Markets Meet Humans: Three Books

Predictably Irrational:
The Hidden Forces That Shape Our Decisions
By **Dan Ariely**
HarperCollins
280 pages

The Logic of Life:
The Rational Economics of an Irrational World
By **Tim Harford**
Random House
255 pages

The Mind of the Market:
Compassionate Apes, Competitive Humans, and Other Tales from Evolutionary Economics
By **Michael Shermer**
Times Books
308 pages

Reviewed by **David Fettig**
Senior Editor

According to recent studies, you are inclined toward the following behavior:

- You get high making money; that is, your brain reacts to a successful stock trade the same way it does to a hit of cocaine—it wants more.
- As a retiree, you will never annuitize your income, though standard economic models suggest that doing so helps ensure guaranteed cash for life.
- You will be less inclined to spend the economic stimulus money that you received from the president and Congress this summer because they called it a "rebate." If they had used the word "bonus" instead, you'd be at the mall in a heartbeat.
- What repulses you, you will not buy. Makes sense, but money also repulses you at a fundamental level because it is not natural and you find it hard to connect money to transactions involving significant moral decisions; for example, you are not inclined to sell one of your kidneys or to buy a baby. This repulsion affects all value-laden purchases, not just dramatic ones.
- If you're a man, that testosterone coursing through your system can influence your financial decision-making, sometimes in a good way, but also at times to the ruin of your assets or those assets that you manage. (Talk about systemic risk.)

And so on. The findings listed above are just a sampling of the many stories of psychological/neurological/evolutionary research that have appeared in the news lately. This stuff is hot. All three of the books reviewed here were published recently, and all appeared on the front display table at my friendly neighborhood chain bookstore at the same time. Also on the table were books by the economists Thomas Sowell and Steven Landsburg, both of whom had written previous books about economics for non-economists. (Landsburg's *The Armchair Economist* should be required reading for all mere mortals.) So, there they stood—on one of those tiered display tables at a large bookstore—*five* books related to the dismal science, following on the heels of many, many others in recent years. Call it the "Freakonizing" of economics. Or not. The reason the *Region* chose these three books for review is that they are related in theme, if not intent, and argue variously about this relatively new phenomenon in economic thought.

More on that in a moment, but I can't help noting that at the same time that all these books on economics are being published for the so-called common reader, we still worry about the level of economic literacy in this country. We're especially concerned about *financial* literacy. Entire shelves at bookstores and libraries are dedicated to educating people about their finances; newspaper columns, magazines, seminars, Web sites, radio and television shows, not to mention nonprofit organizations, school curricula and government programs (present company included), join the chorus. So if, in the face of such an educational onslaught, we're really that dumb about economics and finance, it must be by choice, ergo, such ignorance must be rational. Or is it?

So let's start there. Since the connecting theme among these three books is the question of rationality in economic behavior, let's begin by defining terms. What do we mean by rationality when we talk about economic behavior? Here's a description from N. Gregory Mankiw's textbook, *Principles of Economics:* "Economists normally assume that people are rational. Rational people systematically and purposefully do the best they can to achieve their objectives, given the opportunities they have." This is the infamous *Homo Economicus,* or Economic Man.

And here's what our authors have to say about the idea and how it motivates their books:

Homo Economicus is bunk

Shermer: "I am writing against … the theory of *Homo Economicus,* which holds that 'Economic Man' has unbounded rationality, self-interest, and free will, and that we are selfish, self-maximizing, and efficient in our decisions and choices. When evolutionary thinking and modern psychological theories and techniques are applied to the study of human behavior in the marketplace, we find that the theory of *Homo Economicus*—which has been the bedrock of traditional economics—is often wrong or woefully lacking in explanatory power."

Rationality may be oversimplified, but it has a high utility

Harford: "The assumption that people are rational leads us to some clear and testable theories about the way the world works. … A rigorously simplified view of the world can help even when it is oversimplified, because the simplicity makes it easier to spot the unexpected implications of your ideas, to uncover inconsistencies in your view of the world, and to test your ideas against the evidence. … Now, I'm not claiming that people are always and everywhere rational … but I do hope to convince you that people are rational nearly enough and often enough to make the assumption of rational choice a very useful one."

We are not only irrational, but predictably so

Ariely: "[W]e are really far less rational than standard economic theory assumes. Moreover, these irrational behaviors of ours are neither random nor senseless. They are systematic, and since we repeat them again and again, predictable. So, wouldn't it make sense to modify standard economics, to move it away from naïve psychology (which often fails the tests of reason, introspection, and—most important—empirical scrutiny)? This is exactly what the emerging field of behavioral economics, and this book as a small part of that enterprise, is trying to accomplish."

There you have it, and for those of you with a keen sense of opportunity cost, here's my punch line: The battle between irrationality and rationality, New Economics versus Traditional Economics, seems to be less about virtue and more about utility. Can rationality explain some human behavior? Of course it can. Can it explain everything? Nope. Even Mankiw's textbook has a section on behavioral economics, with the subhead *People are not always rational,* under which he states: "[People] can be forgetful, impulsive, confused, emotional, and short-sighted. These imperfections of human reasoning are the bread and butter of psychologists, but until recently, economists have neglected them."

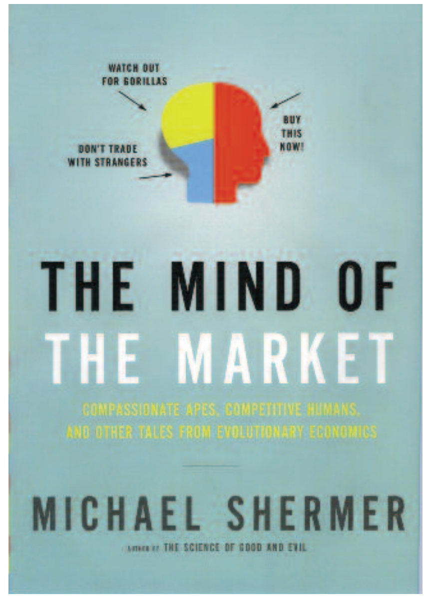
So where do we go from here? One option is to keep up the academic food fight—it's fun to watch. But, in the end, that really doesn't solve anything. Maybe the question isn't so much whether humans act rationally, but how they even achieve rationality (or fail to do so). In other words—why do humans act the way they do, even when they're behaving in a manner that we term rational? After all, to call certain behavior rational still doesn't explain what really happens when humans commit any action or why they do it. What can evolutionary psychology tell us about human motivation? What happens in the brain when humans are given certain choices? These are good questions, and the answers provided by psychologists, neurologists and evolutionary biologists are revealing.

However, the trick for purveyors of this New Economics is to provide some practical utility for their findings. This is where the divide between New and Traditional Economics still seems to fall. It's one thing to reveal which regions of the brain are firing when an economic decision is made, or the seemingly odd way that people behave in laboratory experiments, or why such behavior conforms to our evolved sensibilities, but it's quite another to suggest how such research will help shape monetary policy, or how it will influence the next congressional debate on fast-track trade status.

But maybe that's not entirely fair; maybe the New Economics makes enough of a contribution on a micro scale by, for example, helping to develop retirement savings plans that better reflect humanity's innate decision-making process. (See interview with James Poterba in this issue.) Some sort of New Synthesis may be in order, a sort of Grand Unified Theory for economics and other human sciences. (The biologist Edwin O. Wilson dubbed this synthesis of the sciences and humanities "consilience" and published a thought-provoking book with that title in 1999. To explore this idea further, download a paper by the economist Herbert Gintis, of the Santa Fe Institute and the Central European University, Budapest, "A framework for the unification of the behavioral sciences," at people.umass.edu/gintis/.)

The evolution of markets

Such a New Synthesis already exists within economics, according to Michael Shermer, author of *The Mind of the Market,* and is incorporated into the very meaning of evolutionary economics. Shermer, with a graduate degree in behavioral psychology and a Ph.D. in the history of science, has written much about evolution (including the excellent book *Why Darwin Matters*) as well as about theories relating to religious belief, and he



is publisher of *Skeptic* magazine (to which your reviewer has been a long-time subscriber). So he's the right writer to bring the relatively new ideas of evolutionary economics to a mass audience. And by evolutionary economics, Shermer means the agglomeration of all the New Economics fields—from complexity theory to behavioral and neuro economics and more—and he defines it, essentially, as the study of how our previously primitive economic system changed and adapted into the complex system we have today.

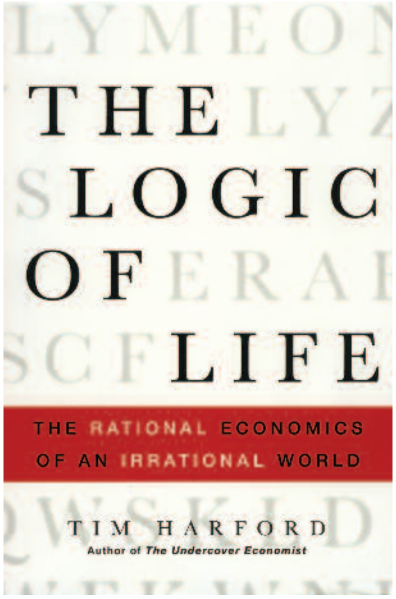
Of course, that's more complicated than it sounds, and Shermer poses three questions that motivate his book: How does the market have a mind of its own? How do minds operate in markets? How are minds and markets moral (i.e., how do evolved emotions facilitate trade)? With appropriate understatement, Shermer says that "this is a really hard problem to solve." But he tackles it with confidence and with a smooth writing style that helps readers understand the science behind the New Economics as, for example, when he describes the latest studies into the nature of free will. (Brain research suggests that such a notion is just that, a notion.)

I will leave readers to engage with Shermer on whether free will really exists, but I mention the issue to illustrate that this is a book that means to first break down human behavior to its fundamental physical/scientific base and then work outward to explain why we act the way we do. If you don't know much about evolution and the science that undergirds much of behavioral research, this book is a great place to start, regardless of your views about economic rationality.

In many ways, Shermer's book is a testament to the virtues of freedom, which he strongly upholds. Throughout the book he cites Adam Smith, Milton Friedman, Ludwig von Mises and others to make his case for the free trade of ideas and goods, and for the freedom of individuals to succeed (and fail) in a world economy. This idea is important to Shermer because he stresses that our own evolved sensibilities tend toward tribalism and xenophobia and that we need to be constantly vigilant against these traits. On a related note, I would be remiss if I did not mention that Shermer quotes the Minneapolis Fed's own Ed Prescott at length about the values of free trade and the merits of openness for countries and individuals alike, in a chapter titled "Bottom-Up Capitalism." (Prescott's *Wall Street Journal* column cited by Shermer is at minneapolisfed.org/research/prescott/wsj/WSJ_2-15-07_Competitive_Cooperation.pdf.)

In the end, though, I am left thinking that Shermer should reconsider his bold assertion that rationality is "woefully lacking in explanatory power" in part because he includes the following quotation from Colin Camerer, a professor of behavioral finance and economics at the California Institute of Technology: "In general, rational choice theory still gets it right often enough that it provides a useful approximation of how the world works." This quotation appears in a Shermer chapter titled "The Extinction of *Homo Economicus,*" and it seems to contradict the very aim of the chapter, if not the book. Economists who embrace rational choice theory don't claim much more than "a useful approximation" and hold that that is very useful indeed.

Shermer quotes Camerer further: "For example, people really do respond to incentives in the long run. But there is more to the story." Of course there is, and Shermer is a good guide for all the rest; even so, he could have stripped out the pointed words about the value of rational choice theory and still have made a very useful contribution to our understanding of human behavior.



The rationality of markets

In essence, that is what Tim Harford does in *The Logic of Life,* which is—at least in part—a defense of rationality. As described above, Harford sees clear benefits from the application of rational choice theory, but he is not orthodox about the matter and states that humans are not blessed with perfect self-control or Spock-like analytical capabilities, but rather that our rationality is an unconscious trait of our humanity. Here Harford and Shermer are on similar ground. Indeed, the same studies pop up in both books (and reappear in Ariely), so something "unified" is going on here.

Even so, Harford's take is distinctly that of a traditional economist, which fits his background as a member of the *Financial Times* editorial board. An economics columnist for the *Times* and other media outlets, Harford received a master's degree in economics from Oxford and is the author of the previous bestseller *The Underground Economist*. The aim of his new book is to show how economic reasoning—including our propensity to act rationally—can explain human decision-making, even those choices that, at first blush, seem irrational.

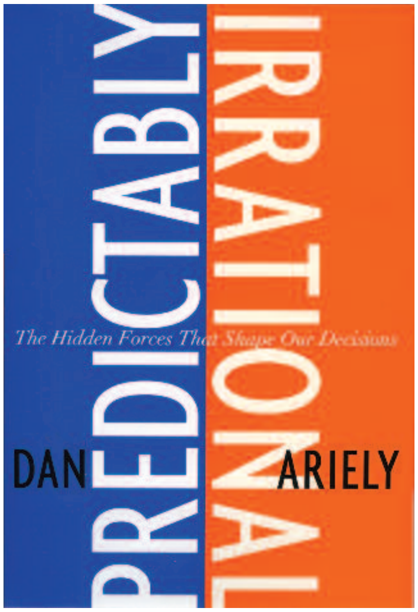
Harford's selection of topics is meant to spark our interest and hold it throughout, and includes such issues as sexual preference and practices, divorce, racism, gambling and why your boss is overpaid (and you've probably got ideas of your own on that one). These are not always explanations that everyone wants to hear. For example, on the question of racism, Harford is quick to stress that even though some racism can be reasoned as rational, that does not make it good. (He also follows in Gary Becker's footsteps and talks about rational criminals, but doesn't argue that such rationality justifies criminal behavior—Becker is cited often in this book, fittingly.)

Becker figures prominently, for example, in Harford's explanation of the divorce revolution of the 1960s. It won't surprise you to hear that Harford's explanation for the sharp increase in divorce rates is explained by a fundamental economic force, but you might not guess that it's that old Adam Smith chestnut—division of labor. Apparently, there's a pretty straight explanatory line from Smith's famous pin factory to the 1960s kitchens of U.S. and European households. And it took Becker to make that connection, as well as to apply the concepts of economies of scale and comparative advantage.

Here's the story, much too briefly explained: In the decades prior to 1950 (and I generalize the timeframe to make the point), couples divided labor to most efficiently manage their households. Because work done in the home (including child-rearing) was so time-consuming, it took the dedicated efforts of one person; and if one person had even a slight comparative advantage over another, that person (OK, it was usually the woman) would customarily stay at home (to work!) while the other one gained outside employment to earn income. "There is no reason to believe that men were breadwinners because they were any good at it," Harford writes. "They might simply have been breadwinners because getting them to help around the house would have been even worse." Ouch.

Cut to the second half of the 20th century and all the technological efficiencies that revolutionized housekeeping. Result? It became easy for women to enter the workforce after their children were grown. Once divorce rates began to climb, a rational self-reinforcing loop kicked in: "The more people divorced, the more divorcees—that is, potential marriage partners—you could meet. That meant it was easier to get divorced yourself and find yourself a new spouse." Another self-reinforcing loop soon began: If divorce was an option, women preserved career options, which made divorce more possible, which reinforced career preservation and so on. "It became less and less likely that a woman would end up trapped in a miserable marriage out of pure economic necessity," Harford writes.

Harford addresses these and other less weighty issues with an engaging style and an ability to weave his main theme through succeeding chapters. While the book's chapters can be read out of order, it pays to read them sequentially. His conclusion? "I hope that I've convinced you over the course of this book that human beings are pretty smart."



The irrationality of markets

Smart? Sure. Rational? Not so much. At least that's the opinion of Dan Ariely, the Alfred P. Sloan professor of behavioral economics at MIT. Ariely's "assault" on *Homo Economicus* is in some ways more direct than Shermer's, for in *Predictably Irrational* he goes beyond the assumptions of rational choice theory and assails tried-and-true sacred cows of Traditional Economics. How's this for an in-your-face chapter title? "The Fallacy of Supply and Demand."

Them's fightin' words. I can remember my first economics course and the simple elegance of the upward-sloping supply curve and the downward-sloping demand curve and how they could explain so much. It was like a light from above, or at least from the chalkboard. How can the law of supply and demand, which says that "the price of any good adjusts to bring the quantity supplied and quantity demanded for that good into balance" (Mankiw again) be fallacious? After all, it's a law, for crying out loud.

Essentially, Ariely says that prices are arbitrary. Production at a certain price (supply) and the desires of those with purchasing power at each price (demand) are not independent of one another and therefore do not come together at a certain balanced point. Of course, we still somehow get prices in the market, but it is not from the intersection of those gently sloping curves; rather, it's from something called arbitrary coherence. Consumers, it seems, do not have a good sense of what they really want to pay; instead, their preferences can be manipulated and are anchored at arbitrary prices.

Moreover, this price anchoring can be set by supply-side variables (manufacturer's suggested retail prices, promotions, product introductions, for example). Instead of market prices being influenced by consumers' willingness to pay (traditional demand-side view), market prices themselves actually influence consumers. In other words, consumers don't help set prices, prices manipulate consumers.

How does Ariely know this? The same way he knows most of the ideas he expounds, through the evidence provided by laboratory-like experiments wherein people are given choices and where they often, in convincing numbers, make decisions that are counterintuitive to rational choice theory; in other words, people are irrational. Indeed, people are so consistently irrational that they are predictably so, making for Ariely's suggestion (and he's not alone) that economics should harness this deeper understanding of human behavior to reconsider its current assumptions.

Laboratory experiments are at the heart of behavioral economists' scientific method, and they are also the crux of the problem for Traditional Economists. Gary Becker, a hero of Harford's book, had this (and more) to say about human lab experiments in the June 2002 *Region:*

> *I have no problem in my vision of economics with endowment effects, fairness issues and many other considerations that affect people's preferences. Therefore, in a sense, I'm a behavioral economist. But I would have some major differences with behavioral economics as it is usually defined. … [T]here is a heck of a difference between demonstrating something in a laboratory, in experiments, even highly sophisticated experiments, and showing that they are important in the marketplace.*
>
> *One can get excellent suggestions from experiments, but economics theory is not about how people act in experiments, but how they act in markets. And those are very different things. It is similar to asking people why they do things. That may be useful to get suggestions, but it is not a test of the theory. The theory is not about how people answer questions. It is a theory about how people behave in market situations. Once you recognize that, it is essential to have a dialogue between market behavior and the theory in order to test various hypotheses.*

That's the core debate for economists, and for many readers of Ariely's book, that debate will take the form of a question: OK, if this is how humans really act, then how does this change anything? Ariely has two answers: He intends his book to illuminate our understanding of what motivates our own behavior so that we might genuinely improve our lives (there is a latent self-help theme to the book). "If I were to distill one main lesson from the research described in this book, it is that we are pawns in a game whose forces we largely fail to comprehend," he writes. And so the more we comprehend about that game, the better. For example, if we understand how our brains react to words like "FREE" and to other promotions, we might make better choices in our day-to-day lives.

On a more macro scale, Ariely issues a call for change in how we craft economic policy. This is the Becker challenge. On the basis of rational choice theory and the power of markets, Ariely says that economists "draw far-reaching conclusions about everything from shopping trends to law to public policy." But since we all make consistent mistakes because of the wiring in our brains, "wouldn't it make sense to modify standard economics and move away from naïve psychology, which often fails the tests of reason, introspection and—most important—empirical scrutiny?"

But if we move away from “standard economics,” what are we moving toward? How can behavioral economics change economic policy? Apparently, according to the examples provided by Ariely, the answer is that behavioral economics doesn’t yet contribute much. The primary contribution he gives relates to the question of why people don’t seem to save enough for retirement. Now, we could argue about whether this is true, but if we begin with the assumption that people have trouble properly valuing future consumption, then standard economic theory isn’t very helpful, according to Ariely, because it assumes that people are rationally choosing to save exactly what they need. (This is the financial literacy conundrum noted earlier in this review.)

Behavioral economics has made strong contributions in this regard, not only in providing answers for why people don’t seem to save enough, but also in providing solutions (such as Thaler and Benartzi’s “save more tomorrow” mechanism, which has employees commit a certain percentage of their future raises to a retirement plan based on the insight that it is psychologically easier to sacrifice consumption in the future than consumption today).

That’s a good plan and a good contribution from behavioral economics, but that’s about all that Ariely offers for policymakers. Until the insights of the New Economics result in similar mechanisms, or in other ways influence public policy, the Traditionalists will likely hold sway. It takes a theory to beat a theory, the old saying goes, and when it comes to policy, it looks like the old-timers are still the team to beat.

You’re not irrational, just complex

At one point in his book, Ariely quotes Walt Whitman to describe how he used the great American poet’s work in one of his experiments with his students, and that’s probably a good place to end this review. Who better than a poet to capture the complexity of the human experience? However, I’m going to select a more famous passage from *Leaves of Grass* than Ariely cited, as it seems to best describe the complex nature of *Homo Sapiens*, or *Homo Economicus* or *Homo Evonomicus* (to borrow Shermer’s coinage of the human condition):

Do I contradict myself?
Very well then I contradict myself,
I am large, I contain multitudes.

That about says it all; and while multitudes are hard to model, that doesn’t mean we shouldn’t try. R