Calabresi and the Intellectual History of Law and Economics

Keith N. Hylton

Boston University School of Law

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This Essay traces the vein of thought represented by Calabresi's The Costs of Accidents, both backward in time to examine its sources, and forward to its impact on current scholarship. I focus on three broad topics: positive versus normative law and economics, positivist versus anti-positivist thinking in law, and the assumption of rationality in law and economics.

No lecture on the history of thought in law and economics would be complete without some discussion of Guido Calabresi's The Costs of Accidents. The book has had an enormous influence on the field. It would not be an exaggeration to say that modern law and economics, as we see it practiced today, had its start with Gary Becker's article on crime and Guido Calabresi's book, both products of the late 1960s.

In this Essay I want to identify and trace the vein of thought represented by Calabresi's book, both backward in time to examine its sources, and forward to its impact on current scholarship. I will focus on three broad topics: positive versus normative work in law and economics; positivist versus anti-positivist thinking in law, and especially law and economics; and, lastly, the assumption of rationality in the economic analysis of law. Before tackling these topics, I will start with an effort to locate Calabresi's book within the history of economic analysis of law.

* Professor of Law and Paul J. Liacos Scholar in Law, Boston University School of Law. Prepared for Calabresi's The Costs of Accidents: A Generation of Impact on Law and Scholarship, a Symposium honoring Guido Calabresi, at the University of Maryland School of Law, April 23 & 24, 2004. I thank Bob Bone, Peter Carstensen, Steve Medema, Andrei Shleifer, and David Walker for helpful comments.

I. A Bird's-Eye View of the Intellectual History of Law and Economics

Law and economics views law from an instrumentalist perspective. That is a perspective that seeks to determine the function of law and the manner in which it solves the social problems thrown before it. Bentham is the most obvious source that comes to mind for this approach. Bentham's core contribution to legal theory was a rejection of the view that law should be understood as emanating from or growing out of some set of a priori fundamental rights. Blackstone had led students to think of the law in this way, and Bentham, as one of those students, seemed to have staked his career on overturning this view. He succeeded; though Blackstone was a more complicated thinker than Bentham's early caricature suggests.

Blackstone himself incorporated instrumentalist reasoning in parts of his Commentaries. His volume on criminal law both refers to and shows the influence of Beccaria's utilitarian writing on punishment. Taking the sum of his views as a theorist, Blackstone presents a muddled picture. He comes across as utilitarian in his treatment of criminal law, and a promoter of nonconsequentialist, fundamental-rights theory in other parts of the Commentaries, especially when he discusses the most basic protections provided by the common law—of life, liberty, and property.

As I have suggested, the instrumentalist or functionalist approach to law typically identified with Bentham makes some appearances in the theoretical literature that predates Bentham. The case of Beccaria I have already mentioned. Beccaria's theory that punishment should be set at a level that wipes out the expected gains of the criminal actor, and not above that level, formed the basis of his influential critique of criminal law enforcement published in 1764. Beccaria's

6. See 4 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 14-19 (photo. reprint 1979) (1769) (discussing the deterrence value of criminal punishment).
7. See, e.g., 4 id. at 17 (describing Beccaria's "ingenious" writing on punishment).
8. See, e.g., 1 BLACKSTONE, supra note 6, at 117-41 (discussing the "absolute rights of individuals"). Another reason Blackstone's perspective as a theorist is unclear is that he shows influences from Hobbes in parts of his discussion. His perspective may be closer to utilitarian than is commonly recognized.
critique served as the chief source of theoretical insights for Blackstone's treatment of criminal law, and also likely served as the chief inspiration for Bentham's work on criminal law. While Blackstone provided a negative inspiration for Bentham, a figure that Bentham would caricature, ridicule, and hold up as an example of all that is wrong with legal theory, Beccaria provided a positive inspiration.

Almost at the same time as Beccaria was writing, Adam Smith gave lectures on jurisprudence to a class at Glasgow University. Smith's lectures, seldom discussed in the law and economics literature, provide really the first sustained treatment of law from an economic perspective. Smith provides especially detailed discussions of property and criminal law. His lectures on criminal law, anticipating Becker, argue that criminal penalties tend to be inversely related to the probability of detection. Smith's work has never received the attention showered on Bentham, which I find puzzling.

Immediately before Beccaria and Smith, one finds Hume's discussion of property and norms, which treats property law as the result of an implicit contract that develops over time within a society. While Hume influenced Smith, he appears not to have influenced Bentham. Before Hume, one finds Hobbes's discussion of the common law. Hobbes argued that the king should have a strong hand in interpreting the law, and, more importantly, suggested that the law's purpose is to maximize social welfare.

Although Bentham is generally viewed as the source of instrumentalism in legal theory, I think the starting point is Hobbes. For at the core of instrumentalism is a notion that the law's purpose should be understood from the perspective of what an economist would call a social planner or what a philosopher might call a Platonic philosopher-king. Hobbes is probably the fundamental source for the argument that law should not be understood or justified only on its own terms, or, equivalently, rejecting the notion that law can only be under-

11. See generally Bentham, A Comment on the Commentaries, supra note 4. For an illuminating discussion of Bentham and Blackstone, see Posner, Economics of Justice, supra note 5, at 13-47.
13. See, e.g., id. at 13-86 (on property); 105-40 (on criminal law).
14. E.g., id. at 129.
stood or justified by a lawyer steeped in the intricacies of legal opinions and terminology. Law and economics practitioners make this argument frequently today; the first wave of legal realists, including Holmes, made the argument several generations ago. Bentham preceded the realists by roughly one hundred years. All of them are partly in debt to Hobbes.

I am not suggesting that Bentham is not the key or most important source for instrumentalism. He clearly is, especially for the law and economics school. However, being the most important source is not the same thing as being the starting point. The starting point for instrumentalism in law is the notion of detachment: that the law should be justifiable to a detached spectator who is not committed to maintaining some set of perceived logical connections among various legal doctrines. Once that notion is accepted, we have the groundwork set for all instrumentalist theories of law. And note that Kantian arguments are in essence instrumentalist, as are utilitarian arguments.

Now let’s move back up to Bentham, in whose work we see a purposive and goal-oriented marriage of instrumentalism and utilitarianism, and consider the development of law and economics from this point. After Bentham, roughly one hundred years passed before Holmes wrote The Common Law, presenting a largely utilitarian justification for the law. But there are big differences from Bentham’s approach. Holmes backs away from the detachment of Hobbes and Bentham: he wants us to understand the law and its internal logic. Holmes backs away from the role of independent critic or censor. He sets out to justify the law as it is.

Following Holmes, we find another long dry spell up to the roughly simultaneous publications of Calabresi’s Costs and Becker’s article on crime. There are interesting similarities between the two works. Both Becker and Calabresi step comfortably into the role of

17. See O.W. Holmes, The Path of the Law, 10 Harv. L. Rev. 457 (1897).
20. I refer to this period as a dry spell only because there does not appear to be anything as ambitious in scope as we see at the endpoints (Holmes on one end, Calabresi on the other). However, there were novel and important contributions to law and economics over this period. The best known is that of Ronald Coase. See R.H. Coase, The Problem of Social Cost, 3 J.L. & Econ. 1 (1960) (setting out the “Coase Theorem,” which holds that if transaction costs are low, individuals will bargain their way to an efficient arrangement, whatever the liability rule). While the Coase Theorem has become perhaps the key starting point for any economic analysis of law, I have not focused on it here because it is not associated with a broad school of thought in law and economics. The best known are those of Aaron Director, probably the founder of Chicago School antitrust analysis, and Ward
detachment, following the tradition of Hobbes and Bentham. Neither thinks it is important for his reader to understand the law from the perspective of a specialist in the common law. This is obviously natural for Becker, since he had no training as a lawyer. For Calabresi, Hobbesian detachment is a bit tougher to explain. After all, this is an individual who had distinguished himself as one of the best-trained lawyers of his generation. Yet, there we find him in Costs, proceeding as if the law were of secondary importance at best.

Indeed, one could describe the personality reflected in Calabresi's Costs as one of hyper-detachment. The book describes itself as a "legal and economic analysis,"21 which it most assuredly is. But Calabresi takes a position of detachment from both the law and the economics. He prefaces his economic remarks in several parts of the book with comments such as "an economist would say,"22 to remind us that he does not necessarily agree with them. He tells us early on that economics is good for solving certain problems, but not all problems, especially those involving basic questions of identity or morality.23 In spite of this, he conducts an economic analysis that appears to be on the highest level of sophistication that one could imagine for the topic at hand. And as Frank Michelman noted in his review, Calabresi shows a far greater awareness of the machinery of law and government, and the limits of human rationality, than even the best economists would have brought to the task.24

Calabresi's book and Becker's article are thoroughly in the tradition of Bentham. Like Bentham, both Calabresi and Becker apply utilitarianism in an effort to promote sweeping reforms of vast areas of the law. In Calabresi's case, his ultimate goal is to replace the "fault system" (or negligence regime) of tort law with a "mixed system" that relies heavily on strict liability for injury-causing activities.25 Becker, on the other hand, aims to change the goal of criminal punishment from completely deterring criminal acts to internalizing costs to offenders.26 Both reforms are so ambitious that neither author seriously could have expected to see them implemented within his lifetime.

Bowman. The institutional and labor economics of John R. Commons is another important contribution.


22. See, e.g., id. at 72 (discussing optimal pricing based on social cost).

23. Id. at 18-20.


Also like Bentham, the reforms suggested by Calabresi and Becker would have the effect of undermining established law in their chosen research areas, to the point of making it irrelevant. Calabresi's approach is most clearly similar to Bentham's, as his reforms would have required a shift from the negligence rule and all of the complicated law that has grown out of it. Calabresi's approach would have replaced the core of tort doctrine with simpler, more direct liability rules that, on a statistical basis, would have loaded liability on the most appropriate actors (the cheapest cost avoiders). Becker's approach would have resulted in a Bentham-like revolution in an indirect manner. By changing the system of penalties to ones based on cost-internalization, it would no longer be necessary under Becker's regime to know whether you had violated the law. If we could calculate the external costs of your actions accurately, we could impose those costs on you, and the law, whatever it says, would eventually whither away—like law under Marxism.

The next development following Calabresi and Becker was the publication of the first edition of Richard Posner's *Economic Analysis of Law.* Just as Holmes bought into utilitarianism but rejected the reform efforts of Bentham, Posner bought into economic analysis and rejected the reform efforts of Calabresi and Becker. Like Holmes, Posner defended the law as it is. However, Posner is much more explicit in his adoption of economic theory than Holmes. Posner claims that the common law aims to maximize wealth. Wealth maximization is distinguishable from utilitarianism, largely in the sense that wealth maximization makes no effort to take into account differences in individual preferences, except in so far as those differences are expressed in the market through prices. Wealth maximization, as an objective, yields a result that is probably identical to that of Adam Smith's impartial spectator, who also made no effort to take into account differences in individual preferences when he decided whether some allocation was appropriate. Holmes, on the other hand, was writing at a stage when there was far less scientific capital to use in his own work, and speaking to a somewhat different audience. In addition, he appears to be more of a utilitarian, and more Hobbesian, in

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27. See *The Costs of Accidents,* supra note 1, at 312.
29. E.g., id. at 98-102.
30. See, e.g., Smith, *supra* note 12, at 17-18 (describing the perspective of the impartial spectator).
the sense that he believes that laws, real laws, must be "living and armed," or backed up by the preferences of a forceful group. 

Since the purpose of this Essay is to examine the contributions of Calabresi's book to law and economics, I will not continue to go forward tracing the general development of law and economics. I have said enough here in my effort to locate Calabresi's work within the broad current of thought in law and economics. I will turn now to consider some of the tensions between Calabresi's approach and alternatives that have developed along the way.

II. Positive versus Normative Law and Economics

Students of economics are familiar with the distinction between positive economics and normative economics. Positive economics seeks merely to explain institutions or conventions that exist. Normative economics seeks to tell us how institutions or conventions should be designed. The same distinction applies to law and economics. Positive law and economics seeks to explain the law, or the legal system, as it is. Normative law and economics seeks to describe how the law or the legal system should be.

Calabresi's Costs, with its criticism of the negligence regime and argument that it should be replaced by simpler rules based on strict liability, is clearly in the normative category. Calabresi's approach puts him firmly in the camp of Bentham, who wanted to scrap the common law and replace it with a simpler set of rules that would be easier to follow and lead to more predictable outcomes. Indeed, normative law and economics begins more or less with Bentham, and then has its next most significant advance in Calabresi's Costs. Probably the majority of modern articles on law and economics are normative analyses, especially among the pieces based on mathematical modeling.

Positive law and economics, on the other hand, arguably begins with Adam Smith's lectures, though they appear to have had no clear influence on anyone. Although one can find instances in which scholars have rediscovered points discussed in Smith—e.g., the notion that

31. Hobbes, supra note 16, at 59 (arguing that real laws are "living and armed," and therefore distinguishable from the laws of reason promoted by the philosopher).

32. E.g., Holmes, supra note 17, at 464-66.

33. See, e.g., Gerald J. Postema, Bentham and the Common Law Tradition 147-336 (1986) (exploring Bentham's critique of the common law and his proposal to replace it).

an efficient system would impose higher penalties when the probability of detection is low; or the notion, stressed by Holmes, that the criminal law has its roots in vengeance—\textsuperscript{35}—it is quite difficult to find citations to Smith's lectures. The next step along the positive path, roughly one hundred years after Smith, is Holmes's *The Common Law*. That is followed, again by another one hundred years, by Posner's *Economic Analysis of Law*. Today, positive economic analysis of law continues to be published,\textsuperscript{36} though it seems to be less attractive to scholars than normative analysis.

A normative economic analysis typically begins with the derivation and specification of an objective function, which the analyst then argues is optimized by his particular policy prescription. In Calabresi's analysis, he describes the objective function as the sum of the injury and avoidance costs associated with accidents (primary costs), risk-spreading costs (secondary costs), and administrative costs (tertiary costs).\textsuperscript{37} This description of the tort system's objective is now the standard approach to evaluating the operational efficiency of the tort system. The core of Calabresi's argument for reform is that a system of strict liability rules, directed at the appropriate activities, comes much closer to minimizing the sum of primary, secondary, and tertiary costs than does the fault system.\textsuperscript{38}

In view of the greater popularity of normative law and economics among today's scholars, Calabresi's *Costs* has been a success in terms of inspiring the work of generations that followed. In addition to the inspiration provided by Calabresi, the reasons for this success are several. First, normative law and economics does not require a huge investment in learning the details of legal doctrine. Thus, a normative scholar should find it easier to work across disciplines and to gain the interest of scholars in other disciplines. Second, given the view in most law faculties that economics is a conservative mode of thought,\textsuperscript{39} normative work may appear especially attractive to law professors who do not specialize in economics (i.e., the majority of law professors) and to law students as well.

The question lurking beneath this is whether the relative advantage enjoyed by normative law and economics is a desirable result. Is it a good thing for legal scholarship, or scholarship in general, that

\textsuperscript{35} Holmes, * supra* note 19, at 2-5.
\textsuperscript{37} *The Costs of Accidents*, * supra* note 1, at 26-31.
\textsuperscript{38} *Id.* at 312.
the Bentham-Calabresi line of law and economics scholarship is now more popular than the Smith-Holmes-Posner line?

I think there is a case to be made that it is not a good thing, and that law and economics scholarship and legal scholarship generally will suffer in the long term as a result. The case begins with the view espoused by Karl Popper and Milton Friedman on the relative value of positive analysis in economics.\footnote{Karl R. Popper, The Open Society and Its Enemies 95-96 (5th ed. 1966); Milton Friedman, Essays in Positive Economics 5-7 (1953).} The Popper-Friedman argument is that economic analysis is most valuable when it is helping us solve existing puzzles, to understand institutions or conventions that exist, and less valuable when used to design new institutions.\footnote{See Popper, supra note 40, at 95-96 (asserting that the main goal of social science is to analyze human reactions within the context of current institutions); Friedman, supra note 40, at 4-7 (describing positive economic analysis as that which explains "what is" and not "what ought to be").}

The argument behind the Popper-Friedman position is as follows. When we approach complicated social institutions or conventions, like the law, we are looking at a system that has evolved over time, and has along the way adapted to constraints and solved problems. The analyst often cannot easily discover the information that is embodied within the system’s design. Economic analysis, however, can be quite useful in this discovery process. In a similar fashion, normative analysis that attempts to redesign a social system from scratch—for example, redesigning the law of torts—is at a disadvantage for the same reason; the analyst may not understand all of the information embodied in the existing system.

This argument applies to economic analysis of law. Indeed, the argument applies most strongly here, if it applies anywhere. If there is any validity at all to the Popper-Friedman view, that validity must surely be observed in the case of the legal system, and particularly the common law. The common law is a system that has evolved—a “grown order” in Hayek’s terms\footnote{1 F.A. Hayek, Law, Legislation, and Liberty: Rules and Order 35 (1973).}—responding at various times to constraints that may no longer be obvious. With such systems, the analyst with a reformist agenda should show some humility.

The proper degree of humility, however, is generally lacking in normative economic analysis of law. To be sure, thoughtful analysts show awareness of the limitations of their own analysis. Calabresi, for example, acknowledges the limitations of his analysis and constantly

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41. See Popper, supra note 40, at 95-96 (asserting that the main goal of social science is to analyze human reactions within the context of current institutions); Friedman, supra note 40, at 4-7 (describing positive economic analysis as that which explains “what is” and not “what ought to be”).

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questions and reexamines his own arguments in *Costs*[^43]. But the self-doubt one observes in Calabresi’s book is rarely found in normative analyses today.

Even when doubts are expressed openly, there is no getting around the problem of uncertainty and limited knowledge. The normative law and economics approach, from Bentham to Calabresi to modern analysts, reflects at bottom an arrogant belief in the power of theory to provide useful policies for reforming complicated institutions. And law certainly qualifies as a complicated social institution. This may seem to be an excessively harsh assessment. However, what should one say about the implicit assumption underlying a substantial part of the normative project, when an analyst claims to have found a reform that solves a complicated systemic problem that has bedeviled countless individuals participating in the system for many years, many of whom are quite as thoughtful as the normative analyst?

As a contributor to the normative law and economics literature (with a personal stake in its success), I realize that this critique should not be taken too far. At its extreme, it is defeatist in its suggestion that there is no point in applying normative economic analysis to law. The critique seems to say that if there is a neat solution to a problem in the legal system, then you should not trouble yourself with proposing it, because if it were really such a neat solution someone would have discovered it long before you.

I do not wish to convey that message. However, I do think it is important for law and economics analysts to consider the possibility that there is more normative analysis in the literature today than warranted by its value relative to positive analysis. The common law is full of puzzles in the form of doctrines whose functions are generally not understood. Economic analysis of law, at least to the Popper-Friedman sympathizers, serves its most useful purpose when it is helping us solve those puzzles. It seems improper, in any event, to surge ahead with one normative analysis after another before even attempting to apply economics to gain a better understanding of the common law as it is. If positive analysis is useful in discovering the information hidden in a social institution, such as the law, then analysts should try to uncover that information before proposing legislative reforms.

III. Positivists Versus Anti-Positivists

While the term positive analysis refers to efforts to use economics to explain institutions, the term positivism, to lawyers, refers to the view that the only laws that exist are those in the statute books or likely to be enforced by the state. An anti-positivist would argue that laws also include norms or conventions that people respect, even if they are not in a law book anywhere or the state is unlikely to enforce them. One version of anti-positivism is the classical common-law theory of Blackstone, which views the law as resulting from the norms of reasonable conduct adopted within society.44

Anti-positivism has not fared well in the law and economics literature. Hume is the first to bring this approach to the economic analysis of law.45 Hume argued that we determine through long experience that certain acts are harmful to social welfare, and society develops norms discouraging those acts.46 Over time, those norms become publicly asserted as law.47 Somewhat later, Hayek argued that the law evolves from norms that develop through social intercourse.48 Bruno Leoni extended this line of reasoning to provide one of the early arguments for the economic efficiency of the common law.49

Calabresi does not take a clear position on the positivism versus anti-positivism debate. However, because his approach is so similar to Bentham's, it is implicitly positivist. The most basic component of that approach is what I have referred to as detachment, the notion that one does not feel a need to study or explain the law in great detail in order to evaluate it. While one can be detached in this sense, and not positivist, it seems to me that one must be a positivist if he is detached. The reason is that if the detached analyst does not need to explain or work through the legal doctrines carefully in order to reach an assessment of the law, he will perceive no need to study norms as generators of legal doctrine. Hence, the detached analyst is never an anti-positivist as I have defined the term. On the other hand, if the analyst is evaluating the law, he must have some minimal sense of what it consists of, which would seem to require a positivist's conception of law.

I doubt that any anti-positivist, or believer in norms as important sources of law, could ever be detached in the sense of Bentham and

44. 1 BLACKSTONE, supra note 6, at 63-92.
45. HUME, supra note 15, 484-501.
46. Id.
47. Id.
48. 1 HAYEK, supra note 42, at 35-54.
If you believe that norms are an important source—let’s say, the most important source—of common law, then you probably also think that those norms develop over time through implicit contracts. It follows that you would see it as important to understand precisely how these norms meet the expectations of the parties. Consider the contract analogy. If you were looking at a contract between an employer and an employee, would you evaluate the desirability of a specific contract term by analyzing its incentive effects, or by trying to determine if the term made sense given the expectations of the parties? The anti-positivist position seems to rule out detachment because it requires a careful examination of common-law doctrine.

I suspect that the influence of Calabresi’s *Costs* is one of the reasons anti-positivism has been in the shadows of law and economics. Neither Becker nor Calabresi made any references to Leoni, Hayek, or Hume in their contributions. Perhaps their examples had some influence on Posner, who does not discuss or even cite any of the anti-positivist literature that preceded his book. Modern generations of scholars, raised on Becker, Calabresi, and Posner, seem to be largely unaware of this strand of law and economics.

The one difference in this trend is represented by the new “norms” literature. But this literature has not, so far, returned to the original direction of the early anti-positivist law and economics literature. The new norms literature has not attempted, as far as I am aware, to provide a deeper understanding of the common law, or suggested significant reasons to question the positivist approach common in the modern literature.

**IV. RATIONALITY IN THE LAW AND ECONOMICS LITERATURE**

The last topic I will consider is the role played by the rationality assumption in law and economics and Calabresi’s influence on that role. Law and economics is often criticized, especially in the law journals, for adhering too strongly to the rational-man model. Critics have argued that people do not always behave as rational actors, that


they do not carefully and accurately weigh the costs and benefits of their anticipated actions.\textsuperscript{52}

The critique of rationality in law and economics is difficult to assess and may collapse into triviality. The process of natural selection should make some responses to external events strong enough to overwhelm our attempts to calculate, and yet these inborn tendencies do not prove that man is never a rational actor. Alternatively, someone may calculate the immediate costs and benefits of a particular action carefully, and then after realizing that it would be costly to reveal to others that he had done so, lie about his motives or take an irrational act. By his words, or perhaps by his actions, he would not appear to be rational. Finally, some minimal degree of rationality must be accepted even by critics of the rationality assumption. For if men are completely or always irrational, laws are pointless.

In any event, the rational-man assumption that critics have in mind is one of an individual who \textit{always} weighs the costs and benefits of his anticipated actions, and always takes the act with the greatest net benefit (benefit in excess of cost). The rational actor fails to take care when the cost of taking care is greater than the benefits he captures, or the liability he avoids, through care. The rational actor breaches a contract whenever the benefit from breaching exceeds the cost. The rational actor commits a crime whenever the benefit from the criminal act exceeds the expected penalty. These benefits and costs are typically reduced to dollars so that the rational man can make an apples-to-apples comparison.\textsuperscript{53}

This version of the rational-man model is a relatively recent feature of the law and economics literature. Bentham held to a version of the rational-man assumption. He argued that all men calculate, even the insane.\textsuperscript{54} However, Bentham made some allowance for departures from the extreme- or strong-rationality assumption. His suggestions for outrageous punishments imply a belief that criminals often did not attempt to foresee and calculate the consequences of

\textsuperscript{52} Id. at 1066-70.

\textsuperscript{53} This description of the rational actor suggests that what is really special about the assumption is that it places severe restrictions on the actor's utility function. One could imagine an individual who enjoys breaching contracts. His utility function should take into account his taste for breach. Given those preferences, one could say that his tendency to breach always, even in cases where the net monetary payoff is negative, is rational. But the rational-actor model excludes such cases. This is a basic definitional issue that runs throughout this paper's discussion of rationality, and the rationality debate in law and economics generally. I am indebted to Bob Bone for bringing this to my attention.

their actions, and so it was necessary to design penalties that would attract their attention.\textsuperscript{55} For example, suppose the typical prospective rapist does not rationally convert his expected hedonic gains and anticipated punishment into a common denominator, such as dollars. He might find these different expectations incommensurable, and given this inability to convert gains and losses into the same terms, may discount the losses from punishment entirely.\textsuperscript{56} A punishment such as castration, which has the flavor of Bentham, might be superior in its deterrent effect because the prospective rapist finds it easier to evaluate the punishment in precisely the same terms as he evaluates his hedonic gains.

Given his utilitarian approach, Holmes must have believed that men were rational and would respond rationally to penalties.\textsuperscript{57} However, Holmes did not have a clear need to assume a strong form of rationality. He was concerned with explaining the logic of the law, not with analyzing its deterrent impact.

Becker and Calabresi represent a fork in the road in the development of the rationality assumption in the law and economics literature. Becker presents a model in which criminals are rational actors.\textsuperscript{58} It makes sense in Becker’s model, to reduce the probability of capture to near zero and increase the fine to near infinity, because this maintains a high expected penalty and at the same time saves the state the costs of frequent enforcement efforts. This is the sort of prescription that could only come from a model that assumes a strong form of rationality. Studies of behavior and psychology—e.g., those of B.F.

\textsuperscript{55} See Jeremy Bentham, The Rationale of Punishment 60-61 (London, Robert Heward, 1830) (suggesting punishment of the “offending member”—e.g.—“[i]n punishing the crime of forgery the hand of the offender may be transfixed by an iron instrument fashioned like a pen”); id. at 76-93 (suggesting deformation and mutilation as possible punishments).

\textsuperscript{56} Bentham said that in order to encourage the potential offender to take his prospective penalty into account before committing an offense, a punishment should have some “characteristic” relating it to the offense:

Punishment cannot act any farther than in as far as the idea of it, and of its connection with the offence, is present in the mind. The idea of it, if not present, cannot act at all . . . . Now, to be present, it must be remembered, and to be remembered it must have been learnt . . . . When this is the case with a punishment and an offence, the punishment is said to bear an analogy to, or to be characteristic of, the offence.

1 Bentham, Principles of Morals and Legislation, supra note 54, at 92.

\textsuperscript{57} See, e.g., Holmes, supra note 17, at 460-61 (describing the “bad man” and his interest in how the law affects the consequences of his actions).

\textsuperscript{58} Becker, supra note 2, at 176 (assuming that “a person commits an offense if the expected utility to him exceeds the utility that he could get by using his time and other resources at other activities”).
Skinner—suggest, contrary to Becker's model of deterrence, that people learn best through frequent rewards or penalties in connection to desired or undesired acts.59

Calabresi, on the other hand, allows for less than perfect rationality and the need for the state to act paternalistically at times. In particular, Calabresi describes four important deviations from the strong form of rationality. First, people may not have enough information to make rational decisions.60 Second, even if given sufficient information, they may suffer from an optimism bias—a belief that bad things will happen only to other people.61 Third, they may be judgment-proof, so that an increase in the amount of liability in excess of their assets has no marginal effect on their incentives for care.62 Fourth, and most interestingly, people are likely to do poorly in comparing short-term benefits and long-term costs—a problem Calabresi describes in terms of the Faustian bargain.63 Part of the problem may be free-riding, or a version of the familiar Prisoner's Dilemma. Knowing that society will not want to see me suffer in my old age, I may not save today, expecting society to help me out when I reach poverty in my later years. This is perfectly rational behavior at an individual level, but irrational on an aggregate level. Another part of the problem is time-inconsistency in preferences. Looking at his overall preferences, Ulysses knows that he should pay no attention to the Sirens. However, at the point at which he hears their song, he can only see clearly the part of his preference map directly in front of him. Because our preferences are dependent upon the perspective from which we view them, we may rationally choose to take actions in the short run that are welfare-reducing in the long run.

To be sure, both Becker and Calabresi assumed that men are rational. The difference between their approaches is in the degree of rationality posited. Becker assumes rationality in its strongest form. His argument that deterrence could be maintained under a program that reduces the frequency of punishment while increasing its severity assumed a degree of rationality that had never received support from behavioral studies in the social sciences. Famous studies by Skinner and others that long predated Becker's paper suggested that people

59. B.F. SKINNER, SCIENCE AND HUMAN BEHAVIOR (1953).
60. THE COSTS OF ACCIDENTS, supra note 1, at 56.
61. Id. at 56-57.
62. Id. at 58-59.
63. Id. at 57.
do not behave as rationally as Becker's model assumed.\textsuperscript{64} Calabresi, in contrast, assumes a weak form of rationality: that men are basically rational subject to some pretty consistent deviations.

From this fork in the road, with Becker adopting strong-form rationality and Calabresi a weak form, the law and economics literature seems to have taken Becker's path. Posner, whose name is virtually synonymous with the Chicago School, adhered to Becker's approach to rationality, and the strong-rationality assumption has since become a defining characteristic of Chicago School law and economics.\textsuperscript{65}

It should be clear that things did not need to go this way. There is nothing special about the strong-form rationality assumption that makes it a necessary feature of the economic analysis of law. The scholars, largely Chicago School, who immediately followed Becker and Calabresi could have chosen to follow Calabresi's example rather than Becker's. If that path had been followed, there would be far less criticism of law and economics. The behavioral law and economics school, still in its infancy, would have been old by now.

It should also be clear that Calabresi's description of weak rationality, remarkable in its clarity, anticipated the behavioral law and economics school by a generation. The behavioral school has identified an expanding list of deviations from strong-form rationality: over-optimism,\textsuperscript{66} framing effects,\textsuperscript{67} endowment effects,\textsuperscript{68} ignorance of baseline probabilities,\textsuperscript{69} and others.\textsuperscript{70} The behavioral literature has expanded, in terms of scientific capital, far beyond where it stood.

\textsuperscript{64} E.g., C.B. Ferster & B.F. Skinner, Schedules of Reinforcement (1957); Skinner, supra note 59.

\textsuperscript{65} See Posner, Economic Analysis, 1st ed., supra note 28, at 1 (assuming that "man is a rational maximizer of his ends in life").

\textsuperscript{66} See, e.g., Linda Babcock & George Loewenstein, Explaining Bargaining Impasse: The Role of Self-Serving Biases, 11 J. Econ. Persp. 109, 110 (1997) (exploring the tendency "to conflate what is fair with what benefits oneself").

\textsuperscript{67} See, e.g., Jeffrey J. Rachlinski, Gains, Losses, and the Psychology of Litigation, 70 S. Cal. L. Rev. 113, 118 (1996) (studying how the framing effect, the fact that "the structure of many choices lures people into making decisions that are suboptimal," influences decisions in litigation).

\textsuperscript{68} See, e.g., Richard Thaler, The Winner's Curse: Paradoxes and Anomalies of Economic Life 63 (1992) (describing the endowment effect "as the fact that people often demand much more to give up an object than they would be willing to pay to acquire it").

\textsuperscript{69} See, e.g., Amos Tversky & Daniel Kahneman, Judgment Under Uncertainty: Heuristics and Biases, 185 Sci. 1124, 1124 (1974) (arguing that "people rely on a limited number of heuristic principles which reduce the complex task of assessing probabilities and predicting values to simpler judgmental operations" that "sometimes . . . lead to severe and systematic errors").

\textsuperscript{70} See, e.g., Robert H. Frank et al., Does Studying Economics Inhibit Cooperation?, 7 J. Econ. Persp. 159, 159 (1993) (concluding that "exposure to the self-interest model [of economics] . . . encourage[s] self-interested behavior"); David Laibson, Golden Eggs and
when Calabresi wrote *Costs*, with Daniel Kahneman and Amos Tversky providing a significant part of that expansion.\textsuperscript{71} Still, in the end, it appears that the behavioral school's message leaves us in the same position that Calabresi did, viewing men as weakly rational—i.e., rational, subject to some pretty consistent deviations.

Calabresi's analysis shows that the behavioralist position is not a critique of a deep flaw in law and economics. It is a reaction to a particular strong-form version of rationality that emerged with Becker and the Chicago School. Economic analysis of law can easily incorporate the behavioralist position, as we observe in *Costs*. The question is whether it would be desirable, as a general matter, to incorporate the behavioralist view in economic analysis of law.

This is partly an empirical question. Given my bias toward the Popper-Friedman view, I would ask whether incorporation of the behavioralists' results improves the ability of economics to either explain the law or predict its effects. I do not think that there are great stakes connected to this issue. It is not a big question about methodology. It is a small question about how quickly the law and economics analyst should reach for Occam's razor.

The other perspective on the question whether behavioral analysis promises a substantial methodological change in law in economics starts with asking *why* we see substantial deviations from strong-form rationality. The most plausible explanation is that evolution has shaped our responses to certain stimuli in ways that depart from the rationality model. The role of evolution has not received much attention in the behavioral law and economics literature, but this may be its area of greatest potential. An over-optimism bias, for example, may appear to be a departure from rationality on an individual level, yet it may be rational on an aggregate level because it imparts an evolutionary advantage.\textsuperscript{72} Modifying the model of rationality to take into account the ways in which natural selection may have encouraged nonrational behavioral or thought tendencies could lead us to a better understanding of the social desirability of some legal constraints.

There is, of course, the broader question whether men are largely rational or largely irrational. I have not dealt with it because it is not


\textsuperscript{71} \textit{E.g.}, Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 Econometrica 263 (1979); Tversky & Kahneman, supra note 69.

\textsuperscript{72} In a competitive environment, an optimism bias could be beneficial to one group that has to compete against another. Indeed, the inculcation of an optimism bias seems to be a central part of what coaches aim to do with their teams. The evolutionary explanation for an optimism bias may be similar to that for altruism.
an issue between the rationalists and the behavioralists. Both sides buy into the assumption that men are largely rational. And as I noted before, if men are largely irrational, laws are pointless. Much of our lives are built around the assumption that people behave rationally. We assume that people will follow traffic patterns rather than simply choose their preferred direction on any road; that they will drive over bridges rather than jump off of them or blow them up. The difficulty with irrationality is that there are so many ways in which it can be expressed. If the number of irrational individuals within a society becomes sufficiently large, the level of public order and coordination necessary for a functioning society collapses.

In the remainder of this Essay, I will briefly explore how Calabresi’s approach to rationality might have altered the treatment of two issues: bargaining under transaction costs and discrimination. Coasean bargaining is assumed to take place in a setting in which rational parties are fully informed as to the different allocations available. If there is a possible efficient allocation, the standard rationality model suggests that parties will reach an agreement that results in that efficient allocation. Suppose, for example, Sam’s fence is too high, and Dave is willing to pay $100 to see it lowered. Suppose the cost to Sam of reducing his fence is only $50. The standard rational-man analysis suggests that Sam and Dave will reach a bargain in which Dave agrees to pay some amount between $50 and $100 in exchange for Sam’s agreement to lower the fence.

Suppose, instead, that people are weakly rational, as suggested by Calabresi, and suppose in particular that they would always prefer to impose their desired outcome rather than reach the efficient outcome through bargaining. In other words, to return to the fence example, reaching the efficient result through bargaining is preferable to the status quo. But Dave would much more enjoy simply imposing his preferred result rather than bargaining. Imposing his preferred result saves the money that would be used in Coasean bribing, and gives him the added sense of hierarchical superiority that comes with having someone do as he bids. This would be the type of deviation from rationality that we might expect in a person who had difficulty comparing short-run gains to long-run costs. Making others do as you bid is gratifying in the short run, but probably quite costly in the long run.

Moreover, a desire to impose your will on others, to make others do as you bid, probably has a firm evolutionary basis. Status hierar-

chies are common in social animals.\textsuperscript{74} Humans are probably hard-wired to seek actions that have a status payoff.\textsuperscript{75} Imposing your will on others, using them as a means to your own desired ends, is perhaps the clearest way of asserting superiority in a status hierarchy.

Now let us reconsider the standard analysis of bargaining under transaction costs in the context of Calabresi's "spongy bumpers"\textsuperscript{76} hypothetical:

Suppose car-pedestrian accidents currently cost $100. Suppose also that if cars had spongy bumpers the total accident costs would only be $10. Suppose finally that spongy bumpers cost $50 more than the present bumpers. Assuming no transaction costs, spongy bumpers would become established regardless of who was held responsible for car-pedestrian accidents. If car manufacturers were held liable they would prefer to spend $50 for the new bumpers plus $10 in accident damages, instead of $100 for accident damages. If pedestrians were held responsible and could foresee the costs, they would prefer to bribe car manufacturers $50 to put in spongy bumpers and bear $10 in damages, rather than bear $100 in damages. Exactly the same result would occur if an arbitrary third party, e.g., television manufacturers, were held liable initially; they too could lessen costs to themselves by bribing car manufacturers to put in spongy bumpers.\textsuperscript{77}

Calabresi is careful to note in his hypothetical that all parties involved know the costs at issue and the technological alternatives. He then shows that if you add transaction costs to this hypothetical, you find that the lowest cost outcome may not result.\textsuperscript{78} For example, it may be too expensive for pedestrians to bribe manufacturers to install spongy bumpers.\textsuperscript{79} One question Calabresi does not take up in this hypothetical is why car manufacturers would not simply install the spongy bumpers and raise the price of a car by a sufficient amount to cover the cost. Perhaps car consumers are too uninformed to know the value of spongy bumpers, or perhaps they would not receive a sufficient reduction in insurance rates, or perhaps pedestrians sue so infrequently that drivers bear too little of the costs of car-pedestrian accidents.

\textsuperscript{74} See generally Robert K. Merton, \textit{Social Theory and Social Structure} (rev. ed. 1957).
\textsuperscript{75} See id. at 382-83.
\textsuperscript{76} \textit{The Costs of Accidents}, supra note 1, at 136.
\textsuperscript{77} Id.
\textsuperscript{78} Id. at 136-38.
\textsuperscript{79} Id. at 137.
accidents to put significant design-reform pressure on manufacturers. These are all potential problems with "market deterrence" (liability-based deterrence) that Calabresi discusses in other parts of *Costs*. Let us assume that one of these is true in order to continue with the hypothetical.

Now alter Calabresi's hypothetical slightly: assume that there are no transaction costs and that pedestrians (and television manufacturers) are not aware of the spongy bumpers alternative. Suppose, in addition, that liability falls on pedestrians. Since spongy bumpers would allow pedestrians to avoid $100 in losses, they clearly would be willing to pay at least $50 to have them installed. In a Coasean bargaining game, the result would be that the manufacturer reveals the availability of spongy bumpers as a technological alternative, and pedestrians bribe the manufacturer to have them installed. The manufacturer should be willing to reveal the availability of spongy bumpers because he will be able to collect a bribe from pedestrians that more than compensates for the cost of installing them.

Suppose, however, that pedestrians, as a group, are like Dave in the fence example considered above. They would much prefer to impose their desired result rather than pay for it in a Coasean bargain. Once the manufacturer reveals the availability of spongy bumpers as a technological alternative, the pedestrians would seek to impose it. They might petition the legislature to have a law passed requiring spongy bumpers on all cars. Car manufacturers, anticipating the danger, would never reveal the safer alternative.

This version of the spongy bumpers hypothetical is Williamsonian in the sense that it involves the threat of expropriation as a type of transaction cost. Indeed, one could say that transaction costs are of three types: basic bargaining costs, i.e., the costs of meeting to bargain; information costs, i.e., the costs associated with asymmetric information; and opportunism costs, i.e., the costs connected to the threat of expropriation. The point of this discussion, however, is to show that one's approach to rationality has important implications for the possibility of Coasean bargaining. Calabresi's assumption of weak rationality immediately introduces obstacles to Coasean bargaining, even in settings in which basic bargaining costs are zero.

The law and economics literature on discrimination might have developed differently if the weakly rational-man model assumed by

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80. *E.g.*, *id.* at 78-94, 199-229.
Calabresi had become the dominant approach. The economic literature on discrimination identifies two types: taste-based discrimination and statistical discrimination. The former assumes an exogenous distaste on the part of the discriminator against the target group. The latter assumes discrimination is based on statistically sound predictions by the discriminator of the costs of dealing with the target group. A little time reading historical material on slavery in the United States, however, will leave you with the impression that this model is inadequate. While taste-based and statistical discrimination exist, both descriptions fail to capture a good deal of the discrimination actually observed.

Viewed in its historical context, racial discrimination appears to be a belief, or set of beliefs, designed to support a status hierarchy. Indeed, it appears that the racial discrimination observed in the United States served, in its formative stage, to support a system of slavery based on race. Discriminatory beliefs helped beneficiaries of slavery directly by offering a ready moral justification for it. Moreover, discriminatory beliefs served the useful function of neutralizing nonbeneficiaries who might otherwise have sought to prohibit slavery. Since slavery was harmful to poor whites, convincing them to accept discriminatory beliefs by giving them a sense that they had a desirable spot in the overall status hierarchy would dampen their incentives to overturn the institution.

We can view this description of discrimination from the same perspective as the spongy bumper hypothetical. Since it is highly proba-
ble that the majority of southern whites were economically disadvantaged by slavery, they had an incentive to form a coalition that would either lessen or eliminate it. In a Coasean bargaining game, they should have been willing to pay slaveholders to reduce the scale of the institution, in order to eliminate its harmful external effects. On the other hand, they could choose to impose their preferred result rather than bargain for it. Imposing a solution saves the cost of Coasean bargaining, and offers the added benefit of elevating one's perceived position in the status hierarchy.

Discrimination offers a solution, from the perspective of slaveholders, to this threat of expropriation. It offers a status payoff to the majority of free, nonslaveholders who might otherwise form a coalition in opposition to slavery. If the status payoff is sufficiently great, they may find little incentive to impose constraints on the institution. To return to the spongy bumper example, it is the refusal to disclose information on the technological alternative that prevents formation of a coalition that would impose the alternative on car manufacturers. In the slavery case, the putting out of a piece of information—the discriminatory belief—serves to prevent the formation of an opposing coalition.

To return to my broader point, the two cases considered, bargaining under transaction costs and discrimination, have been treated in the law and economics literature under a rational-man model that may be inadequate in its ability to explain real outcomes. The weakly rational man of Calabresi's *Costs* probably provides better insights into both cases. To describe him as weakly rational, however, does not suggest that he is somehow less self-interested than is the rational man. The opposite is the case. The weakly rational man is a bit more of a brute than what we find generally assumed in the law and economics literature.

V. Conclusion

Law and economics has developed through tensions among certain broad strands of thought: normative versus positive economic analysis, positivist versus anti-positivist legal premises, and strong-form versus weak-form rationality assumptions. Calabresi's *Costs* laid the groundwork for economic analysis of law as a discipline within law schools, and established a template for modern economic analysis of law that is normative, positivist, and assumes weak-form rationality. Indeed, any modern analysis of the operational efficiency of the legal system must borrow heavily from Calabresi. At least in part because of the influence of Calabresi, the combination of normative economic
analysis and legal positivism appears to have become the dominant approach in law and economics. However, any template has the negative consequence of displacing alternative approaches. In the case of Calabresi's *Costs*, the positive analysis reflected in the earlier work of Smith and Holmes, and the anti-positivist approach of Hume, Hayek, and Leoni were displaced. Positive economic analysis of law quickly returned with Posner's work, but the anti-positivist literature remains largely in the shadows. The assumption of weak rationality has only recently begun to return to the forefront of law and economics.