The Gaps Between the Fingers of the Invisible Hand

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INTRODUCTION

A revolution in legal reasoning began in 1960. With the publication of Coase’s famous article, The Problem of Social Cost,¹ the powerful tool of microeconomic analysis grounded on Adam Smith’s invisible hand,² began to permeate the academic literature. From journals to classrooms, and eventually to case opinions, the enlightening beam of economics has revealed previously unperceived connections in the law’s seamless web. Especially for those willing to ascribe normative force to the economists’ analytic construct,³ economics has provided a guiding beacon

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² See generally ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS (Edwin Cannan ed., 1937). For the contention that the economic analysis of law, Richard Posner’s version particularly, substantially diverges from Smith’s vision of the free market and individual liberty, see Robin Paul Malloy, Invisible Hand or Sleight of Hand? Adam Smith, Richard Posner and the Philosophy of Law and Economics, 36 KAN. L. REV. 209 (1988). For expository purposes, I will nevertheless refer to the economic analysis of law as an invisible hand theory.

³ Coleman classifies three activities within the realm of law and economics, two being conceptual and one normative. “Analytic law and economics may be either descriptive or positive. Descriptive law and economics is concerned with the principle of economic efficiency as an explanatory tool by which existing legal rules and decisions may be rationalized or comprehended.” Coleman, supra note 1, at 221. “Positive law and economics is concerned less with the actual explanatory power of economic efficiency than it
down the path for the law to travel. While I count myself among those who celebrate this revolution, one must acknowledge that behind the illuminated legal doctrines, there is cast a long shadow. Important, sometimes crucial, problems are dimly perceptible, if at all, in the penumbral grays of microeconomic analysis. The foundations and dimensions of some doctrines are consequently often misappreciated, the highlighted parts beguil-

is with the capacity of market models to provide a conceptual apparatus within which traditional legal problems may be conceived." Id. at 222. "Normative law and economics is the home of reformers. Existing legal rules are evaluated and new ones fashioned in terms of their economic efficiency." Id.

Coleman's labeled distinction between the two analytic activities is often overlooked. See infra note 4.

Sen decries the evolution of modern economics towards greater neglect of moral issues. "The methodology of so-called 'positive economics' has not only shunned normative analysis in economics, it has also had the effect of ignoring a variety of complex ethical considerations which affect actual human behavior . . . ." AMARTYA SEN, On Ethics and Economics 7 (1987). This trend runs contrary to the roots of economics "largely as an offshoot of ethics", id. at 2 (e.g., Adam Smith was Professor of Moral Philosophy), and isolates the explicitly moral branch called welfare economics, see id. ch. 2, which in modern theory has a "precarious" position, because, "as the suspicion of the use of ethics in economics has grown, welfare economics has appeared to be increasingly dubious." Id. at 29.

Most economists, including the law and economics school, draw conclusions based on allegedly value-neutral assumptions. See, e.g., Bernard Saffran, Markets and Justice: An Economist's Perspective, in Markets and Justice 303, 304-05 (John W. Chapman & J. Roland Pennock eds., 1989) ("Even though the interest of economists in discussions of justice is growing . . . most economists do not want to get involved in this matter because they are uncomfortable with having uniquely to define justice, are afraid of imposing their own values, and have had difficulty finding an appropriate analytical mechanism."); White, supra note 1, at 579 ("Coase implicitly claims that his approach does not contain value choices . . . ."). Posner, to the contrary, ascribes a normative function to law and economics, i.e., a society ought to strive for efficiency. See, e.g., RICHARD A. POSNER, The Economics of Justice 48-115 (1981). Whether economics in principle can be purely analytic, without resort to normative considerations, has been challenged. See infra note 124. Whether analytic economists in fact stay in the non-normative domain has also been questioned. See, e.g., Jeffrey L. Harrison, Trends and Traces: A Preliminary Evaluation of Economic Analysis in Contract Law, 1988 ANN. SURV. AM. L. 73, 77 ("Those who dream up efficient rules but stop short of insisting on their adoption argue by implication that the proposals deserve consideration."); White, supra note 1, at 579 ("[A]n analysis of [Coase's] methodology indicates that his theory does indeed mask [a value choice]."). Whether such economists actually even pretend to remain purely analytic has also been critiqued. See Thomas Russell & Richard Thaler, The Relevance of Quasi Rationality in Competitive Markets, 75 AM. ECON. REV. 1071, 1081 (1985) ("The usual approach in economics is to solve for the optimal solution to a problem, and then to assume the agents in the model chose accordingly. Thus the model is supposed to be simultaneously normative and descriptive."). That economists typically do not face up to the normative features of their discipline may be "theoretical escapism." See GUNNAR MYRDAL, Objectivity in Social Research ch. XXII (1969).
ing one into forgetting that there is more than meets the eye and that the indistinct margins are often where the controversies lie. In this Article I attend to some of the shortcomings in law and economics, particularly ones pertaining to the bedrock assumption of the ability of an economic actor to make a rational, self-interested choice.

Law and economics has undergone critical evaluation almost from the beginning. This Article pulls together some criticisms and develops others to demonstrate that the gaps between the fingers of the invisible hand may be used, abused or ignored to facilitate legal conclusions stronger than are warranted. The topics addressed are: the rationalization of irrationality, particularly, discount schedules, risk attitudes, psychic income, tastes, and transaction costs; indeterminacies, specifically, utility functions, externalities, what-is-a-cost-of-what, moralisms, and shadow markets; and efficiency, including considerations of the unrealistic assumptions of the market model, superrationality, cardinal versus ordinal valuation, and the theory of second best.

In Adam Smith’s world of the invisible hand, individuals transact to increase their own utilities. With each person’s wealth as a given, and against a background of specified legal entitlements, individuals can choose to enter transactions perceived as best for themselves. Government intervention is economically unnecessary. Beyond being superfluous, owing to the

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6 The literature is extensive. For criticism of the Coase theorem in particular, see, e.g., Jeffrie Murphy & Jules Coleman, The Philosophy of Law 258-62 (1984); Virough A. Aivazian & Jeffrey L. Callen, The Coase Theorem and the Empty Core, 24 J.L. & Econ. 175 (1981); Cooter, supra note 1; Mark Kelman, Consumption Theory, Production Theory, and Ideology in the Coase Theorem, 52 S. Cal. L. Rev. 669 (1979); Donald H. Regan, The Problem of Social Cost Revisited, 15 J.L. & Econ. 427 (1972); Schlag, supra note 1; White, supra note 1. The landmark status of the Coase theorem is emphasized, perhaps overemphasized, in Donald H. Gjerdingen, The Politics of the Coase Theorem and Its Relationship to Modern Legal Thought, 35 Buff. L. Rev. 871 (1986).

6 In general “[t]here are four major targets of criticism of the market: efficiency, distributive justice, personality, and quality of life. Market influences on any one of them also influence the other three . . . .” Robert E. Lane, Market Choice and Human Choice, in Markets and Justice, supra note 4, at 226.


Under the invisible hand, moral suasion is also less necessary. “To the extent that men are allowed freely to trade, conceived in the broadest possible sense of this term, there is little need for the preacher or the administrative authority.” James M. Buchanan, Good Economics—Bad Law, 60 Va. L. Rev. 483, 485 (1974). Furthermore, restrictions “invite evasion, and . . . serve to penalize the law-abiding . . . .” Id. at 487.
foibes of officials, intervention may lead to inefficiency,\(^8\) invasion of private liberty and rights,\(^9\) and undermining of democracy through overreaching.\(^{10}\) The slippery slope of intervention threatens.\(^{11}\)

The construction of the world of the invisible hand assumes certain conditions. Though these have been specified in various ways, a representative list is:


\(^7\) See, e.g., ANTHONY DOWNS, AN ECONOMIC THEORY OF DEMOCRACY 183-84 (1957); JOHN FINNIS, NATURAL LAW AND NATURAL RIGHTS 221-23 (1980); 1 FREDERICH A. HAYEK, LAW, LEGISLATION AND LIBERTY 55 (1973). Schauer discusses “the argument from added authority, that warns against allowing the decisionmaker to enter a given decisional sphere.” Frederick Schauer, *Slippery Slopes*, 99 HARV. L. REV. 361, 367 (1985). The “Hobbes Theorem,” the “polar opposite” of the Coase theorem, pessimistically asserts that a coercive government (i.e., the prince or leviathan) is unavoidably necessary to avoid peoples’ threats against one another. See Cooter, supra note 1, at 18-20. For an examination and criticism of the market paradigm, seemingly at the foundation of law and economics theory, under which law, politics and morality are justified only as a cooperative solution to market failure, see Jules Coleman, *Competition and Cooperation*, 96 ETHICS 76 (1987).

\(^10\) See, e.g., 2 FREDERICH A. HAYEK, LAW, LEGISLATION AND LIBERTY 84-85 (1976); JOHN KLEINIG, PATERNALISM 190-91 (1984) (“Given the large resources of government and the aggrandizing tendencies of bureaucrats, excessive involvement in the marketplace is all too likely.”). The proper response to the slippery slope argument is the old saw about the baby and the bath water. See, e.g., id. at 191. A notch in the slope must be found or made. See Schauer, supra note 10, at 378-81 (“Where do you draw the line?”); see also Bailey Kuklin, *Self-Paternalism in the Marketplace*, 60 U. CIN. L. REV. 649, 711-12 (1992) (discussing the Scylla and Charybdis of intervention and nonintervention).
1. Full information is available about the performance and quality of goods and services and the costs of all alternative ways of producing them, and the cost of this information is zero.

2. Costs of enforcing contracts and property rights are zero, and property rights, including rights to the means of production, are established and stable.

3. Individuals are rational in this sense: their preferences are organized in a transitive ordering (such that if an individual prefers A to B and B to C, he also prefers A to C) and they are capable of selecting appropriate means toward their ends.

4. (a) Transaction costs are zero (transaction costs include costs of bringing goods and services together for exchange, and costs of reaching agreements for exchange.) or (b) there is perfect competition (that is, no buyer or seller can influence prices by his own independent actions and there is complete freedom to enter and exit the market) and no externalities are present. (An externality is a "neighborhood" or "third-party" effect of a market exchange: an effect on someone's well-being which is not taken into account in the market exchange.)

5. Products offered in the market are undifferentiated—buyers cannot distinguish between the products offered by various sellers and vice versa.

These simplifying assumptions are the source of many of the shortcomings faced here. In discussing them I will sometimes illustrate the points by relying on a hypothetical sale of an infrequently purchased consumer good, say, a television set, in which the consumer has no special knowledge of the product or its producers, merchants and repairers. The occasional nature of this type of purchase highlights the information and other difficulties.


13 From an information standpoint, three types of qualities about goods may be identified: search, experience, and credence. See Bailey Kuklin, The Asymmetrical Conditions of Legal Responsibility in the Marketplace, 44 U. Miam. L. Rev. 839, 938-40 (1990). Search qualities are apparent from inspection alone, such as the aesthetics of a television set's picture (under the conditions of the showroom). Experience qualities are revealed by use after purchase, such as the durability of the set. Credence qualities require expertise after the fact, such as whether all the parts replaced by the television repairer were actually needed. The reason for reliance on the hypothetical television
I. THE RATIONALIZATION OF IRRATIONALITY

In deciding what is best for herself, a person is not "a lightning calculator of pleasures and pains." Nor is a person even a molasses calculator, if by "calculator" one means a mathematically certain reckoner. Given all the time she needs, an individual does not consciously calculate the value of reasonably anticipated costs and benefits in a manner expected of a statistical sophisticate under suitable conditions. Instead, the appraisal purchase can now be clarified. Unlike for commonly purchased goods, say, a bar of soap, television purchases are: first, not based on personal experience with current models; second, relatively pricey but not so expensive as to justify running up substantial information (transaction) costs; third, about goods that reveal few of their important qualities by showroom inspection alone; and fourth, as in repairs, have important prospective credence qualities.

14 FRANKLIN E. ZIMRING & GORDON J. HAWKINS, DETERRENCE: THE LEGAL THREAT IN CRIME CONTROL 76 (1973) (quoting Thorsten Veblen, also citing A.J. Ayer and H.L.A. Hart); see also Gary S. Becker, Irrational Behavior and Economic Theory, in THE ECONOMIC APPROACH TO HUMAN BEHAVIOR 153, 153 (1976) ("lightning-fast calculation" an earlier economic meaning of "rational"); Victor P. Goldberg, Aversion to Risk Aversion in the New Institutional Economics, 146 J. Pol. 216, 217 (1990) ("I am bewildered by economists who make the 'people really are risk averse' argument and at the same time make wildly unrealistic assumptions about the ability of individuals to make complex calculations and engage in long chains of sophisticated reasoning . . . .") Some of these "sophisticated mental feats" are "routinely assigned to them by economic theorists."); Oskar Morgenstern, Thirteen Critical Points in Contemporary Economic Theory: An Interpretation, 10 J. Econ. Lit. 1163, 1175 (1972) (Under fixed conditions, "[o]ptimal allocation is a conceptually simple matter for the consumer . . . . [B]ut [t]his may be computationally of phenomenal difficulty . . . ."). For the importance to economics of "computational efficiency," and the actual shortcomings, see 2 Herbert A. Simon, FROM SUBSTANTIVE TO PROCEDURAL RATIONALITY, in MODELS OF BOUNDED RATIONALITY 424 (1982).

16 Consequently, she may not be rational. "[E]conomic theory has been erected upon the supposition that conscious rationality prevails . . . ." Downs, supra note 10, at 4. In economic theory, "now everyone more or less agrees that rational behavior simply implies consistent maximization of a well-ordered function, such as a utility or profit function." Becker, supra note 14, at 153. For elaboration, see, e.g., Downs, supra note 10, at 4-6; Sen, supra note 4, at 12-22 (criticizing the two meanings of economic rationality: internal consistency of choice and maximization of self-interest); Kenneth J. Arrow, Public and Private Values, in HUMAN VALUES AND ECONOMIC POLICY 3, 4-6 (Sidney Hook ed., 1967) (economic rationality as "consistent ordering"). For comparison to the broader meaning of rationality in other social sciences, see, e.g., JON ELSTER, ULYSSES AND THE SIRENS 137-41 (rev. ed. 1984); 2 Herbert A. Simon, Rationality, in MODELS OF BOUNDED RATIONALITY, supra note 14, at 405; 2 Herbert A. Simon, Rationality as Process and as Product of Thought, in MODELS OF BOUNDED RATIONALITY, supra note 14, at 444. For the relationship of rationality, including economic rationality, to responsibility, see Kuklin, supra note 13. One psychologist claims that, given the economists' "particular definition of rational behavior, and despite appearances to the contrary, all behavior, free to vary, can be considered rational." Howard Rachlin, Economics and Behavioral Psychology, in LIMITS TO ACTION: THE ALLOCATION OF INDIVIDUAL BEHAVIOR 205, 206 (John Staddon ed.,
tends to be too conservative or too liberal.

Social scientists who study choice under risk and uncertainty offer many explanations for the flaws in one's reasoning. The following are only a few among the great hodgepodge of causes. For one, the setting in which information is imparted may give rise to framing distortions that affect the perception of facts and the formation of preferences. Fancy showrooms, advertisements by attractive spokespersons, selective presentation of data, or even use of vague, complicated, or buried contract terms slant the perception of a product's true qualities and desirability. Heuristics are rules of thumb for making appraisals. These are biased by such factors as the person's predispositions and desires (e.g., wishful thinking or cognitive dissonance), as well as the salience, vividness, or availability of relevant data (e.g., a recent airplane crash causes many cancellations). Though economists are primarily concerned with fully rational actors, they

1980) (emphasis omitted); see also MARTIN HOLLIS & EDWARD J. NELL, RATIONAL ECONOMIC MAN 56 (1975) ("So in whatever way [economic] rationality is introduced, the statement of it is either vacuous or untestable."); The economists' label "rational" for its particular notion has also been criticized for being loaded. See Richard B. Brandt, PERSONAL VALUES AND THE JUSTIFICATION OF INSTITUTIONS, in HUMAN VALUES AND ECONOMIC POLICY, supra, at 22, 30-31 (The economist "is using a familiar word with complex associations, and therefore in calling an action rational he tends to suggest or imply that the behavior in question is to be recommended, that it is desirable . . ."); Paul Kurtz, POLICY DECISIONS AND VALUE IN METAECONOMICS, in HUMAN VALUES AND ECONOMIC POLICY, supra, at 150, 153 ("Rationality," however, is notoriously value-charged; and one has to be careful that it is not merely a persuasive term."). On the other hand, Barry, referring to economic theory, urges that principled moral choices of ends or objects of desire are rational when they "show a consistent pattern of preference." BRIAN BARRY, POLITICAL ARGUMENT 4 (1965).

1 Under the conventional distinction, a decision under risk occurs when "each action leads to one of a set of possible specific outcomes, each outcome occurring with a known probability," while one under uncertainty occurs when a contemplated alternative "has as its consequence a set of possible specific outcomes, but where the probabilities of these outcomes are completely unknown or are not even meaningful." R. DUNCAN LUCE & HOWARD RAFFA, GAMES AND DECISIONS 13 (1957).

17 The types of distortions are extensively surveyed in Kulkin, supra note 13, at 971-79.

18 Under the economic paradigm, "markets are assumed to reflect actions taken by experienced decision makers seeking to maximize their own gains and, simultaneously, keeping the market efficient by exploiting the errors of others." Robin M. Hogarth & Melvin W. Reder, INTRODUCTION: PERSPECTIVES FROM ECONOMICS AND PSYCHOLOGY, in RATIONAL CHOICE 1, 6 (Robin M. Hogarth & Melvin W. Reder eds., 1987). Irrational actors are of little interest to economists "since they believe these agents will not survive in the market." Id. See, e.g., Becker, supra note 14, at 167 (in conclusion, "irrational units would often be 'forced' by a change in opportunities to respond rationally"). Hence, in
do not, or need not, deny that errors in calculation occur, at least when they are random in nature. But even when random across a broad population, and hence allocatively irrelevant, distributive questions may arise since some individuals or classes may systematically get the short end of the stick. Yet the reach and significance of the biasing effects on rational choice are easily forgotten when certain economic “wild cards” appear on the table, thereby plausibly explaining the variance in individual choices, including ones downright peculiar, in terms other than irrationality. The diversity may be attributed instead to such interrelating notions as discount schedules, risk attitudes, psychic income, tastes, and transaction costs.

light of its assumptions and resistance to demanded verification of them, “neoclassical economics becomes, as has been observed more than once, essentially tautological and irrefutable.” Herbert A. Simon, Rationality in Psychology and Economics, in RATIONAL CHOICE, supra, at 25, 38; see also Rachlin, supra note 15, at 205 (“To the extent that behavior fails to conform to predictions of economic theory, it is labeled irrational. Much human . . . behavior would seem to fall into this category.”); Howard Rachlin et al., Substitutability in Time Allocation, 87 PSYCHOL. REV. 355, 359 n.1 (1980) (“Economics is often said to be a science of rational behavior, but ‘rationality’ means no more to economists than conformity to economic theory. Economics is properly a science of maximization rather than rationality.”). The leader among economists in exploring the limits to rationality is Herbert A. Simon. See, e.g., MODELS OF BOUNDED RATIONALITY, supra note 14. Other economists are starting to pay attention. See, e.g., Russell & Thaler, supra note 4.

While economists recognize that actors make decisions based on errors and inconsistencies, “the fallibilities of economic agents are assumed to be of a random rather than a systematic nature. That is, since agents who make systematic errors would be exploited by other agents and eventually forced to withdraw from the market, they would no longer be the subject of economic enquiry.” Hogarth & Reder, supra note 18, at 6. The question remains, however, when the economic agent is, say, a consumer, how can she withdraw from the market?

When faced with the psychological experiments evidencing people’s poor ability to make rational choices under conditions of risk and uncertainty, “economists are forced into ‘rationalizing,’ discrediting, or arguing the irrelevance of the empirical findings.” Hogarth & Reder, supra note 18, at 5 (footnote omitted). As one Nobel Prize winning economist puts it, neoclassical economists “are prepared to make whatever auxiliary empirical assumptions are necessary in order to preserve the utility-maximization postulate, even when the empirical assumptions are unverified.” Herbert A. Simon, Rationality in Psychology and Economics, in RATIONAL CHOICE, supra note 18, at 25, 38. “Hence neoclassical theory, as usually applied, is an exceedingly weak theory, as shown by the difficulty of finding sets of facts, actual or hypothetical, that cannot be rationalized and made consistent with it.” Id. at 39. For a summary and critique of the economists’ common “formidable set of defenses in the form of bolstering assumptions that restrict the significance of any observed violation of the model [of assumed rationality],” see Amos Tversky & Daniel Kahneman, Rational Choice and the Framing of Decisions, in RATIONAL CHOICE, supra note 18, at 67, 89-91. Similarly, another Nobel Prize winning economist, “disentangle[s] some of the senses in which the hypothesis of rationality is used in
A. Discount Schedules

If one could opt for a nickel immediately or a dime in an hour, and there is no pressing need for cash, it seems prudent to choose the dime.21 The five cents invested at the going rate would fall far short of ten cents at the end of an hour. Sensible motivations for the immediate gratification from opting for the nickel are not easy to imagine, especially if such factors as uncertainty over whether the dime will be forthcoming are eliminated. A common intuition is that one rationally should be indifferent to when one obtains a particular satisfaction—it's the same satisfaction whenever it occurs.22 But as is commonly experienced, people have a wide range of preferences pertaining to whether they are to realize goods sooner or later.23 If an adult chooses the immediate nickel over the briefly delayed dime, should she be declared incompetent, or at least, somewhat irrational? No, according to economic analysis; the choice only manifests her discount schedule.24 She has a high discount rate. Indeed, there is truth to this. Yet what most would consider a childish preference for instant gratification can be fully buried.

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23 See, e.g., SHLOMO MATTAL, MINDS, MARKETS, AND MONEY 53-59 (1982); ARTHUR M. OKUN, EQUALITY AND EFFICIENCY 80-81 (1975); TIBOR SCITOVSKY, THE JOYLESS ECONOMY 72-75 (1976); George Ainslie, Beyond Microeconomics: Conflict Among Interests in a Multiple Self as a Determinant of Value, in THE MULTIPLE SELF 133, 138-39 (Jon Elster ed., 1986). Relatedly, Zimring and Hawkins discuss whether one is future-oriented or present-oriented, optimistic or pessimistic. See ZIMRING & HAWKINS, supra note 14, at 98-104.

24 There may be quite plausible reasons for choosing the immediate payoff. Maital lists several reasons for taking $50 today rather than $100 in five years: a high expected inflation rate; the prospective death of the payee; the unreliability of the payor; a pressing need on the payee; and, advantageous interim investment opportunities. See Maital, supra note 23, at 57-58. At some point society blows the whistle and declares the discount out-of-bounds. The boundaries, however, are exceedingly wide.
within the notion of a discount schedule. Under this reasoning, when all else is equal, that the consumer buys a particular television set with exorbitant future service requirements, rather than buying the slightly more expensive set with substantially lower service needs, says nothing about the rationality of the choice. It merely indicates that the consumer has a high discount rate.

B. Risk Attitudes

An individual's risk attitude reflects her taste for, or enjoyment of, risk. One may be a risk preferrer, a risk avoider, or risk neutral. The attitude may vary with the circumstances. It can explain behavior otherwise inexplicable. If, for example, a person jumps without a parachute from a high-flying airplane into the ocean because the great danger is exhilarating, an economist might say she is a risk preferrer. Others are likely to say she is nuts. As the jumps descend to lower planes, cliffs, tow-


26 Notice that, from an internal point of view, one's attitudes do not make one better or worse off, unless one regrets them, since the attitudes "enter among the criteria for what is worse or better." Jon Elster, Comments on Krouse and McPherson, 97 ETHICS 146, 153 n.20 (1986).


28 Or, in a different context, that she is negligent. "Unreasonable risk-taking—doing that which a reasonable man would not do—is now the standard measure of negligence." George P. Fletcher, Fairness and Utility in Tort Theory, 85 HARV. L. REV. 537, 557 n.74 (1972). One must be careful, however, of the reasonable person standard for risk taking that imperils only personal harm, for this threatens personal autonomy. See FEINBERG, supra note 27, at 106-13, 159-62; see also Cass R. Sunstein, Legal Interference with Private Preferences, 53 U. CHI. L. REV. 1129, 1168-69 (1986) ("What appears to be an irrational evaluation of a danger may in fact be a subjective attraction to risk, a preference that should not be interfered with if there is no independent basis for concern."); Daniel Wikler, Persuasion and Coercion for Health: Ethical Issues in Government Efforts to Change Life-Styles, in PATERNALISM 35, 42 (Rolf Sartorius ed., 1983) (risking one's health, e.g., overeating, may be rational and voluntary).
ers, and diving boards, more appraisers will convert their label from insane thrill-seeking to sensible risk preference. Nearly everyone will take on a (one meter) diving board even though there remains some risk of injury. Those who will not are risk avoiders. How do we decide whether these jumpers fully appreciate the risks they assume? We do not. Instead we throw into the calculations a wild card: risk attitudes. That explains the behavior, in some sense, and evades the knotty question of when risk attitudes verge into irresponsibility.29 But short of wild extremes, what other choice is there, really, for both risk attitudes and discount schedules? In a liberal democracy there is and should be a substantial range of behavior that passes as acceptable as long as it does not impinge on others. Besides, these behavioral constructs allow us to carry on unimpeded with the economic modeling of rational choice and keep governmental interveners more easily on a short leash.30

29 One economist characterizes the wild card feature: "Risk aversion is a conversation-stopper." Goldberg, supra note 14, at 216. At least as a practical matter it is an economic conversation-stopper because it typically immunizes from scrutiny the various forces at play that comprise risk aversion. See id. Regarding risk-taking, "[i]nconsistency and variability . . . should probably be expected." Von Magnus, supra note 27, at 642. Accurate quantitative information about risk attitudes requires an examination of risk-taking under conditions favorable to rational behavior, which perhaps is rarely the case. Owing to the large social element of risk attitudes, another condition is "that there has been some accumulated and reflective social experience with the kind of risk taking in question and that the risk taker has had the opportunity to be influenced by it." Id. at 643. "Rational risk/benefit preferences can be understood, with admitted vagueness, as a kind of socially established equilibrium, a golden mean between perceived excesses of caution and recklessness." Id. See also Douglas, supra note 27, at 68 (the notion of risk is culturally determined).

30 For example, a difficult issue is when considerations of voluntariness and assumptions of risk justify paternalistic intervention. See, e.g., Feinberg, supra note 27, ch. 20; Kleinig, supra note 11, at 69-70, 75-76.

Another point regarding risk attitudes may be raised. Rizzo criticizes Posner and Landes for assuming risk neutrality in their modeling of efficiency in tort law. "This permits them to deal with the simpler notion of expected wealth rather than the more complex expected utility." Mario J. Rizzo, The Mirage of Efficiency, 8 Hofstra L. Rev. 641, 645 (1980). See infra notes 54-68 and accompanying text (concerning the difficulty of specifying utility functions). On the other hand, because risk preferrers and avoiders probably feel the same amount of pain when the risk comes to fruition, Goodin argues from a public policy standpoint that the differences in tastes should "usually only be a marginal consideration." Goodin, supra note 22, at 147. Yet in choosing collective risks, especially ones involving catastrophic consequences, "[i]t seems to be wrong to allow the majority to impose its risk preferences on the rest, even if those preferences are perfectly well informed, stable, and so on." Id. at 158. Assuming risk neutrality in economic theory may have this wrongful tendency. Imputed risk attitudes are often ad hoc. See Baruch
C. Psychic Income

Risk attitudes may be further analyzed. One approach to this and other decisional perplexities is to maintain that an individual's choice partially reflects her expected "psychic income." She takes a high risk, for example, because she gets pleasure from it. To overstate the point, the same general motivation induces murderers facing severe penalties to do the dirty deed anyway. Similarly, risk avoiders overinsure because of the increased sense of security. That explains everything, or conversely, in the view of some, nothing at all. There are, of course, internal satisfactions and they are important to the good life. Indeed, the good life may be determined by these satisfactions alone. But along with the problem of determining

Fischhoff et al., Acceptable Risk 113 (1981). These authors argue on grounds of caution and Goodin's reason above that "those who make acceptable-risk decisions on behalf of others have a moral duty to be risk neutral even when the people affected by their decisions are risk averse or risk prone." Id.

"What is often called 'psychic income' concerns utility due to the fact that Smith feels better about himself by behaving in a certain way, for example, the sense of well-being that accompanies satisfaction of one's sense of duty, or doing one's fair share." Howard Margolis, Selfishness, Altruism, and Rationality 59 (1982). For an example of the use of this wildcard, see, e.g., Gary S. Becker, An Economic Analysis of Fertility, in The Economic Approach to Human Behavior, supra note 14, at 171, 172-73 (analyzing children as source of psychic income). Cf. Sigmund Freud, The Problem of Anxiety 27-28 (1936) (discussing "secondary gains" of neurosis).

By looking at it this way we may execute them without concern for whether they were truly responsible for the crime.

Margolis notices that "some writers seem to have no qualms about invoking psychic income to explain behavior that seems irrational in terms of the more usual components of an economic utility calculus . . . whereas others . . . treat psychic income as mere ad hocery that explains nothing at all in terms of rational choice." MARGOLIS, supra note 31, at 59 (footnote omitted). Under the latter view, psychic income is not meaningless in explaining motives, but rather it "does not tell us anything more than we already know, namely, that there is apparently something which does not fit in a conventional utility calculus that accounts for the observed behavior." Id. Having no generally understood interpretation or analytical treatment, the notion may be "only a device for papering over difficulties." Id. Simon refers to the entrepreneur who balances psychic income against profit losses. "But if we allow 'psychic income,' the criterion of profit maximization loses all of its definiteness." 2 Herbert A. Simon, Theories of Decision-Making in Economics and Behavioral Science, in Models of Bounded Rationality, supra note 14, at 287, 296. "'Psychic income'—a wobbling crutch for egoism—explains little of substance about motivation." Jeffrey Harrison, Egoism, Altruism, and Market Illusions: The Limits of Law and Economics, 33 UCLA L. Rev. 1309, 1319 (1986) (footnote omitted) (referring to psychic income as tautological, "self-sealing," "puncture proof," "filler").

For example, Sen criticizes the concept of rationality prevalent in economics because, among other reasons, "the exclusion of any consideration other than self-interest
whether an individual actually reaps the psychic income that makes hers a rational choice is that some internal effects foster the bad life. Additionally, some choices do not advance the good life as much as others. One should not lump together all plausible internal effects indifferently under the label "psychic income" and use this as a means to examine no further behavior against the actor's better (more rational!) self-interest. Even in

seems to impose a wholly arbitrary limitation on the notion of rationality." Amartya K. Sen, *Rational Fools: A Critique of the Behavioral Foundations of Economic Theory*, 6 Phil. & Pub. Aff. 317, 342 (1977). He distinguishes sympathy from commitment. Sympathy "corresponds to the case in which the concern for others directly affects one's own welfare," and thus "is in an important sense egoistic." Id. at 336. Commitment, on the other hand, relates to the case that "does not make you feel personally worse off, but you think it is wrong and you are ready to do something to stop it," and thus "which would be non-egoistic in this sense." Id. "The characteristic of commitment with which I am most concerned here is the fact that it drives a wedge between personal choice and personal welfare, and much of traditional economic theory relies on the identity of the two." Id. at 329. Without this internal, noneconomic effect, the world would be a sorrier place. If an economist did acknowledge this commitment, it could be thrown into the miscellaneous category, psychic income, and then used as a wild card to explain behavior otherwise economically unaccountable. Williams observes that laissez faire economists maintain the self-interest model "in the face of the obvious fact that all economic systems depend on people in society having dispositions that extend beyond self-interest." BERNARD WILLIAMS, *ETHICS AND THE LIMITS OF PHILOSOPHY* 13 (1985); see also Harrison, supra note 33, at 1311-12 ("Because the narrow self-interest assumption is inherently ambiguous and frequently inaccurate, we should regard with caution the conclusions that follow from it."). If everyone actually acted purely out of self-interest, Parfit advances the practical problem that "the actual outcome will be worse for everyone." DEREK PARFIT, *REASONS AND PERSONS* 62 (1984). Therefore, along with economics, politics and morality also are needed. Id. For a powerful economic ratiocination of internal effects, such as commitment, that goes far to dislodge the wedge between choice and welfare referred to by Sen, see MARGOLIS, supra note 31. That Sen also pulled at the wedge, see Sen, supra, at 335-41 (for moral judgments, "rankings of preference rankings").

The economic conception of psychic income, like that of tastes, the next topic, fails to distinguish the morally acceptable from the unacceptable, e.g., malice. See infra note 44.

The overgenerality of economic analysis in dealing with internal effects, i.e., desire, is discussed in Alfred F. MacKay, *Human Motivation: The Inadequacy of Economists' Models*, 10 Hofstra L. Rev. 441 (1982). He points out that many economists conceive of human motivation as a general mental image of "a set of features, characteristics, or properties which together constitute the basis of the desire for the thing." Id. at 441. Yet MacKay suggests that "[d]irect desire focuses directly on a particular object, without intervening lists of characteristics or features in mind; it is fundamental and not derived; it operates without implicit prediction and assessment, without comparison and evaluation, and without potential substitutability." Id. at 444. While Sen, the economist, has questioned the standard model of motivation, see Sen, supra note 34, MacKay leaves "for another occasion" the implications of a proper model of human motivation. MacKay, supra, at 454.
a liberal democracy, society must draw the line somewhere.\textsuperscript{37}

D. Tastes

The topic of tastes treats generally the variation of preferences among decisionmakers in similar circumstances.\textsuperscript{38} Under the theory of revealed preferences, economists take as a given an individual's tastes\textsuperscript{39} and assume she acts rationally, in other words, best for herself in light of her tastes.\textsuperscript{40} That two persons,
identically situated economically, choose to allocate their resources differently can be fully justified as a reflection of their dissimilar tastes or preferences. Discount schedules, risk attitudes, and psychic income may be matters of taste, but the term is used more broadly by economists.\textsuperscript{41} Again, it is often a wild card played to explain the otherwise inexplicable.\textsuperscript{42} Further-

\begin{quote}
\textit{Markets, 14 Phil. \& Pub. Aff. 195, 199-203 (1985)} (individual uncertainties about preference orderings, effects of circumstances, and preferences based on impulse, ignorance, or confusion about aims); Harrison, \textit{supra} note 33, at 1312-13, 1351-62 (the decisionmaking process often distorts the perception of preferences); Mark Kelman, \textit{Choice and Utility}, 1979 Wis. L. Rev. 769 (criticizing neoclassical views that one cannot tell whether consumer choices lead to well-being and that choosers actually are satisfied with their choices); Gail Kennedy, \textit{Social Choice and Policy Formation, in Human Values and Economic Policy, supra} note 15, at 140, 142 ("Any attempt to discriminate between that which is in fact valued and that which upon reflection might be found either valuable or the contrary is ignored."); Ernst Nagel, \textit{Preference, Evaluation, and Reflective Choice, in Human Values and Economic Policy, supra} note 15, at 73, 78 ("Economic theory does not differentiate between such consumers [who reflectively form their preferences] and those whose preferences are uninformed by any knowledge of the likely consequences of alternative choices but are the expressions of unreflective impulse.").
\end{quote}

\textsuperscript{41} Becker implies that tastes or preferences underlie "the production of commodities such as 'good health', children, marriage, or 'intercity visits'," as well as "concepts such as envy, prestige, physical and psychological health, 'circumspectness', and so on—notions often grappled with by sociologists and psychologists." Gary S. Becker, \textit{On the New Theory of Consumer Behavior, in The Economic Approach to Human Behavior, supra} note 14, at 131, 147-48. Scitovsky refers to people's tastes as "the way they spend their money and arrange their lives." \textit{Scitovsky, supra} note 23, at vii. That preferences are, in fact, not just self-regarding, \textit{see supra} note 34.

\textsuperscript{42} Stigler and Becker begin a famous article: "The venerable admonition not to quarrel over tastes is commonly interpreted as advice to terminate a dispute when it has been resolved into a difference of tastes, presumably because there is no further room for rational persuasion." George J. Stigler \& Gary S. Becker, \textit{De Gustibus Non Est Disputandum, 67 Am. Econ. Rev. 76, 76} (1977). The "assumptions of differences in tastes . . . along with assumptions of unstable tastes, have been a convenient crutch to lean on when the analysis has bogged down." \textit{Id.} at 89. They provide "\textit{ad hoc} arguments that disguise analytical failures." \textit{Id. See also} Becker, \textit{supra} note 41, at 133 ("variations in tastes . . . are the portmanteau in the demand curve"); Alexander Rosenberg, \textit{Prospects for the Elimination of Tastes from Economics and Ethics, Soc. Phil. \& Pol'y} (Spring 1985) at 48, 53 ("Any actual choice can be accommodated to the conventional theory of consumer behavior because of the indeterminacy of the preferences that give rise to it."). Becker reacts to this role of tastes in "explaining" behavior: "For economists to rest a large part of their theory of choice on differences in tastes is disturbing since they admittedley have no useful theory of the formation of tastes, nor can they rely on a well-developed theory of tastes from any other discipline in the social sciences, since none exists." Becker, \textit{supra} note 41, at 133. For examples, \textit{see id.} at 133-34. As an alternative he advances the "household production function approach" to consumption theory, though under this approach tastes or preferences remain a factor. \textit{See id.} at 134-37. Along this line Stigler and Becker recommend, on the basis of the standard of useful predictiveness, that the economist not stop when faced with matters of taste, but, maintaining the as-
more, taking tastes as a given and assuming individuals act rationally to satisfy them "overlook[] the fact that tastes are highly variable, easily influenced by example, custom, and suggestion, constantly changed by the accumulation of experience, and modified by changing prices and the availability of some satisfactions and the unavailability of others." Finally, while tastes are not all morally neutral, economic analysis is unable to distinguish between socially acceptable and unacceptable ones, such as a taste for prejudice.**

** Scitovsky, supra note 23, at 5. "It also overlooks the possibility that the same influences that modify our tastes might also modify our ability to derive satisfaction from the things that cater to our tastes." Id. This famous book by Scitovsky contains a sustained analysis of tastes or preferences and criticism of its role in economic theory. To similar effect, see, e.g., John Kenneth Galbraith, The Affluent Society 152-60 (1958) ("the dependence effect"); Joseph A Schumpeter, Capitalism, Socialism and Democracy 257-58 (3d ed. 1950) (advertising); C. Edwin Baker, The Ideology of the Economic Analysis of Law, 5 Phil. & Pub. Aff. 3, 32-41 (1975) (market influence on values) [hereinafter Ideology]; C. Edwin Baker, Property and Its Relation to Constitutionally Protected Liberty, 134 U. Pa. L. Rev. 741, 785-804 (1986) ("market determination") [hereinafter Property]; Cass R. Sunstein, Disrupting Voluntary Transactions, in Markets and Justice, supra note 4, at 279, 282-83 (preferences are "endogenous to, or a function of, consumption patterns, legal rules, and social pressures most generally"). For other criticism, see, e.g., David Braybrooke, Skepticism of Wants, and Certain Subversive Effects of Corporations on American Values, in Human Values and Economic Policy, supra note 15, at 224; Sunstein, supra note 28, at 1138-69 (cataloging the reasons for rejecting the view that private preferences are autonomous); see also Gordon G. Winston, The Reasons for Being of Two Minds: A Comment on Schelling's "Enforcing Rules on Oneself," 1 J.L. & Econ. Org. 375, 377-78 (1985) (discussing various causes of internally conflicting preferences). For a technical examination, see Peter J. Hammond, Changing Tastes and Coherent Dynamic Choice, 43 Rev. Econ. Stud. 159 (1976).

** See Richard S. Markovitz, Legal Analysis and the Economic Analysis of Allocative Efficiency, 8 Hofstra L. Rev. 811, 873 (1980) ("Since economics is insensitive to the prejudice-taste distinction, it cannot provide an algorithm for legal analysis where this distinction is concerned."). That preferences are not given beyond social appraisal, see, e.g., Rationality, supra note 38, at 40-44 (common sense allows rational assessment of some preferences); Mark Sagoff, Values and Preferences, 96 Ethics 301, 302-05 (1986) (public values diverge from private preferences); Sunstein, supra note 28, at 1173 (the legal system should examine private preferences). Society obviously draws the line somewhere, such as at malice. See Michael S. Moore, Law and Psychiatry 101-04 (1984) (desires must be minimally intelligible and correct); Bailey Kuklin, Punishment: The Civil Perspective of Punitive Damages, 37 Cleve. St. L. Rev. 1, 18-20 (1989) ("malice" subjects a person to punitive damages); Sunstein, supra note 28, at 1129-30 ("[I]t is difficult to understand much of private and public law without questioning the assump-
E. Transaction Costs

Transaction costs, which include opportunity costs, information costs, and administrative costs, can be used as an

tion that private preferences must always be regarded as sovereign.

45 For a definition of transaction costs, see supra text accompanying note 12. Polinsky offers a more expansive definition. "In general, transaction costs include the costs of identifying the parties with whom one has to bargain, the costs of getting together with them, the costs of the bargaining process itself, and the costs of enforcing any bargain reached." A. MITCHELL POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 12 (2d ed. 1989). See also Cooter, supra note 1, at 16 (similarly expansive definition); Ellickson, supra note 1, at 614-16 ("A Taxonomy of Transaction Costs"). Related to transaction costs is strategic behavior, whereby bargainers vie for shares of the fruits of their cooperation. See Jules L. Coleman, Economics and the Law: A Critical Review of the Foundations of the Economic Approach to Law, 94 Ethics 649, 664-67 (1984). The Coase theorem can be criticized for neglecting strategic behavior, e.g., threats and bluffs, that jeopardizes cooperation. See id.

46 "The costs of inputs to a firm are their values in their most valuable alternative uses." EDWIN MANSFIELD, MICROECONOMICS: THEORY AND APPLICATIONS 163 (3d ed. 1979) (the alternative or opportunity cost doctrine). The input discussed here is the time and other costs of acquiring information, presumptively unnecessary in the ideal market. While "[a] basic principle of economic thinking is that opportunity costs and out-of-pocket costs should be treated alike," psychological experiments demonstrate that whether the costs are framed as discounts or surcharges affects their perceived value. Tversky & Kahneman, supra note 20, at 67, 76-77.

47 Information costs, as suggested by Becker, can also be used as a wild card: "The assumption that information is often seriously incomplete because it is costly to acquire is used in the economic approach to explain the same kind of behavior that is explained by irrational and volatile behavior, or tradition behavior, or 'nonrational' behavior in other discussions." GARY S. BECKER, THE ECONOMIC APPROACH TO HUMAN BEHAVIOR, supra note 14, at 3, 7. He goes on:

When an apparently profitable opportunity to a firm, worker, or household is not exploited, the economic approach does not take refuge in assertions about irrationality, contentment with wealth already acquired, or convenient ad hoc shifts in values (i.e., preferences). Rather it postulates the existence of costs, monetary or psychic, of taking advantage of these opportunities that eliminate their profitability—costs that may not be easily "seen" by outside observers. Of course, postulating the existence of costs closes or "completes" the economic approach in the same, almost tautological, way that [is done in the physical and biological sciences]. The critical question is whether a system is completed in a useful way . . . .

Id. But what if the profitable opportunity actually is not exploited because of irrationality, contentment with wealth already acquired, or shifts in values? These reasons may have normative significance. Whereas usefulness is fully satisfactory as a touchstone for physical and biological scientific theory, fairness also is relevant to human interactions. For example, if a choice is irrational, this may affect the chooser's moral responsibility. Yet Becker would seem to have none of this: "Economists cannot resist the temptation to hide their own lack of understanding behind allegations of irrational behavior, unnecessary ignorance, folly, ad hoc shifts in values, and the like, which is simply acknowledging defeat in the guise of considered judgment." Id. at 11-12 (examples following).

Becker himself does resist the temptation. See id. at 14. Let us not acknowledge defeat
other economic wild card. For example, why does the consumer fail to undertake a simple investigation into the value of particular goods or the dependability of the merchant? It is not because she is irrational, but rather because of the opportunity costs involved. She values her leisure time more than the rationally expected payoff from the investigation. That she may save hundreds of dollars in twenty minutes by phoning ten merchants for price quotations, only shows that she highly values her twenty minutes of leisure.

too quickly, but then again, let us not smugly claim sufficient understanding when normative factors are neglected. Elster turns the claim of being ad hoc against Becker's position. He notes that the general problem with the principle of charity as defined, infra note 99, is "that so many of its gambits involve ad hoc reasoning perilously close to tautologies. To postulate costs of information, costs of transaction, psychic costs or different time perspectives just to make the behavior fit the theory is an unacceptable way out." ELSTER, supra note 15, at 156. Elster believes "the ad hoc hypotheses should have some independent predictive power." Id.

Notice that Buchanan implies that administrative costs differ from transaction costs. See supra text accompanying note 12 (compare item 2 with 4(a)). Polinsky runs them together. See supra note 45.

"No term in the philosopher's lexicon is more imprecisely defined than is the economist's term 'transaction costs.' Almost anything counts as a transaction cost." MURPHY & COLEMAN, supra note 5, at 261; COLEMAN, supra note 45, at 666; see also Guido Calabresi, Transaction Costs, Resource Allocation, and Liability Rules — A Comment, 11 J.L. & Econ. 67, 68 n.5 (1968) (questioning the meaning of transaction costs); Cooter, supra note 1, at 16 ("The meaning of transaction costs is not well-standardized in the literature."); Schlag, supra note 1, at 929 (noting the concept of transaction cost is usually "undefined and unlimited").

Since information is normally costly to acquire, the rational actor chooses to invest in information more as the value of the decision increases, e.g., television versus house purchase. The leading article is George J. Stigler, The Economics of Information, 69 J. Pol. Econ. 213 (1961). Notice that information costs may even be negative, i.e., a positive benefit to the consumer. For example, the television purchaser who obtains pleasure (i.e., psychic income) from reading technical and consumer magazines, and going from store to store looking at available models and talking to salespersons, may actually feel a letdown once the "chore" of the purchase is over. See infra text accompanying notes 97-99.

Coase himself recognizes the need to account for transaction costs. "[W]hile consideration of what would happen in a world of zero transaction costs can give us valuable insights, these insights are, in my view, without value except as steps on the way to the analysis of the real world of positive transaction costs." Ronald H. Coase, The Coase Theorem and the Empty Core: A Comment, 24 J.L. & Econ. 183, 187 (1981). The "more complicated version of the Coase Theorem" faces up to the fact that positive transaction costs may curtail the efficiency of a particular legal rule. "In these circumstances, the preferred legal rule is the rule that minimizes the effects of transaction costs. These effects include actually incurring transaction costs as well as the inefficient choices induced by a desire to avoid transaction costs." POLINSKY, supra note 45, at 13. For an interesting analysis and use of the reciprocal nature of transaction costs, see Schlag,
To summarize, the point is not that people do not vary in their discount schedules, risk attitudes, psychic income, tastes, and transaction costs. Rather, these wild cards can cover a multitude of sins. In a just society, or at least in intellectually honest discourse, the sins must be uncovered and counted.\textsuperscript{62}

II. INDETERMINACIES

There are other soft spots in economic theory that dampen the normative force of the market paradigm. The ones addressed here are the indeterminacies that result from inexactitudes, uncertainties, or symmetries in economic models. Specifically, they relate to problems with utility functions, externalities, what-is-a-cost-of-what, moralisms, and shadow markets.\textsuperscript{63}

A. Utility Functions

Economists usually assume that an economic actor aims to maximize his utility function, which is the relationship between the consumer's utility and the goods consumed.\textsuperscript{64} It "depends only on his own consumption, and . . . determines all his

\textsuperscript{62} Posner responds to criticism stemming from unrealistic economic assumptions regarding human nature: "Rational choice in economics does not mean self-consciously economic choice, or even conscious choice. Economics . . . is concerned with what people do, not what they feel or think. To complain that economics does not paint a realistic picture of the conscious mind is to miss the point of economics . . . ." Richard A. Posner, \textit{The Ethical Significance of Free Choice: A Reply to Professor West}, 99 Harv. L. Rev. 1431, 1439 (1986) (footnotes omitted). \textit{Au contraire}, the point is not missed. To say nothing about the effect of the market on feelings and thoughts, insofar as choices are not reflective of what people feel or think, the Kantian and utilitarian justifications of the market are undermined. Neither autonomy nor preference satisfaction are promoted. Cf. Posner, \textit{supra} note 1, chs. 3-4 (justifying the free market and wealth maximization principles on autonomy grounds, i.e., \textit{ex ante} consent).

\textsuperscript{63} For a sampling of other criticisms of economic theory, particularly as applied to legal analysis, see \textit{Property, supra} note 43, at 785-804 (arguing that the market structure coercively determines the content of the social world, thereby limiting self-determination); Rizzo, \textit{supra} note 30, at 641 (noting that the normative justification of common law efficiency has unrealistically high information requirements); see generally Jules L. Coleman, \textit{Markets, Morals and the Law} (1988); \textit{Symposium on Efficiency as a Legal Concern}, 8 Hofstra L. Rev. 485 (1980).

\textsuperscript{64} See Mansfield, \textit{supra} note 46, at 58 n.8. The meaning or significance of individual welfare or utility is debatable. See, e.g., Sen, \textit{supra} note 4, at 38-51; G. A. Cohen, \textit{On the Currency of Egalitarian Justice}, 99 Ethics 906, 909-10 (1989) (corresponding to Sen and Dworkin, distinguishing "hedonic welfare" from "preference satisfaction").
choices.\footnote{Sen, supra note 4, at 80 (specifying the features of the "complex structure of 'self-interested behavior'" of a utility function). "Each actor seeks to maximize an index known as a utility function, whose value depends on the vector (list) of goods possessed by that actor." Margolis, supra note 31, at 6; cf. Frank H. Knight, Science, Philosophy, and Social Procedure, in Freedom and Reform 205, 207 (1947) ("The economic man may only in a rather unrealistic sense be said to work, and he does not play; he maximizes satisfaction, subject to the condition of the 'resources' at his command.").} While experiments have been designed to do this,\footnote{See James G. March, Bounded Rationality, Ambiguity, and the Engineering of Choice, in Rational Choice 142, 153-54 (Jon Elster ed., 1986); Rosenberg, supra note 42, at 48; Sen, supra note 34, at 323-24.} their validity has been challenged.\footnote{See supra note 43 and accompanying text; see generally Ronald de Sousa, Rational Homunculi, in The Identities of Persons 217 (Amélie O. Rorty ed., 1976).}

One reason actual utility functions may be indeterminable is that individuals may not actually have stable preferences which are consistently ordered.\footnote{For economic rationality, see supra note 15.} They may, in other words, be economically irrational,\footnote{Becker explains the basis of the assumption partially as a means to avoid a wild card: "The assumption of stable preferences provides a stable foundation for generating predictions about responses to various changes, and prevents the analyst from succumbing to the temptation of simply postulating the required shift in preferences to 'explain' all apparent contradictions to his predictions." Becker, supra note 47, at 5. The assumption is one of the keystones: "The combined assumptions of maximizing behavior, market equilibrium, and stable preferences, used relentlessly and unflinchingly, form the heart of the economic approach as I see it." Id. The assumption that preferences can be taken as a given is criticized in the topic "tastes." See supra notes 38-44 and accompanying text.} notwithstanding the assumption to the contrary.\footnote{See supra note 43; Mansfield, supra note 46, at 71-72 (determinants of tastes and preferences); John Rawls, A Well-Ordered Society, in Philosophy, Politics and Society 6, 9 (Peter Laslett & James Fishkin eds., 5th series 1979) ("the social system shapes the desires and aspirations of its members").} Preferences are not independent of the setting, but are themselves partially informed by the marketplace and other environmental factors.\footnote{See, e.g., Myrdal, supra note 4, at 16; Brandt, supra note 15, at 22, 29-30;}

They also change over time.\footnote{See supra note 43; Mansfield, supra note 46, at 71-72 (determinants of tastes and preferences); John Rawls, A Well-Ordered Society, in Philosophy, Politics and Society 6, 9 (Peter Laslett & James Fishkin eds., 5th series 1979) ("the social system shapes the desires and aspirations of its members").} Even be-
yond this, when examining the social goal of individual preference satisfaction, the proposition that people generally know what is best for themselves has been questioned.64

To overcome some of the problems with utility functions, economists have embraced the notion of Pareto superiority and, derivatively, optimality,65 which avoid the need of utility measurements, or at least of interpersonal utility comparisons.66


64 See Kuklin, *supra* note 11, at 666-69 nn.36 & 44. The challenge extends to whether, even if people know what is best for themselves, they choose it. See *supra* note 34.

65 The criterion of Pareto superiority may be defined: "One state of the world, S1, is Pareto superior to another, S . . . if and only if no one prefers S to S1 and at least one person prefers S1 to S." Murray & Coleman, *supra* note 5, at 213. Pareto optimality, derived from superiority, is: "S1 is Pareto optimal if and only if there exists no Sn such that Sn is Pareto superior to S1." Id. Pareto superiority is also referred to as the "Pareto condition," see, e.g., Paul Seabright, *Social Choice and Social Theories*, 18 Phil. & Pub. Aff. 365, 368 n.6 (1989) (providing versions of the "Pareto condition"), and the "Pareto principle," see Arrow, *supra* note 15, at 15. Akin to the Pareto criteria, particularly superiority, is the Kaldor-Hicks criterion: "One state of affairs (E') is Kaldor-Hicks efficient to another (E) if and only if those whose welfare increases in the move from E to E' could fully compensate those whose welfare diminishes with a net gain in welfare." Jules L. Coleman, *Efficiency, Utility, and Wealth Maximization*, 8 Hofstra L. Rev. 509, 513 (1980). "Under Kaldor-Hicks, compensation to losers is not in fact paid." Id. For the various notions of efficiency in law and economics, see generally Buchanan, *supra* note 12, at 4-13; Coleman, *supra* note 1, at 208-31. See also Sen, *supra* note 4, at 21 n.20 (laying out the two main definitions: "technical efficiency" and "economic efficiency," i.e., Pareto optimality); David D. Friedman, *Does Altruism Produce Efficient Outcomes? Marshall Versus Kaldor*, 17 J. Legal Stud. 1, 1 (1988) (defining "Marshall efficiency"). Kennedy complains that efficiency can be given such a capacious definition that it becomes easily manipulable for political purposes. See Duncan Kennedy, *Distributive and Paternalistic Motives in Contract and Tort Law, with Special References to Compulsory Terms and Unequal Bargaining Power*, 41 Md. L. Rev. 563, 587 (1982); see also Sen, *supra* note 4, at ch. 2 (lamenting the impoverishment of welfare economics by its reliance on economic efficiency); Frank L. Michelman, *A Comment on Some Uses and Abuses of Economics in Law*, 46 U. Chi. L. Rev. 307, 309 (1979) ("Efficiency is too loose and evocative a term for scientific usage . . . ").

Under the Pareto criteria, to determine if a move in the marketplace is superior, all the parties affected by it must consent. Their consent presumably indicates that they have achieved personal utility gains. As it turns out, this is far from a perfect solution. Critics of reliance on Pareto superiority object to its neglect of social values. Another fundamental issue is whether the Kaldor-Hicks criterion. See Friedman, supra note 65, at 2. That interpersonal utility comparisons are problematic, see, e.g., Buchanan, supra note 12, at 7-8 (with criticism); Wilfred Harrison, Introduction to Jeremy Bentham, A Fragment on Government and an Introduction To The Principles of Morals and Legislation ii n.2 (Wilfred Harrison ed., 1948) (1st ed. Oxford 1823); Richard A. Posner, Economic Analysis of Law 345-46 (2d ed. 1977). The reluctance of economists to compare interpersonal utilities may be due to the influence of logical positivism, see Sen, supra note 4, at 30-31; Seabright, supra note 65, at 371 n.13, or to “a cautious positivistic view of the capacity and reliability of human speculative reason, intuition, and insight,” Michelman, supra note 65, at 313. “Many economists even today are uneasy about making interpersonal comparisons of welfare, even though most policy-making depends implicitly upon doing so.” Id. That policymakers realistically have little choice but to make the comparisons, and do, see, e.g., Barry, supra note 15, at 44-52; Goodin, supra note 22, at 16-18, 246; Ian M.D. Little, A Critique of Welfare Economics 52-53 (2d ed. 1957); Arrow, supra note 16, at 19-20 (examining the “principle of extended sympathy”).
one's "consent" can be considered morally sufficient when one contemplates the many factors that prevent the making of a fully rational choice in the marketplace, such as the lack of complete information and equal bargaining power.89

B. Externalities

Efficient Pareto superior moves are unlikely to occur unless all the costs and benefits of a transaction are internalized. In the absence of third-party effects, when costs and benefits are fully internalized, the price of the goods reflects the true social costs, thereby forcing the parties to take them into account.90 Otherwise, when there are externalities, the transactors may blithely ignore these social costs and, for example, consummate the transaction even though it is inefficient because the transaction imposes diffuse costs on third parties greater than the benefits to the transacting parties. Therefore, among the assumptions of the ideal market is that there are no externalities.90 Insofar as...
there are, the marketplace, realistically having transaction costs, will fail to assure Pareto superiority and optimality. Unfortunately, externalities exist for large classes of transactions, perhaps most of them. Since not all costs and benefits are internalized, in Posner's words, "the Pareto-superiority criterion is useless for most policy questions."


Before complaining about the inefficiency caused by the failure to internalize costs and benefits, one must be able to identify an externality. What costs and benefits are properly ascribed to a particular good? For example, is it a cost of owning a farm that occasionally sparks from the bordering railroad's engines will ignite the nearby crops, or is it a cost of owning a railroad that occasionally the nearby farm crops will be ignited by the engines' sparks? Determining, as Calabresi refers to the question, what-is-a-cost-of-what, suggests the answer to the more important social question, namely, which party should internalize this cost? From a purely analytical point of view, there is a symmetry to the problem.

4(b)); see generally Mansfield, supra note 46, at 372-74. The existence of externalities "is inefficient, thus creating a potential cooperative surplus that can be distributed so as to make each person better off." Coleman, supra note 12, at 82.

71 See Coleman, supra note 65, at 541 ("In the ideal world of noncoercive markets free from transaction costs and third party effects, in which individuals are both rational and knowledgeable, the exercise of liberty leads to Pareto-optimal states of affairs through a series of Pareto-superior exchanges.").

72 See, e.g., Mansfield, supra note 46, at 372-74 (examples); cf. Sen, supra note 67, at 79 ("Indeed the failure of the market mechanism to take note of 'externalities' is one of the well-known deficiencies of the market system.").

73 Even if all costs could be internalized, one reason they are not despite the potential cooperative surplus, see supra note 70, is that the bargain over them is an exchange having the payoff structure of the Prisoner's Dilemma. A prisoner's dilemma occurs when two persons would be better off if they both reliably cooperated (e.g., neither prisoner rats on the other) but they rationally choose not to cooperate (e.g., both rat on each other) because of the fear that the other will gain an advantage by not cooperating (e.g., one rats on the other and gets off with a light sentence while the other who does not rat gets a heavy one). See Coleman, supra note 12, at 82.

74 Posner, supra note 66, at 489. Similar criticism may also be leveled against other gambits resorted to in the attempt to cope with problems of achieving efficiency, such as the Kaldor-Hicks criterion. See, e.g., id. at 490-91; Coleman, supra note 1, at 237-42.

75 This example comes from Coase's original article. See Coase, supra note 1, at 29-34.

76 See Calabresi, supra note 69, at chs. 7 & 8. This stems from Coase who discusses "the reciprocal nature of the problem." Coase, supra note 1, at 2.
Under the Coase theorem determining what-is-a-cost-of-what is ultimately irrelevant to the matter of resource allocation. Under Coase's assumptions (e.g., zero transaction costs), the person who stands to gain more will end up with her favored resolution, if not by original entitlement, then by purchasing it from the other party. Therefore, depending on which party originally has the right in question and values the right more, either the farmer will pay the railroad to stop emitting sparks, or the railroad will pay the farmer to stop growing crops along the railroad tracks. One way or another, the most valuable use will result.

Even granting Coase his strong assumption that required transactions will occur, while there may be no allocative effects from externalities, there are distributive ones; the person with the original entitlement will end up wealthier, either from being paid for the entitlement by the other party, or in being free from having to pay the other party for it. For example, when neighbors claim that damage from smokestack pollution should be considered a cost of the manufacturer's products, the symmetrical counterclaim is that the neighbors' pollution harms should be treated as a cost to the neighbors of living in modern times in industrial areas. Under a regime that requires the polluter to internalize the costs of pollution either by paying for pollution damage to the neighbors, or by installing pollution control devices, the pollutees end up better off. Under a contrary regime, the polluter ends up better off. The proper response to the reciprocal claims is neither self-evident nor resolved by Coase's analysis. Instead, it is political. What-is-a-cost-of-what is declared by the body politic based on economic and moral policy considerations, history, etc. In the end, the economic analysis

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77 See Coase, supra note 1, at 2-8. But Coase took note of transaction costs and recognized that, in some circumstances, government intervention may be efficient. See id. at 15-19.

78 For environmental impacts of this sort, one commentator advances a "responsibility principle," distinguishing between the actor and the acted upon, which is claimed to offer an asymmetric answer, Coase notwithstanding. See Talbot Page, Responsibility, Liability, and Incentive Compatibility, 97 Ethics 240 (1986). As one might suspect, under this principle the polluter, not the pollutee, is responsible.

79 For accidents, Calabresi espouses the "general deterrence or market approach" to risk distribution to achieve "primary accident cost avoidance." See CALABRESE, supra note 69, at 20-21. This approach, based on policies favoring efficiency, "would require allocation of accident costs to those acts or activities (or combinations of them) which
becomes blurred by the required normative judgment that controls.80

D. Moralisms

As seen in the discussion of what-is-a-cost-of-what, there is a moral component to social choices that at first glance may seem merely analytical. This component, broadly speaking, may be called moralisms.81 Moralisms are public goods that "do not lend themselves to collective measurement which is acceptably objective and nonarbitrary."82 Measurement problems aside, economic analysis tends to neglect a broad range of social values.83 If the law relies exclusively on efficiency considerations, it will inadequately account for basic normative questions, such as the could avoid the accident costs most cheaply." Id. at 135 (footnote omitted). Along with the general deterrence approach, Calabresi advances the specific deterrence approach that attacks the problem of cost reduction differently. Under this one, there are "not only collective decisions as to which acts or activities are responsible for accidents, but also collective decisions regarding the tolerable level of accident costs in light of the activities that must be given up to reduce accident costs." Id. at 174. In addition to the economic values revealed in the market, also appraised are the nonmarket moral values of activities affected by the reduction of accident costs. "While general deterrence seeks the 'cheapest' way of reducing accident costs, specific deterrence may be said to seek the 'best' way of reducing them." Id. at 175. For the difficulty in determining the "best" way of reducing costs—often harder than finding the "cheapest" way, see id. at 176-97.

80 Kennedy emphasizes this indeterminacy in attacking the use of economic analysis by liberals. See Kennedy, supra note 67, at 393-400. Schlag shows that transaction costs also raise the question of what-is-a-cost-of-what. See Schlag, supra note 1, at 929-30.

81 While Calabresi discusses the moral component of what-is-a-cost-of-what under "specific deterrence", see supra note 79, for analytical purposes he excludes consideration of some moral principles, such as justice, that put into issue the fairness of the particular accident system. See Calabresi, supra note 69, at 100-02. Though he brings in the broadest moral principles later, see id. at pt. V, I lump together all these principles under the label "moralism."


83 For instance, Baker observes that the competitive market forces firms to respond in kind to efficiency-increasing techniques, "even if the technique is objectionable to consumers, workers, capitalists, and managers of other firms . . . . The social world thus created may not reflect the preferences of any of these interested parties." Baker, supra note 43, at 789. As an example, Baker turns to health preferences, though the preservation of health is not entirely a moralism because it has objectively measurable aspects. "[M]arket competition forces cigarette companies to try to increase demand for their product, even if the owners, managers, and workers all recognize that smoking is unhealthy and should be discouraged." Id. at 789-90. For a fuller examination of the moral overtones of smoking, see Robert E. Goodin, The Ethics of Smoking, 99 Ethics 574 (1989).
tradeoff between efficiency and equality, or allocational versus
distributional goals.\textsuperscript{84}

E. Shadow Markets

Economists attempt to monetize moralisms and other
"goods" for which no actual market exists by means of a shadow,
hypothetical or pseudo market. This is a conjectural market in
which the decisionmaker is relegated to estimating the valuation
in question.\textsuperscript{85} The weakness of this ploy is that it is imprecise,\textsuperscript{86}
arguably reflecting only the decisionmaker's "own beliefs about
how people should behave."\textsuperscript{87} At their best, shadow markets are

\textsuperscript{84} See, e.g., Dworkin, supra note 68, at 264 (summarizing that wealth maximization
"makes no sense as a social goal, even as one among others"); Arthur M. Okun, \textit{Equality and Efficiency: The Big Tradeoff} (1975) (the pursuit of efficiency creates inequalities);
Kronman, supra note 68, at 240-42 (wealth maximization principle favors the advantaged, including "the arbitrary results of the natural lottery"); Malloy, supra note 2, at 245 (Posner's framework favors the rich); Rizzo, supra note 30, at 644 ("moralisms," such as relational and distributional goals, are excluded); White, supra note 1, at 593-99 (Coase policy tends to redistribute wealth to the economically advantaged); \textit{but see} George J. Stigler, \textit{Two Notes on the Coase Theorem}, 99 \textit{Yale LJ.} 631, 632-33 (1989) (Under the Coase theorem, "[a] stable property or tort law \ldots would not affect the distribution of income."). Regarding the general normativity of economics, see \textit{infra} note 124. In a recent reexamination of his principle of wealth maximization, Posner finds himself "slightly more sympathetic to some of the criticisms than I once was—but only slightly more." Posner, supra note 9, at 85. He acknowledges situations in which the principle offers no guidance. See, e.g., id. at 92-93, 100-01. He believes, however, that these situations are rare, and "not a fatal limitation." Id. at 93.

\textsuperscript{85} \textit{Shadow prices}, for example, "refer to the prices society \textit{would} assign in perfect markets to commodities for which, in reality, no market exists." Rizzo, supra note 30, at 643 n.5. "Prices, be they the money prices of the market sector or the 'shadow' imputed prices of the nonmarket sector, measure the opportunity cost of using scarce resources, and the economic approach predicts the same kind of response to shadow prices as to market prices." Becker, supra note 47, at 6. Posner's wealth-maximization principle relies heavily on hypothetical markets. \textit{See Posner, supra note 4, at 60-65. For examples of arguments based on shadow or hypothetical markets, see Gary S. Becker, \textit{On the Interaction Between the Quantity and Quality of Children, in The Economic Approach to Human Behavior, supra note 14, at ch. 10 (noting shadow price of children affects demand); Posner, supra note 4, at 61-62 (discussing the need for judicial estimations of values when applying the Hand formula for negligence liability).}

\textsuperscript{86} \textit{Shadow prices}, for example, "refer to the prices society \textit{would} assign in perfect markets to commodities for which, in reality, no market exists." Rizzo, supra note 30, at 646-47; Weinrib, supra note 68, at 319-25. Particularly in valuing a moralism as revealed and priced through the common law, "[t]here is no way \ldots to stand outside of the law and see how it measures up against an external standard." Rizzo, supra note 30, at 646; \textit{but see} Posner, supra note 4, at 79 (Though interpersonal utility comparisons are rightly "anathema to the modern economist \ldots the interpersonal comparison of values, in the economic sense, is feasible, although difficult, even when the values are not being compared in an explicit market.").

\textsuperscript{87} Ronald Dworkin, \textit{Liberalism, in Public and Private Morality} 113, 131 (Stuart
soft. These estimated factors are easily manipulated, discounted, or ignored when considered along with the hard numbers of more concretely determined market factors.

Thus, economic theory again faces formidable problems. When these are confronted, the models show weaknesses both at the edges and at the cores. These are where the controversies rage, or should rage.

III. Efficiency

The ideal world of the invisible hand is perfectly efficient. Goods end up with those who value them most. What could be wrong with this? In responding to this question, it is helpful to examine the unrealistic assumptions of the market model, super-rationality, cardinal versus ordinal valuation and the theory of second best.

A. Unrealistic Assumptions of the Market Model

Once one backs away from the tautological finding of efficiency which follows from the assumption that parties make perfectly rational choices, the actual flaws in the rationality observed in the marketplace undermine this primary economic goal. In light of the unrealism of the assumed conditions of the invisible hand, individual efficient choices are unlikely. For example, some costs and benefits of goods are easy to perceive...
(e.g., price tag and design), while others are difficult (e.g., prospective repairs and dealer dependability). Because of the effect of this on consumers, resources tend to be misallocated in favor of competitive goods with relatively more unperceived costs and more perceived benefits. To put it in distributive terms, merchants of goods with higher discernible net advantages capture wealth from consumers as well as merchants of competitive goods with lower discernible advantages, irrespective of the true nature of the goods.  

Defenders of the market model claim that the unrealism of the assumed conditions is irrelevant to the usefulness of economic theory. What counts is not realism, but, like Newton's theory of gravity, whether the theory is predictive. The impor-

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90 See Kuklin, supra note 13, at 997-1003 (redistribution from consumer to merchant). For the variables affecting this conclusion, see Kennedy, supra note 65, at 597-614. Whether the market is actually efficient "depends on empirical data that no one ever seems to have ready at hand." Id. at 603. Despite the uncertainties regarding the outcome of compulsory terms, because of the prohibitive transaction costs Kennedy would have the decisionmaker, following "rough intuitive assessments," intervene for distributive and efficiency motives. Id. at 614. At the same time, he severely criticizes intervention because of inequality of bargaining power for distributive motives, see id. at 614-24, while advancing it, with qualms, for paternalistic motives. See id. at 624-49.

91 See, e.g., Becker, supra note 47, at 7; Milton Friedman, The Methodology of Positive Economics, in ESSAYS IN POSITIVE ECONOMICS 3, 15, 41 (1953); POSNER, supra note 66, at 13; GEORGE J. STIGLER, THE THEORY OF PRICE 5-7 (4th ed. 1987); Lionel Robbins, The Nature of Economic Generalizations, in PHILOSOPHY AND ECONOMIC THEORY, supra note 37, at 36. Buchanan points out that, along with Pareto Optimality, "[t]he case for the market on grounds of efficiency rests on . . . the assumption that actual (nonideal) markets, or feasible modifications of actual markets, sufficiently approximate the efficiency of the ideal market to make them preferable to nonmarket arrangements." BUCHAN, supra note 12, at 14. That there are prodigious obstacles to "intersystemic efficiency comparisons." See id. at 36-46. Arguably, since people try to be rational, "[t]hus, although individuals are not perfectly rational (even in the narrow sense of economic theory), and even though aggregate behavior may be significantly irrational (in a deeper sense), it is nevertheless comprehensible that rational (narrow sense) models turn out to work quite well over a considerable range of behavior." MARGOLIS, supra note 31, at 8. For criticism, see 2 Herbert A. Simon, Problems of Methodology — Discussion, in MODELS OF BOUNDED RATIONALITY, supra note 14, at 369; 2 Herbert A. Simon, Rational Decision Making in Business Organizations, in MODELS OF BOUNDED RATIONALITY, supra note 14, at 474; Russell & Thaler, supra note 18, at 1074. "The predictions of the classical and neoclassical theories and the policy recommendations derived from them must be treated with the greatest caution." Simon, Rational Decision Making, supra, at 490. See also Michelman, supra note 67, at 1038 (noting that because of the lack of definitive structure to the relations among the variables in the economic theory of law, "it displays a certain flaccidity, a tincture of nonfalsifiability . . ."); Nagel, supra note 40, at 78-79 ("A theory of rational consumer choice that stipulates ideally complete knowledge and absence of any uncertainty may be a useful guide to omniscient beings; it is not obvi-
tance of predictability may be conceded. Current invisible hand economic models may well be predictive, and even more predictive than any other available ones, but still this is not enough. Other considerations also count, such as fairness. Even if individual foibles and disadvantages wash out from a bird’s eye view of the marketplace, individuals have solid grounds on which to object to being washed out. Some individuals, owing to their unavoidable positions in the marketplace, systematically come up with the short straw for reasons independent of desert or claims of rights. The overall aggregations of economic analysis allow

ously relevant to the problems of mortal men."). The positivistic approach to economics has been sharply attacked. See generally Hollis & Nell, supra note 15 (subscribing to a rationalist position); Christopher W. Morris, The Relation Between Self-Interest and Justice in Contractarian Ethics, Soc. Phil. & Pol'y 119, 130 (Spring 1988) (philosophers of science widely criticizing Friedman's instrumentalist account of economic assumptions).

For the challenger of current economic theory, Friedman throws down the gauntlet. Not only must the compared alternative theory be, ceteris paribus, more predictive, but also “[t]he gains from greater accuracy, which depend on the purpose in mind, must then be balanced against the costs of achieving it.” Friedman, supra note 91, at 17. Let us not forget that fairness is a benefit of applied theory, offsetting a decrease in predictiveness. Friedman recognizes that “normative economics” does not necessarily coincide with analytic economics, though the former is largely informed by the latter. See id. at 3-7.

For hints of what follows, see supra note 67.

Economists defend their neglect of psychological evidence of human irrationalities with the response that they “are interested in aggregate behavior and these individual errors will wash out when we aggregate.” Russell & Thaler, supra note 14, at 1074. Russell and Thaler counter: “Since the errors that have been identified are systematic (i.e., in a predictable direction), this statement is just wrong.” Id. Nor for individuals can one say, under “a more subtle version of this idea,” that “[m]arkets will eliminate the errors,” since irrationality “is rarely fatal.” Id. As to this first response, I go further. Even if the individual errors wash out when aggregated, normative questions remain. For example, as between persons on either side of the aggregated average, there are likely to be distributive consequences, as where the unsophisticated subsidize the sophisticated, or risk averters subsidize risk preferrers. This should not be ignored.

This point is largely of a deontological orientation. Irrespective of the usefulness of economic theories, important questions of rights and justice are lost sight of. Chapman, for example, argues “that rights cannot be sensibly incorporated within any kind of [Posnerian wealth] maximization framework . . . .” Bruce Chapman, Individual Rights and Collective Rationality: Some Implications for Economic Analysis of Law, 10 Hofstra L. Rev. 455, 455 (1982); see also Neil MacCormick, Law and Economics: Adam Smith’s Analysis, in LEGAL RIGHT AND SOCIAL DEMOCRACY 103, 124-25 (1982) (showing the economic approach to law inadequately justifies or explains rights); Lawrence H. Tribe, Technology Assessment and the Fourth Discontinuity: The Limits of Instrumental Rationality, 46 S. Cal. L. Rev. 617, 628-30 (1973) (“[T]he Coase-Calabresi approach overlooks the structural complexity implicit in the problem of assigning rights when it effectively reduces that problem to one of maximizing net total welfare.”); Weinrib,
important questions of fairness and other values to be lost in the welter of impressive looking numbers churned out by formulas that deal with only part of what should be of public concern. For controversial issues, such as some environmental problems, the formulas may even produce answers that are accurate to no significant digits.\textsuperscript{65}

B. Superrationality

If one fails to account for the shortfalls in full rationality behind an actual purchase, the finding that any choice is efficient can be fully defended. For example, the consumer without prior information who purchases a television set after looking at a few models in a single store may be quite rational in a fairly strong sense. She values her leisure highly and obtains no pleasure from gathering information about goods so mundane. She

\textsuperscript{65} Hook pinpoints objections to exclusive reliance on the invisible hand: If human values are defined in terms merely of choice, the strength of which is quantitatively measured by price, then to assert that the equilibrium established in the uncontrolled market maximizes human welfare is to utter a stupendous tautology. One must reflect on the consequences of the equilibrium achieved—requiring so to speak a second-order judgment—in order to determine whether they adequately fulfill, in the light of the possible alternatives, whatever human needs we reflectively conclude are essential to a good life in a good society. The choices we make on a first-order level are not ultimate data. They have a history behind them that depends on the way the market economy has functioned in the past. A whole library of social criticism has called attention to the manifold ways—subtle and blatant—in which first-order choices have been influenced by the operation of the market. A judgment about the way in which the resources of a society should be organized cannot be rationally evaluated by criteria that presuppose antecedent acceptance of the market system.

realizes her decision is made in the face of much risk and uncertainty, but based on what she does know, she monetizes these factors, determining the tradeoff to be worthwhile. Hence, her choice made with little detailed knowledge maximizes her own utility. This is perfectly rational even though she may have gotten a lousy deal on a lousy set.

To push the basic idea farther down the slippery slope, consider another hypothetical. An urban homeowner in a residential neighborhood justifiably claims his property values will suffer by forty percent from the planned establishment next door of a garbage landfill. In rebuttal, he is told that his preexisting reasonable expectations are not dashed by this depreciation. When he bought the home twenty years before, he knew that the urban environment included many concentrated unpleasantries, both extant and prospective. Waste, transportation, industrial, and penal facilities may be among the more disruptive, but everyone knew then and knows now that these must be accommodated for the municipality to operate. To push farther, even the zoning ordinance in place is no guarantee of freedom from future inconsistent use, for one must be oblivious to the political processes to believe that zoning is not subject to change and exception. So far the downside has been emphasized, but comparable upside prospects can be mentioned, such as the creation of a park nearby, or an urban renewal project down the street that increases the fair market value of the entire neighborhood. Therefore, twenty years ago, the homeowner rationally anticipated that his prop-

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88 See supra text accompanying notes 45-51 (transaction costs). The term of art for the idea is "rational ignorance." See Jonathan R. Macey, Public Choice: The Theory of the Firm and the Theory of Market Exchange, 74 CORNELL L. Rev. 43, 47 n.17 (1988). However, when the cost of the information and its relative value for the contemplated purchase is profoundly uncertain, the actor can hardly choose rationally in a strong sense. See, e.g., Goodin, supra note 22, at 177-79.

89 The assumption of rationality has been called a "principle of charity" whereby "one should always assume, as a working hypothesis, the rationality of any given action, however strange and unadapted it might appear to be at first glance." Elster, supra note 15, at 154. For the ad hoc nature of the principle, see supra note 47.
ery was likely to increase in value at about the same rate as realty in general, but that there was some chance for more dramatic changes, upward or downward. Reasonable people expect the unexpected, and, for that matter, expect to be treated unfairly on occasion, even by rational people. In the end, the homeowner is told that the fates were unkind regarding his house investment. Perhaps it will even out in the long run ("Have you thought about buying a lottery ticket?"). In any event, his reasonable expectations grounded on rational choice of twenty years ago have not been improperly disappointed. He certainly has no warrant for a legal claim because of the landfill.

This reasoning has run amuck. At the top of the slope, it is quite plausible—at the bottom, ludicrous. The points at which poor choices become irrational and unlikely contingencies become too attenuated to support contentions founded on reasonable anticipation are far from obvious. Normative theories based on rational choice need reins, as do their echoes, theories based on consent, or compensation.

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100 This is one of the reasons people purchase insurance. For an interesting analysis of the reasons for purchasing insurance, other than owing to risk aversion, see Goldberg, supra note 14, at 217-21.


102 The response that bad luck will be followed by good luck since things even out in the long run is known as the "gambler's fallacy." See RICHARD NISBETT & LEE ROSS, HUMAN INFERENCE: STRATEGIES AND SHORTCOMINGS OF SOCIAL JUDGMENT 25 (1980); AMOS Tversky & Daniel Kahneman, Belief in the Law of Small Numbers, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, supra note 27, at 23, 24. This is a typical example of irrationality when confronted with risk and uncertainty.

103 For an argument like this in the takings context, see Frank L. Michelman, Property, Utility, and Fairness: Comments on the Ethical Foundations of "Just Compensation Law," 80 HARV. L. REV. 1165, 1237-38 (1967).

104 I myself am not innocent of pushing rationality beyond the pale, though (sometimes) with tongue in cheek. See Kuklin, supra note 44, at 88 n.257, 93, 94 n.274; Kuklin, supra note 11, at 658-61 ("consent").

105 For example, in addressing aspects of superrationality in the takings context, Ackerman distinguishes the institutionalized, reasonable expectations of the Ordinary Observer from the Comprehensive View of the Scientific Policy Maker. See BRUCE A. ACKERMAN, PRIVATE PROPERTY AND THE CONSTITUTION 10-20 (1977). The expectations of the Ordinary Observer arguably are the standard for takings, but, Ackerman contends, it may be time for a reappraisal. See id. at ch. 7.

106 "Consent" arguments face the same slippery slope of superrationality. For example, a criminal, by undertaking an illegal act, "consents" to the punishment. See, e.g., IMMANUEL KANT, THE METAPHYSICAL ELEMENTS OF JUSTICE 99-103 (John Ladd trans., 1965) (1st ed. Konigsberg 1797); ERNEST VAN DEN HAAG, PUNISHING CRIMINALS 182
C. Cardinal versus Ordinal Valuation

The blackbox of economic modeling fineses problems by means of another clever move beyond that of the assumption of ideal rationality: the personal valuation of particular goods. Since the process of valuation typically involves, among other things, the monetization of many intangible qualities and speculative contingencies, how can a party determine the amount of utility she will obtain from the goods? Economic theory avoids this knotty issue of utility measurement with the weaker assumption that an individual need not know exactly the personal value of goods being considered (cardinal choice); one only must compare goods and choose which one is relatively preferred over the others (ordinal choice).


Posner espouses a compensation principle. For example, Posner argues that landowners in town A received ex ante compensation for losses owing to the movement of a factory to another town since the price they originally paid for their property was probably discounted by the probability of the future factory departure. Just as for “consensual” losses from losing lottery tickets, the gamble satisfies the Pareto principle. See Posner, supra note 66, at 491-92; see also Richard A. Posner, Epstein's Tort Theory: A Critique, 8 J. Legal Stud. 457, 460-64 (1979) (good Samaritan tort obligation from ex ante compensation). Correspondingly, Epstein argues that low-level nuisances are legally allowable because, over time, everyone suffers and benefits from them, so that ultimately persons gain under the rule by avoiding litigation and administrative costs. Particular losses are compensated for by overall gains, thereby advancing efficiency overall. See Richard A. Epstein, Nuisance Law: Corrective Justice and Its Utilitarian Constraints, 8 J. Legal Stud. 49, 82-85 (1979) (“live and let live” rule). For Kronman's discussion of these and other comparable compensation arguments from Michelman, Fried and himself, see Kronman, supra note 68, at 236-39. For Coleman's criticism of Posner's theory of consent and ex ante compensation, see Coleman, supra note 65, at 534-39.

For a brief introduction to the distinction between cardinal and ordinal utility, see Mansfield, supra note 46, at 54-56. But notice that the modern assumption of ordinal utility “does not mean that results based on the assumption of cardinal utility are wrong.” Id. at 55. In Arrow's words, it simply is that in consumer demand theory, “cardi-
When the competitive goods being considered are similar, the choice from an ordinal ranking probably coincides well with the choice that would follow from accurate cardinal valuations of each of the goods. In comparing apples to apples, for instance, inspection and experience are usually enough to pick the right apple. The chooser committed to an apple purchase does not have to determine that apple A is worth 37.2 cents to her while apple B is worth 34.9 cents to her. As a practical matter, her misestimations of cardinal value will have little affect on her allocation of resources. Even if she learned that she had somewhat misestimated the value of each apple, she would still buy an apple, to be exact, apple A.

On the other hand, when one is comparing apples to oranges, more specifically, disparate substitute goods, inspection and experience are usually not enough to make an accurate choice. For example, for the chooser deciding among a television set, a number of movie tickets, and the many other forms of entertainment, the cardinal valuations are so difficult that even the ordinal ranking may be beyond introspective ratiocination. The goods are virtually incommensurable. While the purchaser

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Due to the difficulty of comparison, the assumption of transitivity may not be satisfied. See Sen, supra note 4, at 63 n.5 ("The issue of 'commensurability', much discussed in ethics, seems to involve both ... that of descriptive homogeneity of goods, and that of consistent and complete overall ordering"); Arrow, supra note 15, at 6. I suspect that the difficulty is greater for luxury goods than for necessaries because the experience with the latter is broader and the range of substitute goods for them is narrower. For this reason the example of the television set may be inapt. Everyone needs a television set; it must be now considered a necessity. Thus, the important comparison may be of different sets and not to other forms of entertainment. Perhaps for a second or third set wider substitute goods become relevant. Posner believes that incommensurability is not an insurmountable problem even for "soft" goods such as moral values. See, e.g., Posner, supra note 66, at 101-04, 185-88 (love, honesty, selflessness, charity, neighborliness, etc.); Posner, supra note 4, at 79 (quoted supra note 86). Other commentators have serious doubts. See, e.g., I. Kenneth E. Boulding, Economic Analysis 9 (4th ed. 1965) ("the economist ... cannot claim jurisdiction over the great region of valuation where such imponderable realities as friendship, patriotism, sincerity, and loyalty are assessed"); Michelman, supra note 65, at 309-10; Weinrib, supra note 68, at 312-15, 319-25 (indicating the relationship between incommensurability and shadow markets). Regarding collective choices, where decisions are unavoidable, by default or otherwise, Arrow is not convinced that incommensurability is a problem. See Arrow, supra note 15, at 5-6. For an example of the debate, compare E.J. Mishan, Consistency in the Valuation of Life: A Wild Goose Chase?, Soc. Phil. & Pol'y at 152 (Spring 1985) with Dan Usher, The Value of Life for Decision Making in the Public Sector, Soc. Phil. & Pol'y 163 (Spring 1985).
may not remain indecisive, she is relegated largely to shooting in the twilight guided mainly by crude instinct. When this is the case, the decision is subject to manipulation by those with an interest in doing so. There is little hard data to counter soft persuasion. From this perspective the invisible hand works well only if seen through a telescope, not a microscope.110

The difficulty of cardinal valuation affects the nature of the goods in the marketplace. Goods constitute a package of qualities differing in ease of monetizability. The aesthetics of the television cabinetry may be fully perceived upon inspection, while the value of the service warranty remains dim. Competitors of quality goods may exploit this disparity by (roughly) equaling the discernible qualities while cutting corners on the hidden ones. Merchants who prefer to deal in goods of overall high quality will be at a competitive disadvantage since aspects of their excellence are imperceptible as a practical matter.111 In other words, bad goods and services drive out good ones. The consumer ends up worse off.112

D. The Theory of Second Best

Under the theory of second best, "[t]he second-best state of affairs usually departs in several respects from the first best,

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110 Yet to be asked is whether the techniques of correcting the unfairness arising from this problem threaten even greater unfairness. Yes they do, at some point. See Kuklin, supra note 11, at 705-12.

111 In theory, advertising can overcome consumer ignorance about the unperceived qualities. But for some of the most important qualities, such as health and safety risks, there is a practical disincentive. By publicizing the relative health or safety of a competitive product, the producer may alarm consumers by making salient the idea that there is a risk in both products. See, e.g., Richard A. Posner, Strict Liability: A Comment, 2 J. LEGAL STUD. 205, 211 (1973). A freerider problem also arises among competitive producers. See, e.g., Howard Beales et al., The Efficient Regulation of Consumer Information, 24 J.L. & Econ. 491, 506 (1981). Finally, advertisements spelling out some of the relevant costing notions (e.g., discounting) are hard to express in the jingles and flash of most ad copy. See generally Kuklin, supra note 13, at 944-47.

112 Kennedy calls this phenomenon the "competitive pathology." Even the merchants, other than the first ones who devalue the goods and services and thereby take advantage of the preexisting goodwill, end up worse off "since they are selling less product." See Kennedy, supra note 65, at 601-03. For the distributive consequences of this pathology to consumers and competing merchants, see supra note 90.
rather than being defined by exactly the same characteristics save one." In the context of the marketplace, when one of the ideal conditions is unmet, the unpredictable rippling effects make it exceedingly difficult or impossible to know whether, by satisfying the other conditions, resources are efficiently allocated. Distributive effects are similarly unpredictable. While theoretical conclusions do not collapse altogether under circumstances of second best, caution is needed before prescribing them.

**Conclusion**

Modern economic analysis is generally predictive of efficient moves. Nevertheless, considerations other than efficiency bear on social choices within a legal system. Inextricably intertwined with implementing the standard economic model are effects on social values that should be appraised and accommodated. Several may be highlighted. First, social choices based on the assumptions of economic theory have distributive effects. Some classes of persons, such as the poor, may be made worse off.

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113 Goodin, supra note 22, at 134. Therefore, "[w]hen ever we rule out one goal as impossible—mistakenly or otherwise—we usually readjust all our other goals as well." Id. The leading article is R.G. Lipsey & Kelvin Lancaster, The General Theory of Second Best, 24 Rev. Econ. Stud. 11 (1956). "The general theory of second best demonstrates that if there are distortions from competitive equilibrium throughout the economy due to taxes or monopoly, for example, a change that can be viewed as value maximizing in one small sector may actually decrease value overall." Rizzo, supra note 30, at 652 (footnote omitted); see also White, supra note 1, at 594 (Analysis under this theory "proves that the intuition—that it is economically superior to achieve as many efficient conditions as possible—is wrong."). Buchanan modifies a French aphorism to advance a related idea: "the best may be the enemy of the tolerable." Allen E. Buchanan, Assessing the Communitarian Critique of Liberalism, 99 Ethics 852, 860 (1959).


115 See supra note 44, at 884-86.

116 The foibles of individuals are unimportant to economists concerned only with large-scale phenomena or effects at the margins of consumption, or when for predictive purposes the relevant assumptions of the ideal market can be replaced by assumptions of random consumer behavior. "For ethical purposes, however, such assumptions would clearly be fatal." Bennett, supra note 40, at 200.

117 See supra note 84 & infra note 122. For one example, risk attitudes or discount rates may be related to socioeconomic class. See Kuklin, supra note 13, at 937 n.311 (high discount rates among the poor). Inasmuch as they are, the failure to account for
Assigning entitlements on the basis of the efficiency criterion, for example, Posner's insistence that the legal assignment of entitlements mimic the market, favors the wealthy who are willing to pay more simply because they are able to pay more.¹¹８ See supra note 68. The most common ideological criticism is: "If rights are assigned this way, the richer not only get richer, but because their newly acquired entitlements increase their wealth further, they are in an ever better position to increase their wealth again by securing more rights on the grounds that their doing so is required by efficiency." MURPHY & COLEMAN, supra note 5, at 256; see also Coleman, supra note 46, at 661-64 (tracking the same arguments in similar language). Hence, "pursuing efficiency leads inevitably to further inequities." MURPHY & COLEMAN, supra note 5, at 256. In rebuttal, the authors point out, first, that "assigning rights to those willing to pay more for them does not in fact always amount to assigning rights to those most able to pay." Id. at 257 (emphasis omitted). Second, the authors note that "just as we recognize the existence of cases in which, in spite of their efficiency, markets are inappropriate allocation mechanisms, proponents of economic analysis recognize that mimicking markets is sometimes inappropriate for the very same reasons." Id. Finally, "there is nothing in economic analysis that precludes making lump-sum transfers from those who gain entitlements to those who have lost out. So the gain in efficiency need not create a snowball effect in favor of those who obtain rights on efficiency grounds." Id. at 258.

In surrebuttal, first, even if mimicking the market does not always give entitlements to the wealthier, it probably usually does, which is enough to raise fairness questions. Second, even if economists sometimes recognize the inappropriateness of mimicking the market, the question remains whether they do so often enough, since the elegance of economic theory easily distracts one from the murkiness of fairness arguments. Cf. id. at 261 ("Economists criticize philosophers for using terms like 'justice,' 'fairness,' and 'causation' as too imprecise and murky for their taste."). Finally, because the entitlement decisions are often made by courts, transfer payments are usually unrealistic. See Posner, supra note 9, at 104-05. Even when transfer payments are realistic, they are extraordinarily rare. For one of the rare cases, see Spur Indus., Inc. v. Del E. Webb Dev. Co., 494 P.2d 700 (Ariz. 1972). Legislatures also are reluctant to enact transfer payments. See CALABRESI, supra note 69, at 79 ("[H]ypothetical compensation rarely comes about. It may be too expensive; it may be made feasible only through the levying of taxes that misallocate resources grievously; or it may be politically impossible to accomplish."). Economists resist the transfers on the grounds of the second-order inefficiency in administering them. See, e.g., Richard A. Epstein, Luck, Soc. Phil. & Pol'y at 17 (Autumn 1988). Yes, lump-sum payments can be made under economic theory, but how often do economists propose this? My objections are not only to what economic theory requires, but also to what it tends to do. This is the major theme of Michelman. Michelman, supra note 67. "[T]he success of this enterprise [of the positive economic theory of law] helps to engender false belief about the motives and meanings of extant law and about the right criteria for forming and appraising the law yet to be made." Id. at 1016. "[C]ertain intellectual confusions . . . may lead one who is not on guard against them to draw unjustified normative inferences from positive, descriptive studies." Id. at 1016; see also Michelman, supra note 65, at 315 (The "systematic indoctrination of judges with economic learning . . . might contrive to squeeze out of the law the poorly defined
ond, certain personal behaviors or traits are rewarded and thereby reinforced irrespective of social desirability. For example, the assumption of risk neutrality may redistribute wealth from risk preferrers to avoiders, or vice versa, which may result in a change in society's risk attitudes. The reluctance to interfere with private bargains on the supposition that the parties are equally situated may increase aggressiveness and deceitfulness. As a final example, since uncommon preferences are often unsatisfied because the economies of scale make them uneconomic, conformity is encouraged. Traits both socially desirable and undesirable are induced, of course, the problem being that the invisible hand is blind to the different values underlying them. Third, preference satisfaction and success in the market, as consumer or producer, are not determined only by the desert of the individual, but rather to a large extent by the fates, or "moral luck." To generalize, important social policies fade from sight noneconomic variables or 'other justice factors.' Through all this, the reader must not be left with the impression that Murphy and Coleman agree with Posner's principle of mimicking the market in the name of efficiency. See Murphy & Coleman, supra note 5, at 262-67. The principle neither duplicates "the rational autonomous behavior of informed individuals," nor necessarily "promote[s] the ends of efficiency or utility." Id. at 267.

For an excellent development of this argument, pointing out, among other things, that economic analysis ignores the issue of what preferences society should foster, see C. Edwin Baker, Posner's Privacy Mystery and the Failure of Economic Analysis of Law, 12 GA. L. REV. 475 (1978).

See supra note 43; Scrotsky, supra note 23, at 7 ("in our age of mass production . . . almost nothing gets produced that cannot be produced in the thousands"); Kelman, supra note 40, at 795 (citing Albert D. Hirschman, Exit, Voice, and Loyalty 26-29 (1970)) (arguing that market competition does not "inevitably produce the full range of products that is technically feasible (i.e., where demand supports production of a certain scale."). "Where an economy is structurally unsatisfactory to consumers, competitive market forces may immunize producers from pressures for change." Id. (emphasis omitted).

A sample of the arguments may be summarized. Some maintain that success in the market is due to personal characteristics which do not correlate to moral worth, but rather are largely arbitrary from a moral point of view—a matter of luck. See, e.g., Ronald Dworkin, Why Liberals Should Care About Equality, in A Matter of Principle, supra note 68, at 205, 206-07; Rawls, supra note 22, at § 48. Buchanan argues, first, that luck often governs whether one obtains or retains wealth in the market, and second, if desert is proportional to one's contribution to the good of others, that this good is not measured simply by the satisfaction of their preferences (e.g., supplying cigarettes or heroin). See Buchanan, supra note 12, at 51-53; but cf. id. at 53 ("Why should we assume in the first place that one's overall share of wealth should be determined by desert in any sense?"). Christman contends that entrepreneurs, indeed all participants in the market, do not deserve what they get from competitive market interactions because the
in the attempt to make the invisible hand operate as frictionlessly as possible.\textsuperscript{122} Ultimately, economic models are not purely analytic, notwithstanding some economists' protestations to the contrary.\textsuperscript{123} Instead, economic models are normative to the core.\textsuperscript{124}
One point must be emphasized. I have not come to bury law and economics, I have come to praise it, though perhaps somewhat faintly. Little said about the limitations to economic analysis of the law detracts from its usefulness when used properly. Economic analysis has substantially lengthened the road of legal justification, thereby shortening the "leap of faith" awaiting at the end of the road where analysis and reasoned policy stop and intuition and dogma start. For this great contribution, let us
celebrate the beginning of the fourth decade of the revolution started by Coase’s article.

‘just’ outcome.” Id. at 104 (footnote omitted). He adds elsewhere that “the current application of economic analysis to law should be regarded as an interim step toward the integration of law with the behavioral, natural, and social sciences.” Harrison, supra note 33, at 1314 (footnote omitted). See also MANSFIELD, supra note 46, at 72-75 (The theory of consumer behavior “provides a correct way of thinking about [a] problem. It focuses attention on the relevant factors, and it puts them in their proper place.”); POLINSKY, supra note 45, at 134 (“[T]he fact that there are many goals that the legal system might be viewed as trying to accomplish makes economic analysis all the more helpful in determining what the tradeoffs are among the goals and how to strike an appropriate balance.”); Bruce A. Ackerman, Law, Economics, and the Problem of Legal Culture, 1986 Duke L.J. 929 (distinguishing the strong lawyer-economists who believe economic analysis is the only appropriate form of legal argument from weak lawyer-economists, “not so imperialistic,” who believe economic analysis should be pervasive, but not all-important); Coleman, supra note 1, at 249 (“For even if efficiency does not carry the day in matters of social policy, arguments from efficiency must be taken seriously.”); Coleman, supra note 45, at 679 (“Economic analysis is far more sophisticated and powerful than are the vast majority of the objections raised against it.”); Lewis A. Kornhauser, A Guide to the Perplexed Claims of Efficiency in the Law, 8 Hofstra L. Rev. 591, 637 (1980) (“Viewing the law from an economic perspective allows the lawyer to note similarities that may have previously escaped attention.”); Stewart G. Pollock, Economic Analysis at Work in Judicial Decision-Making, 1988 Ann. Surv. Am. L. 133, 135 (“Economics and law are different, but each discipline can illuminate the other.”); White, supra note 1, at 579 (“Economic analysis by itself, unencumbered by value choices, can be an effective aid in analyzing the issues presented in legal disputes, clarifying when a value choice must be made, and identifying what choices are available.”). White surveys the judicial opinions citing Coase’s article, see id. at 613-34, and finds that “the courts intuitively recognize the [limited] true analytical usefulness of economic reasoning . . . [by] resort[ing] to broader social policies to make their decisions.” Id. at 612-13 (footnote omitted). In sum, decisionmakers must not “commit the fallacy of economic determinism; that is . . . proceed as if economic arguments were a neutral policy value.” Id. at 628.