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

by

Robert Cooter

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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. The second explains the law’s content (the “content enterprise”). The content enterprise interprets what the law requires people to do. The content enterprise presents itself as a theory of laws, not merely a theory of law’s effects. Law and economics joins two enterprises rather than merely analyzing one by the other. Few legal scholars contest the usefulness of the cause enterprise, but many struggle with its methods, especially the model of incentives and econometrics. Economists mostly confuse legal interpretation with normative economics, whereas lawyers mostly reject economic interpretation as alien to law and offensive to morality. Both need a philosophical account of law and economics that encompasses its two enterprises.
Robert Cooter

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

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. "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.

* Herman F. Selvin Professor of Law, U.C. Berkeley, School of Law. rcooter@law.berkeley.edu.

** This article 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, especially the distinction between cause and content. 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 article’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 article 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?).

These dismissals should be answered in academic writing. Books have been written on the question, “What is law?” and “What is economics?” but not “What is law and economics?” On this question, there are articles about it, and books that bear on it, but no book about it.

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Why not? Many law and economics scholars deal in the hard currency of testable hypotheses and resist the soft currency of philosophical argument. Some dismiss untestable propositions as useless or meaningless. Thus Richard Posner, the polymath genius of law and economics, dismisses the philosophy of law so lightly that it is the one subject on which can’t say anything interesting. Conversely, many political philosophers have limited patience for law and economics, which they reject without going through the intermediate step of understanding it. In contrast, this article aims for a philosophical understanding of law and economics as currently practiced.

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 effects of laws. 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.

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After the cause enterprise, the second enterprise of law and economics is the content enterprise, which explains what the law requires people to do. It asks, “What is the law of x?” 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 laws, 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 laws, not the consequences. Since the content enterprise uses economics to address the central work of lawyers, it generates more interest and controversy than the cause enterprise.

Figure 1
Pyramid of Law and Economics
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, assigning definite meaning to a legal rule is an exercise in legal reasoning, which enlists legal resources beyond the rule’s plain meaning, such as its purposes, the lawmakers’ intentions, the law’s history, and its location among similar rules and principle. The legal resources for interpretation include economic reasoning. This article clarifies the place of economic reasoning in interpreting laws.

Some scholars 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.” 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. Accusations if someone suggests that economic analysis might eventually crowd out humanistic theories of law, like physics crowded out metaphysics.

Few lawyers believe these claims, nor should they. Propositions about the ultimate purpose of laws are beyond the reach of economics. Being untestable, they belong to philosophy or religion, not to science. Even so, economics scholars routinely overstate the role of efficiency and social welfare in interpreting laws. The “efficiency principle of legal interpretation” refers to the proposition that the correct interpretation of an ambiguous law has the most efficient consequences. This principle elevates a pervasive but mostly indecisive factor into the unique determinant of a law’s content.

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To gain perspective on the efficiency principle, consider the connection of a legal rule to its purposes. Different laws 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. When a legal rule is ambiguous, its interpretation often invokes its purposes. The best interpretation often fulfills a law’s actual purposes the most. In that case, social science can find the best interpretation of a law by predicting the extent to which alternative interpretations fulfill its actual purposes. To apply this method, use legal reasoning to identify the purposes of an ambiguous law, and then use social science to predict their fulfillment by alternative interpretations.

Sometimes efficiency is the explicit purpose of a law – examples come later. More often, efficiency is an implicit purpose of a law – it is inferred by abstraction from explicit purposes. Implicit efficiency is more pervasive than appearances suggest, but pervasiveness is not decisiveness. Efficiency is only decisive for interpreting a law whose uniquely dominant purpose is efficiency. For such a law, the efficiency principle provides its best interpretation. Efficiency is not decisive for interpreting a law whose primary purpose is something else -- non-discrimination, affirmative action, cost reduction, equality, redistribution, political payoffs, rent-seeking, and so on. While efficiency is often a purpose of a law, it is seldom the purpose. When efficiency is one purpose among several, efficiency is one factor among several for a law’s interpretation.

Each social science -- political science, sociology, psychology, and anthropology -- can predict the effects of laws, including the extent to which different interpretations fulfill different purposes. Social scientists engaged in interpreting law should use the social science that predicts best, whether it is economics or another social science. This article, however, concerns law and economics, not law and social science. Law creates incentives and people respond to them. In the application of social science to law, economics differs from other social sciences in its steadfast commitment to modeling incentives. The model of incentives is a good way --often the best way -- to predict the fulfillment of given purposes by alternative legal interpretations.
As described, the content enterprise of law and economics interprets law by intertwining reasoning about purposes and predictions about consequences. In practice, however, purposes and predictions are conjoined, not cleanly separated. Legal reasoning and economics circle back to each other. Here is the method in practice: first consider a law’s possible purposes, second predict the consequences of alternative interpretations for fulfilling these purposes, third reconsider the law’s purposes in light of the consequences, fourth reconsider the predictions in light of reconsidered consequences, and so on. The end is a reflective equilibrium that identifies the best interpretation.6

Summing up, in hard cases, interpretation requires assessing alternative interpretations of a law in light of the totality of legal resources, not just the words in a rule. Interpreting a law in a hard case often focuses on disputes about its purposes. The best interpretation is often the one that most fulfills its purposes. Incentives have a central role in predicting an interpretation’s consequences with respect to a law’s purposes. The larger contribution of economics to legal interpretation is the incentive model because it applies to all of a law’s purposes, whereas efficiency is just one possible purpose of a law.

This article offers a philosophical account of law and economics, which views it as the union of two enterprises: cause and content. The cause enterprise applies the incentive model to predict the consequences of laws. It is an application of economics to law, as suggested by the phrase, “the economic analysis of law”. Even though incentives pervade law, nothing resembling the incentive model can be found inside the legal tradition before law and economics. The content enterprise uses the predictions of consequences to explain what laws require us to do. It is an application of legal reasoning. Nothing resembling legal reasoning can be found inside economics.

Many lawyers have no understanding of social science, because they do not need it to practice law, especially at the lower ranks of the legal profession.

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6 John Rawls famously used the phrase “reflective equilibrium” to describing philosophical reason, specifically reasoning back and forth about alternative theories of justice.
Their central task is to understand legal rules and reasoning. Conversely, few economists understand legal practice, because the character of a social practice differs so much from the character of a science. Legal reasoning is a practice whose rules are opaque to economists, like the rules of chess are opaque to someone who mostly plays checkers. Combining a social science (economics) and a humanistic discipline (law) creates confusion because each side understands the unfamiliar half in light of the familiar half. Economists wonder, “What do lawyers know? Do they just memorize rules?” Lawyers wonder, “What the use of knowing that? What do numbers have to do with the requirements of law?”

This article concerns the philosophy of law and economics, not ethics or political philosophy. Like economics, law and economics can be combined with most ethical or political philosophies, because it is not necessarily connected to any particular ethical or political philosophy such as utilitarianism or consequentialism. Nor is law and economics necessarily connected to any philosophy of law, such as natural law or positive law. In legal reasoning, some legal philosophies like utilitarianism elevate the role of consequences, and some legal philosophies like Kantianism demote the role of consequences, but no reasonable philosophy of law denies a significant place to consequences. Law and economics can be combined with any philosophy of law that acknowledges a significant place for consequences in legal reasoning. Finally, law and economics is not necessarily connected to state laws. Besides state laws, law and economics encompasses “soft laws” as studied in international law, as well as and social norms in stateless societies as studied in law and anthropology.

This article begins by describing the intellectual history of law and economics. To take its measure, the article next turns to the subject’s two enterprises: causes and content. These two enterprises define law and economics as currently practiced. The cause and content enterprises especially use the model of incentives, whereas the efficiency principle has a lesser role. Understanding the relationship between the incentives and interpretation reduces many of the controversies swirling around law and economics.
Like the Rabbit in Australia\textsuperscript{7}

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 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.\textsuperscript{8} 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.”\textsuperscript{9} 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

\textsuperscript{7} 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.


\textsuperscript{9} Cite Robert Hale and ___, and give some dates. Connect to Progressive movement.
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 antitrust law that spread from Chicago beginning in the 1970s. 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.

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.

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10 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.

11 Tax and antitrust are omitted from the introductory textbooks by Polinsky, and also Cooter and Ulen.
Figure 1. Year of Publication of Some Seminal Law and Economics Books and Articles

(some titles abbreviated)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>1975. Williamson. Markets &amp; Hierarchies</td>
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</tbody>
</table>

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 with more explicit mathematics and consistent notation. 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

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12 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.\(^\text{13}\) 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.\(^\text{14}\) 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.\(^\text{15}\) 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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\(\text{14}\) *Id.* at 407 (see Table 7).

\(\text{15}\) *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.”

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. 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. (This finding contradicted Ellickson’
earlier speculation that law and economics had reached a steady-state in the
1980s.)

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 Journal of Law and Economics established in 1958 and the
Journal of Legal Studies established in 1972. The Journal of Law, Economics and
Organizations grew out of a workshop at Yale Law School in the mid-1980s. As
of 2007, the Journal of Law and Economics (JLE) had the highest impact factor
among all law journals (21.76), the Journal of Legal Studies ranked fifth (18.58)
and the Journal of Law, Economics, and Organizations ranked eighth (15.47).

The International Review of Law and Economics was founded in 1981 and it
flourished after relocating to the Berkeley Law School. The American Law and
Economics Review was founded in 1999, and the Review of Law and Economics
was founded in 2005.

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16 Id. at 391.
17 See Ellickson, R. “Trends in Legal Scholarship: A Statistical Study,” Journal of Legal Studies,
Vol. 29, No. 1, Interpreting Legal Citations (Jan. 2000), pp. 517-43 (findings based on searches of
Westlaw’s online “JLR” database).
18 Supra note 5.
19 Ellickson, R. “Bringing Culture and Human Frailty To Rational Actors: A Critique of Classical
Cornell L. Rev. 245 (1989) (arguing that the law and economics movement had peaked in the
early- to mid-1980s).
20 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>Kleworski, 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).

Figure 3. Liberty Fund Conferences on Law and Economics

<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, Ryelown</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 no measure of its extent.

The number of law and economics scholars in law schools decline 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{21}

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{21} 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 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.\textsuperscript{22}

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>
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<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>

Liberal critics of law and economics often point out that the Liberty Fund and the Olin Foundation are private, politically conservative organizations. However, the National Science Foundation, which is the major source of public money for research in social science, gave almost no support to law and

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Not much law and economics research passed peer review by NSF’s multi-disciplinary panels. Documenting this fact is difficult because “law and 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, which proved highly profitable for law and economics scholars. Also, American law school faculties had a tradition of including a few experts in disciplines outside of law, such as psychiatrists. Some law schools opened these appointments to economists, as Figure 6 demonstrates. Most law and economics scholars originally found jobs on

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23 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.

24 On a personal note, I began my academic career in public finance, where my research enjoyed generous NSF support. When I switched to law and economics, my first application was rejected. The economist on the review panel said that I used “simplistic economics”, the lawyer on the panel said that economic models are “unpromising” for understanding law, and the sociologist said that my perspective was too narrow. After that experience, I look elsewhere than NSF to fund my research.
law school faculties, not in economics departments. Ideas, money, and academic positions all contributed to the success of law and economics.

This article, 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. Law and economics inflates the usual meaning of “preferences” to encompass all kinds of values, so long as they form a ranking of alternatives. The values underlying preferences can be almost anything -- pleasure, love, happiness, self-realization, wealth, power, prestige, social standing, environmentalism, altruism, or fairness. In brief, ordinal utility is a theory of individual values that are ordered. The ranking of alternatives does not require any particular theory of value or motivation, or an underlying philosophy or religion.

Ranking of alternatives from better to worse is all that modern economists usually mean by “individual utility” or, more precisely, by “ordinal utility”. When

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25 The usual list of formal properties are, reflexivity, completeness, and transitivity.
26 Besides ordinal utility, other forms with other assumptions include “cardinal utility.”
27 Transitivity is the essential condition for an ordering. Thus relation R among states of the world x,y, and z is transitive if Ry and yRz implies xRz. When economists stop analyzing individual choices and turn to social welfare, “utility” acquires new meaning, as discussed later. Transitivity
economists mean more they usually say so.\textsuperscript{28} Since any ordered ends can satisfy the requirement of ranked alternatives, 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 the downward slopes down, which is true for ice cream or automobiles (and false for heroin\textsuperscript{29}).

Many laws attach sanctions to obligations. 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.

\textsuperscript{28} A mere ranking is described as “ordinal utility.” Rational risk-taking implies “cardinal utility” and ethical reasoning requires “interpersonally comparable cardinal utility.” In cost-benefit analysis, changes in utility translates into wealth changes in wealth as measured by the “Kaldo-Hicks criterion of hypothetical compensation. These distinctions, which were worked our much earlier in economics and then explained to lawyers in the early years of law and economics, notably in Jules Coleman, \textit{Efficiency, Utility, and Wealth Maxiization}, 8 HOFSTRA LAW REVIEW 509 (1980).

\textsuperscript{29} 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.
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’s 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. Little changed until social science developed in the 20th century. Economists transferred the scientific methods for estimating demand in markets to estimating deterrence by laws. When mathematical reasoning and statistical estimation supplants intuition, the gain resembles replacing a clock’s wheels with a silicon chip.

Economists assume that people respond similarly to prices and sanctions. The demand curve measures how much consumption will decrease in response to a higher price, and the deterrence function measures how much an activity will decrease in response to a higher sanction. The same economic techniques can 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. By analyzing sanctions as prices, economists inflate “preferences” to encompass all kinds of motives and values. In demand theory, a preference for coffee is much the same as a commitment to safety. The expansion of the concept of “preference” by economist massively simplifies the analysis of values. (This simplification also generates conceptual confusions as explained later.)

As explained, declining marginal utility is a simplifying assumption used to explain the slope of the demand curve and the deterrence function. In another simplification, economists often assume that people care only about their own wealth. Thus economists often assume that executives pursue wealth alone, even though real executives also enjoy leisure activities. 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 reality, 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 the effect of stock repurchases on her behavior. Definite predictions based on the dominant motive may be more useful to the board of directors than indefinite predictions based on complex motives.

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. This assumption simplifies the analysis of the effects of laws on social welfare.

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 break the chain unpredictably. Long chains of deduction lead to remote effects that more complicated analysis overlook. Simplifications are the straight road to remote effects, whereas complications go down intellectual detours.

30 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.
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. In law as in tipping, mixed motives are especially important accurate explanations.

To illustrate, 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 the 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.\footnote{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.}

A difference in language reflects different assumptions about motives in economics and law. Whereas “rational” is a key word in economics, “reasonable” is a key word in law. The difference concerns the socialization of ends. A person can pursue immoral ends rationally, like Don Giovanni pursued women. In contrast, a reasonable person constrains the pursuit of his self-interest out of consideration for others. A reasonable person is socialized – she internalizes community norms. Socialization constrains and directs the response of people to law. Thus the rational person of economics becomes the reasonable person of law by internalizing constraints. Laws create incentives and people ideally respond rationally and reasonably. The need to study reasonableness extends economic analysis in an unfamiliar way. Instead of assuming that that everyone is good or bad, predictive models of law should assume an accurate distribution of socialization across people. Law should deter bad people and inspire reasonable people.

By internalizing a norm, a person commits to doing what is right, even when it requires self-sacrifice. When the facts demand a sacrifice, staying committed to the norm is a strain. Attaching legal sanctions to moral norms reduces the strain of commitment. Thus morality requires people to drive safely and avoid imposing unreasonable risk on others. Some circumstances require a sacrifice for safe driving, such as when the driver is in a big hurry. In these circumstances, the strain might break the moral commitment to safety. However, a police car with a radar gun who enforces the law can tip the balance of reasons in favor of safety.

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
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. Ranked alternatives and limited opportunities define the circumstances of choice in economic theory. These two austere assumptions 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 chooses the highest ranking alternative that is feasible. By restricting individual values to ranked alternatives, economists can deploy the mathematics of maximization. The fundamental insight of the “marginalist revolution” in 19th 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.

A model of rationality is a good beginning to predicting a law’s effects, and a bad ending. The incentive model is a subset of behavioral models. Real people are psychological, not logical. After predicting the legal consequences of rational behavior, the incentive 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

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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.

Experiments in cognitive psychology repeatedly reveal gaps between reality and perception. The framing of a law decisively affects how it is perceived. When a law imposes an obligation backed by a sanction, a gap separates perceived and actual incentives. This article, however, focuses on economics, not psychology, so we mostly discuss the incentives created by accurate perceptions of laws.33

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.34 However, racial attitudes in America have changed massively in favor of equality in recent decades. Economists have contributed little or nothing to understanding these changes. To contribute, economists would need theories of preference change, not the assumption of unchanging preferences.

33 My thanks to Joseph Raz for comments on the difference between the law’s actual and perceived content.
34 I review these theories in Robert Cooter, The Strategic Constitution (Princeton University Press, 2000), Chapter 10, “Civil Rights”.
Preferences change in various ways, notably through deliberation. When people are mistaken about what they really want, deliberation and conversation can change them. 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 change.\textsuperscript{35}

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 theories from motivational psychology as it imported behavioral economics 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 to predict how imprisonment changes preferences, especially the commitment to obeying the law.

\textit{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. Everyone maximizes simultaneously. This characteristic defines a “Nash equilibrium”.\textsuperscript{36} In law and economics, the model of incentives combines constrained utility maximization for individuals and Nash equilibrium for groups.

Law and economics often compares the equilibriums under different legal rules, such as 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 an equilibrium exist? Some phenomena have an

\textsuperscript{35} Note, however, that some irrational beliefs resist change by deliberation. De-biasing may require more than recognizing an irrationality.

\textsuperscript{36} More precisely, this is a “Nash equilibrium”.
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, whereas the theory of business cycles predicts unending movement.

Second, is the equilibrium unique? To illustrate, consider the relationship between crime and the number of police. Given too few police, additional policemen could be hired until the target is reached. Given too many police, retiring policemen could not be replaced until the target is reached. Thus the path to a given number of police could go up or down, depending on the starting point. If crime has a unique equilibrium, the starting point does not matter to the ultimate amount of crime. Conversely, if crime has multiple equilibriums, the starting point matters to the ultimate amount of crime. 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.\(^{37}\)

Third, is the equilibrium stable like a stopped car or unstable like a stopped bicycle balancing on two wheels? Small perturbations cause no change in a stable equilibrium and a change in an unstable equilibrium. Thus a random eruption of street violence will have no enduring effect on crime rates in a stable equilibrium, whereas it may have large enduring effects in an unstable equilibrium. Similarly, sales of houses destabilize the racial balance in some neighborhoods and not others.\(^ {38}\)

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

\(^{37}\) 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.  
\(^{38}\) cite Thomas Schelling.
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? What are its distributional effects?

State officials never publicly advocate wasting money. The fact that one law achieves a goal more efficiently than another is almost always an argument in its favor. Efficiency is a public value that commends a law in any forum. Efficiency is always relevant and seldom dispositive to law and policy. In any case, efficiency does not seem to align with any particular moral or political belief.

In contrast, equality is a value that aligns with particular moral and political philosophies. To remain morally or politically neutral, a scholar must stop after parameterizing distribution – saying how a policy lever will change the distribution of income or wealth, without saying that one distribution is better than another. To illustrate, the abolition of import duties on wheat (“repeal of the corn laws”) was a traumatic event in 19th century English politics. In public debates, economists played an important role by predicting its consequences for various classes of people in England, notably the aristocrats who owned the land where wheat grew, the rural laborers who did the work of growing it, the city workers who bought it, and the industrialist who employed the city workers. Thus economists parameterized the problem by predicting that repealing the duties on wheat would diminish the incomes of aristocrats and increase the incomes of industrialists, which counted as a minus for Tories and a plus for Whigs.

Similarly, an economist might contrast a tax system that maximizes the income of the poorest class of people (maximin) and a tax system that maximizes the income of the richest class of people (maximax). After estimating the parameters, the neutral scholar says nothing about whether one policy objective is better than another.
Some law and economics scholars prefer a stance of technocratic neutrality. They prefer the role of neutral technician and reject the role of advocate. Others enter these debates with gusto, usually advocating equality.

Almost all economists think that their role as scientists includes identifying efficient policies. However, they sometimes dispute about the best definition of efficiency for particular circumstances or the weight that efficiency should receive when making decisions. Similarly, almost all economists think that their role as scientists includes predicting distributive consequences of policies. To illustrate, the abolition of import duties on wheat ("repeal of the corn laws") was a traumatic event in 19th century English politics. In public debates, economists played an important role by predicting its consequences for various classes of people in England, notably the aristocrats who owned the land where wheat grew, the rural laborers who did the work of growing it, the city workers who bought it, and the industrialist who employed the city workers. Thus economists parameterized the problem by predicting that repealing the duties on wheat would diminish the incomes of aristocrats and increase the incomes of industrialists, which counted as a minus for Tories and a plus for Whigs.

A more modern example concerns progressive taxation. A decision maker might favor a tax system that gives all weight to the income of the poorest class of people (maximin), or a decision maker might favor a tax system that gives most weight to the richest class of people (maximax). Once the decision maker chooses the distributional weight, the economic model yields the optimal tax system. Economists who enter this debate with gusto focus on the distributional weights that they prefer, and this commitment affects their judgment about the best economic models for identifying the optimal tax system.

39 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 article, we do not need to distinguish efficiency into types.
41 Emanuel Saez famously ruffled established views in recent years by arguing that the optimal marginal income tax for the richest Americans is roughly 80%.
Like the general public, however, economists disagree about general principles and concrete policies of income distribution. Consensus eludes economists such questions as how much money a country should spend to achieve equality, or whether a fair state should favor a particular distribution of income, or whether equality is inherently valuable.

There is no necessary connection between the economic analysis of law and particular moral or political theories. However, law and economics scholars often make such commitments.

Prolonged study of markets makes economists admire their successes and comprehend their failures. However, the history of economics refutes the claim that the subject is inherently right-wing. Many early 20th century economists were Fabian socialists, Keynesian liberals, financial regulators, environmentalists, or defenders of the welfare state. The membership of the American Law and Economics Association spans the full political spectrum of U.S. politics from right to left.

The logical foundations of law and economics are presumably not skewed to the right any more than the logical foundations of economics. Even so, law and economics is often regarded as conservative and pro-market. This perception comes from its history, not its essential character. At its first meeting, the American Law and Economics Associated recognized four scholars as founders of the subject. Three of them were conservatives with Chicago connections, and one was a left-liberal from Yale. The reputation of law and economics for being

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42 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.

43 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).

44 The effect of such study may explain why few economists identify with the far left. A Berkeley activist once complained to Cooter that he could not find a single economist, even among liberal democrats, who would testify in favor of rent control. He concluded that something is wrong with economists, not with rent control.

conservative probably has more to do with its historical origins at the University of Chicago than anything else.

Almost all economists think that their role as scientists includes identifying efficient policies. However, they sometimes dispute about the best definition of efficiency for particular circumstances\(^\text{46}\) or the weight that efficiency should receive when making decisions.\(^\text{47}\) Similarly, almost all economists think that their role as scientists includes predicting distributive consequences of policies. Like the general public, however, economists disagree about general principles and concrete policies of income distribution. Consensus eludes economists such questions as how much money a country should spend to achieve equality, or whether a fair state should favor a particular distribution of income,\(^\text{48}\) or whether equality is inherently valuable.\(^\text{49}\)

Earlier we explained that ranking alternatives is all modern economists means by “utility” or, more precisely, by “ordinal utility”. Similarly, making the best feasible choice is \(\text{all that modern economists mean by maximizing ordinal utility. As formalized in economics, utility maximization constitutes a general form of practical rationality -- “general” because it applies to many possible ends, “practical” because it concerns achieving ends, and “rational” because it follows the form for consistent pursuit of ends.}

Most economists think that utility maximization characterizes instrumental rationality. Instrumental rationality is for achieving ends, not choosing them. Many economists disbelieve that choosing ends is not rational, like choosing

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coffee instead of tea. Some philosophers agree with these views, but many disagree. Much of philosophy's history is the search for rational and reasonable principles for ethics and politics.

To illustrate the disagreement, some economists believe that all motivation comes from desire. In other words, they believe that choice always satisfies a preference. Furthermore, they believe that utility maximization is the general form of preference satisfaction. In contrast, many philosophers hold that a belief can motivate without a preference. Specifically, the belief that an action is right can motivate a person to do it. According to Kant, respect for the law motivate a truly moral act, not the desire or preference to be good. The Kantian tradition holds that beliefs, not preferences, motivate moral behavior. Consequently, preference satisfaction cannot be the form of rational morality.50

The Kantian alternative to utility maximization baffles most economists. Fortunately, we need not dwell on it, because little or nothing in law and economics turns on it. Like economics, law and economics is compatible with many different ethical philosophies, including classical utilitarianism and Kantianism. The incentive model in law and economics is so general that it can be combined with almost any ethical theory for describing a wide range of behavior.

**The Ideal Is Unreal**

Assuming that people have pure motives is empirically false, whereas assuming mixed motives is empirically true. Similarly, assuming an equilibrium in society is empirically false, and assuming social change is empirically true. In reality, psychological individuals interact in evolving patterns, whereas in most economic models rational individuals interact in equilibrium. Why do economists construct models on false assumptions instead of true ones?

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Economic models often assume a pure motive in order to follow where it leads. Acting from pure motives stays on course and leads to remote effects. Simple assumptions about behavior enable theorists to follow long chains of reasoning to remote effects. As long as many people act on a particular motive much of the time, a pure model can predict remote effects with statistical significance. The main reason to simplify assumptions about the complicated ends of people is to explain and predict remote effects of their behavior. In 1844 this fact was recognized and explained brilliantly by Mill in his defense of economic methodology. \(^51\) With mixed motives, in contrast, a shift in the ascendancy of one motive over another deflects behavior and actions change their course. More complex and realistic assumptions about the ends of people make all causal inferences indeterminate except the most immediate.

Thus the model of perfect competition clarifies the effect of competition on markets. After analyzing perfect competition, the researcher can consider how imperfections modify the predictions. Similarly, to compare strict liability and negligence, economic models assume separable utility functions and contrast the equilibrium caused by the two rules. After analyzing purely rational motives, the researcher can consider how diminished rationality modifies the predictions.

Perfect competition and models of tort rule fits Max Weber’s description of an “ideal type”. They are ideal for analysis because simplicity is better for theory than realism. \(^52\) Pure motives and stable equilibriums make good models. (In contrast, mixed motives and unstable interactions make good novels.) Simplicity dominates realism in the first stage of model-building. Later the simple model must be adjusted for reality.

Mathematical models with stylized assumption are much the same ones used in all fields of applied economics -- international trade, industrial organization, economic development, etc. In all fields, economic methods raise


questions about stylized assumptions, the scientific status of results, and the
difference between normative and positive claims. As economists urge
pioneering quantitative methods on others, some react like native peoples
responding to imperialism. The debate is lively. Many criticisms made against
economics in general apply specifically to law and economics. The philosophy of
economics debates these criticisms. Instead of rehashing these debates, we
will focus on methodological disputes distinctive to law and economics.

As with stylized assumptions, law and economics relies heavily on
statistical analysis of data, and this fact provokes controversy. As with
mathematical methods, statistical methods are debated in the philosophy of
economics. Many of these arguments resonate in controversies over law and
economics. Instead of rehashing these arguments, this article focuses on
distinctive problems of law and economics. I will not go into the critique of
quantitative research in law, except to mention a cause of biased thinking about it.

Most people reason from personal experience about causes in social life.
However, causal inference in social science mostly depends on representative
experience. Only data can say whose experience is representative.
Consequently, data is central to finding the effects of laws— a fact that many
lawyers resist, because of their habits of mind. Lawyers mostly say what laws
require people to do. In routine cases, lawyers do not need data to say what the
law is. So lawyers mostly reason qualitatively, not quantitatively.

Unfortunately, they bring this habit of mind to hard cases. In hard cases
the right interpretation often turns on its effects, and predicting effects usually
requires data. Lawyers who find data irrelevant in routine cases falsely assume
that it is irrelevant in hard cases. Economic modeling is a modern technique
involving mathematics and statistics without parallel in traditional law, so few

[53] The most prominent contemporary writer on the philosophy of economics is Daniel Hausman.
See Daniel M. Hausman, “Philosophy of Economics,” in Stanford Encyclopedia of Philosophy, 2003; also see Daniel M. Hausman and Michael S. McPherson, “Economics, Rationality, and
Economy; and on the Method of Investigation Proper to It,” in Essays on Some Unsettled
Questions of Political Economy (London,: J. W. Parker, 1844).
lawyers understand its character. When presented with statistics, they bristle. Many lawyers are troubled by generalizations from imperfect data and untroubled by generalizations from no data at all.

The lawyerly bias towards the qualitative corresponds to a bias towards the quantitative among economics. In making and interpreting law, the intuitive approach of lawyers is often unavoidable. Many legal decisions have to be made before the data is in. Everyone knows this. However, economists often overlook the fact that the data cannot be “in” for many legal consequences. In competition, smart people continually change strategies to stay ahead of other smart people. As soon as behavior becomes data, people falsify it by changing what they are doing. With strategic behavior, data that describes the past cannot predict the future. In technical terms, data describes the disequilibrium path that legal institutions take to somewhere else.

For example, to foresee the financial meltdown of 2009, scholars needed to read the contracts on financial instruments involving mortgages. These contracts involved innovative financial instruments that created a bubble of speculation, with socially disastrous consequences when it burst. At the time, available data did not reveal the terms in these contracts. Consequently, the cause of the crisis was not reduced to statistics until after it occurred. No one who studied the statistics alone could have foreseen the disaster, which is why so few economists predicted the meltdown.54

In general, life is a game of strategy in which people constantly innovate to advance their ends. As people innovate, social life mutates, and the collection of statistics lags behind the mutations. This is a fundamental justification for the qualitative research on institutions that many lawyers do, as opposed to the quantitative research that most economists do.

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54 The few investors who read the contracts and foresaw the meltdown made a fortune by shorting the stock of financial institutions. If enough investors had shorted the stock soon enough, there would have been a “soft landing” in financial stocks, not a meltdown.
Cause Is Not Enough

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, these claims were mostly exaggerated and philosophically naive. The challenge to which we now turn is restating these claims with greater accuracy and sophistication.

Some people mistakenly think that cause is all there is to law and economics. Perhaps they think that science is about causes and nothing else, so the cause enterprise encompasses everything that scientific economics 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, the question “What is the law of x?” is answered by the effect of law x on judges.

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 the 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 doing it.

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. Thus suppose that the hotel’s concierge gives a guest a map with directions to a nearby restaurant. The directions are not a prediction of the path that the guest will take. However, if you know that the guest is following the map, you can predict his path. The path is predictable from the map because the latter causes the former. Like a map, judges and other people can take laws as a guide, which is what legal theorists
call the “internal viewpoint”. When people internalize laws, the laws predict what people will do. When internalized, laws cause people to obey them.

While judges ideally decide cases by facts and law, they are human and they often fall short of the ideal. In 20th century American legal theory, “legal realists” sought the psychological causes of judicial decisions. In 1930 Jerome Frank is credited with saying, "Justice is what the judge ate for breakfast." 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.

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 professional football team won, relative to the day after their team lost. They found similar effects of bad weather.

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56 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).
57 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.
58 “…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
According to these studies, breakfast, football, and weather affect judicial decisions. According to judicial ethics, they ought not to. These are taboo causes. In existing studies, taboo causes have small but statistically significant affects. If data were available on, say, a judge’s quarrels with her spouse, her child’s failing calculus at school, or her car having a flat tire on the expressway, taboo causes might have large effects in total. If complete data on taboo causes could explain most judicial decisions by, 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 taboo 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 taboo causes, behavioral studies find that political philosophy influences judicial decisions. According to statistical studies on the USA Supreme Court and Circuit Courts, the political orientation of judges has a large effect on their decisions. Specifically, the President usually appoints Supreme Court justices whose left-right political orientation 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 operates through political philosophy, not political pressure.

Most people think that law should shield judges from politics, but few 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. However, judicial

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federal sentencing guidelines.” Daniel L. Chen & Holger Spamann, *This Morning’s Breakfast, Last Night’s Game: Detecting Extraneous Influences on Judging, in Berkeley Law Faculty Workshop* (14 4-8), quoting from the abstract.

59 cite Quinn, etc.

60 Judicial ethics and structural features, such as life-time service of federal judges, effectively prevents the President from pressuring federal judges about a case.
ethics are unclear about the way in which political philosophy should affect judicial decisions. The connection between judicial decisions and political philosophy is controversial like the political philosophies themselves.

As explained, behavioral theories of judging search for statistical regularities. All statistical regularities in behavior, including judicial behavior, can be studied by methods as found in economics, biology, physics, and chemistry. These methods allow scientists to discover the causes of regularities. However, influences like breakfast and the weather, which fit the model of causation in biological and natural sciences, are forbidden by judicial ethics. Legal practice and judicial ethics prescribe permitted reasons for deciding cases, which we call the “normative causes” of laws. Prescribing normative causes is part of the law that guides judges. The proscription of causes, however, excludes them from the law. 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.

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.

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. It suggests where to look for legal influences.

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61 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
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. Political philosophy, which is not clearly prescribed or proscribed, stands in between natural and normative causes of judicial decisions. 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 taboo 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 reception of law and economics in the 1970s and 1980s. Instead, controversy swirled around the claim that laws are really about efficiency.\(^62\)

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.” In American classrooms, the 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, The Effect of Judicial Ideology on Intellectual Property Cases, (2007).

efficiency principle was widely discussed and narrowly endorsed. Why did so many American law professors engage in claims that they rejected? 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 stand up in class and answer the claim that a specific line of court decisions tends towards efficiency. The efficiency principle gives a definite legal interpretation when the relevant facts are known, or it identifies the decisive facts to be proved in order to interpret a law. The efficiency principle provided a foil for its many critics and a guide for its few believers.

Is the efficiency principle correct as a matter of law? 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. 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.

Unlike the evolutionary explanation, the second type of explanation of the efficiency principle 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.

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63 Unpublished writing by Jody Kraus explains in detail the place of the efficiency algorithm in the history of American law school teaching.

64 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.

65 For a review, see chapter 11 of Cooter and Ulen, Law and Economics (6th edition).
According to this view, efficiency pervades the law implicitly. Later we argue that this claim is false. The incentive model pervades the law, not the efficiency principle.

**Models and Meaning**

Economic modeling is a modern technique involving mathematics and statistics without parallel in traditional law. Few lawyers understand its character. Similarly, interpreting a law requires legal reasoning, which is an ancient practice without parallel in economics. Few economists understand its character. In the content enterprise, lawyers struggle to interpret models, and economists struggle to interpret laws.

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. From its beginnings, law and economics scholars defended their subject by arguing that the law ought to be efficient. As discussed above, most people believe that efficiency is one criterion for evaluating the law. Proponents of the efficiency principle believe that it is the ultimate criterion. They identified the efficiency principle with the justification of law and economics. Unfortunately, the proponents of the efficiency principle offered a philosophically naive justification of it. Subsequently, critics mistakenly took the flawed justification of the efficiency principle as proof of the ethical bankruptcy of law and economics.

Who is more to blame, the law and economics scholars for making a bad justification of their enterprise, or the philosophers and lawyers for concluding that no good justification is possible? Philosophers should be patient with the philosophical errors of social scientists, just as social scientists should be patient with the scientific errors of philosophers. Law and economics scholars are not the

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66 The most philosophically sophisticated defense of such a position is Kraus…

67 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.
first social scientists to philosophize badly, and the critics of law and economics are the first scholars to condemn a social science without mastering it. Over thirty years later, scholars have failed to produce what this article attempts to supply: a defense of the content enterprise in law and economics.

A 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. Thus a rule is an “exclusionary reason” – an injunction to act on specific reasons without considering other reasons. Decision makers bound by the rule need only consider whether the case at issue falls under its circumstances. When applying a rule, most 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 (“secondary rules”). However, rules are not the only legal resources for interpreting laws. Given gaps in explicit

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68 Perhaps the most famous article on the philosophy of law and economics is Milton Friedman’s “Article in Positive Economics.” It offers a strong version of legal positivism without citing any philosophical paper on the subject. See Milton Friedman, Articles in Positive Economics (1953). This article influenced economists, but philosophers of economics rejected it as naïve or simply bypassed it. See Frank Hahn & Martin Hollis, Philosophy and Economic Theory (1979); Mark Blaug, The Methodology of Economics or How Economists Explain (1st ed 1980; 2nd ed. 1992); Ernest Nagel, Assumptions in Economic Theory, American Economic Review 211–219 (1963); Daniel M. Hausman & Michael S. McPherson, 2nd Edition Economic Analysis, Moral Philosophy, and Public Policy (2006); Julian Reiss, Philosophy of Economics: A Contemporary Introduction (2013).

69 For an analysis of the parts of a rule, including the “norm circumstances”, see Georg Henrik von Wright, Norm and Action (1963).

70 Joseph Raz, Practical Reason and Norms (1975). His concept of an “exclusionary reason” is central to his theory of legal rules.

rules, the authorities may look to other resources of interpretation, such as the purposes behind the rule. Thus the purpose of the park regulation discussed above may be to regulate driving, not exhibiting. Or the authorities may look to 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.\(^2\)

The preceding discussion concerns cases that ambiguity makes hard. In other hard cases, the rule clearly applies but it produces otiose results. To avoid otiose results, legal systems allow exceptions to rules. 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.\(^3\) In general, laws pose hard cases when a rule’s application is ambiguous or otiose.

To decide a case, a judge should apply the rule whose conditions are satisfied by the facts. In easy cases the rules are self-interpreting – only an understanding of language is required. In hard legal cases, interpretation by the ordinary meaning of a law’s words yields ambiguous or otiose results, so the judge must draw on legal resources that include other rules, principles, purposes, or equity. These resources identify consequences relevant to the disputed interpretations. The central task of the content enterprise is to predict the consequences of a law that affect its legally correct interpretation. Arguments about the consequences refer to incentives created by alternative interpretations of the law. The incentive model is a theoretical abstraction from arguments that pervade 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. The fundamental principle of the content enterprise is the incentive

\(^2\) Dworkin famously used this example to show that law includes principles, not just rules. *Ronald Dworkin, 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.

\(^3\) 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.
principle of interpretation: a law’s correct interpretation in hard cases depends on its incentives as measured against legal rules, principles, and purposes. More specifically, in the usual case a law’s correct interpretation creates the best incentives for fulfilling its actual purposes.

Law and economics scholars mostly predict the effects of alternative laws, as Figure 1 represents by the cause enterprise in the pyramid’s base. Explaining what a law says people should do is not the same as explaining the consequences of doing what it says. In law, a gap separates obligations and consequences. The peak of the pyramid in Figure 1 depicts the content enterprise. The content enterprise is based on the incentive principle of interpretation. Applying the incentive principle requires identify the consequences relevant to a law’s correct interpretation and then applying the incentive model to predict the consequences of alternative interpretations. The content enterprise focuses the cause enterprise on the actual purposes of laws. Purposes and consequences feed back to reach a reflective equilibrium.

Normative Economics and Interpretation

Some predictions in economics concern coal burned, cars produced, or potatoes eaten. These predictions describe without evaluating. With respect to evaluation, they are neutral. They do not commend a course of action until connected to values such as energy, pollution, transportation, and nutrition. Other predictions in economics directly concern values, especially efficiency, welfare, and equality. The prediction that an action will increase efficiency, welfare, or equality is usually part of recommending it. These predictions can be described as “normative”. In between neutral and normative predictions lie economic variables with some evaluative connotations, such as inflation, balance of payments, or employment.

Policy advocacy is an activity of many economists, like prescribing medicine is an activity of many doctors. For economists identifying a policy that increases efficiency, welfare, or equality is usually part of prescribing it. Similarly, for doctors identifying a medicine to cure a disease, improve health, or reduce
pain is usually part of prescribing it. Efficiency, welfare, and equality are central to economics, like health, longevity, and painlessness are central to medicine.

In economics and medicine, a narrow gap separates normative predictions and prescriptions. In physics, however, “electron”, “molecule”, “quark”, “gravity”, and the like lack evaluative connotations. The gap between predictions and prescriptions is so wide that physics can be described as a “value free” science. In the 20th century, many economists – but not all -- were impressed with physics as the model for all science. In their view, science must be value-free because it concerns what is, not what ought to be, and you cannot derive an “ought” from an “is”. They thought that economic science is, or should be, value-free, whereas mixing descriptions and prescriptions retards its development. According to this view, economic science stops where neutral predictions end. After making neutral predictions, nothing remains for economists to do in their role as scientists. An extreme example of this view is Milton Friedman’s influential essay in positive economics, which exaggerates older arguments in the philosophy of science without citing them.  

Following this reasoning, economists divided into two branches. “Positive economics” is the scientific part that deals with what is. Predictions in positive economics concern neutral variables. “Normative economics” is the non-scientific part that deals with what ought to be. Predictions in normative economics concern normative variables. In law and economics however, the distinction between positive and normative, or between neutral and normative predictions, is overshadowed. It is less important in law and economics than the distinction between cause and content. Thus Figure 1 groups positive and normative effects together in the cause enterprise at the pyramid’s base, and the figure places the content enterprise at the pyramid’s apex. The cause enterprise is an application of economics to law, whereas the content enterprise is a combination of law and

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74 Milton Friedman, Articles in Positive Economics (Chicago: University of Chicago Press, 1953). CITE EXACT ESSAY ON METHODOLOGY IN THIS COLLECTION AND CHECK THAT IT HAS NO CITES TO PHILOSOPHERS. The argument is a form of logical positivism, which philosophers of science debated for decades. Also see Uskali Maki, ed., The Methodology of Positive Economics: Reflections on the Milton Friedman Legacy (Cambridge University Press, 2009).
economics. The content enterprise does not belong to the positive or normative branches of economics because it is not a form of applied economics.

These categories are confusing, especially to scholars who come to law from economics. To diminish confusion, we will explain how the law’s content relates to normative predictions. The prediction that a possible law increases efficiency, welfare, or equality is a reason to favor it, and the opposite prediction is a reason to disfavor it. Thus normative economics provides reasons for and against possible laws.

Thus legislation mostly comes from political deals. The political deals that attract sufficient support for enactment seldom have the best consequences in terms of efficiency, welfare, and distribution. In addition, in between legal obligations and good consequences stands litigation. Judges with political independence develop methods of interpretation that draw on various legal rules, purposes, principles, values, and facts. Often the best legal interpretation advances the law’s purposes the most.

Legal scholars and officials often disagree about the correct interpretation of laws. One source of disagreement concerns different understandings of the legal resources for interpretation. The incentive model is not tied to a particular ethical or political philosophy, not to a particular philosophy of law. It is philosophically neutral because it is social science. Scholars with different political philosophies often disagree about a law’s interpretation. The incentive model contributes to these debates by predicting the effects of disputed interpretations. Since the incentive model is not committed to a particular philosophy, it provides a framework for discussions among proponents of different philosophies.

Interpreting a law requires engaging its actual purposes, not its ideal purposes. In litigation, the fact that one interpretation results in less waste, higher welfare, and more equality is a reason to favor it, but not usually a decisive reason. Laws have many other purposes that do not reduce to the big three of normative economics.

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75 As explained in the introduction, no reasonable philosophy of law can entirely ignore consequences, so every reasonable philosophy must have a place for the incentive model, even though the model of incentives has a more prominent place in consequentialist philosophies than non-consequentialist philosophies of law. Thanks go to Hanoch Dagan for discussing this point with me.
Efficiency Principle

Where does the efficiency principle fit? Sometime it is an explicit part of a rule. Thus the “Water Resources Act” required federal projects to proceed by comparing the costs and benefits. 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 can be present implicitly, entering through higher order legal considerations.

To explain implicit efficiency, we turn to the account of implicit utility in classical utilitarianism. “Maximize utility” is the supreme injunction of classical utilitarianism. Most people lack the time and capacity to apply the supreme injunction directly to their activities. When making decisions, they need rules to guide them. Consequently, most people should apply legal rules in their activities. In the utilitarian vision of law, the supreme injunction applies to making rules. Legal rules ought to maximize utility, and they usually do, although imperfectly. Legal utilitarianism is rule utilitarianism, which asserts that law-makers should follow the supreme injunction and most people should follow the rules.

To decide a case, a judge should apply the rule whose conditions are satisfied by its facts. In easy cases the rules are self-interpreting – only an understanding of language is required. In hard legal cases, interpretation by the ordinary meaning of a law’s words yields ambiguous or otiose results, so the judge must draw on other legal resources for interpretation – secondary rules, principles, and purposes. “Maximize utility” is the supreme injunction of utilitarianism. The utilitarian judge believes that the supreme injunction is the highest principle of law that captures its most fundamental purpose.

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77 Utilitarianism, which has a reforming spirit, leaves ample scope for critiquing and improving the law by showing how it can increase utility even more.
Consequently, the utilitarian judge may apply the supreme injunction directly to decide hard cases.

Applied to law, welfare economics parallels utilitarianism. “Maximize welfare” is the supreme injunction of welfare economics. Most people lack the time and capacity to maximize welfare directly. Computational limits bound individual rationality. Consequently, the law should make rules that maximize welfare. Instead of maximizing welfare directly, individuals should obey rules. Their task is to decide which rule applies in the circumstances of acting. The welfare principle applies to rule making, not to conduct falling under rules. In hard cases, however, the explicit rules yield ambiguous or otiose instructions. The welfarist judge believes that the supreme injunction of welfare economics is the highest principle of law that captures its most fundamental purpose. Consequently, the welfarist judge may apply it to decide hard cases.

We have explained that welfarism parallels utilitarianism in many respects. Consequently, the critiques of utilitarianism also apply to welfarism. In recent years, much of the debate in ethics and political philosophy pits utilitarianism against its alternatives. Classical utilitarianism and welfarism recognize individual rights when doing so maximizes utility or welfare, but not otherwise. Thus individual rights are contingent on aggregate effects. According to a fundamental line of criticism, individual rights deserve stronger protection than aggregate effects afford them. To use the memorable phrase of Rawls, by aggregating individual utility or welfare, utilitarianism and welfare economics do not take distinctions among persons seriously.

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78 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).

79 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.

80 “About classical utilitarianism, he [Rawls] famously complains that it ‘adopt[s] for society as a whole the principle of choice for one man.’ In so doing, he suggests, it fails to
In this respect, classical utilitarianism and welfare economics are the same. However, they differ significantly in other ways. This article 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 law should maximize social welfare. In this regard, many economists contradict themselves and disagree with each other. However, we will not go down this trampled path of controversy.  

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 utilitarianism characterizes 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. However, classical utilitarianism has no general theory of the pursuit of utility by individuals maximizes its sum over persons. 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. Welfare economics solves this problem by an additional mathematical concept. While classical utilitarianism relies on the one mathematical concept of maximization, welfare economics relies on two: maximization and equilibrium.


81 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).
Economists ask whether interactions among people 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 welfarism. However, maximizing welfare is only 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.

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 subsequently 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

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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 such a distinction, economists have the advantage of regularly 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.  

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. Balancing them is an accepted principle of interpretation. When the 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**

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?  

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84 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.

85 The example of negligence per se is from ROBERT D. COOTER & ARIEL PORAT, *GETTING INCENTIVES RIGHT: IMPROVING TORTS, CONTRACTS, AND RESTITUTION* (2014), Chapter 3.
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.

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 social efficiency, wider liability fulfills its purpose more completely than narrower liability.86

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. Formulate their arguments. Understanding the connection between these two possible purposes of the law and alternative interpretations will help litigators to formulate their arguments. 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

86 This is an application of the Hand Rule standard of negligence, which I discuss later in detail.
2. taxes v. penalties in Obama care cases

**Conclusion: The Mortar Between the Stones in Law’s Cathedral**

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. Normative predictions especially concern efficiency and distribution. Instead of incentives, the law and economics of interpretation usually focuses on efficiency. Efficiency is an indecisive factor in interpreting most laws, and a decisive factor in interpreting some laws like the Hand Rule. In contrast, incentives are a decisive factor in interpreting most shard cases.

Interpreting a law in a hard case often focuses on disputes about its purpose or purposes. The best interpretation is often the one that most fulfills its actual purpose. Incentives have a central role in predicting an interpretation’s consequences with respect to a law’s purposes. The larger contribution of economics to legal interpretation is the incentive model, not the efficiency principle.

In a famous article, Calabresi and Melamed described economic analysis as one view of law’s cathedral. Given that incentives pervade law, a better metaphor is the mortar between the stones. Reasoning about incentives pervades the law. The economic model of incentives is an abstraction of this reasoning. In law, incentives are not everything but they are everywhere.

People who realized that God was not on Mount Olympus or in the sky naturally wondered where He is. One answer is that God is everywhere – his presence in

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88 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.”
“immanent” in everything. The content enterprise argues that the model of incentives is “immanent” in law -- pervasive even when unnoticed.

If economists and other social scientists aspire to a central place in legal education and scholarship, they must develop the content enterprise and produce theories of laws, 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 lawyers and judges regard as central to legal interpretation. The content enterprise must rest on the authority of law, not the appeal of welfare economics.

Law and economics is a scholarly community on a voyage of discovery, not a captive 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. As existentialists observed, existence precedes essence. 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 social norms in economic development. Daniel Kahenman, a psychologist, received the Nobel prize in 2002.