The Law and Economics of Irrational Behavior: An Introduction

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Friedrich Nietzsche (1878) once wrote, “The irrationality of a thing is no argument against its existence, rather a condition of it.” Since the inception of Adam Smith’s invisible hand, economics has largely been guided by rational choice theorists who advance the notion that the logical pursuit of self-interest drives human choice in a free society and leads to prosperity. However, while proponents of rational choice are quick to remember the notions of empirical economics that have sprung forth from Smith’s *Wealth of Nations*, it is often forgotten that Smith’s work was predicted on a philosophy that justice and other moral virtues limit the pursuit of self-interest (Kilcullen 1996a). In his other great work, *The Theory of Moral Sentiments*, Smith provides an analysis of various feelings and psychological dispositions relating to morality and invites the reader to test his ideas against their own experience of these feelings (Kilcullen 1996b). This reliance on psychology by the greatest economic mind of our times might lead a person to believe that the field historically would have been more influenced by a broader set of social theories. However, until recently, economic thought has largely focused on the empirical study of self-interest that leads to utility functions, supply and demand curves and pareto-optimal solutions. It is only more recently that the findings of behavioral economists have raised some doubts on the previously unquestioned assumptions of human rationality, and have made large inroads into this discipline.

* Introduction to the volume by Francesco Parisi and Vernon L. Smith (eds.) “The Law and Economics of Irrational Behavior” (Stanford University Press, forthcoming)
Behavioral economists accept many of the premises of traditional economic thought; that situational outcomes are the result of individual decisions, taking place in a particular economic environment. But behavioral economists go a step further, arguing that the human action is shaped not only by relevant economic constraints, but is highly affected by people’s endogenous preferences, knowledge, skills, endowments and a variety of psychological and physical constraints (Smith 1991 and 2000). Incentives matter and incentives drive human behavior, but incentives are often more than simple monetary gain. Thus, more penetrating forms of experimentation are needed than traditional game theoretic analyses to truly understand human choice and behavior.

Behavioral thought has come to play a large role in economic theory. One could just look at Alan Greenspan blaming “irrational exuberance” for unduly escalating market values to realize the relevance of behavioral analyses in policy and political discourse. In academic analyses, the relevance of these tools spans from the understanding of micro-behavior to general equilibrium theory. For example, no longer could the value of assets, be determined simply by the financial equations of the market. Rather, a combination of emotions and heightened attention to the market, fed by the optimistic cheerleading of pundits, led to an excessive desire to “get into the game” (Shiller 2000). But behavioral and experimental economics’ unique blend of psychology, economics and neuroscience can explain more than the overvaluing of stocks. In many ways it offers an analytical opening where mainstream economic models have failed. The former theory may help explain questions such as why Americans save too little, acquire too much debt and manage their investment portfolios in a self-destructive fashion (Dubner 2003).

The rise of behavioral economics and the findings of experimental economics however, have led to a clash between the theory of rational-choice and those who believe that this idea
does not properly account for the montage of human emotions, biology and attitudes. One anonymous economist has been quoted as saying, “What you have to understand is that behavioral economics is attacking the foundation of what welfare economics is built on.”

However, it may be possible to end the intellectual tug of war between rational choice theorists and behavioralists without turning it into a zero-sum game. In the present text, twenty-eight authors have joined together to present such a possibility. Covering a wide range of fields from neuroscience, to economics, to law and sociology, these distinguished academics have presented an array of valuable contributions that, aware in their own application that rational choice theory can no longer be bought in a wholesale fashion, aims at revisiting its basic premises in such a way as to ensure a more rigorous analytical model. These authors then proceed to offer a practical application of this modified theory to a variety of economic and legal problems that have bedeviled traditional economic thought.

These papers offer an important contribution to the ongoing research program, incorporating the findings of psychology and other behavioral sciences, to reevaluate more systematically the process of human choice and the structure of human judgment and well-being. These sciences, while revealing important differences between traditional economic assumptions and the process of human choice, unveil important facts about the human nature, allowing a more realistic and complete economic representation of the true form of human preferences and choice.

1. *Irrationality and Bounded Rationality in Law, Psychology and Economics*
In the first set of articles, the authors provide the intellectual foundation for a behavioral theory that questions many of the assumptions of rational choice. Contributions range from reviews of mainstream research on biases in judgment under uncertainty to more radical challenges to the economic model of human choice, such as critiques of the familiar assumptions about preference and choice. Relying on the idea of bounded rationality, these authors argue that rational choice theory fails to account for everyday experiences. Why, for example, are millions of dollars given away anonymously if people are only driven by rational, self-interested impulses? Why do some humans find themselves incapable of controlling self-destructive impulses that lead them to choices they know are not in their own best interest? These questions can be answered in a variety of ways. Psychology instructs us that the needs of human reality impose cognitive limits on mankind that restrict inputs into the decision-making process, leading to seemingly irrational choices. Neuroscience teaches us that the structure and activity of the brain influence human choices and that physiological damage can radically alter decisions and perceptions of rationality. Other ideas such as prospect theory and optimism bias that result in the misperception of odds and risks are evaluated as factors that likewise limit the process of rational choice.

The papers included in this section lay the analytical groundwork that is needed to understand from an economic perspective, why humans frequently behave in an irrational fashion. Rather than simply dismiss rational-choice theory as an intellectual failure, these authors explain some of the weaknesses that have confronted traditional economic analysis and offer theoretical models that will help rectify some of these inconsistencies.

In his article, “Departures from Rational Choice: With and Without Regret,” Robert Frank argues that the analytical power of pure rational choice theory is compromised, because it
fails to adequately address the cognitive errors that are part of every day human experience, it does not address the impulse-control problem of many individuals that will drive a person to make a seemingly irrational choice, and it’s premise that humans always make self-interested choices does not explain the voluminous number of anonymous charitable donations that are made each year. Frank puts forth the Adaptive Rationality Standard where people choose efficient means to achieve an end, but the person’s goals are not a preordained objective such as self-interest. Frank argues that the more flexible Adaptive Rationality Standards offers a better tool for understanding everyday issues such as savings rates and the failure to reach efficient agreement in contract negotiations, than does rational choice theory.

Gerd Gigerenzer offers a more refined focus of Frank’s first criticism of rational choice theory. Focusing on the existence of cognitive and memory failures, Gigerenzer argues that the methodology of human choice must be understood within the constraints on reason that our own minds impose on us. In order to truly understand the heuristics or decision-making processes utilized by individuals, one must consider not only the cognitive process of people, but the environmental constraints and limitations in which the decision-making process occurs. Gigerenzer examines several different heuristic devices that individuals use to limit the cognitive information that go into reaching decisions, including one-reason based decisions, a preference for recognizable outcomes, etc. Gigerenzer concludes that these devices, which take into account humanity’s cognitive limits have strong predictive ability in regards to human choice.

McCabe, Smith and Chorvat argue that the law and economics field would be intellectually strengthened if more consideration was given to the arising field of neuroeconomics. Neuroeconomics is defined by the author as the use of technology such as fMRI scans to determine which area of the human brain is used when making economic
decisions. The authors maintain that there is a great deal of heterogeneity among humans in terms of their perception and cognition of different circumstances. Thus, if one gains a solid understanding of which parts of the brain are used to make particular decisions, a predictive function can be achieved. The article concludes by surveying the field of potential practical applications of neuroeconomics to the law, including contract law, property law, choice of law, business associations, and the study of juries.

While the proceeding three articles attempt to examine how human psychology affects outcome choices, Robert Cooter rounds out this section, by examining the reverse question: How do the choices we make, such as the laws we abide by change our values? Cooter argues that we choose laws to achieve certain ends, but the eventual result is that those very laws change who we are as people and the values that we hold.

2. The Economics of Irrational Behavior

In the second section, the analysis extends to a broader examination of how irrational behavior affects our everyday economic decisions. Contributions focus on the economic implications of modifying traditionally accepted norms of rational choice. What do ideas such as bounded rationality, prospect theory and optimism bias have to teach us about the choices of individuals when they must face decisions about resource consumption, revenge and retaliation in negotiation and economic activity or cooperation and laughter.

Looking at the issue of addiction, author Ole Skog rejects the classical notion that alcoholism is a biological disease triggered by consumption. Skog takes something of an economic approach, maintaining that addiction must be understood as choice, though not
necessarily a rational one. Skog argues that addicts show several components of irrational thinking and decision-making including unstable preferences and inconsistencies between short-term and long-term motives. Skog reasons that choice is best understood in the area of addiction, if we reject rational choice’s insistence on stable preferences and accept that preferences vary based on environmental factors.

Just as addiction can lead to irrational behavior, so can other factors and emotions such as a desire for revenge and retaliation. Authors Vincy Fon and Francesco Parisi posit that norms of negative reciprocity have been present in all civilizations and have played an important evolutionary role in human development. Humans are guided by an innate sense of fairness that drives their actions, attitudes and behaviors. By constraining the actions of revenge that are born out of this sense of fairness, a net social benefit can be achieved.

Building on the framework of negative reciprocity such as retaliation, Hoffman, McCabe and Smith endeavor to provide an analytical foundation for understanding how reciprocity allows for trade. The authors posit that in situations where trading partners are familiar to each other, the actors will use techniques of positive reciprocity to ensure fair behavior and to achieve the desired outcome. However, in trading environments characterized by unfamiliar players, the actors will rely on the option of punishing a defector to ensure fairness in negotiations and adherence to agreements.

While the proceeding three authors in this section have begun the process of taking the larger thematic notions of behavioral economics and applying them to everyday choices, human interactions, etc., Marco Novarese and Salvatore Rizzello compete this section by offering a methodological approach to examining these theories in practice. The authors set forth an
experiment that investigates the interaction between individual aspirations and decision-making in an environment characterized by uncertainty and limited information.

F. H. Buckley concludes this section by taking the very light subject of laughter and showing how it too can be analyzed with the economic tools employed by other authors in this book. Buckley presents as an economic market the silent negotiation between the audience and the jester, leading to the development of communities of interest and comic norms.


The third section of the book builds on the contributions of the previous sections to consider the understanding of human choice and the departures from the assumptions of rational choice affects the idea of law as a behavioral instrument and the design of legal and judicial institutions.

Contributions examine the implications that irrationality and limited rationality have for our jurisprudential system. How should courts confront the cases of the mentally ill given that the assumption of rationality cannot always hold? What alterations must be made to the criminal justice system in light of this theory? Should the premise of the criminal sanction be altered to account for the fact that not all choices are the product of well-thought, rational decision making?

Stephen Morse begins the section by a broad overview of mental health law, finding a common thread in the notion that some people with mental disorder are treated specially by our legal system because they appear to lack the capacity for reason. Morse begins by examining the notion of the individual and legal responsibility, with particular emphasis on how the mentally ill
are treated in the legal system. Morse argues that instead of adopting a new body of law that deals specifically with mental health, mental disorders should instead be used as evidentiary tools that bear on the question of whether an individual in a given situation possessed the capacity to reason.

The next three articles expand the role that irrationality plays in shaping jurisprudence beyond the bounds of mental health law, to cover its applicability to criminal sanctions for the community at large. Christine Jolls examines the cognitive failures of humans such as the optimism bias and reasons that these must be considered when drafting law enforcement policies, or they will not result in maximum detection and deterrence at minimum cost. These failures help explain why policies such as prohibitions against employment discrimination have failed to always change societal and human behavior. Michael O’Neill continues the examination of the interaction between cognitive limits and the criminal sanction by reasoning that perfectly rational decisions are inhibited because individuals do not have access to all information necessary to make the fully rational choice. Accordingly, O’Neill concludes that policy makers must take irrationality into consideration, because typical methods of punishment will often not deter misbehavior.

Jonathan Caulkins and Robert MacCoun offer a very practical application of the principles laid out by Christine Jolls and Michael O’Neill. It is because rational decisions are inhibited, that many drug dealers do not respond to typical deterrence policies. This may help explain why retail cocaine and heroin prices have fallen sharply despite very large increases in drug enforcement, targeted primarily at suppliers.

Moving from the perspective of the criminal to the sanctioner, Cass Sunstein argues that strong emotions such as outrage often result in inconsistent and irrational punishments and jury
awards, because it is hard to translate outrage into coherent legal terms and norms. Once armed with a better understanding of this, rules can be structured for maximum deterrence. Continuing the endeavor to shape a proper system of sanctions, Feldman and MacCoun endeavor to answer the question of how and when norms arise and how the process of individual internalization of norms occurs. The authors conclude that norms cannot be viewed as arising from a single source and that policy makers hoping to use norms to affect behavior, must understand the multiplicity of the origin of norms as well as the factors that moderate the application of norms in and particular individual’s life.

4. Irrational Behavior and the Design of Law

The final section of the book offers specific policy applications of the theories of bounded rationality. The analytical framework presented by the authors provides insights into a diverse range of human problems such as traffic safety, torts, contract law and securities regulation.

Tom Ulen reviews the literature and arguments of both rational choice theorists and behavioral economists and how these ideas would present potential solutions to reduce the social costs of traffic accidents. Ulen maintains that society must accept the limited rationality of its citizens. As a result, policymakers and regulators should favor technological innovations over approaches such as tort law in achieving enhanced traffic safety.

Mark Grady examines a legal oddity that says while irrational and rational people should be treated the same in terms of liability for their own actions, this does not hold true for persons who are accused of prompting a third party to act dangerously. Grady reconciles this seeming
discrepancy by explaining that tort law must be understood, not as promoting corrective justice in a moral sense, but instead on focusing liability where it will have the greatest impact, on responsible people. Understanding the rules that are used to encourage responsible persons to curb the excesses of irresponsible persons is necessary to having a full understanding of the tort system.

Several papers in this volume have established the fact that people frequently do not approach decision-making with an accurate estimation of the probability of positive or negative events happening to themselves. This begs the question of how legal rules should be properly developed to ensure optimal social behavior, taking into consideration the fact that people do not properly estimate the probability of relevant events. In this article, Posner presents how altering tort rules can affect behavior if individuals are either optimistic or insensitive to actual probabilities. Posner reasons that when rules such as negligence and strict liability are used to correct inaccurate perceptions of probability, they will result in levels of care that exceed the socially optimal outcome. Posner concludes the paper by briefly expanding the reach of his discussion to include it’s potential application to other areas such as contract law.

Authors Owen Bar-Gill and Omri Ben-Shahar argue that in the realm of contract law, courts should alter the traditional rules of contract modification and uphold any modification as long as the threat that led to their adoption was credible. The authors maintain that this should be the case, even if the credible threat seems irrational, as there are a wide variety of situations in which an economic actor would want to threaten an irrational breach of contract. By failing to uphold modifications under these circumstances, the authors believe courts would not lessen the occurrence of irrational conduct, but would only hamper the choice of threatened parties, forcing them to accept breach instead of modification.
The last two articles examine the role that irrationality plays in the regulation of the securities markets and investing. Peter Huang maintains that emotions play a strong role in investing decisions. Frequently, emotions diverge from cognition, and it is the former that often drives behavior. Emotional responses by investors have particular salience because of a line of securities regulations that mandate a broad swath of public disclosure by companies. Emotional reactions to these disclosures can lead investors to make unsound decisions. Understanding the role of emotions in investing and in particular the emotional reaction to mandated disclosure is vital in creating appropriate securities regulation.

Jeffrey Rachlinski and Gregory LeBlanc believe that investors need more than what cognition alone provides in order to make the decisions that result in an efficient market. The authors maintain that if investors acted solely in a rational, cognitive function, they would withhold non-cognitive information that the market desperately needs and would hamper the market’s liquidity. As a result, the authors believe that many reforms aimed at protecting investors from the cost of their own cognitive mistakes (i.e. structuring the tax code to favor pooled investing over individual accounts, curbing Internet investing, etc.) must be weighed in light of the potential negative effects they could have on the market, not just in terms of their protection of the individual investor.

5. Conclusion

The design of legal rules often rests on predictions about how people will respond to legal rules and institutional constraints. Much of the early work in law and economics has been deeply influenced by models of rational choice and behavioral theories of human action, which
have traditionally provided the theoretical basis for such predictions. In recent years, mainstream economics has begun to take notice of the intellectual and practical relevance of departures from rational and informed choice. In 2001, George Akerlof, Michael Spence and Joseph Stiglitz won the Nobel Prize for Economics for arguing that markets don’t always act efficiently because buyers and sellers don't always have access to the information they need to make optimal choices (Hillenrath 2003). The same year, Matthew Rabin won the John Bates Clark Medal for his efforts to expand the realm of economics through psychology (Maclay 2001). In 2002, Daniel Kahneman and Vernon Smith won the Nobel Prize for Economics for their respective contributions to behavioral and experimental economics. This mainstreaming of behavioral theory and the ongoing process of incorporation of psychological findings in the process of economic modeling shows the intellectual power of these ideas.

This intellectual undertaking is unavoidably destined to engage several generations of scholars, given the complexity of real-world human choice, relative to the simplifications of early rational choice approaches. It will be a fascinating undertaking, which has the potential of generating a vast array of policy implications in the fields of law and institutional design. This volume takes a step in this direction, bringing together the contribution of scholars who are pioneering in this area, with a presentation of some of the most exciting developments and relevant implications for legal and economic theory.

This volume explores the most relevant developments at the interface of economics and psychology. With special attention to models of irrational behavior, it draws the relevant implications of such models for the design of legal rules and institutions. It is to be hoped that this will offer a starting point for how this discussion can continue in the applied field of law and economics. The findings of this volume reveal that the application of economic models of
irrational behavior to law is especially challenging because specific departures from rational behavior differ markedly from one another. Furthermore the analytical and deductive instruments of economic theory have to be reshaped to deal with the fragmented and heterogeneous findings of psychological research, turning towards a more experimental and inductive methodology.


