Friedrich Nietzsche (1878) once wrote, "The irrationality of a thing is no ar
against its existence, rather a condition of it." Since the inception of Adam
invisible hand, economics has largely been guided by rational choice theori
advance the notion that the logical pursuit of self-interest drives human c
a free society and leads to prosperity. However, although proponents of
choice are quick to remember the notions of empirical economics that have
forth from Smith's *Wealth of Nations*, it is often forgotten that Smith's w
predicated on a philosophy that justice and other moral virtues limit the pu
self-interest (Kilcullen 1996a). In his other great work, *The Theory of Mor*
ments, Smith provides an analysis of various feelings and psychological
tions relating to morality and invites the reader to test his ideas against th
experience of these feelings (Kilcullen 1996b). This reliance on psychology
greatest economic mind of our times might lead a person to believe that
historically would have been more influenced by a broader set of social t
However, until recently, economic thought has largely focused on the e
study of self-interest that leads to utility functions, supply and demand cur
Pareto optimal solutions. It is only more recently that the findings of be
economists have raised some doubts on the previously unquestioned assu
of human rationality and have made large inroads into this discipline.

Behavioral economists accept many of the premises of traditional ec
thought, for example, that situational outcomes are the result of individ
cisions, taking place in a particular economic environment. But behavior
omists go a step further, arguing that the human action not only is sh
relevant economic constraints but is highly affected by people's endogeno
erences, knowledge, skills, endowments, and a variety of psychological an

market values to realize the relevance of behavioral analyses in policy and p
discourse. In academic analyses, the relevance of these tools spans from
derstanding of microbehavior to general equilibrium theory. For exam
longer could the value of assets be determined simply by the financial equa
the market. Rather, a combination of emotions and heightened attentio
market, fed by the optimistic cheerleading of pundits, led to an excessive d
"get into the game" (Shiller 2000). But behavioral and experimental eco
unique blend of psychology, economics, and neuroscience can explain m
the overvaluing of stocks. In many ways it offers an analytical openin
mainstream economic models have failed. The former theory may help
questions such as why Americans save too little, acquire too much debt, an
age their investment portfolios in a self-destructive fashion (Dubner 2003

The rise of behavioral economics and the findings of experimental eco
however, have led to a clash between the rational choice theory and the be
this idea does not properly account for the montage of human emotions,
and attitudes. One anonymous economist has been quoted as saying, "W
have to understand is that behavioral economics is attacking the founda
what welfare economics is built on."

However, it may be possible to end the intellectual tug-of-war between
choice theorists and behavioralists without turning it into a zero-sum gam
present text, twenty-eight authors have joined together to present such a p
ity. Covering a wide range of fields from neuroscience to economics to law
ciology, these distinguished academics have presented an array of valuable
butions that, aware in their own application that rational choice theory
longer be bought in a wholesale fashion, aim at revisiting its basic premises
a way as to ensure a more rigorous analytical model. These authors then
to offer a practical application of this modified theory to a variety of econo
legal problems that have bedeviled traditional economic thought.

These chapters offer an important contribution to the ongoing resear
gram, incorporating the findings of psychology and other behavioral scie
reevaluate more systematically the process of human choice and the stru
human judgment and well-being. These sciences, while revealing import
ferences between traditional economic assumptions and the process of

In the first set of chapters, the authors provide the intellectual foundation f
havioral theory that questions many of the assumptions of rational choice.
butions range from reviews of mainstream research on biases in judgmen
uncertainty to more radical challenges to the economic model of human
such as critiques of the familiar assumptions about preference and choice.
on the idea of bounded rationality, these authors argue that rational choice
fails to account for everyday experiences. Why, for example, are millions
lars given away anonymously if people are only driven by rational, self-int
impulses? Why do some humans find themselves incapable of controlli
destructive impulses that lead them to choices they know are not in their o
interest? These questions can be answered in a variety of ways. Psychol
structs us that the needs of human reality impose cognitive limits on hum
that restrict inputs into the decision-making process, leading to seeming
tional choices. Neuroscience teaches us that the structure and activity of th
influence human choices and that physiological damage can radically alt
sions and perceptions of rationality. Other ideas, such as prospect theory a
timism bias that result in the misperception of odds and risks, are evaluated
tors that likewise limit the process of rational choice.

The chapters in this section lay the analytical groundwork that is needed
derstand from an economic perspective why humans frequently behave in
tional fashion. Rather than simply dismiss rational choice theory as an inte
failure, these authors explain some of the weaknesses that have confronte
tional economic analysis and offer theoretical models that will help rectify s
these inconsistencies.

Robert Frank argues that the analytical power of pure rational choice t
compromised, because it fails to adequately address the cognitive errors
part of everyday human experience, it does not address the impulse-contr
lem of many individuals that will drive a person to make a seemingly ir
choice, and its premise that humans always make self-interested choices d
explain the voluminous number of anonymous charitable donations that a
each year. Frank puts forth the adaptive rationality standard, that is, a
chooses efficient means to achieve an end, but the person's goals are not a

enzer argues that the methodology of human choice must be understood
the constraints on reason that our own minds impose on us. In order to tr
derstand the heuristics or decision-making processes utilized by individu
must consider not only the cognitive process of people but the environmen
straints and limitations in which the decision-making process occurs. Gig
examines several different heuristic devices that individuals use to limit the
tive information that goes into reaching decisions, including one-reason-ba
cisions, a preference for recognizable outcomes, and so forth. Gigerenz
cludes that these devices, which take into account humanity's cognitive limi
strong predictive ability in regard to human choice.

Kevin McCabe, Vernon Smith, and Terrence Chorvat argue that the l
economics field would be intellectually strengthened if more consideratio
given to the arising field of neuroeconomics. Neuroeconomics is defined
authors as the use of technology such as functional magnetic resonance i
(fMRI) scans to determine which area of the human brain is used when
economic decisions. The authors maintain that there is a great deal of hete
ity among humans in terms of their perception and cognition of different c
stances. Thus, if one gains a solid understanding of which parts of the br
used to make particular decisions, a predictive function can be achieved. Th
ter concludes by surveying the field of potential practical applications of
economics to the law, including contract law, property law, choice of law, b
associations, and the study of juries.

The authors of the first three chapters in this section attempt to exami
human psychology affects outcome choices. Robert Cooter rounds out t
tion by examining the reverse question: How do the choices we make, suc
laws we abide by, change our values? Cooter argues that we choose laws to
certain ends, but the eventual result is that those very laws change who w
people and what values we hold.

THE ECONOMICS OF IRRATIONAL BEHAVIOR

In the second section, the analysis extends to a broader examination of ho
tional behavior affects our everyday economic decisions. Contributions fo

notion that alcoholism is a biological disease triggered by consumption. Sk
something of an economic approach, maintaining that addiction must be
stood as choice, though not necessarily a rational one. Skog argues that
show several components of irrational thinking and decision making, in
unstable preferences and inconsistencies between short-term and long-te
tives. Skog reasons that choice is best understood in the area of addiction i
ject rational choice's insistence on stable preferences and accept that pre
vary based on environmental factors.

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

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

The authors of the first three chapters in this section began the process
ing the larger thematic notions of behavioral economics and applying t
everyday choices, human interactions, and so forth. Marco Novarese and S
Rizzello offer a methodological approach to examining these theories in p
The authors set forth an experiment that investigates the interaction betw
dividual aspirations and decision making in an environment characterize
certainty and limited information.

F. H. Buckley concludes this section by taking the very light subject of l
and showing how it too can be analyzed with the economic tools empl
other authors in this book. Buckley presents as an economic market the s

The third section of the book builds on the contributions of the previous s
to consider how the understanding of human choice and the departures fr
assumptions of rational choice affect the idea of law as a behavioral instrum
the design of legal and judicial institutions.

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

Stephen Morse begins the section with a broad overview of mental hea
finding a common thread in the notion that some people with mental di
are treated specially by our legal system because they appear to lack the capa
reason. Morse begins by examining the notion of the individual and legal
sibility, with particular emphasis on how people who are mentally ill are tr
the legal system. Morse argues that instead of adopting a new body of law th
specifically with mental health, mental disorders should instead be used
dentiary tools that bear on the question of whether an individual in a give
tion possessed the capacity to reason.

The next three chapters expand the role that irrationality plays in sha
risprudence beyond the bounds of mental health law, to cover its applica
criminal sanctions for the community at large. Christine Jolls examines th
tive failures of humans, such as the optimism bias, and reasons that these
considered when drafting law enforcement policies, or they will not result
imum detection and deterrence at minimum cost. These failures help expl
policies such as prohibitions against employment discrimination have faile
ways change societal and human behavior. Michael O'Neill continues the
nation of the interaction between cognitive limits and criminal sanction
soning that perfectly rational decisions are inhibited because individuals
have access to all information necessary to make the fully rational choice.
ingly, O'Neill concludes that policy makers must take irrationality into co
ation, because typical methods of punishment will often not deter misbe

Jonathan Caulkins and Robert MacCoun offer a very practical applica

stein argues that strong emotions such as outrage often result in inconsist
irrational punishments and jury awards, because it is hard to translate outra
coherent legal terms and norms. Once policy makers are armed with a bet
derstanding of this, rules can be structured for maximum deterrence. Con
the endeavor to shape a proper system of sanctions, Yuval Feldman and
MacCoun endeavor to answer the question of how and when norms arise a
the process of individual internalization of norms occurs. The authors co
that norms cannot be viewed as arising from a single source and that polic
ers hoping to use norms to affect behavior must understand the multiplicit
origin of norms as well as the factors that moderate the application of nor
particular individual's life.

IRRATIONAL BEHAVIOR AND THE DESIGN OF LAW

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

Thomas Ulen reviews the literature and arguments of both rational cho
orists and behavioral economists and how these ideas would present poten
lutions to reduce the social costs of traffic accidents. Ulen maintains that
must accept the limited rationality of its citizens. As a result, policy mak
regulators should favor technological innovations over approaches such as
in achieving enhanced traffic safety.

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

fect behavior if individuals are either optimistic or insensitive to actual pro
ties. Posner reasons that when rules such as negligence and strict liability a
to correct inaccurate perceptions of probability, they will result in levels
that exceed the socially optimal outcome. Posner concludes the chapter by
expanding the reach of his discussion to include its potential application t
areas, such as contract law.

Oren Bar-Gill and Omri Ben-Shahar argue that in the realm of contr
courts should alter the traditional rules of contract modification and uph
modification as long as the threat that led to their adoption was credible.
thors maintain that this should be the case, even if the credible threat seer
tional, as there are a wide variety of situations in which an economic acto
want to threaten an irrational breach of contract. By failing to uphold m
tions under these circumstances, the authors believe courts would not les
occurrence of irrational conduct but would only hamper the choice of thr
parties, forcing them to accept breach instead of modification.

The last two chapters examine the role that irrationality plays in the reg
of the securities markets and investing. Peter Huang maintains that emotio
a strong role in investing decisions. Frequently, emotions diverge from cog
and it is the former that often drives behavior. Emotional responses by in
have particular salience because of a line of securities regulations that ma
broad swath of public disclosure by companies. Emotional reactions to th
closures can lead investors to make unsound decisions. Understanding the
emotions in investing and, in particular, the emotional reaction to manda
closure is vital in creating appropriate securities regulation.

Jeffrey Rachlinski and Gregory La Blanc believe that investors need mo
what cognition alone provides in order to make the decisions that result i
ficient market. The authors maintain that if investors acted solely in a r
cognitive way, they would withhold noncognitive information that the mar
perately needs and would hamper the market's liquidity. As a result, the auth
lieve that many reforms aimed at protecting investors from the cost of th
cognitive mistakes (that is, structuring the tax code to favor pooled investi
individual accounts, curbing Internet investing, and so forth) must be wei
light of the potential negative effects they could have on the market, not
terms of their protection of the individual investor.

for such predictions. In recent years, mainstream economics has begun to t
tice of the intellectual and practical relevance of departures from rational
formed choice. In 2001, George Akerloff, Michael Spence, and Joseph Stig
the Nobel Prize in economics for arguing that markets don't always act ef
because buyers and sellers don't always have access to the information they
make optimal choices (Hillsenrath 2003). The same year, Matthew Rabin
John Bates Clark Medal for his efforts to expand the realm of economics t
psychology (Maclay 2001). In 2002, Daniel Kahneman and Vernon Smith
Nobel Prize in economics for their respective contributions to behavioral
perimental economics. This mainstreaming of behavioral theory and the
process of incorporation of psychological findings in the process of ec
modeling show the intellectual power of these ideas.

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

This volume explores the most relevant developments at the interface
nomics and psychology. With special attention to models of irrational beh
draws the relevant implications of such models for the design of legal rules
stitutions. It is hoped that this will offer a starting point for how this discuss
continue in the applied field of law and economics. The findings of this vol
veal that the application of economic models of irrational behavior to law
cially challenging because specific departures from rational behavior diffe
edly from one another. Furthermore, the analytical and deductive instrum
economic theory have to be reshaped to deal with the fragmented and he
neous findings of psychological research, turning toward a more experimen
inductive methodology.