The Two Enterprises of Law and Economics:  
An Introduction to Its History and Philosophy

by

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August 26, 2015

Abstract

When law and economics first burst upon the legal academy, its character was opaque. Some 40 years later, two distinctive enterprises have emerged. The first explains the causes and effects of law (the “cause enterprise”), especially its effects on efficiency and distribution. Few legal scholars contest the usefulness of the cause enterprise, but many struggle with its methods, especially the model of incentives and econometrics. The second explains the law’s content (the “content enterprise”). The content enterprise interprets what the law requires people to do. It presents itself as a theory of law, not merely a theory of its effects. Lawyers mostly reject economic interpretation as alien to law and offensive to morality, whereas economists mostly confuse legal interpretation with normative economics. Both need a philosophical account of law and economics that encompasses its two enterprises.
The Pei Pyramid is a large glass and metal structure in the courtyard of the Louvre Palace that serves as the main entrance to the Louvre Museum. This 20th century abstraction pierces weathered elegance from past centuries.1 Since its completion in 1989, some visitors love it, some want to demolish it, but no one ignores it. It stands with the Eiffel Tower and Notre Dame as a landmark of the City of Paris.

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** This essay began its life as joint manuscript with Jody Kraus entitled, “The Measure of Law and Economics.” I wrote the first part and he wrote the second part. We have separated the parts. My name appears alone as the author of this part, but I am indebted to Jody for many ideas in it. I also owe thanks to Lewis Kornhauser and Peter Hacker for help on fundamental philosophical concepts, and thanks to Joseph Raz for comments on the essay’s aims.
1 Thanks to Herbert Lazerow for comments on the Louvre’s architecture.
Law and economics is the pyramid in the courtyard of the palace of law. This 20th abstraction pierces an inheritance of humanistic thought. Since its construction in the 1970s, some legal scholars love it, some want to demolish it, but no one who surveys legal theory can ignore it. It stands with formalism and realism as a landmark of legal theory.

Philosophers often ask, “What is x?”, where x denotes “justice”, “morality”, “democracy”, “a person”, “emotion”, “intention”, and so on. What is law and economics? This essay aims to provide a philosophical definition. A philosophical definition should clarify a concept and name it correctly. The many detractors of law and economics obscure its nature and name it incorrectly, often mistaking it for flawed philosophy or disguised politics. Here is a list of dismissals by definition that I have heard over the years (along with my own rude remarks).

Law and economics is...

- Utilitarianism (Isn’t economics mostly about wealth, not pleasure?)
- The philosophy of conservatism, libertarianism, or plutocracy. (Isn’t economics social science, not philosophy?)
- Legal realism (Isn’t economic theory formal?)
- Reductivism (Don’t all theories reduce complexity?)
- Scientism (Is social science ideology?)
- The Chicago school (Ever heard of Yale?)
- The philosophy of Auschwitz (Want a discussion or a duel?).

This essay aims for a philosophical definition of law and economics as currently practiced. Law and economics is a scholarly community on a voyage of discovery, not a prisoner of conceptual necessity. No one can say what law and economics is once-and-for-all, because no one can foresee what it will become. My account will characterize the subject as it is, even while it becomes something else.

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2 As existentialists observed, existence precedes essence.
3 When creative people interact with each other, expect the unexpected. Few foresaw that economics would embrace institutions, plunge into the study of social norms, or absorb cognitive psychology’s findings on irrational decision-making. Douglas North received the Nobel Prize in 1993 research on institutions and
When law and economics first burst upon the legal academy, it was unformed. Some 40 years later, two distinctive enterprises have emerged. The first uses economic models to explain the causes and effects of law. The cause enterprise primarily asks, “What are the effects of law x?” This question concerns legal consequences. Few legal scholars contest the usefulness of the cause enterprise, but many struggle with its quantitative methodology, which differs from law’s humanistic traditions.

After the cause enterprise, the second enterprise of law and economics is the content enterprise. It asks, “What is the law of x?” The content enterprise explains what the law requires people to do. To illustrate, the content enterprise aims to distinguish between negligence and strict liability in tort law, freedom and trespass in property law, expectation damages and specific performance in contract law, monopoly and competition in antitrust law, and commercial and non-commercial activities in the U.S. constitution. By explaining what the laws are, the content enterprise presents itself as a theory of law itself, not merely a theory of law’s effects.

Economic models mostly stop after predicting the effects of a law, without analyzing what the law requires people to do. Consequently, Figure 1 depicts the cause enterprise as the subject’s large foundation and the content enterprise as its small peak. Traditional legal scholarship is the opposite: it mostly aims to say what laws require, not to predict their effects. Doctrinal studies concern the content of law, not the consequences. Since the content enterprise in law and economics addresses the central work of lawyers, it generates disproportionate interest and controversy compared to the cause enterprise.

social norms in economic development. Daniel Kahneman, a psychologist, received the Nobel prize in 2002.
In routine cases the law’s explicit language leaves no doubt about what it requires people to do. In hard cases, however, the facts and law’s explicit language yield indefinite results. Given ambiguity, interpreting a law correctly often requires identifying its purposes. Different laws rules have different purposes such as non-discrimination, affirmative action, cost reduction, decentralization, insurance, information dissemination, signaling, expression, scientific progress, cost shifting, political favoritism, protection from competition, to name just a few. At a higher level of abstraction, the purposes might be efficiency, equality, redistribution, or rent-seeking.

Economic models can predict the extent to which different interpretations fulfill definite purposes. The best interpretation often fulfills a law’s actual purposes the most. Economic modeling, especially the model of incentives, is a good way—often the best way—to predict the fulfillment of given purposes by alternative legal interpretations. Interpretation requires reasoning that circles back on itself: legal reasoning elucidates a law’s purposes, economic models predict the consequences, the consequences prompt reconsideration of the law’s purposes, which prompt reconsideration of the law’s consequences, and so on. The content enterprise thus interprets law by intertwining legal reasoning about
purposes and economic models about consequences. The end is a reflective equilibrium that identifies the best interpretation.4

Many legal scholars lose sight of this simple account of the content enterprise. Some think that economics has nothing to say about legal interpretation, because economics is a science and science exclusively concerns causes, or because economics and law concern different values -- efficiency versus justice. Instead of having nothing to say about legal interpretation, some scholars think that economics has the ultimate say. Thus Posner famously wrote, “economics is the deep structure of the common law, and the doctrines of that law are the surface structure.”5 He claimed that the common law tends towards efficiency, and that it ought to. Going further, Kaplow and Shavell claim that all laws ought to maximize social welfare, rather like Bentham held two hundred years earlier that all laws ought to (and inevitably do) maximize utility.

Few lawyers believe these claims, nor should they. Propositions about the ultimate purpose of laws are untestable. They are beyond the reach of the methodology of law and economics. The claim that law does, or should, maximize social welfare belongs to philosophy or religion, not social science.

When interpreting law, economics scholars routinely overstate the role of efficiency and social welfare. The “efficiency principle of legal interpretation” refers to the proposition that the correct interpretation of an ambiguous law has the most efficient consequences. The efficiency principle applies to interpreting the relatively few laws whose uniquely dominant purpose is efficiency. It does not apply to other laws whose primary purpose is something else -- non-discrimination, affirmative action, cost reduction, decentralization, insurance, and so on. For most laws, the efficiency principle elevates a pervasive but indecisive factor into the determinant of the law’s content.

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4 John Rawls famously used the phrase “reflective equilibrium” to describing philosophical reason, specifically reasoning back and forth about alternative theories of justice.
The larger contribution of economics to legal interpretation is the incentive model, not the efficiency principle. In hard cases, interpretation requires assessing alternative interpretations of a law against the fulfillment of its purposes. Incentives have a central role in predicting an interpretation's consequences with respect to the law's purposes. In reaching reflective equilibrium, the relative importance of efficiency must be assessed against the law's purposes, and it is seldom decisive.

Each social science -- political science, sociology, psychology, and anthropology -- can predict the effects of laws. Social scientists engaged in the cause enterprise should use the theory that predicts best regardless of the discipline. This essay, however, concerns law and economics, not law and social science. Law creates incentives and people respond to them. Economics differs from other social sciences in its steadfast commitment to modeling incentives. Intensive use of the model of incentives differentiates economics from the application of other social sciences to law.

This essay begins by describing the intellectual history of law and economics. To take its measure, the essay next turns to the subject's two enterprises: analysis of the law's causes and effects, and analysis of its content by using the model of incentives. These two enterprises define law and economics as currently practiced. Understanding the relationship between the incentives and interpretation reduces many of the controversies swirling around law and economics.

**Like the Rabbit in Australia**

Most biological mutations die, most new businesses go bankrupt, and most new ideas fail. A few innovations, however, succeed spectacularly and change the world. Some scholars regard law and economics as a transformative innovation in legal education and scholarship. Professor Bruce Ackerman of the Yale Law School described the economic approach to law as “the most important

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This section is based on a lecture by Robert Cooter entitled “Why Did Law and Economics Succeed?”, which was presented at the conference “Legal Education: Past, Present, and Future,” 29 April 2006, Vanderbilt Law School.
development in legal scholarship of the twentieth century." Certainly it decisively changed scholarship on business law in the U.S. and influenced other areas of law. We will document the fact that law and economics exploded in the 1980s like the rabbit when it reached Australia, and then we will explain the hole in the intellectual ecology that it filled. (If you are uninterested in the history of law and economics, skip this section.)

In his monumental history of economics, Joseph Schumpeter distinguished between economic thought and economic analysis. Economic thinking requires general education but not technical training. Newspapers are replete with economic thoughts that, in Schumpeter's words, "float in the public mind." Law and economic thought flourished in some places in recent years, notably among progressives in the "Wisconsin School." Ronald Coase succinctly summarized its accomplishments: "Lacking a theory, they accumulated nothing but a mass of data that was waiting for a theory or a fire."

Lawyers have always engaged in economic thinking, but not economic analysis. Economic analysis, which requires training in mathematical theories and statistical methods, mostly occurs in universities and research institutes. Economics emerged in universities by separating itself from older faculties, especially law. (In a few universities such as the Catholic University of Louvain, economics never formerly separated from the law department, although they separated in practice.) Lawyers without economic training cannot understand economic analysis, just as economists without legal training cannot appreciate legal reasoning.

A few U.S. law schools have long recognized the importance of analytical economics to some areas of scholarship, especially taxation and antitrust. Henry Simons at Chicago and William Andrews at Harvard used economics to comprehend tax law. Much the same applies to the economic re-interpretation of

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8 Cite Robert Hale and ____, and give some dates. Connect to Progressive movement.
antitrust law that spread from Chicago beginning in the 1970s.\footnote{George Priest discovered that Justice Stevens developed many ideas on antitrust that he wrote into Supreme Court decisions by co-teaching the subject with Aaron Director at Chicago. His lecture to Kauffman Summer Legal Institute, July 2010, is being rewritten for a law review.} These subjects, however, are not the core of modern law and economics. Two of the most used textbooks on law and economics omit these topics.\footnote{Tax and antitrust are omitted from the introductory textbooks by Polinsky, and also Cooter and Ulen.}

Instead of taxation or monopolies, different concerns animated the modern economic analysis of law. Figure 1 lists some key books and articles in its development. The list begins with Coase’s classical paper, published in 1965, whose central insight is the Coase Theorem. It challenged scholars to consider more deeply the incentive effects of legal rules and the strategic responses to them, especially in property and tort law. In 1967 Demsetz proposed that private property emerges to solve the tragedy of commons. Becker used economics to reformulate the utilitarian calculus of deterring criminals, which inspired theories of crime and statistical research to test them.
Figure 1. Year of Publication of Some Seminal Law and Economics Books and Articles
(some titles abbreviated)

General

Textbooks

Torts

Corporations
1975. Williamson. Markets & Hierarchies

Posner’s 1972 textbook offered the first comprehensive map of the new world of law and economics, like Amerigo Vespucci’s first map of America. Posner’s sketch of the mountains and rivers guided those who later walked the terrain and charted it. In 1987 Cooter and Ulen published a textbook that covered fewer topics in more detail.\textsuperscript{11} More explicit mathematics and consistent notation allowed economists to teach the subject without studying law. Polinsky’s shorter book covered much the same material as Cooter and Ulen, but Polinsky used numerical examples rather than explicit models. Each of these books provided a way for scholars outside of the subject to get into it.

With the study of torts, economic analysis reached into common law, which is central to American legal education. Calabresi’s 1970 book defined the social

\textsuperscript{11} The book appeared in fall of 1987, but for reasons best know to the publisher, it was dated 1988.
costs of accidents as the sum of harm and the cost of avoiding it. In 1973 Brown used simple mathematics to rework Calabresi’s formulation and compare equilibriums under alternative legal rules. Shavell’s book in 1987 synthesized the economic theory of accident law, including his own seminal contributions. Landes and Posner, also in 1987, applied econometrics to tort law to the extent permitted by the data available at the time.

In 1937 Coase published a paper that asked how a firm decides to make some goods and buy others. He answered using the talisman phrase “transaction costs.” Like the Rosetta Stone, Coase’s paper was lost and then rediscovered, fortunately after 30 years and not 2,000. Transaction costs guided subsequent economic formulations of the difference between markets and firms. Manne’s 1965 paper prompted reconsideration of whether markets for buying and selling companies alleviate the conflict between owners and managers. Williamson’s book and the article by Jensen and Meckling developed rival theories of how transaction costs shape the firm, whether by governance or contracts.

Several attempts were made to measure the progress and success of law and economics scholarship. In 1993, William Landes and Richard Posner analyzed citations to the twenty-seven law and economics scholars at America’s elite law schools. They found that citations to them in law journals increased by 300 percent over fifteen years (from 2,657 citations in 1976 to 8,035 citations in 1990), at an average rate of 17 percent per year 1976-1990. These numbers compared favorably to the citation rates to scholars who took other approaches to law. For example, over the same time period citations to professors of critical legal studies increased at an annual rate of 13 percent, and citations to political theorists in law reviews increased at an annual rate of 6 percent. Landes and Posner acknowledged that their focus on top scholars limited their ability to generalize their findings, but they hypothesized that “a new movement is likely to

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13 Id. at 407 (see Table 7).
14 Id. at 412-414.
begin in elite schools and then percolate outward to the rest, so that penetration of the elite market may be a good 'leading indicator' of a field's growth."\textsuperscript{15}

In 2000 Robert Ellickson measured the frequency that economic concepts appeared in law reviews, bar journals, and handbooks for continuing legal education between 1982 and 1996.\textsuperscript{16} Ellickson searched for articles that used the economic terms “externalities,” “risk averse,” “game theory,” human capital,” and “transaction costs.” Ellickson found that the indexes for his proxies nearly doubled during the first half of the 1990s.\textsuperscript{17} (This finding contradicted Ellickson’ earlier speculation that law and economics had reached a steady-state in the 1980s.\textsuperscript{18})

In addition to citation studies, institutional developments indicate the growth of law and economics. Six journals exclusively devoted to law and economics were founded between 1958 and 2005. The University of Chicago is home to the two oldest: the \textit{Journal of Law and Economics} established in 1958 and the \textit{Journal of Legal Studies} established in 1972. The \textit{Journal of Law, Economics and Organizations} grew out of a workshop at Yale Law School in the mid-1980s. As of 2007, the \textit{Journal of Law and Economics} (JLE) had the highest impact factor among all law journals (21.76), the \textit{Journal of Legal Studies} ranked fifth (18.58) and the \textit{Journal of Law, Economics, and Organizations} ranked eighth (15.47).\textsuperscript{19} The \textit{International Review of Law and Economics} was founded in 1981 and it flourished after relocating to the Berkeley Law School. The \textit{American Law and Economics Review} was founded in 1999, and the \textit{Review of Law and Economics} was founded in 2005.

\textsuperscript{15} \textit{Id.} at 391.
\textsuperscript{17} \textit{Supra note} 5.
\textsuperscript{19} ScienceWatch.com, “Journals Ranked by Impact: Law.” Available at: http://sciencewatch.com/dr/sci/08/sep28-08_2/.
The fluorescence of research in the 1970s prompted the appointment of economists to law faculties in the 1980s. Figure 2 lists the appointment dates for some scholars with the PhD in economics who became notable in the field of law and economics.

**Figure 2. Date of Appointment to Law Faculty for Some Prominent Economists**

<table>
<thead>
<tr>
<th>Name</th>
<th>LAW SCHOOL</th>
<th>Appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director, Aaron</td>
<td>Chicago</td>
<td>1947</td>
</tr>
<tr>
<td>Coase, Ronald</td>
<td>Chicago</td>
<td>1964</td>
</tr>
<tr>
<td>Manne, Henry</td>
<td>Rochester</td>
<td>1968</td>
</tr>
<tr>
<td>Komesar, Neil</td>
<td>Wisconsin</td>
<td>1971</td>
</tr>
<tr>
<td>Klevorick, Al</td>
<td>Yale</td>
<td>1973</td>
</tr>
<tr>
<td>Landes, William</td>
<td>Chicago</td>
<td>1974</td>
</tr>
<tr>
<td>Goetz, Charles</td>
<td>Virginia</td>
<td>1975</td>
</tr>
<tr>
<td>Rubinfeld, Dan</td>
<td>Michigan</td>
<td>1977</td>
</tr>
<tr>
<td>Polinsky, Mitch</td>
<td>Stanford</td>
<td>1979</td>
</tr>
<tr>
<td>Shavell, Steve</td>
<td>Harvard</td>
<td>1980</td>
</tr>
<tr>
<td>Cooter, Robert</td>
<td>Berkeley</td>
<td>1980</td>
</tr>
<tr>
<td>Strnad, Jeff</td>
<td>USC</td>
<td>1981</td>
</tr>
<tr>
<td>Viscusi, Kip</td>
<td>Duke</td>
<td>1981</td>
</tr>
<tr>
<td>Kornhauser, Lewis</td>
<td>NYU</td>
<td>1982</td>
</tr>
<tr>
<td>McChesney, Fred</td>
<td>Emory</td>
<td>1983</td>
</tr>
<tr>
<td>Katz, Avery</td>
<td>Michigan</td>
<td>1986</td>
</tr>
<tr>
<td>Donohue, John</td>
<td>Northwestern</td>
<td>1986</td>
</tr>
<tr>
<td>Ayres, Ian</td>
<td>Northwestern</td>
<td>1987</td>
</tr>
<tr>
<td>Ulen, Tom</td>
<td>Illinois</td>
<td>1989</td>
</tr>
<tr>
<td>Haddock, David</td>
<td>Northwestern</td>
<td>1989</td>
</tr>
</tbody>
</table>

In the 1980s, few universities had more than one specialist in law and economics, which limited discussion of specialized papers and retarded the subject's development. A series of national conferences, mostly sponsored by the Liberty Fund and organized by Henry Manne, filled this need (Figure 3).
Also, scholars founded law and economics associations that institutionalized their networks (Figure 4).

<table>
<thead>
<tr>
<th>Year</th>
<th>Location and Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975*</td>
<td>Gold, Money and the Law</td>
</tr>
<tr>
<td>1980*</td>
<td>Evolution of Law, Key Biscayne</td>
</tr>
<tr>
<td>1981</td>
<td>Buchanan’s Political Theory, Blacksburg</td>
</tr>
<tr>
<td>1981*</td>
<td>Concepts, Ryetown</td>
</tr>
<tr>
<td>1982*</td>
<td>Legal Education, Denver</td>
</tr>
<tr>
<td>1982*</td>
<td>Punitive Damages, Emory</td>
</tr>
<tr>
<td>1983*</td>
<td>Contract Damages, New Orleans</td>
</tr>
<tr>
<td>1984</td>
<td>Liberty and Responsibility, Tucson</td>
</tr>
<tr>
<td>1985</td>
<td>Human Nature, Louisville</td>
</tr>
<tr>
<td>1990</td>
<td>Morality and Profits, Montreal</td>
</tr>
<tr>
<td>1993</td>
<td>Affirmative Action, San Diego</td>
</tr>
<tr>
<td>*?</td>
<td>Political Economy of Antitrust (Bill Baxter)</td>
</tr>
<tr>
<td>?</td>
<td>Securities Regulation and the First Amendment</td>
</tr>
<tr>
<td>?</td>
<td>Privatization</td>
</tr>
<tr>
<td>?</td>
<td>Snowbird</td>
</tr>
</tbody>
</table>

* Organized by Henry Manne
Appointments of law and economics experts to law faculties apparently accelerated after 1990. The annual survey of the American Association of Law Schools (AALS) invites law faculty to identify their areas of teaching. The number of different faculty who identified themselves as teaching law and economics increased from 153 in 1995 to 247 in 2005. The proportion of AALS faculty who teach law and economics remained small – 2% in 2000 and 2.4% in 2005 – but this understates its influence. Law schools feel the need for one law and economics class at most, and after that need is filled, subsequent hiring focuses on substantive law. When teaching substantive law, many professors use law and economics, although we have measure of its extent.

The number of law and economics scholars in law schools declined with their rank. This is true in the top 25 law schools when the relevant measure is the number of professors with advanced degrees in law and economics, or the number of professors who describe themselves as teaching law and economics, as in Figure 5.
Most law faculty who list themselves as teaching law and economics in the AALS survey lack advanced training in economics. Conversely, a small number have advanced training in economics and lack a law degree. To be precise, 351 different law faculties listed themselves as teaching law and economics between 1987 (the first year that AALS began counting this category) and 2009. Of them, 12% lack the JD degree, and 30% lack any relevant graduate degree other than the JD.\textsuperscript{20}

The funding of law and economics before 1985 came mostly from private resources of universities and the Liberty Fund that paid for the conferences described in Figure 3. When the Liberty Fund began to withdraw its support after 1985, the Olin Foundation more than filled the gap. Unlike the Liberty Fund, The

\textsuperscript{20} Ivona Josipovic of the Michigan Law Library collected the 2009 data for us. CHECK THAT THIS IS NOT 70%.
Olin Foundation gave grants to create law and economics programs in law schools (Figure 6). The recipients immediately established seminars for presenting of works in progress, which stimulated research among scholars and spread interest among students. Following the plan of its founder, the Olin Foundation closed its doors in 2005, but the law and economics programs that it stimulated continue to flourish.21

**Figure 6. Olin Programs in Law and Economics with Founding Date**

(At least $15 million distributed in these years.)

<table>
<thead>
<tr>
<th>Year</th>
<th>Law School</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>Emory University</td>
</tr>
<tr>
<td></td>
<td>Harvard University</td>
</tr>
<tr>
<td></td>
<td>University of Chicago</td>
</tr>
<tr>
<td></td>
<td>University of Miami</td>
</tr>
<tr>
<td>1986</td>
<td>George Mason University</td>
</tr>
<tr>
<td></td>
<td>University of Pennsylvania</td>
</tr>
<tr>
<td></td>
<td>Yale University</td>
</tr>
<tr>
<td>1987</td>
<td>Stanford University</td>
</tr>
<tr>
<td></td>
<td>U.C. Berkeley</td>
</tr>
<tr>
<td></td>
<td>University of Virginia</td>
</tr>
<tr>
<td>1989</td>
<td>Columbia University</td>
</tr>
<tr>
<td></td>
<td>Duke University</td>
</tr>
<tr>
<td></td>
<td>Georgetown University</td>
</tr>
<tr>
<td></td>
<td>University of Toronto</td>
</tr>
<tr>
<td>1991</td>
<td>Fordham University – short term</td>
</tr>
<tr>
<td>1992</td>
<td>Cornell University</td>
</tr>
<tr>
<td>2000</td>
<td>University of Michigan</td>
</tr>
</tbody>
</table>

The Liberty Fund and the Olin Foundation are private, politically conservative organizations. The National Science Foundation, which is the major source of public money for research in social science, gave almost no support to law and economics research.22 Documenting this fact is difficult because “law and economics scholars to find who received NSF funding. Steve Shavell is one of the few. I enjoyed NSF funding for my research until I switched fields from public finance to law and economics.

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22 I called law and economics scholars to find who received NSF funding. Steve Shavell is one of the few. I enjoyed NSF funding for my research until I switched fields from public finance to law and economics.
economics” is not a category in the NSF’s records of its grants – a fact that is revealing in itself.

The Cause Enterprise

Having narrated the history of law and economics, we will explain its explosive growth. Law and economics grew like the rabbit in Australia because it filled a hole in the intellectual ecology. The hole concerned predictions about law’s consequences, such as the effect of liability law on automobile accidents, compulsory school integration on students’ educational achievement, retail price maintenance on book prices, corporate law on national income, or progressive taxes on income distribution. The humanistic traditions of legal scholarship predict effects by intuition and common sense. Law traditionally lacked a scientific theory and method to make such predictions. Law and economics filled the gap with microeconomic theory and econometrics.

The success of law and economics, however, resulted from something more than filling a gap in ideas. In addition, American courts were prepared to hear expert testimony from economists about laws’ consequences. The hole in ideas corresponded to unmet demand for expert testimony, an activity in which law and economics scholars have prospered. Also, American law school faculties had a tradition of including a few experts in disciplines outside of law, such as psychiatrists. Most law and economics scholars originally found jobs on law school faculties, not in economics departments. Ideas, money, and academic positions all contributed to the success of law and economics.

This essay, however, mostly concerns ideas. Law and economics makes predictions especially by characterizing incentives created by law and deducing the response to them by rational people. The incentive model is an abstract account of instrumental rationality. We will discuss its three elements: preferences, maximization, and equilibrium.
Preferences

Economics assumes that each person can rank alternatives from better to worse over the choices that she faces. The alternatives may be described as states of the world that the actor can choose. Thus a consumer can rank goods – suede shoes, fine wine, boxing gloves, fast cars, and marshmallow peeps. A politician can rank offices – town council member, mayor, state senator, Congressman, and President. A university student can rank careers -- accounting that promises wealth, or music that gives pleasure.

A ranking must satisfy some formal properties, but economics assumes nothing in particular about the reasons behind the rankings. The values underlying preferences can be almost anything -- pleasure, love, happiness, self-realization, wealth, power, prestige, social standing, environmentalism, altruism, or fairness. The ranking of alternatives does not require any particular theory of value or motivation, or an underlying philosophy or religion. Thus law and economics expands the usual meaning of “preferences” to include all kinds of values, so long as they form a ranking of alternatives.

Since the general model allows any ordered ends, almost any behavior can happen. Getting more definite predictions about behavior requires restricting the rankings under consideration. Much progress in economics concerns when and how to simplify assumptions about motives.

To illustrate, consider the demand curve, which indicates the amount that people are willing to pay for additional units of a good. With many goods, more consumption brings more satisfaction, but satisfaction increases at a decreasing rate. The assumption that each additional unit of the good adds utility at a decreasing rate implies that people are willing to pay less for additional units. Thus the demand curve slopes down whenever the willingness to pay for another unit falls as a person gets more of it. Thus people respond to higher prices by consuming less of a more expensive good. The “first law of demand” asserts that

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23 The usual list of formal properties are, reflexivity, completeness, and transitivity.
the downward slopes down, which is true for ice cream or automobiles, and false for heroin.\textsuperscript{24}

Many laws attach sanctions to obligations. The deterrence function in law measures the sanction that a person would risk to engage in an activity, which predicts how changes in sanctions will change the activity. The “deterrence hypothesis” asserts that increasing a sanction causes less of a sanctioned activity. People respond to more severe sanctions by doing less of the sanctioned activity. According to the deterrence hypothesis, higher liability causes fewer accidents in tort law, fewer breaches in contract law, and less trespassing in property law. Similarly, the first law of demand asserts that increasing the price causes less consumption of the good.

Thus the Code of Hammurabi, which was promulgated in Babylon in roughly 1790 BC, attaches sanctions to wrongdoing. Hammurabi’ counselors probably wondered how much wrongdoing a particular sanction deters. The available method for answering this question in 1790 BC was intuition and practical reasoning, which is all that was available in law before social science developed in the 20th century. Since economists assume that people respond similarly to prices and sanctions, they transferred the scientific methods for estimating demand in markets to estimating deterrence by laws. Estimating the deterrence function measures how much an activity will decrease in response to a higher sanction, just as estimating the demand curve measures how much consumption will decrease in response to a higher price. When mathematical reasoning and statistical estimation supplants intuition, the gain resembles replacing a clock’s wheels with a silicon chip.

By analyzing sanctions as prices, economists expand “preferences” to encompass all kinds of motives and values. The same economic techniques can

\textsuperscript{24} For some goods like heroin, present consumption increases future demand. In technical terms, these goods have inter-temporal complementarity. Within an appropriate time frame, the marginal utility of heroin increases with its consumption. This contorted language leads to valuable insights and some bizarre conclusions concerning addiction. See Gary S. Becker and Kevin M. Murphy, “A Theory of Rational Addiction,” \textit{J.Political Economy} 96 (1988): 675–700.
estimate the sacrifices that people will make for a cup of coffee or safer highways. From these estimates, economists can predict how much coffee people will buy at a given price, or how much care people will take to prevent automobile accidents. In demand theory, a preference for coffee is much the same as a commitment to safety. This expansion of the concept of “preference”, however, generates conceptual confusions as explained later.

Besides declining marginal utility, another typical simplification concerns wealth. Economists often assume that people care only about their own wealth. In analyzing business behavior, economists often assume that executives pursue wealth alone, even though real executives enjoy leisure activities that don’t require wealth and they donate to charity. Thus the assumption of wealth maximization often predicts how an executive will respond to a compensation package without need to consider charity or leisure.

After declining marginal utility and wealth, another common restriction on the ordering of ends concerns self-interest and altruism. Most people are self-interested much of the time and altruistic some of the time. However economists often assume that consumers are purely self-interested. For example, economists usually assume that consumers get utility from their own consumption of goods, but not from consumption by others. The assumption of self-interest implies that each person cares about what he gets, not about what others get. The assumption of self-interest simplifies the analysis of the effects of laws on social welfare.25

Figure 8 summarizes the preceding simplification of motives. By simplifying motives, economists can string together long deductive chains of reasoning that connect causes and effects, whereas complex motives may make the chain of decisions unpredictable. With simplifications the chain of deduction leads to remote effects, whereas complications disrupt the chain of reasoning and

25 To illustrate, consider it a world consisting of two self-interested people. A perceives his well-being as depending on his income, and B perceives his well-being as depending on his income. Consequently, an increase in A’s income unambiguously increases social welfare. Conversely, if each one cares about the others income, then an increase in A’s income increases A’s well-being, and decreases B’s well-being, so the effect on social welfare is ambiguous.
remote effects are easily overlooked or misunderstood. Simplifications are the straight road to remote effects, whereas complications lead down intellectual detours.

To illustrate, assume that the board of directors wants to predict how an incentive contract will affect the decisions of the CEO with respect to stock repurchases. In fact, the CEO values both income and leisure, and the former desire is stronger than latter. Assuming that she maximizes expected income alone yields more definite answers about remote effects, even though assuming that she maximizes utility as a function of income and leisure is more accurate. Definite predictions based on the dominant motive may be more useful to the board of directors than the indefinite predictions based on complex motives.

**Figure 2. Simplification of Motives**

Simplified motives fail to explain some markets. Thus a waiter at a restaurant along the highway works partly for tips. Repeat customers may tip in the hope of good service in the future, but one-time customers gain no advantage from tipping. Tips by one-time customers are altruistic. True predictions about tips
require accurate assumptions about the distribution of altruism among people, not the assumption of pure self-interest. While simplified motives fail to explain some markets, they fail to explain more law. Explaining the effects of laws often requires realistic assumptions about normative commitments, not the unrealistic assumption that everyone is narrowly self-interested. Like tipping, mixed motives are especially important to analyzing law.

To see why, consider the famous “bad man” theory proposed by Holmes. According to this theory, law should be written for the “bad man” who obeys from fear of legal sanctions. The bad man theory overlooks that fact that good people vastly improve the state’s power to deter bad people. To deter bad people, the state needs citizens who do not focus on personal gains when they report crimes to the police, testify in court on behalf of an injured plaintiff, or blow the whistle on corporate wrongdoing. Furthermore, the state needs fair judges and brave policeman who take pride in doing what is right. Similar arguments apply to other intersections of law and morality, such as tax compliance and promise-keeping.26

Law creates incentives and people respond to them. In law, the ideal person responds reasonably, not merely rationally. A reasonable person is socialized – she internalizes community norms. Socialization constrains and directs the response of people to law. In law, the ideal person is reasonable, not rationally self-interested. Within the constraints of morality, pursuing a rational life plan or other forms of self-interest is reasonable. Reasonableness in law is rationality in economics with internalized constraints. Predictive models of law should assume an accurate distribution of socialization across people, not that everyone is bad or good. Normative models of law should concern deterring bad people and increasing the proportion of reasonable people who internalize social norms.

Explaining the behavior of judges poses an acute problem with simplifying motives. Consumers decide purchases and judges decide cases. Both choices can be described as “revealing preferences” over outcomes. A preference for

26 A model to taxation must acknowledge that tax evasion occurs much less frequently in the United States or Switzerland than models of pure self-interest would predict.
coffee, however, is merely a taste that requires little or no justification. In contrast, a legal decision is justified when made on its merits. Arguments about the merits are the main cause and the best predictor of decisions by conscientious judges. In contrast, arguments are not the main cause or best predictor of demand for coffee. Later we explain this difference in detail when we turn to the content enterprise.

**Maximization**

Having discussed preferences, we turn to constraints on their satisfaction. Each person has limited opportunities for satisfying her preferences. The two austere assumptions -- ranked alternatives and limited opportunities – define the circumstances of economic choice. They were used in the most famous definition of economics in the 20th century:

> “Economics is the science which studies human behavior as a relationship between given ends and scarce means which have alternative uses.”

We relate ranked alternatives and limited opportunities to maximization. A rational person satisfies her preferences to the greatest extent that opportunities allow. When alternatives are ranked, a rational person makes the highest ranking alternative that is feasible. By restricting individual values to ranked alternatives, economists can deploy the mathematics of maximization that it assimilated more than a century. The fundamental mathematical insight, which the prompted the “marginalist revolution” in the 19th century, is that maximization requires equating marginal benefits and costs, not average or total benefits and costs. This insight continues to improve our understanding of issues that confound lawyers, as we illustrate later by the Hand Rule for tort liability.

Earlier we explained that ranking alternatives is *all* that modern economists means by “utility” (or, more precisely, “ordinal utility”). Similarly, making the best

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28 Besides ordinal utility, other forms with other assumptions include “cardinal utility.”
feasible choice is *all* that modern economists mean by *maximizing* utility.\(^{29}\) As formalized in economics, utility maximization constitutes a general form of instrumental rationality. It is general because it is consistent with many possible values, purposes, ends, or goals, instead of dependent on a particular theory of value.

A model of rationality is a good beginning to predicting a law's effects, and a bad ending. Real people are psychological, not logical. After predicting the legal consequences of rational behavior, the model should be adjusted by introducing psychology. Behavioral economics, which has absorbed the findings of cognitive psychology, often guides the adjustments. The enthusiasm with which economists embraced cognitive psychology, including awarding the Nobel prize in economics to the psychologist Daniel Kahneman in 2002, shows that economics is open to theories outside of its own traditions that satisfy its standards of rigor.

Any model explains some variables and takes others as given. The model of instrumental rationality takes preferences as given. Economics offers no theory of how preferences are acquired or modified. Economists justify this approach by asserting that internal values and commitments change relatively slowly, whereas external facts like prices and opportunities change relatively quickly. Thus the price of coffee fluctuates daily or even by the minute, whereas the underlying taste for coffee changes slowly.

Taking preferences as given is a good approach to predicting the price of coffee or cantaloupes, and it is sometimes a useful simplification for the study of law. Thus race poses some of the most vexing legal challenges in contemporary America. By assuming unchanging attitudes towards race, economists have made significant contributions to understanding how discrimination works. This approach led to such novel concepts as racial signals, racial cartels, and residential tipping.\(^{30}\) However, racial attitudes in America have changed massively in favor of racial equality in recent decades. Economists have

\(^{29}\) To be more precise, making the best feasible choice is *all* that modern economists means by maximizing ordinal utility.

contributed little or nothing to understanding these changes. To contribute, economists would need theories of preference change, not the assumption of unchanging preferences.

Preferences change in various ways, notably through deliberation. When people are mistaken about what they really want, deliberation and conversation can change their preference ordering. Deliberation and conversation are especially effective in changing irrational preferences. Thus talk therapy by clinical psychologists reduces painful irrationalities by increasing understanding of them. Recognizing that preferences are irrational is sometimes sufficient to change them, and sometimes recognition is only the beginning of a hard process of rationalizing preferences.\(^3^1\)

Besides deliberation, experience is another cause of preference change. People change by falling in love, working, having children, getting divorced, becoming ill, or burying a parent. However, economics has no theory connecting preferences to life’s experiences. Perhaps economics will someday import such a theory from motivational psychology, as it imported the theory of diminished rationality from cognitive psychology. In the mean time, the gaps in economics from having no theory of preference change create problems for applying economics to law. To illustrate, predicting the deterrence effects of criminal sanctions on young men requires a theory of how imprisonment changes their preferences. As another example, law and economics needs a theory of how people make and modify their normative commitments to obey the law, which are essential to the rule of law.

**Equilibrium**

In economics, utility maximization characterizes individual behavior. A social interaction tends to persist when no one can increase his satisfaction by changing his behavior, given that others do not change their behavior. This characteristic defines a “Nash equilibrium”, in which everyone maximizes

\(^3^1\) Note, however, that some irrational beliefs resist change by deliberation. De-biasing may require more than recognizing an irrationality.
In law and economics, the model of incentives combines constrained utility maximization for individuals and Nash equilibrium for groups.

Law and economics often finds compares equilibriums under one legal rule and another. Thus a model might compare the equilibrium number of automobile accidents under a rule of strict liability and negligence. A complete comparison of rules ideally answers four questions. First, does equilibrium exist? Some phenomena have equilibrium like water sloshed in a bowl that was bumped, whereas others have no equilibrium like waves on the sea. Thus the model of perfect competition predicts the equilibrium towards which a market is tending, even though it may never arrive.

Second, is the equilibrium unique? To illustrate, consider the equilibrium amount of crime for a given level of policing. A given level of policing might be reached by starting with many police and reducing their number, or by starting with few police and increasing their number. If the equilibrium amount of crime is unique, the start makes no difference to the finish. Conversely, if the equilibrium amount of crime is multiple, starting with many police and reducing their number may result in a low-crime equilibrium, whereas starting with few police and increasing their number may result in a high-crime equilibrium.

Third, is the equilibrium stable like a stopped car or unstable like a stopped motorcycle? Small perturbations cause no change in a stable equilibrium and large changes in an unstable equilibrium. Thus a random eruption of street violence will have no enduring effect on crime rates in a stable equilibrium and large enduring effects in an unstable equilibrium. Similarly, sales of houses destabilize the racial balance in some neighborhoods and not others.

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32 More precisely, this is a “Nash equilibrium”.

33 It seems likely that the path to equilibrium affects the amount of crime -- it has multiple equilibriums. The reason is that a given level of policing results in low or high crime depending on how much cooperation citizens provide to police, and the amount of cooperation of citizens with police is affected by the rational expectations of citizens based on the history of crime in their community.

34 cite Thomas Schelling.
The final question measures equilibrium on normative grounds. When the model of incentives predicts the effects of laws, some predictions concern variables that are not inherently good or bad, such as how fast motorists drive, whether the police patrol more on the east or west side of town, how many family businesses incorporate, or whether manufacturers raise prices to pay the cost of safer goods. Non-normative predictions do not inherently favor or disfavor a course of action. In contrast, normative predictions offer reasons to prefer one course of action to another. The most useful predictions for law concern its effects on significant policy variables. In the economics tradition, two policy variables dominate scholarship: efficiency and distribution. The fourth question concerns policy values: Is the equilibrium efficient, and what are its distributional effects?

State officials never publicly advocate wasting money, so efficiency commends a law in any public forum. Efficiency is an accepted policy value. Almost all economists think that their role as scientists includes identifying efficient policies, although they often dispute about the best definition of efficiency for particular circumstances or the weight that efficiency should receive when making decisions.

Like efficiency, almost all economists think that their role as scientists includes predicting distributive consequences of policies, such as whether law A increases the well-being of the poor more than law B. Besides predicting distributive effects, many people (including economists) favor economic equality. Thus if law A and law B yield the same net benefits, and law A distributes more of them to the poor than B, then this fact inclines many people to prefer A over B. However, people disagree about how to value distributive consequences -- how much money country should spend to achieve equality, whether equality is

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35 The three main types are Pareto, cost-benefit (also called “Kaldor-Hicks”), and social welfare. Many other distinctions can be made – ex ante efficiency v. ex post efficiency, productive efficiency, efficient exchange, and so on. For this essay, we do not need to distinguish efficiency into types.

inherently valuable,37 or whether a fair state should favor a particular distribution of income.38

Efficiency and equality provides strong reasons for favoring a policy. Indeed, identifying a policy that is more efficient and equal often amounts to recommending it, like identifying the medicine to cure a patient’s disease often amounts to recommending its use. Almost all economists think that their role as scientists includes identifying efficient policies and predicting their distributive consequences. Policy advocacy is an activity of many economists, like prescribing medicine is an activity of many doctors. However, economists disagree about the scientific status of recommendations concerning efficiency and equality. However, some economists think that recommending is unscientific, possibly because they think that science is value-free. They must take physics as their model of science, not medicine.39

In sum, economics provides a behavioral theory that predicts how people respond to legal rules and institutions. The behavioral theory is a model of incentives that reduces individual rationality to utility maximization and social interactions to equilibrium. Prediction can be non-normative or normative, and normative predictions especially concern efficiency and distribution. It is always better to achieve the law’s purpose at lower cost than at higher cost, whereas people disagree about equality’s value. Since all laws affect incentives, the model of incentives applies to every area of law from contracts to constitutions. In a famous essay, Calabresi and Melamed described economic analysis as one view

37 In strict utilitarianism, a more equal distribution of the same amount of utility does not increase welfare. Conversely, the social welfare function may favor a more equal distribution of utility. A sophisticated but technical explanation of the difference is in MATTHEW ADLER, WELL BEING AND FAIR DISTRIBUTION (2012).
38 In this view, the equality of the end does not count in its favor, but the means of achieving it could count for or against. More equality from protecting the poor against predation by the rich is a plus, whereas more equality from redistributive taxes counts as a minus.
39 Welfare, wealth, and efficiency are central to economics like health, longevity, and painless are central to medicine. No such value seems central to physics. Economic positivists often think that economics is value free. An extreme example is Milton Friedman, Essays in Positive Economics (Chicago: University of Chicago Press, 1953).
of law’s cathedral. Since Incentive effects pervade law, a better metaphor for the cause enterprise is the mortar between the stones in law’s cathedral.

For prediction, the model of incentives surpasses intuition just as social science surpasses common sense. The superior ability of law and economics to make predictions was the first cause of its explosive growth in the 1980s. The second cause was its claims to provide a superior account of the law’s content. As we will explain, the latter claims were exciting but mostly wrong as stated. A challenge to the philosophy of law and economics is to restate these claims so that they are mostly right.

**Cause Is Not Enough**

Some people mistakenly think that cause is all there is to law and economics. Perhaps they think that economics is a science and science is about causes and nothing else, so the cause enterprise encompasses everything that social science has to say about the law’s content. This line of thought follows Holmes who famously said that law is a prediction about what courts will do. According to this view, “What is the effect of law x on judges?” answers the question “What is the law of x?”

Perhaps Holmes had in mind a lawyer advising a client who wants to know how a suit will end. To see the problem with Holmes’ theory, switch the viewpoint from a lawyer advising a client to a judge deciding a case. According to professional ethics, judges ought to decide cases by the facts and the law. Imagine a judge who tries to decide a case by the facts and the law, and he believes that law is a prediction about what a judge will do. When this judge asks, “What is the law of x as applied to this case?” he asks for a prediction of how he will decide the case. This makes no sense. Judges do not decide cases by predicting how they will decide them. Making a decision is not predicting what you will do and then fulfilling your prediction.

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Believing that law is a prediction of judicial decisions is like believing that a map is the path chosen by a person who follows it. Instead of using law as a prediction, a person can use it as a guide. Taking the law as a guide is what legal theorists call the “internal viewpoint”.41 From an internal viewpoint, the law is a guide and judges are committed to following it.

While judges ideally decide cases by facts and law, they are imperfect just like other people. In 20th century American legal theory, “legal realists” sought the psychological causes of judicial decisions. Jerome Frank is credited with saying in 1930, "Justice is what the judge ate for breakfast."42 Recent statistical research probes this statement’s truth. In 1,112 parole board hearings in Israel, Shai Danziger purports to find that the odds of paroling prisoners is around 65% at the beginning of the day and plummets over a few hours. After a work break, however, the odds purportedly jump back up to 65%, before resuming their downward slide.43

Similarly, a recent econometric study found that US immigration court judges grant asylum petitions with higher probability on Mondays after the professional football team in the court’s city wins its Sunday game, as compared to Mondays after the team loses its Sunday game. On average, US immigration judges grant an additional 1.5% of asylum petitions on the day after their city’s

42 This proposition has been drawn from a passage found at p.162 of Courts on Trial (1930). In LAW AND THE MODERN MIND (1949), he wrote "...judge made law is not a lie and it is not a fiction, it is a myth"(page 37), and “…the personality of the judge is the pivotal factor” (page 133).
43 Danziger, Leva and Avnaim-Pesso. 2011. Extraneous factors in judicial decisions. PNAS http://dx.doi.org/10.1073/pnas.1018033108, cited in Justice is served, but more so after lunch: how food-breaks sway the decisions of judges By Ed Yong | April 11, 2011 3:00 pm, Discover Magazine.
NFL team won, relative to the day after their team lost. They found similar effects of bad weather.44

According to these studies, breakfast, football, and weather affect judicial decisions measurably. According to judicial ethics, they ought not to. Although statistically significant, the forbidden effects are small. Presumably more variance could be explained by forbidden causes if data were available on, say, the judge quarreling with her spouse, the judge's child failing calculus, or the judge's car having a flat tire on the expressway. Perhaps complete data on forbidden causes would explain most judicial decisions. In that case, the rule of law would be a myth, as Jerome Frank claimed.

Instead of discrediting the rule of law, however, better behavioral studies might prompt steps to neutralize the influence of forbidden causes. Thus judges could be warned to take food breaks more often, dampen their football enthusiasm on Monday mornings, and enjoy a cup of coffee before hearing cases on a rainy day. In this way, behavioral studies could improve the rule of law instead of discrediting it.

Besides breakfast, football, and the weather, behavioral studies find that political philosophy influences judicial decisions. According to statistical studies on the USA Supreme Court and Circuit Courts, the left-right political orientation of judges affects their decisions.45 Specifically, the President appoints high court judges subject to Senate approval, and he usually appoints judges whose political philosophy resembles his own. Statistical analysis shows that the political party (democrat or republican) of the appointing President predicts how judges decide hard cases. The causal mechanism explaining these findings presumably

44 “…We detect intra-judge variation in judicial decisions driven by factors completely unrelated to the merits of the case, or to any case characteristics for that matter….By way of comparison, the average grant rate is 39%. We do not find comparable effects in sentencing decisions of US district courts, and speculate that this may be due to higher quality of the federal judges, more time for deliberation, or the constraining effect of the federal sentencing guidelines.” Daniel L. Chen & Holger Spamann, This Morning’s Breakfast, Last Night’s Game: Detecting Extraneous Influences on Judging, in BERKELEY LA W FACULTY WORKSHOP (14 4-8), quoting from the abstract.

45 cite Quinn, etc.
operates through political philosophy, not political pressure, because judicial ethics effectively prevents the President from pressing federal judges about a case.

Most people think that law should shield judges from politics, but few people believe that constitutional courts can, or should, decide hard cases without political philosophy. Indeed, some theories of legal interpretation such as “originalism” and “judicial deference” are political philosophies. How law connects to political philosophy, or how it should connect, is controversial like the political philosophies themselves. Consequently, judicial ethics are unclear about how political philosophy should affect judicial decisions.

As explained, behavioral theories of judging search for statistical regularities. Influences like breakfast and the weather, which fit the model of causation in biology and the natural sciences, are forbidden by judicial ethics. These “natural causes” are external to law. In contrast, legal practice and judicial ethics prescribe permitted reasons for deciding cases. These “normative causes” are internal to law. Political philosophy, which is not clearly approved or forbidden in judicial decisions, stands in between natural and normative causes.

Judges fulfill the duties of their office by deciding cases on the merits. Doing so makes their decisions predictable from the facts and the law. Thus the law’s guidance induces common patterns of behavior among judges. The predictive theory of law must recognize that law causes judges to decide predictably, rather than law being a prediction of what they decide.

All regularities in behavior, including judicial behavior, can be studied by statistical methods as found in economics, biology, physics, and chemistry. These methods allow scientists to discover and prove the causes of regularities. As explained, the discovery of natural causes of judicial decisions should prompt efforts to reduce their influence. In contrast, the discovery of normative causes of judicial decisions improves the rule of law.

To illustrate, patents can be viewed as property or regulations. Conservatives often favor property and disfavor regulations. Jacobi and Sag wanted to know whether conservative judges view patents as property or
regulations. By statistical analysis of patent infringement cases, they found that conservative judges tend to favor plaintiffs more than liberal judges. This finding is consistent with the view that conservatives view infringements as trespass on property rights, not violations of regulations.\textsuperscript{46} It suggests where to look for legal doctrines that might convince conservative judges to protect patents. In arguing before the judge, however, appeal to political philosophy has a limited role because of its unclear status in judicial ethics. Consequently, statistical methods for discovering judicial reasoning have limited value in arguing cases.

An analogy to mathematics clarifies the limitation. Mathematicians prove theorems. The methods of mathematical reasoning determine what counts as a proof. A behavioral theory of mathematicians could search for regularities in the way mathematicians prove theorems. However, these regularities are mostly disallowed in a mathematical proof. In mathematics as in law, breakfast, football scores, and the weather do not count as arguments. Proving theorems requires participating in the forms reasoning constituting the practice of mathematics, just as arguing a case requires participating in the forms of reasoning constituting the practice of adjudication. The statistical studies of forbidden causes have various uses, but they contribute nothing to proving theorems in math or cases in law.

The Content Enterprise

The cause enterprise filled the hole in the ecology of legal ideas made by the absence of a social scientific theory to predict how people respond to laws. The cause enterprise, however, did not provoke the sensation of the initial

\textsuperscript{46} Supreme Court Justices were scored for left-right ideology using the Martin-Quinn scale or the party of the appointing president. Logit analysis of the votes by judges in IP cases from 1954 to 2006 showed that judges with conservative ideology are more likely to vote in favor of the intellectual property owner. This finding apparently confirms that conservative judges view IP as property, not regulation ". The conclusion supports "attitudinal voting" by Supreme Court justices and disconfirms "IP exceptionalism." Tonja Jacobi, Matthew Sag & Maxim Sytch, \textit{The Effect of Judicial Ideology on Intellectual Property Cases}, (2007).
reception of law and economics in the 1970s and 1980s. Instead, controversy swirled around the claim that laws are really about efficiency.47

At the time, the law and economics method for finding the law’s content in hard cases usually reduced to this algorithm: “The law’s correct interpretation is the one that gives incentives for efficient behavior.” Proponents justified the efficiency principle in two ways. The first is evolutionary. In the 1970s and 1980s, some legal scholars thought they could prove that the common law evolves towards efficiency. If these proofs are correct, the common law evolves as if judges applied the efficiency principle. Perhaps market forces cause judges to apply the efficiency principle without aiming to do so, just as market forces cause businesses inadvertently to maximize the nation’s wealth.48 Evolutionary mechanisms for the common law’s efficiency, however, failed scrutiny by law and economics scholars. The common law apparently does not evolve towards efficiency except under special conditions.49

Evolution does not require intent. Instead of market forces, the second type of explanation depends on judicial intent. According to this view, the efficiency principle is an abstract form of specific judicial reasoning that pervades judicial argument in disguise. Judges seldom mention efficiency explicitly, but, when viewed abstractly, their decisions conform to the efficiency principle. According to this view, efficiency pervades the law implicitly.50

In American classrooms, the efficiency principle was widely discussed and narrowly endorsed. Believing the efficiency principle, why did so many American law professors engage its claims? Whether right or wrong, a strong proposition triggers a lively debate. American law professors often teach by asking leading questions and debating the answers. After 1980, many students were required to

48 So Adam Smith famously proclaimed in 1775 in THE WEALTH OF NATIONS HTTP://WWW.ECONLIB.ORG/LIBRARY/SMITH/SMWN.HTML (2003). Rubin and Priest proclaimed a similar message about the common law that Smith proclaimed about market competition.
49 For a review, see chapter 11 of Cooter and Ulen, Law and Economics (6th edition).
50 The most philosophically sophisticated defense of such a position is Kraus…
stand up in class and answer the claim that a specific line of court decisions tends towards efficiency. The efficiency principle provided a foil for its many critics and a guide for its few believers.

The law prescribes what people ought to do, including judges. When judges follow the law, it guides what they actually do. Given this link between “is” and “ought”, defending the claim that judges follow the efficiency principle involves justifying the claim that they ought to follow it. Proponents of the efficiency principle offered a philosophically naive justification.\(^{51}\) (Law and economics scholars are not the first social scientists to philosophize badly.\(^ {52}\) Legal scholars influenced by philosophy subsequently dismissed law and economics because they identified it with the flawed defense of the efficiency principle. Over 30 years later, scholars have failed to produce what this essay attempts to supply: a defense of the content enterprise in law and economics.

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\(^{51}\) Two volumes of a law review were dedicated entirely to this debate, and it contains many of the classic papers, including the exchange between Richard Posner and Ronald Dworkin. See 8a and 8b Hoffstra Law Review 1980.

Interpreting Rules

A better defense of the content enterprise must begin by explaining legal methods for interpreting rules. The law ideally specifies the circumstances in which a rule applies.\(^\text{53}\) Thus a rule is an “exclusionary reason” – an injunction to act on specific reasons without considering other reasons.\(^\text{54}\) Decision makers bound by the rule need only consider whether the case at issue falls under its circumstances.

When applying a rule, many cases fit clearly into the rule’s circumstances. However, rules inevitably under-specify the circumstances for their application, so a rule’s applicability is sometimes uncertain. Thus a park regulation may exclude motor vehicles, but does it exclude mounting an historical airplane on a pedestal? To answer this question, the authorities may look to the rule itself. Perhaps a statute says that rules for motor vehicles apply to driving, not exhibiting. Or perhaps the statute authorizing park regulations contains rules for their interpretation. (These are “secondary rules.”\(^\text{55}\))

The totality of legal resources for interpreting laws, however, exceeds the total of legal rules. Given gaps in explicit rules, the authorities may look to other resources of interpretation, such as legal principles. Thus the court in Riggs v. Palmer famously barred a murderer from inheriting from his victim, and the court defended the decision by the principle that a criminal should not profit from his crime.\(^\text{56}\) Or, instead of principles, interpretation might appeal to purposes. Thus the purpose of the park regulation in question may be regulating driving, not regulating exhibiting.

\(^{53}\) For an analysis of the parts of a rule, including the “norm circumstances”, see GEORG HENRIK VON WRIGHT, NORM AND ACTION (1963).

\(^{54}\) JOSEPH RAZ, PRACTICAL REASON AND NORMS (1975). His concept of an “exclusionary reason” is central to his theory of legal rules.


\(^{56}\) Dworkin famously used this example to show that law includes principles, not just rules. RONALD DWORGEN, TAKING RIGHTS SERIOUSLY (1977). Note that this case was hard not because the inheritance law was ambiguous, but because its application produced an unfair result,
The preceding discussion concerns cases that are hard because of ambiguity. In other hard cases, the circumstances are clearly applicable but the rule produces otiose results. To avoid otiose results of a rule, legal systems may allow exceptions. Thus English and American law sometimes allows the equitable defense of unconscionability for breaching a contract that otherwise satisfies all of the legal requirements for enforceability.\textsuperscript{57}

In general, laws pose hard cases when a rule’s application is ambiguous or otiose. In hard cases the interpretation of a rule may invoke legal sources that include other rules, principles, purposes, or equity. Where does the efficiency principle fit? It is sometimes, but not often, an explicit part of a rule. Thus the “Water Resources Act” required federal projects to proceed by comparing the costs and benefits.\textsuperscript{58} Similarly, environmental impact statements often have the structure of cost-benefit analysis.

More often, however, rules regulating behavior do not explicitly mention efficiency. Even so, efficiency might be present implicitly, entering through higher order legal resources used for interpretation -- secondary rules, principles, or purposes of laws. To explain the implicit presence of efficiency, we turn to classical utilitarianism, which provides a clear account of how rules of conduct and higher-order principles interact.

“Maximize utility” is the supreme injunction of classical utilitarianism. In the utilitarian vision of law, the supreme injunction applies to making rules. According to utilitarians, legal rules ought to maximize utility and they usually do, although imperfectly.\textsuperscript{59} Legal utilitarianism is rule utilitarianism. However, the supreme injunction does not imply that everyone should act directly on it. When making

\textsuperscript{57} Equity in law is based on Aristotle’s observation that some laws are universal, but universal laws have exceptions. The best laws have exceptions because the best formulation of obligations does not include all the circumstances in which it applies and does not apply.


\textsuperscript{59} Utilitarianism, which has a reforming spirit, leaves ample scope for critiquing and improving the law by showing how it can increase utility even more.
decisions, most people lack the time and capacity to apply the supreme injunction. They need rules to guide them.

A judge should apply the rule whose conditions are satisfied by the facts of the case. In easy cases the rules are self-interpreting – only an understanding of language is required. In hard legal cases, a law is not self-interpreting. Rather, interpretation by the ordinary meaning of a law’s words yields ambiguous results or otiose results. Like any other judges facing a hard case, a utilitarian judge must draw on the accepted legal resources for interpretation – secondary rules, principles, and purposes. Unlike non-utilitarian judges, the utilitarian judge believes that the supreme injunction is the highest principle of law that captures its most fundamental purpose. Consequently, the utilitarian judge may apply the supreme injunction directly to decide some hard cases.

In welfare economics, reasoning often parallels utilitarianism. “Maximize welfare” is the supreme injunction of welfare economics. The welfare principle mostly applies to making rules. However, most people lack the time and capacity to maximize welfare directly. Computational limits bound individual rationality. Deciding whether the facts satisfy the conditions for applying a rule is simpler than deciding whether an act maximizes welfare. Instead of applying the welfare principle, legal decision makers should usually apply the rules of law. In hard cases, however, the explicit rules yield ambiguous or otiose instructions. The welfarist judge may apply the efficiency principle directly to such a case.

In recent years, much of the debate in ethics and political philosophy pits utilitarianism against its alternatives. We have explained that most critiques of maximizing utility also apply to maximizing welfare. According to a fundamental line of criticism, classical utilitarianism and welfare economics recognize individual

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60 With bounded rationality, according to a prominent economic theory, individuals aim for a satisfactory result, rather than aiming for the best result. They “satisfice” instead of maximizing. In 1978 Herbert Simon won the Nobel prize in economics for pioneering these ideas. See H.A. Simon, Models of Man (1957) and Theories of Decision-Making in Economics and Behavioral Science, 1–28 (1968).

61 A Theory of Justice (1971), the magisterial book by John Rawls that framed much of ethics and political philosophy in the last quarter of the 20th century, famously argued that a deontic theory of rights is superior to any theory of utility.
rights when doing so maximizes utility or welfare, but not otherwise. Consequently, individual rights are contingent on social effects, which makes them insecure. Individuals deserve stronger protection of their rights, according to this view. To use the memorable phrase of Rawls, by aggregating individual utility or welfare, utilitarianism and welfare economics do not take distinctions among persons seriously. 62

In this respect, classical utilitarianism and welfare economics are the same, but they differ significantly in other ways. This essay cannot explore these differences in detail, but we briefly mention two of them. First, Bentham claimed that the utility of different people could be compared and combined. In contrast, many economists insist that interpersonal comparisons of utility are scientifically impossible. The belief among many economists that interpersonal comparisons of utility lack a scientific basis conflicts with the belief that social welfare is measurable in law and economics. 63

Second, Bentham thought that utility’s enemies are common law judges and its friends are legislators and regulators. In contrast, Posner thought the opposite: efficiency’s enemies are legislators and regulators, and its friends are common law judges. This disagreement over legislation has a conceptual cause. Classical utilitarians characterize individuals and society the same way – as utility maximizers. Each individual maximizes his utility in private choices and society maximizes aggregate utility in public choices, including legislation and regulation (albeit with room for improvement through more understanding and better analysis). However, classical utilitarianism has no general theory of why individuals who pursue their own interests also maximize the sum of utilities.

63 Ordinal utility theory denies the possibilities of interpersonal comparisons of utility. For an historical overview of this dispute, see Robert Cooter and Peter Rappoport m”Were the Ordinalists Wrong About Welfare Economics?” 22 Journal of Economic Literature 507 (1984).
Consequently, it has no general account of the conditions under which society will fail to maximize the sum of utilities. In this respect, classical utilitarianism is analytically incomplete. Adapting the language of Rawls, we could say that classical utilitarianism fails to take interactions among individuals seriously.

While classical utilitarianism relies on the one mathematical concept of maximization, welfare economics relies on two: maximization and equilibrium. Economists use the equilibrium concept to analyze the conditions under which interactions achieve efficiency and maximize aggregate welfare (e.g. perfect competition), rather than wasting resources and foregoing welfare (e.g. market failures). Testing legislation and regulation for efficiency has exposed many shortcomings in the public sector. According to public choice theory, private interests and public irrationality plague legislation and regulation. Unlike Bentham, Posner and other law and economic scholars influenced by public choice theory are skeptical about the benefits of legislation and regulation, and hopeful about common law.

We have shown that some, but not all, of the critique of utilitarianism applies to the efficiency principle. The efficiency principle, however, is a small part of the content enterprise of law and economics. Instead of rehashing the critique of utilitarianism, we proceed to a more complete explanation of the content enterprise.

**Normative Economics and Interpretation**

Economists conventionally divide their subject into positive and normative branches. Positive economics predicts effects in units like cars produced, tons of coal burned, number of people employed, growth, or inflation. These are natural measures that do not commend any course of action until connected to normative values. Disagreement about their measurement is relatively modest. In contrast,

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normative economics predicts effects on values, especially efficiency, welfare, and distribution. These are normative measures used to commend one course of action over another. Disagreement about their measurement is relatively wide.

Law and economics scholars mostly predict the natural and normative effects of alternative laws. Besides predicting law’s effects, law and economics scholars sometime take the additional step of modeling the making, amending, and repealing of laws. Thus an economic model might predict how the price of coal will affect the supply of electricity by private firms given certain public regulations. Thus the cause enterprise usually asks, “What are the non-normative and normative effects of law x?” The model might also take the additional step of predicting how the price of coal will affect the public regulations applied to the private firms. Thus the cause enterprise sometimes asks, “What are the causes of law x?”

As currently practiced, the cause enterprise primarily encompasses the natural and normative effects of laws, and it secondarily encompasses the causes of laws. “Political economy” has come to mean the latter -- explaining the causes of laws that traditional economics takes as given, especially the political causes. Traditional economics explains (or “endogenizes”) the effects of laws, and political economy explains (or “endogenizes”) the causes of laws.

By predicting effects of policies, economists provide valuable information for making and interpreting law. Having done so, many economists feel that nothing remains for them to do in their professional role. They think that non-economists must decide how to use economic predictions to make laws. Others think that economists should also recommend laws. In practice, claiming that a law is efficient, welfare maximizing, or equality enhancing is usually part of

65 J.S. Mill used the term “political economy” in the 19th century to refer to all of economics, including its overlaps with politics. After 1950, the dominant “neoclassical school” in economics tended to analyze the economy and take politics as given. The older ideas of political economy were especially revived and updated in the late 20th century under the name “positive political theory”. The term “positive” distinguishes political that draws on positive economics and makes predictions without political or ethical commitments. In contrast, “normative” political theory draws on philosophy and usually aims to implement democratic values.
recommending it. Not much separates normative prediction and recommendation.

In contrast, much separates predicting a law’s normative effects and claiming that it is already law. What separates them is nothing less than the law’s content. Normative economics explains what it would be good for people to do. It predicts the effects of a law on efficiency, welfare, and distribution. The content enterprise explains what the law requires people to do. It explains a law’s correct interpretation.

Law and economics aspires to become central to legal practice and scholarship. Lawyers are more concerned with the law’s content than its effects or causes. To do so, law and economics must become a theory of law itself, which explains what laws require people to do, not merely a theory about law’s effects and causes. In this respect, law and economics is unlike any application of economics such as industrial organization, international trade, labor economics, or public finance.

Normative predictions usually provide reasons to favor one legal interpretation over another. The fact that one interpretation results in less waste of resources, higher welfare, and more equal distribution is a reason to favor it, often a strong reason. However, the interpretation with the best consequences as measured by normative economics is not necessarily the correct interpretation. Sometimes Congress enacts bad laws, courts make bad precedents, and administrators create bad regulations. The correct interpretation depends on the historical facts and the rules, principles, and values that a legal system deploys for interpretation.

In ordinary cases, interpreting the law requires checking the facts against the conditions of its application. In hard cases, the rule is ambiguous or otiose, as explained above, so interpretation involves reasoning from all of the relevant legal materials, specifically secondary rules, principles, and purposes. The central task of the content enterprise is to predict the consequences of a law that affect its legally correct interpretation. Economics is useful for finding legal content in so
far as the correct interpretation of a law refers to effects that the model of incentives can predict.

Sometimes the relevant effects are efficiency effects. Later we illustrate legal reasoning with the efficiency principle’s form. Usually the relevant effects are not efficiency effects. Instead of efficiency, much more legal reasoning has the incentive model's form. Instead of efficiency, it is the incentive model that pervades legal interpretation without judges mentioning it. Consequently, we propose to ground the content enterprise on the incentive principle: the law’s correct interpretation depends on its incentives as measured against secondary rules, principles, and purposes.

Examples of Interpretation

I will provide some example of the content enterprise. I begin with the efficiency principle of legal interpretation, which holds that the correct interpretation of a law is the efficient interpretation. In these cases, cost-benefit reason is the decisive factor in legal interpretation. As explained above, efficiency is often a factor in the interpretation of a law, but seldom the decisive factor. Consequently, I will turn to more typical cases where the efficiency principle fails and the incentive principle succeeds in interpreting the law.

Hand Rule

In U.S. v. Carroll Towing, 159 F.2d 169 (2d Cir. 1947) Judge Hand proclaimed his famous rule for determining negligence. According to the Hand Rule, in the absence of a community standard, an injurer is negligent if the burden of precaution B that would have avoided the accident is less than its probability P multiplied by the liability L for the harm it causes. Thus an injurer is negligent is B<PL. In other words, the injurer is negligent if he omits precaution that costs less than its resulting benefits. To illustrate numerically, assume an injurer fails to spend 5 to avoid an accident that occurs with probability .10 and causes harm of 100. With these numbers, the injurer is negligent because omitted care costs less (5) than the expected harm that it prevents (.10x100). Hand’s formula is explicitly recognized in law in the U.S.A., and judges in other countries use this pattern of reasoning without acknowledging the formula.
Economists love the Hand Rule because it explicitly balances costs and benefits. In addition, economists love the Hand Rule for making a mistake that economists easily corrected. The mistake was failing to note that B, P, and L should refer to marginal values, not average or total values. The "marginal Hand Rule" is the best interpretation because it balances costs and benefits as required for social efficiency. Under the marginal interpretation, the rule is efficient, which gives it normative appeal. Under the non-marginal interpretation, the rule is inefficient, and it has little normative appeal.

Judge Hand was unaware that his rule requires a marginal interpretation. When making a distinction like “marginal” versus “average”, economists have the advantage of dealing in mathematical generalities, whereas courts wrestle with factual particularities. Consequently, judges may be unaware when their reasoning in a particular case has the general form of economic theory. Hand’s formula is an explicit balancing test. Balancing uncertain future payoffs is tricky and confusing. Economists have spent decades straightening out reasoning about uncertain future payoffs. Understanding the economics of cost-benefit analysis can help judges to think clearly and balance correctly. Understanding the general form of legal reasoning can liberate the mind. Thus the correct interpretation of the Hand Rule unlocked puzzles in accident law like the right combination of numbers unlocks a safe.66

Explicit balancing like Hands Rule is rare, but implicit balancing pervades judicial reasoning. Justice Eliezer Rivlin of the Israeli Supreme Court provides an interesting discussion of implicit balancing. According to Justice Rivlin, the Israeli Supreme Court weighs costs and benefits when interpreting the right of free speech.67 Balancing them is an accepted principle of interpretation. When the

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66 For a summary and discussion, see chapters 6 and 7 of Cooter and Ulen, Law and Economics (6th edition).
67 Eliezer Rivlin, “Law and Economics in the Israeli Legal System: Why Learned Hand Never Made it to Jerusalem,” in Berkeley Law and Economics Workshop, 2011. According to Justice Rivlin, the Israeli Supreme Court accepted the weighing of costs and benefits in freedom of speech cases more readily than in torts cases. His explanation is that the justices under Chief Justice Barach wanted complete discretion in deciding cases. They thought that weighing costs and benefits in free speech cases gave them full discretion to decide as they wished, whereas weighing costs and benefits in torts cases might constrain what they could decide.
Israeli Supreme Court applies a balancing test in free speech cases, the form of reasoning corresponds to cost-benefit analysis. However, the Israeli Supreme Court does not mention normative economics to justify using the balancing test. It eschews explicit use of the Hand Rule in tort cases. The legal justification for balancing must be found in the practices and principles of the Israeli Supreme Court, not in normative economics. Normative economics seldom enjoys legal recognition, so it seldom conveys legal authority.

**Negligence Per Se: Railings to protect the disabled or everyone?**

Now we turn to the doctrine of negligence per se, where cost-benefit reasoning imperfectly captures a law’s purpose. Assume that a statute requires stores to install special railings for disabled people. Subsequently the victim of an accident caused by the absence of a special railing sues the store. The victim of the injury, however, is able-bodied, whereas the statute describes its purpose as protecting the disabled. Can an able-bodied person recover damages from the store, or is recovery limited to disabled people?  

Answering this question requires interpreting the statute. If the statute is not explicit on this point, the correct interpretation may be the one that best fulfills its purpose. Liability to the able-bodied and the disabled creates stronger incentives to upgrade the railings than liability to the disabled only. To illustrate concretely, assume that upgrading the railing to comply with the statute costs 80, which prevents injuries costing 60 to the disabled and 40 to the able-bodied. By upgrading the railing, the store will save 20 if it is liable to the disabled and the able-bodied, so the rational store will upgrade. However, by upgrading the railing the store will lose 20 if it is liable to the disabled and not liable to the able-bodied, so the rational store will not upgrade. In general, wider liability provides stronger incentives for preventing accidents. If the statute’s purpose is to prevent accidents harming the disabled (without regard to the able-bodied), then wider liability fulfills this purpose more completely than narrow liability.

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68 The example of negligence per se is from ROBERT D. COOTER & ARIEL PORAT, GETTING INCENTIVES RIGHT: IMPROVING TORTS, CONTRACTS, AND RESTITUTION (2014), Chapter 3.
Alternatively, assume that the statute’s purpose is to provide reasonable protection to everyone, both disabled and able-bodied. Upgrading the railing costs the store 80 and saves accident costs of 100, so upgrading the railing is reasonable. Since the benefits of upgrading exceed the costs, upgrading is also socially efficient. Thus if the statute’s purpose is reasonable balancing of costs and benefits of precaution, or social efficiency, then wider liability fulfills its purpose more completely than narrow liability.\(^{69}\)

In this example, the correct interpretation of the law requires relating its purpose to its consequences. The economic model relates interpretation to two possible purposes: protecting the disabled, and protecting everyone. Litigators will get excited about law and economics if it helps them to influence judges about the law’s correct interpretation.

**EXAMPLES TO BE WRITTEN**

1. “progress in the useful arts” and intellectual property law: growth not static efficiency
2. taxes v. penalties in Obama care cases

**Conclusion**

When people realized that God was not on Mount Olympus or in the sky, they naturally wondered where He is. One answer is that God is everywhere – his presence in “immanent” in everything. The content enterprise argues that economics is “immanent” in law -- pervasive but not necessarily noticed or mentioned. Interpreting some laws involves balancing economic benefits and costs, which applies the efficiency principle. Efficiency is decisive to interpreting some laws like the Hand Rule, but it is an indecisive factor in interpreting most laws. In contrast, incentives are a decisive factor in interpreting many laws in hard case. Instead of normative economics, the branch of economics that

\(^{69}\) This is an application of the Hand Rule standard of negligence, which I discuss later in detail.
pervades more of law is positive economics, specifically the incentive model. In law, incentives are not everything but they are everywhere.\textsuperscript{70}

If economists and other social scientists aspire to a central place in legal education and scholarship, they must develop the content enterprise and produce a theory of law, not just a theory about law’s effects. They must show how predicting consequences scientifically improves the law’s interpretation. Unlike law and economics of the past, they must get the content enterprise right by basing it on predictions that the law regards as central to its interpretation. The content enterprise must rest on the authority of law, not the appeal of welfare economics. In this way, law and economics will integrate the two subjects in its name, not merely apply the former to the latter.

\textsuperscript{70} Ejan Mackaay concluding a recent lecture with this sentence: “Law and economics belongs in the toolkit of every lawyer in all branches of the profession to stay in tune with the social function of the law.”