect the decedent to have walked the mile round trip which would have been necessary to use a crosswalk to cross the street to his legally parked car. Plaintiff's argument here, in essence, is that the absence of a crosswalk shows or creates an intent by the City that pedestrians be allowed to cross highways at will wherever street parking is allowed, and that the City, when it illuminates a street, must light the street adequately for their use. Inasmuch as the City is not required to provide crosswalks in the first place, we fail to see how the absence of crosswalks can give rise to such a duty.113

The Illinois cases in 1992 and 1993 provide no support for the economic theory of negligence. The cases do not attempt to impose the economic theory on the results of verdicts, and the facts of the cases cannot plausibly be reconciled with the theory, although the cases indicate the banal point that relative costs and benefits are not irrelevancies. Even though our sample was not randomly selected, this is significant evidence disconfirming the economic argument. In any particular case, an appellate court may not need to invoke the economic arguments even if those arguments capture the court’s view on the legal phenomenon. However, this is a string of nine cases in a row. Suppose the probability of a court invoking and relying upon the economic arguments in a jurisdiction where negligence is fashioned from them is .5; in other words, half the time the court discusses efficiency, and half the time there is no need to. Assuming independence,114 the probability of a string of nine consecutive cases not relying on the economic perspective is .59, or about one in 500. More plausibly, if the probability that a court discussing the nature of negligence would actually discuss what it believed that nature to be were more like .8, then the probability of having a string of nine straight cases such as these would be .29, or about one in two million. And actually, the reality of the Illinois cases over this period of time is forty-seven consecutive cases mentioning negligence without one rigorously tying the concept to the economic arguments.

Moreover, we found nothing inconsistent with the cases noted above when we expanded the research to cover a ten-year period. Although costs and benefits were relevant variables, no cases grounded a decision on the implications of a cost-benefit analysis in a way consistent with the economic prediction. As with the cases detailed above, by far the most robust variables were such matters as the settled expectations of the parties and common sense. There is

113. Id. at 1104.
114. Clearly a false assumption, but one made for ease of exposition.
simply very little or no evidence in the Illinois cases of the appellate courts attempting to fashion negligence cases into an economic form; there is literally no case in our set that looks at all like the Louisiana cases discussed immediately below. In any event, the proposition that the Illinois cases do not provide support for the economic arguments can easily be disconfirmed if it is false by an even further extension of our work. What we have provided is so startling that we believe it satisfies our purposes here.

The cases from Louisiana, the one state explicitly adopting the Hand formula, could not be more different from the Illinois cases. The cases speak so clearly for themselves that we simply reproduce relevant excerpts from Dobson v. Louisiana Power & Light Co.,115 the Supreme Court of Louisiana case adopting the Hand approach, and one standard courts of appeals treatment of the issue. First, from Dobson:

The generally accepted view is that negligence is defined as conduct which falls below the standard established by law for the protection of others against an unreasonable risk of harm. The test for determining whether a risk is unreasonable is supplied by the following formula. The amount of caution "demanded of a person by an occasion is the resultant of three factors: the likelihood that his conduct will injure others, taken with the seriousness of the injury if it happens, and balanced against the interest which he must sacrifice, or the cost of the precaution he must take, to avoid the risk." L. Hand, J. in Conway v. O'Brien. If the product of the likelihood of injury multiplied times the seriousness of the injury exceeds the burden of the precautions, the risk is unreasonable and the failure to take precautions or sacrifice the interest is negligence. The foregoing conception has been referred to by legal scholars as the "Hand formula," the "Learned Hand test" or the "risk-benefit" balancing test.

It assists us to concentrate here on the costs of the precautions necessary to avoid the accident because the magnitude of the danger caused by the conduct of either Dobson or LP&L was extreme. If the risk that a person might come into contact with the bare high voltage distribution line were to take effect, the anticipated gravity of the loss was of the highest degree. Dobson's conduct in lowering himself down the tree trunk with a metallically reinforced safety line dangling below near the electric wires substantially increased the possibility of such an accident. But so did LP&L's conduct in transmitting high voltage electricity through its uninsulated distribution lines in a residential subdivision without regular inspection of its equipment and right of way, regular maintenance of its right of way by trimming unsafe trees and limbs, insulation of its lines in

115. 567 So. 2d 569 (La. 1990).
close proximity to trees, or installation of adequate warnings of the dangerous uninsulated condition of the distribution lines. The chances of an accident were further increased when LP&L, by refusing to respond to Mrs. Davidge's complaints, encouraged her to take it upon herself to remove the limbs and trees in close proximity to the uninsulated distribution lines. The odds of an electrocution were raised again when LP&L failed to warn Dobson specifically of the uninsulated distribution lines although the company had knowledge that he was a new, inexperienced tree trimmer working in the neighborhood where the lines were located.

Confining ourselves to the factor of the cost of taking an effective precaution to avoid the risk, it appears to us that the cost or burden of eliminating the danger would have been greater for Dobson than for LP&L. As we have indicated, the power company had a number of relatively inexpensive, efficacious precautions available to it, e.g., inspection, maintenance, partial insulation, public education and visible warnings. Moreover, there was one particularly effective way in which LP&L could have eliminated the risk at little or no cost—by explicitly warning Dobson about the uninsulated high voltage distribution lines and telling him how to distinguish them from the insulated dwelling service lines. On the other hand, the cost to Dobson, who was ignorant of the characteristics of the uninsulated distribution lines and therefore unaware of their special danger, exceeded the cost to a person with superior capacity and knowledge. An actor with "inferior" capacity to avoid harm must expend more effort to avoid a danger than need a person with "superior" ability....

Following the Louisiana Supreme Court's lead, the appellate courts in Louisiana routinely apply the Hand formula. Consider, for example, Pinsouneault v. Merchants & Farmers Bank & Trust Co.:117 The test for determining whether a risk is unreasonable is supplied by the following formula. The amount of caution "demanded of a person by an occasion is the resultant of three factors: the likelihood that his conduct will injure others, taken with the seriousness of the injury if it happens, and balanced against the interest which he must sacrifice [or the cost of the precaution he must take] to avoid the risk." L. Hand, J. in Conway v. O'Brien.

If the product of the likelihood of injury multiplied times the seriousness of the injury exceeds the burden of the precautions, the risk is unreasonable and the failure to take precautions or sacrifice the interest is negligence. The foregoing conception has been referred to by legal scholars as the "Hand formula," the "Learned Hand test" or the "risk-benefit" balancing test.

In the present case, where foreseeability of armed robbery at the night depository has been established, the likelihood that the

116. Id. at 574–76 (citations omitted).
bank's failure to provide security would lead to the shooting death of a night deposit patron far outweighs the cost of installing surveillance cameras, cutting down shrubbery, upgrading lighting and/or extending a fence...118

To reiterate, courts are quite competent to attempt to apply the Hand formula analysis if they choose to do so. The Louisiana courts do so as directed by their supreme court. The rest of the country does not. As we previously mentioned, Louisiana also permits a version of the Hand formula to be used in instructing juries. Louisiana thus appears to be the exception that proves the rule.

VI. ANTITRUST LAW

The microeconomic explanation of antitrust law has been with us as long or longer than the microeconomic explanation of negligence. While negligence law has resisted the intrusion, antitrust law has welcomed it. This is no great surprise. The goal of antitrust law is typically phrased in economic terms; the purpose of the Sherman Act, in the words of one widely circulated pattern jury instruction, is to: "preserve and advance our system of free, competitive enterprise."119 Nonetheless, not all of antitrust law is explicitly procompetitive or, for that matter, governed by straightforwardly microeconomic demands. It is only necessary to look as far as the well-known defenses to Sherman Act claims, such as the Noerr-Pennington doctrine, or the immunity granted to labor organizations under the Clayton Act, to see that antitrust law is governed by a complex set of goals.120

Moreover, no specific economic theory has captured antitrust law. The basic elements of a story we have watched unfold in other areas of the law121 has occurred in antitrust: strenuous attacks on Warren Court era jurisprudence led to initially successful but ultimately incomplete attempts to provide a coherent, general theoretical grounding. The Chicago school's important successes did not prove robust enough to gather anything approaching consensus in the courts or academia. Indeed, by the late 1980s, leading antitrust scholars hostile to the Chicago school had hammered out a set of

118. Id. at 187-88 (citations omitted).
119. O'MALLEY, GRENIG & LEE, FEDERAL JURY PRACTICE AND INSTRUCTIONS § 150.01 (5th ed. 2000).
121. See Allen & Rosenberg, supra note 5.
basic criticisms of the school and began predicting its demise. At approximately the same time, the price-theoretic structure of the Chicago school came under a profound attack; the movement of economic theory outside the law began to be picked up by legal theorists. It pointed in directions which presented serious alternatives to the Chicago school position on efficiency and post-Chicago theorists began using a variety of approaches to model, among other things, the effect of informational deficiencies on antitrust rules.\footnote{See Peter J. Hammer, Antitrust Beyond Competition: Market Failures, Total Welfare, and the Challenge of Intramarket Second-Best Tradeoffs, 98 Mich. L. Rev. 849, 854 n.12 (2000) (citing Herbert Hovenkamp, Antitrust Policy After Chicago, 84 Mich. L. Rev. 213, 241–42 (1985) ("Problems of second-best may be so overwhelming and so hypothetical that the antitrust policymaker is well off to avoid them."); Phillip Areeda & Donald F. Turner, 2 Antitrust Law 308–13 (1978) (also acknowledging second-best concerns).} In somewhat of a parallel course, populist-oriented antitrust scholars drew from international law, particularly from the European Union, a new source of strength that the notion of free competition embodied in antitrust law included principles of fairness and substantive justice.\footnote{See, e.g., Eleanor M. Fox, The Battle for the Soul of Antitrust, 75 Cal. L. Rev. 917 (1987).} Legislatures and courts have not adopted the position of one or another of these camps; they have adopted an overwhelmingly microeconomic approach to antitrust.\footnote{This point is made clear by the controversy which attends the seemingly endless interpretative effort concerning the Court’s recent antitrust opinions to provide evidence of a direct endorsement of one program or the other. See, e.g., Thomas C. Arthur, A Workable Rule of Reason: A Less Ambitious Antitrust Rule for the Federal Courts, 68 Antitrust L.J. 337 (2000).}

The growing importance of microeconomic analysis to antitrust law provides an interesting counterpoint to the resistance of negligence law to microeconomics. We begin by illustrating the progressive influence of microeconomics on a range of Sherman Act jury instructions. Then we turn to section 1 Sherman Act Rule of Reason instructions because of the rough analogue they provide to tort law’s reasonable prudent person standard. Both examples provide important evidence that microeconomics has colonized Sherman Act jurisprudence in a gradual but thorough manner.

A. Selected Sherman Act Jury Instructions

The influence of economics on antitrust jury instructions over the past eighty years has been marked. Herbert Hovenkamp and Frederick Rowe have previously demonstrated that economics models have strongly influenced antitrust law at least since the
1930s.125 We take it to be no great surprise that jury instructions have tracked this trend.

In order to indicate the depth of the effect on antitrust law of microeconomic theory in a manageable fashion, we focus on two sets of jury instructions. First we present typical price-fixing instructions, both horizontal and vertical. Along with cartels, price fixing is a core antitrust concept under the Sherman Act. The significance of these instructions is that they display an explicit tendency to require juries to consider many different economic methods of fixing prices. While this is obviously an intuitive approach to drafting a price-fixing instruction, this tendency to define in detail what constitutes price fixing in economic terms has changed over time. In the last thirty years, price-fixing instructions have become far more rigorous in their description of the methods of price fixing.

Second, we examine jury instruction defining monopoly as an example of the impact of economics on specific areas of antitrust law. One striking aspect of the history of these instructions is the pronounced tendency to focus the attention of the jury on the market share of the defendant. Over the last forty years, at least, market share has assumed greater importance and juries have been instructed to look at a longer list of facts from which to induce market share.

First, price fixing. We begin with a typical price-fixing instruction from the 1920s:

We are naturally led to inquire as to what is the character of the agreement or understanding charged which the Government claims was in violation of the Sherman law, or, on the other hand, what was the character of the conduct of the members of this combination which it claims brands that combination as illegal under the Sherman law. On this head, first and most important, let me advise you, so that there cannot be any possible misunderstanding in your minds that it is illegal and a violation of the Sherman law for a group of independent units, that is, individuals or corporations, operating in combination such as a trade association of the character shown here, to agree amongst themselves to fix the prices to be charged for the commodity which the members manufacture, where they control a substantial part of the interstate trade and commerce in that commodity. That proposition you should bear clearly in mind. . . .126


126. AM. BAR ASS'N, JURY INSTRUCTIONS IN CRIMINAL ANTITRUST CASES 7 (1965) (citing United States v. Trenton Potteries Co., Cr. 32-566 (S.D.N.Y. 1922)).
This is an obvious, direct instruction. Perhaps for this reason it remained durable through the 1950s. By the 1960s, however, a more complicated instruction became typical:

Thus, any direct interference by contract, or combination, or conspiracy, with the ordinary and usual competitive pricing system of the open market constitutes an unreasonable restraint of trade, and is in itself unlawful. The mere fact that there may be business justifications for the fixing of prices, or the fact that the wholly or partially fixed prices may be reasonable, will not relieve the members of the price-fixing combination or conspiracy from liability under the antitrust laws.

On the other hand, the mere fact that pricing systems of persons engaged in the same business or industry may be substantially similar does not, in and of itself, indicate a price-fixing combination or conspiracy, but may be consistent with ordinary competitive behavior in a free and open market.

If you find from the evidence in these cases that the defendants, or two or more of them, have knowingly and willfully agreed or conspired, whether tacitly or expressly, to raise, lower, maintain or standardize admission prices, or have attempted to regulate or control or fix admission prices in any way or manner, or by any means or method, you must find that such defendants have violated the antitrust laws.127

The shift from the earlier instruction that forbids an agreement "to fix the prices to be charged for the commodity which the members manufacture, where they control a substantial part of the interstate trade and commerce in that commodity," to one referring to "competitive pricing systems of the open market" and "ordinary competitive behavior in a free and open market" is striking, and, we suspect, evidence of the effect of microeconomics.

The current ABA sample jury instructions on horizontal price fixing and vertical minimum resale price fixing continue this process:

Plaintiff claims that it was injured because defendants conspired to fix the prices for [product X].

Under the Sherman Act it is illegal for two or more competitors to enter into an agreement to fix, control, raise, lower, maintain, or stabilize the prices charged or to be charged for products or services. This prohibition is violated not only if the same price is set by competitors, but also if the range or level of prices is agreed upon or various price formulas are agreed upon. Any agreement to [describe the price-fixing conspiracy alleged by plaintiff, e.g., to set a specific price, to maintain a floor under prices to increase the stability or firmness of prices, to establish a minimum or maximum price, to

127. AM. BAR ASS'N, ANTITRUST CIVIL JURY INSTRUCTIONS 69-70 (1972).
eliminate or limit discounts, to establish a fixed spread between the prices of different sellers, to establish a fixed spread between wholesale and retail prices, to establish fixed markups or profit margins, to stabilize prices, to set credit terms or other conditions of sale relation to price] is illegal.

To win against a defendant on its price-fixing claim, plaintiff must have proved as to that defendant each of the following elements by a preponderance of the evidence:

First, that an agreement to fix the prices of [product X] existed;
Second, that that defendant knowingly—that is, voluntarily and intentionally—became a party to that agreement;
Third, that such agreement occurred in or affected interstate [or foreign] commerce;
Fourth, that the agreement caused plaintiff to suffer an injury to its business or property.\(^\text{128}\)

The microeconomic aspect of these price-fixing instructions is plain, and again appear to demonstrate an increasing utilization of microeconomic concepts and jargon.

We turn now to the definition of a monopoly under section 2 of the Sherman Act, which has not always included reference to even such a basic economic concept as market shares. Thus, a typical instruction from the 1930s runs:

[I]t does not have to be that these people were in complete control of the fur dressing industry. It is enough if there is a substantial control, whereby these people could fix their prices among each other and determine who was going to enter into this business within a limit. That would constitute a monopoly, even though not a complete domination by the group of particular activities.\(^\text{129}\)

By the late 1950s, explicit discussions of the effect of size on monopoly claims began to find their way into jury instructions. Thus:

Now let me direct your attention back to the defining of “monopolization.” It is a series of restraint of trade. The term does not necessarily mean complete acquisition or control of the market in a particular community, or the exclusion of all competition. The size of a corporation, or the percentage of the market it controls are not by themselves indicators of a violation of the antitrust laws. However, these factors can indicate the degree or power which a corporation has in the competitive market and they can indicate the ability to exercise such power within the relevant market. If there is power to control or dominate such market, to exclude actual or

\(^{128}\) AM. BAR ASS’N, SAMPLE JURY INSTRUCTIONS IN CIVIL ANTITRUST CASES, at B-16–B-17 (1999).

\(^{129}\) AM. BAR ASS’N, supra note 126, at 80–81 (citing United States v. Fur Dressers Factor Corp., Cr. C-95-924 (S.D.N.Y. 1933)).
potential competitors therefrom, or to otherwise unreasonably suppress competition therein, this is sufficient to constitute monopolization under the antitrust laws.\textsuperscript{130}

By the 1970s, explicit descriptions of market share became commonplace:

Monopoly power is defined in the law as the power to control prices or exclude competition. Now, the existence of monopoly power ordinarily may be inferred from the fact that a company has the predominant share of the market. However, when a company does not possess a predominant share of the market, monopoly power cannot be inferred. The test is whether the defendant has the power to control prices or exclude competition. Furthermore, the size of the company alone is not monopoly power, but is only a factor which may be considered in determining whether or not a defendant possessed that power. However, both of these factors (1) the size of the company, and, (2) the percentage of the market it controls, may be considered as indicators as to the degree of power which a company has to control prices and exclude competition.

It is, of course, natural that some businesses grow larger than others, and, therefore, operate and sell on a much larger scale than a smaller competitor. In determining whether or not Bethlehem possessed monopoly power you may also consider the existence and proximity of other competitors in the relevant market, the responsiveness of the alleged possessor of such power to the pricing policies of those competitors or potential competitors and the possibility that others, not now competing, may enter the market. You may also consider the economic and commercial realities of the industry involved. Monopoly power to exist need not be exercised and it need not be absolute in the potential for market control which it gives to its possessor. If within the relevant market a company has then power to control prices or to exclude competitors then that company possesses monopoly power within the meaning of the antitrust laws.\textsuperscript{131}

Quite clearly, microeconomic analysis informs these instructions. Indeed, to some extent they represent an invitation for the jury to defer to a cluster of economic concepts, such as relevant markets, and to expert testimony about the markets in question. The current ABA sample instruction continues this trend:

Monopoly power is the power to control prices in or to exclude competition from the relevant market.

The power to control prices is the power of a company to establish appreciably higher prices for its goods than those charged by

\textsuperscript{130} A.M. BAR ASS'N, ANTITRUST CIVIL JURY INSTRUCTIONS 103 (1965) (citing Park Neponset Corp. v. Smith, 258 F.2d 452 (1st Cir. 1958)).

\textsuperscript{131} A.M. BAR ASS'N, ANTITRUST CIVIL JURY INSTRUCTIONS 132 (1980) (citing Belmont Indus., Inc. v. Bethlehem Steel Corp., 512 F.2d 434 (3d Cir. 1975)).
competitors for equivalent goods without a substantial loss of business to competitors. Thus, if a company that has raised prices eventually has to lower its prices to the level of prices charged by its competitors, it may not have monopoly power in the sense of power to control prices.

The power to exclude competition means the power of a company to dominate a market by eliminating existing competition from that market or by preventing new competition from entering the market.

To establish the possession of monopoly power, plaintiff need not prove that prices were raised or that competition actually was excluded, but only that defendant had the power to raise prices or exclude competition.

Further, to conclude that defendant had monopoly power, you need not find that defendant could sell at any price it desired or that it had no competition whatsoever. A company may face some competition in the relevant market and still have monopoly power. On the other hand, if you find that defendant did not have the power to control prices or to exclude competition, then you must conclude that it did not have monopoly power. 132

B. Rule of Reason Jury Instructions

The Rule of Reason provides a particularly suitable test for the influence of microeconomic analysis on antitrust. Across the spectrum of antitrust law, it stands out as involving an unusually complex and ambiguous inquiry. Undoubtedly, this is because it entails, at the most general level, an analysis of "whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition."133 Despite a long history of refinement, tinkering and outright overhaul by the courts, it remains "an incredibly complicated and prolonged economic investigation" that is "often wholly fruitless when undertaken."134 Somewhat less charitably, a fair number of practicing lawyers regard it as a "euphemism for an endless economic inquiry resulting in a defense verdict."135 We find it interesting because its application invites a complex, fact-intense, and, to some, a standardless inquiry, which provides a rough analogy to the reasonableness standards at the core of negligence.

132. AM. BAR ASS'N, supra note 128, at C-4 (citations omitted).
133. Bd. of Trade of Chi. v. United States, 246 U.S. 231, 238 (1918).
Such complexity has driven the adoption of the large set of precedents that cabin the scope of the rule in one way or the other. It was not until the 1970s that the “comprehensive network” of per se rules which served to limit the application of the Rule of Reason was decisively pared back by the Supreme Court. Shortly after opening the door to more vigorous application of the Rule of Reason, the Court began developing the doctrinal support for truncated applications of the rule, the so-called “quick look” or “flexible” Rule of Reason analysis. Predictably, no coherent theory has emerged from this process; instead a collection of more or less disparate standards that govern specific types of behavior has emerged. In the words of two astute practitioners, the rule has evolved “from rigid categories to flexible ‘common sense’; from rules of law to rules of thumb.”136 Views on the worth of this process are mixed; some see it as optimal, others as evidence that antitrust is adrift. We are, of course, agnostic on this point.

We are not agonistic on the accelerating pace of the colonization of Rule of Reason jury instructions by microeconomic analysis in the late 1970s. While we cannot put a specific date on this matter, an examination of Rule of Reason jury instructions shows that courts began in the 1970s to move microeconomic considerations to the forefront when instructing juries. This process continued through the heyday of the Chicago School and instructions from recent cases and the ABA Model Instructions are based foursquare on microeconomic concerns. We turn now to examples.

For some eighty-odd years, the basic statement of Rule of Reason analysis has remained that of Mr. Justice Brandeis in Board of Trade of Chicago v. United States:

The true test of legality is whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition. To determine that question the court must ordinarily consider the facts peculiar to the business to which the restraint is applied; its condition before and after the restraint was imposed; the nature of the restraint and its effect, actual or probable. The history of the restraint, the evil believed to exist, the reason for adopting the particular remedy, the purpose or end sought to be attained, are all relevant facts. This is not because a good intention will save an otherwise objectionable regulation or the reverse; but because

knowledge of intent may help the court to interpret facts and to predict consequences. . . .

Justice Brandeis’s formulation of the Rule of Reason left its imprint on jury instructions in two principal ways. First, juries were asked to assess the competitive significance of the restraint at hand, and second, they were invited to base their assessment upon a now standard list of facts relevant to the restraint and the parties. Thus, a typical jury instruction from the 1960s echoes Justice Brandeis’s statement of the rule by inviting juries to examine the specific context of a restraint:

As to the meaning of the term “restraint of trade,” you are instructed that this general term applies only to unreasonable restraints and not to all possible restraints of trade. The antitrust law seeks to maintain free competition in interstate commerce, in order to protect the public interest. The end sought by the antitrust law is the prevention of unreasonable restraints in business and commercial transactions which tend to restrict production, raise prices, or otherwise control or affect the market to the detriment of purchasers or consumers of goods and services; the public is to be protected in order to secure to them the advantages which accrue to them from free competition in the market.

Not all restraints of trade are unreasonable restraints. All business affects trade in some way. Therefore, in determining whether a “restraint of trade” exists, you must decide whether the conduct which you have found tends to restrict or otherwise control free and open competition. And in determining whether or not such an unreasonable restraint exists, you need not find a specific injury, but you must find that the conduct tends to or is reasonably calculated to prejudice the public interest.

Clearly, both Justice Brandeis’s statement of the rule and this jury instruction rely heavily on microeconomic concepts. Both enjoin the fact finder to focus on the competitive effects of a restraint and to develop that assessment through economic calculations. Nonetheless, there is an important difference between these two formulations of the rule: the jury instruction asks jurors to assess the restraint in terms of public interest. Obviously, this is a fairly supple imperative, and it is by no means clear that microeconomics and the public interest coincide on antitrust policy.

The instruction and Justice Brandeis’s formulation of the rule do share a fairly capacious list of factors for the jury to consider.

137. Bd. of Trade of Chi., 246 U.S. at 238.
138. AM. BAR ASS’N, supra note 131, at 91 (emphasis added) (citing Dailey v. Quality Sch. Plan, Inc. 380 F.2d 484 (5th Cir. 1967)).
Perhaps jurors would read into that list an assessment of the public interest. Because of a lack of data on how juries decide antitrust cases (or other cases) we cannot say; we are trapped at the level of the instruction. At the level of the wording, it is palpably clear that putting in the words "public interest" matters. Moreover, the very looseness of the list of factors Justice Brandeis included in his statement of the rule points out another reason the term "public interest" is significant.

Justice Brandeis's statement does not explain how a fact finder should balance the positive and negative effects of a restraint. Indeed, it is unclear if a fact finder must balance the positives and negatives, although a certain invitation to balancing is implicit in his words. All of the same may be said of the jury instruction. What is significant for our purposes is that the weak message sent on the balancing issue may reinforce the tendency of a juror to include his own perception of the public interest or antitrust policy.

By the 1980s, Rule of Reason instructions went through two transformations. They began dropping references to the public interest and they began to set explicit tests for measuring competitive effects. While Justice Brandeis's list of factors remained, they began to play an equal role with the imperative to find an unreasonable restraint of trade only if the competitive harm of a restraint out-weighed, or according to some courts, substantially outweighed, the benefits of a restraint. Thus, a typical instruction from the 1980s reads:

In determining reasonableness there are three crucial inquiries you must make. First, you must determine whether [the defendant] has substantial market power to unreasonably restrain trade in the relevant market. Second, you must determine the effect of the restrictions on competition. Third, you must consider the justifications for imposing the restrictions.

Now, as I just told you, the first inquiry you must make is to determine whether [the defendant] has substantial power to unreasonably restrain trade in the relevant market.

If... you find that [the defendant] has substantial power to unreasonably restrain trade in the relevant market, you must then judge whether the restriction is unreasonable in its effect on competition. In other words, you must determine whether the restrictions employed constituted an unreasonable restraint of trade because they had an overall anticompetitive effect in the relevant market.

In other words, a restriction may reduce or diminish competition in some respects and at the very same time enhance or increase competition in other respects. For example, a restriction may re-
duce intrabrand competition but at the same time increase inter-
brand competition. If you find that the restrictions in this case do
 impose some adverse restraint on competition which is more than
 trivial, and if you also find to exist procompetitive effects, then you
must determine whether the anticompetitive effects of those restric-
tions outweigh the procompetitive effects. If they do not, you
should conclude that [defendant's] restriction is reasonable under
the law. . . .

You must decide what the "purpose" of the alleged restraints
was. You must also consider the "effect" of the alleged re-
straints. . . .

In order for you to find that [the defendant's] restrictions are
unreasonable, you must be convinced that [the plaintiff] has proven
by a preponderance of the evidence that the restrictions are anti-
competitive in effect. [The defendant's] purpose in imposing the
restrictions, by itself, is not sufficient to establish a violation of the
Rule of Reason, although proof of purpose may help you assess the
market impact of [the defendant's] restrictions. Absent anti-
competitive effect, an unlawful intent or purpose is not enough to
establish a Rule of Reason violation.

The focus of your inquiry must be the effect that [the defen-
dant's] restrictions have on competition. The antitrust laws are de-
signed to protect competition generally, not to protect any one
competitor. Therefore, in making your determination of whether
these restrictions constituted an unreasonable restraint on trade,
you are not being asked to determine the effects of the restrictions
on [the plaintiff.] A manufacturer or supplier, such as [the defen-
dant], has a legitimate interest in the way its product is sold, and it
may legally refuse to sell to any particular dealer. . . .

The standard of reasonableness has a particular meaning in the
law. To determine the reasonableness of [the defendant's] system,
you are not to make a business judgment about whether [the de-
fendant] has chosen the best system of distribution, or the one
which you would have chosen had it been up to you. You are sim-
ply to determine whether this system is reasonable or unreasonable
in its effect on competition.

In making your determination of whether the restrictions [the
defendant] imposed on its distributors constituted a reasonable or
unreasonable restraint of trade, you may consider whether the re-
strictions were reasonably necessary to meet the evil believed to
exist prior to imposing the restrictions.

You may find that [the defendant] could have solved these
problems by imposing other types of restrictions which might have
been less restrictive than the system actually adopted by [the de-
fendant]. The existence of less restrictive alternatives is relevant in
determining whether the restrictions used were reasonably neces-

In the final analysis, you must determine the following:
(1) Whether intrabrand competition is affected by the restrictions;
(2) Whether interbrand competition is affected by the restrictions;
(3) Balancing both these factors, to what extent is competition affected; in other words is there an overall procompetitive or an overall anticompetitive effect.

If you find that on balance competition is either enhanced or remains unaffected, then you would find the restrictions reasonable. If you find that on balance competition is harmed, that is, that the anticompetitive effects outweigh the procompetitive effects, then you would find the restrictions unreasonable.139

The most recent American Bar Association Model Instruction, the model presented in treatises and case law, supports a hard microeconomic approach to the Rule of Reason. The American Bar Association Model Instruction reads:

Plaintiff challenges the practice of defendant [describe practice, e.g., to allocate territorial market areas for its distributors]. To win on this claim, plaintiff must show that this practice was an unreasonable restraint of trade.

In determining whether the restraint was unreasonable, you must decide whether the restraint helped competition or harmed competition. Your task is to balance any aspects of the restraint that were helpful to competition against any aspects that were harmful to it. In doing so, you should consider such factors as the particular business of defendant; the condition of the market before and after the restraint was imposed; the nature of the restraint and its effect on competition; the history of the restraint; the reason for adopting the restraint; and defendant's purpose or intent.

To show that the restraint was unreasonable, plaintiff must prove that defendant's activities substantially harmed competition in a relevant market. To show this, plaintiff must prove by a preponderance of the evidence:

First, what the relevant market is;

Second, that defendant's restraint or practice had a substantially harmful effect on competition in that relevant market; and

139. AM. BAR ASS'N, supra note 131, at S-19–S-20 (citing Davis-Watkins Co. v. Serv. Merch., 686 F.2d 1190 (6th Cir. 1982), cert. denied, 466 U.S. 931 (1984)). These changes in antitrust instructions reflect the relevant case law. In 1977, the Court held, in the context of an antitrust challenge to the National Society of Engineers canons of ethics, that "[c]ontrary to its name, the Rule does not open the field of antitrust inquiry to any argument in favor of a challenged restraint that may fall within the realm of reason." Nat'l Soc'y of Prof'l Eng'rs v. United States, 435 U.S. 679, 688 (1978). Rather, according to the Court, the Rule "focuses directly on the challenged restraint's impact on competitive conditions." Id.
Third, that the harmful effect on competition outweighs any beneficial effect on competition.\footnote{140}

The overall picture presented by the changes in Rule of Reason instructions is striking. Juries have been reined in by mandates to balance harms and to focus on specific markets, practices, and products. Language that would encourage the jury to analyze the public welfare aspects of antitrust has been reduced if not deleted altogether. Significantly, while the instructions do not focus the explicit attention of the jury on efficiency, the range of issues left for the jury to analyze and the emphasis placed on balancing harms and competitive injury indicates that efficiency is an imperative. Nonetheless, what is most important for our purposes is the change over time; Rule of Reason instructions have become closely knit microeconomic blueprints. By contrast, negligence instructions have remained virtually constant over the last century.

CONCLUSION

Antitrust apparently has been colonized; negligence does not appear to have been. The economic scholars probably got one right, and they probably got one wrong.\footnote{141} The contributions of the corrective justice scholars to torts is perhaps somewhat more ambiguous, but the evidence indicates its irrelevancy. One area plausibly is subject to top-down theorizing; one is not.

As we said in the introduction to this Article, we presently make no claim about the extension of our analysis. The primary contribution here is to make plausible that legal phenomena (human interactions and resultant legal regulation) may be analyzed systematically (top-down theory though that may be), more important usefully, and most important not just by reference to competing ideologies of lawmakers (whether judicial or legislative).\footnote{142} To us it is significant

\footnote{140. AM. BAR ASS'N, supra note 128, at A-4–A-5.}

\footnote{141. For an analysis of another one the economists got "wrong" that bears a small resemblance to the interests of this Article, see Karen Eggleston, Eric A. Posner & Richard Zeckhauser, The Design and Interpretation of Contracts: Why Complexity Matters, 95 NW. U. L. REV. 91 (2000).

142. This seems to be the standard explanation for the lack of systematicity in the law. [T]he lack of system in the existing law is not due merely to the existing lawmaker's paying insufficient attention to systematicity. It is due primarily to the fact that modern legal systems are open to change at the hands of different lawmakers, with differing and often opposed priorities, programs, and values. Jeremy Waldron, "Transcendental Nonsense" and System in the Law, 100 COLUM. L. REV. 16, 41–42 (2000). Surely some legal phenomena are so explained; we have tried to show that some}
that the data are consistent with our theoretical predictions in two analogous fields that have been of interest to economists (one of which has also been of interest to corrective justice theorists). This is because one economist—Richard Posner—has claimed that the charge of ineffectuality can be made of moral theorizing but not of economic (and other "scientific") theorizing. The data presented here indicate that he is half right—some moral theorizing is apparently of little practical consequence to the legal system—and half wrong—sometimes economic theorizing, including the centerpiece of economic theorizing, is of little practical consequence to the legal system. More important, our data suggest that Judge Posner's (implicit) explanation is quite wrong. It is not, or not just, that much moral theorizing is comprised of half-baked ideas promoted by hypocritical postmodern types whose only real interest is pursuing their personal and ideological agendas, and that economics by contrast is a science pursued disinterestedly by hardheaded realists. Instead, it is at least in part that some realms of legal regulation are more amenable than others to being organized by reference to simple theories, and that legal theorists may have neglected this point.

We thus think that not only is Judge Posner wrong in part, so too is one of his critics, Charles Fried, with respect to the significance of philosophy for the law. In an arresting metaphor, Fried wrote:

The picture I have, then, is of philosophy proposing an elaborate structure of arguments and considerations which descend from on high but stop some twenty feet above the ground. It is the peculiar task of the law to complete this structure of ideals and values, to bring it down to earth; to complete it so that it is seated firmly and concretely and shelters real human beings against the storms of
passion and conflict. That last twenty feet may not be the most glamorous part of the building—it is the part where the plumbing and utilities are housed. But it is an indispensable part. The lofty philosophical edifice does not determine what the last twenty feet are, yet if the legal foundation is to support the whole, then ideals and values must constrain, limit, inform, and inspire the foundation—but no more. The law really is an independent, distinct part of the structure of value.146

While purportedly explaining the independent significance of the law, the condescension in this passage is striking. It is not the law hovering majestically over philosophers who, in their petty squabbles, are struggling to be heard; rather, it is the philosopher (kings?) with their arguments “which descend from on high.” Dworkin has an equally high opinion of jurispruders, describing them as the “princes” of “law’s empire,” but not its “seers and prophets.”147 Posner has his privileged class as well.148 Without getting into a battle of metaphors, we have tried to show not that law’s royalty, of whatever kind, does not have much of an impact on any aspect of the field, but rather to begin the process of specifying why and when the theorists might matter. Or why and when different kinds of theory might matter.149

147. *Dworkin, supra* note 7, at 407.
149. Thus, our argument differs significantly from Posner’s attack on academic moralizing. See Posner, *supra* note 2. We are trying to discern the nature of legal phenomena that permit or invite one form of inquiry and explanation rather than another. A priori, we have no good reason to assert that academic moralizing of the Posnerian kind could never influence the outcomes in or accurately explain a set of legal phenomena (although we suspect the set of such sets is small, but still it is an empirical question). Analogously, and this is the point that Posner may miss, a priori one should be cautious about thinking that any set of legal phenomena is amenable to top-down theorizing of any kind. Perhaps Posner would not disagree, as there is some ambiguity in his writing. In *Against Constitutional Theory*, 73 N.Y.U. L. Rev. 1, 3 (1998), he states that “The big problem is not lack of theory, but lack of knowledge...” In *Reply to Critics of the Problematics of Moral and Legal Theory*, 111 Harv. L. Rev. 1796, 1803 (1998), he says, “Consensus on ends or goals is found in some areas of law, but not in all.” And at page 1811 he says that “judges routinely confront issues that cannot be resolved by the application of an algorithm.…” Precisely, and we are trying to uncover whether one can specify the nature of such cases. Thus, perhaps Charles Fried is right that sometimes *Philosophy Matters, supra* note 145—we would like some purchase on when or why. In any event, we are not interested here in
an intellectual history of any particular thinker, but we do wish to note that Posner's comments quoted above seem to us somewhat at odds with an apparently stronger commitment to algorithms in Richard A. Posner, Legal Reasoning from the Top Down and from the Bottom Up: The Question of Unenumerated Rights, 59 U. CHI. L. REV. 433, 435, 436 (1992) ("I agree there isn't much to bottom-up reasoning" and "there must be a theory"). The strong position baffles us, both because it is inconsistent with obvious observations of the human condition and for formal reasons, such as: what is the theory from which the necessity for a theory is deduced; and where did that theory come from? In any event, much of life, including legal life, involves muddling through, and we hope we have said something useful, even if obviously preliminary, about the nature of muddling.