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DAN ARIELY

Predictably Irrational

By Glenn Rifkin



Becoming a star in the controversial academic

discipline of behavioral economics is not for the faint of heart.

Battle lines were drawn nearly four decades ago when innovative thinkers such as Daniel Kahneman, Amos Tversky and Richard H. Thaler challenged traditional economic dogma with their theories about the unpredictable impact of human behavior on tried-and-true economic models. Treading on the sacred ground of mainstream economics set off an intense controversy and inter- and intra-disciplinary sniping that has continued unabated ever since.

For Dan Ariely, a behavioral economist at Duke University's Fuqua School of Business and author of the best-selling "Predictably Irrational: The Hidden Forces That Shape Our Decisions" (Harper, 2008), a little testy debate about his work pales in comparison to his own remarkable odyssey. An Israeli who was born in New York City but raised in Ramat HaSharon, a small city just north of Tel Aviv, Ariely welcomes combative discourse with the relish of someone who has endured tougher battles.

When Ariely was 18, just after he had joined the Israeli military, he was at a meeting in a room filled with munitions when a magnesium flare, the kind used to light up battlefields at night, inexplicably ignited. The explosion left him severely burned over 70 percent of his body.

After an agonizing three-year hospital stay, countless surgeries and skin grafts and a painful struggle to heal, Ariely re-entered a world that had become alien and inaccessible. He had to relearn the mundane aspects of life, like how to step into a bath and to reconnect as a social being. Instead of succumbing to self-pity, he returned to academia and discovered the initial precepts of his career. Today, the 43-year-old Ariely retains what he describes as his Israeli combativeness, along with a wry sense of humor and unflappable balance. His ordeal fueled a deep introspection about his own psychological makeup and a fascination with why people behave as they do.

Traditional economists dismiss Ariely's work and that of other behavioral economists as inconsequential trivia — clever lab experiments that do not apply to the real world of finance and politics. But, Ariely believes that the economic meltdown in 2008 and former Federal Reserve Board Chairman Alan Greenspan's confession that he had been wrong about the rationality of markets vindicate his life's work. If Ariely is an expert on anything, it is irrational behavior.

Suppose you walked into a large public building and noticed a table set up with a big sign offering "One chocolate per customer." At the table, you were given a choice: a high quality Lindt chocolate truffle for 15 cents or a Hershey's Kiss for one cent. What would you take? In the experiment, customers made a very "rational" choice. About 73 percent chose the better Lindt truffle while 27 percent bought the Hershey's Kiss. But suppose you came back the next day and the price had changed. Now, the Lindt is 14 cents and the Hershey's Kiss is free. Would you expect a difference in customer reaction? Should there be? In fact, 69 percent of the customers chose the Hershey's Kiss when it was free, and the Lindt buyers dropped to 31 percent. The 14 cent price difference had not changed, but "free" made all the difference. It created a struggle in making a decision and led the customers to make a bad decision, giving up what they actually preferred for something inferior. It was irrational but hardly unexpected. It happens all the time.

—A sample experiment conducted by Dan Ariely

Ariely first confronted irrational behavior during his prolonged stay in the Israeli hospital. The bandages and dressings covering his badly burned body required daily changing. The nurses insisted that the correct and least painful procedure was to rip the bandages off quickly — much as a parent removes a child’s Band-Aid — starting with the most damaged area and moving to the least affected spot. But in Ariely’s case, this hourlong process was torture and he quickly grew to dread it. He believed that a slower, gentler bandage removal would be far less excruciating even though it would take twice as long. The nurses refused to believe him.

Later, when he had finally left the hospital and entered Tel Aviv University, Ariely took a class on the physiology of the brain taught by Hanan Frenk, who became an early mentor. With Frenk’s guidance, Ariely designed and conducted a series of experiments using heat, cold water, pressure from a vice grip, loud noises and the like to determine how people reacted to pain. When he finished, he had evidence that he had been correct and that the nurses in the hospital had come to an irrational conclusion and had been wrong.

Although Ariely returned to the hospital and explained his research to the nurses, they politely refused to change their methods. But for Ariely, the experience was cathartic. It “profoundly changed my outlook on research and largely determined my future,” he wrote. More than anything, Ariely’s experience taught him to question what was presumed to be fact and to pursue evidence to support his conclusions. He became enthralled with experimentation and from that point on relied on empirical information to shape his thinking. He sat for hours in coffee shops and observed people and their behavior.

Now, with a doctorate in psychology and a second doctorate in business administration, Ariely, a determined iconoclast, retains an insatiable curiosity about what motivates people. In an

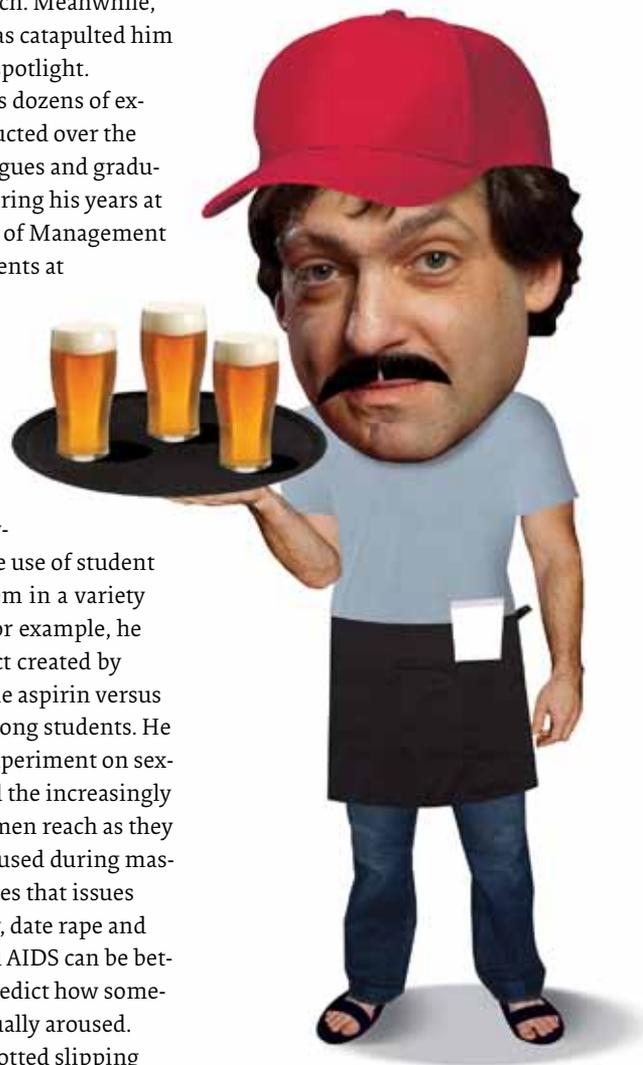
irrational world, a rational man may be king, but Ariely believes that irrational behavior is not only predictable but also potentially profitable for open-minded, innovative thinkers in business, politics and other facets of life. He enjoys passionate debate nearly as much as the countless experiments he has conducted for his academic research. Meanwhile, his best-selling book has catapulted him into the international spotlight.

The book describes dozens of experiments Ariely conducted over the past decade with colleagues and graduate students, mostly during his years at the M.I.T. Sloan School of Management and in other appointments at Princeton and the University of California, Berkeley. His experiments are an eclectic mix, scrutinizing everything from online dating to the origins of unethical behavior. He makes extensive use of student bodies by enlisting them in a variety of empirical studies. For example, he tested the placebo effect created by high-priced brand name aspirin versus a cheap store brand among students. He caused a stir with an experiment on sexual arousal that tracked the increasingly irrational state young men reach as they get more and more aroused during masturbation. Ariely believes that issues such as teen pregnancy, date rape and the spread of H.I.V. and AIDS can be better understood if we predict how someone behaves when sexually aroused.

Ariely has been spotted slipping into dormitories or working in disguise as a server in a bar, all in the name of social science. He once sneaked into a dormitory at the Massachusetts Institute of Technology and deposited several six-packs of Coca-Cola in refrigerators in communal areas on each floor. He surreptitiously monitored the refrigerators and discovered that within 72 hours, all the Coke was gone. Next, he placed a plate containing six one-dollar bills in

each of the same refrigerators and waited. After 72 hours, not a single dollar had been taken.

Ariely concluded that people are comfortable cheating or stealing when cash is not directly involved. “Companies cheat with their accounting practices, executives cheat by using back-



dated stock options, lobbyists cheat by underwriting parties for politicians,” he wrote. As long as people can keep some distance from taking actual cash, they can somehow justify dishonest behavior. This can explain a great deal about the rash of corporate malfeasance in the past decade. The leaders of Enron would not have mugged old ladies with black-jacks and taken money from their purses, but they were able to rationalize

destroying the retirement savings of tens of thousands of employees and investors, Ariely noted.

Given that traditional economists failed to predict or explain the events of the past three years, Ariely is convinced that behavioral economics is the correct approach for understanding and addressing global economic challenges.

“As the results presented in this book show, we are all far less rational in our decision making than standard economic theory assumes,” Ariely writes. “Our irrational behaviors are neither random nor senseless — they are systematic and predictable. We all make the same types of mistakes over and over, because of the basic wiring of our brains. So wouldn’t it make sense to modify standard economics and move

ARIELY has been spotted slipping into dormitories or working in disguise as a server in a brewhouse, all in the name of social science.

away from naïve psychology, which often fails the tests of reason, introspection and empirical scrutiny?”

To promote empiricism, Ariely has dedicated his life to experimentation. He is happily married and has two small children, but he has little time for outside interests. “I used to be a more interesting guy with hobbies, like flying a plane and scuba diving,” he said. “But academia really takes over everything. I have many more ideas for experiments than time to do them.”

Michael I. Norton, an assistant professor of marketing at Harvard Business School, did his postdoctoral work at M.I.T., where Ariely was his advisor. “You could go to his office and say, ‘I ran 100 experiments, published 20 papers and wrote 10 best-selling books’ and he’d pause and reply, ‘What else?’” Norton said. “He also applies that to himself. ‘What else can I do? What are the interesting questions, who are the other people I could work with and talk with?’

It is always, ‘What’s next?’ A lot of academics get stuck working on the same thing. Dan is always looking for a way to move things forward.”

Ariely has become a much sought-after expert amid the current enthusiasm for behavioral economics. He was part of a dream team of behavioral scientists and economists, including Kahneman, Thaler, Cass R. Sunstein and Robert B. Cialdini, that advised Barack Obama about fighting negative advertising, soliciting campaign contributions and getting out the vote during his presidential campaign. And, Ariely’s book is one of several behavioral science-based business best-sellers, also including “Freakonomics,” “Nudge” and “The Wisdom of Crowds,” that has challenged mainstream economic thinking. His follow-up book, “The Upside of Irrationality: The Unexpected Benefits of

Defying Logic at Work and at Home,” is just arriving in bookstores.

For Ariely, his core argument is straightforward.

“Standard economics assumes that we are rational — that we know all the pertinent information about our decisions, that we can calculate the value of the different options we face, and that we are cognitively unhindered in weighing the ramifications of each potential choice,” Ariely writes. “The result is that we are presumed to be making logical and sensible decisions. And even if we make a wrong decision from time to time, the standard economics perspective suggests that we will quickly learn from our mistakes either on our own or with the help of market forces. On the basis of these assumptions, economists draw far-reaching conclusions about everything from shopping trends to law to public policy.”

But Ariely and his fellow behaviorists disagree. They believe that econom-

ics would make a lot more sense if it were based on how people actually behave instead of how they should behave. Using this hypothesis as a guide, Ariely believes there are unlimited social, economic and political problems that can be solved or at least addressed more effectively in a chaotic world.

Observing Human Behavior

From his lower-level office tucked away in a corner of Fuqua’s modern glass and steel building, Ariely has emerged as a faculty celebrity and a magnet for students and visitors from around the world. He keeps a Segway parked outside his door for the joy of using it and to make his movement across the vast campus quicker and easier on his damaged body. The burns left massive scars across his arms and face. Skin grafts on the right side of his face are noticeable but unobtrusive. With large dark eyes and a shock of dark hair, Ariely has a boyish appearance reflecting a mischievous nature that his friends say goes back to his early childhood. Even in seventh grade, Ariely was opinionated and rebellious, an Israeli Ferris Bueller who led an uprising of his classmates against the administration and demanded extensive school reform. He penned a students’ Bill of Rights, circulated petitions and won on a host of issues, including the content of quizzes. Eventually, he pushed too far.

“I was actually expelled from middle school,” Ariely recalled with a smile. “The principal was trying to run a very tight ship, and I was causing her a lot of grief.” He was able to negotiate his way through high school, exercising more restraint, and was just about to fulfill mandatory military service when his life changed forever.

Ariely points out that if not for techniques for treating burn victims developed during the Vietnam War, he would have died. The pain was so prolonged and so relentless that he contemplated suicide. Yet he insists he never asked, “Why me?” “I did ask myself

Food for Thought from Dan Ariely

Five Irrational Takeaways for Senior Executives

- 1. Supply and demand do not behave as you might expect. The amount consumers are willing to pay can easily be manipulated.**
- 2. Price can influence expectations, and expectations can influence the real performance of products. For example, people often form expectations about a product's performance based on its price, and if the identical product is sold for less, they will experience its performance as inferior.**
- 3. Even if people are paid more, they may perform worse.**
- 4. The power of fuzziness can induce people to cheat by just a bit and at the same time think of themselves as honest people.**
- 5. "Irrational" is a complex word and what may appear as irrational behavior — e.g., blocks of voters apparently voting against their own self-interests — may be perfectly sensible with a more nuanced understanding of human nature, such as an appreciation for people's concern for others.**

whether all the pain was worth it, but I never felt bad for myself," he said.

The second stage of his treatment may have been the toughest. "The sad thing was that as I got better, it became worse," he explained. "I didn't really understand the implication of these kinds of burns. I thought, 'Everybody has a burn and it will just go away, right?' We don't have an image of a burn that never goes away. These skin cells today are not the same cells that got burned, but they keep on regenerating as scars."

While Ariely was coming to grips psychologically with the realities of his future, he had to deal with another physical trauma, the shrinking of the scar tissue. As each day passed, Ariely had to constantly stretch his extremities to keep the scar tissue from tightening so much that he could not use his hands, arms or legs. "It really felt like a betrayal, as if my body was acting against me and that I had to hurt myself to overcome my body," he said. "It wasn't about wanting to get better; I just want to deteriorate."

Having been so isolated for so long during such a formative period in his life, Ariely had lots of time to ponder questions about human behavior. When he finally arrived at the university, his passion for researching these life questions blossomed.

"He was one of those students who was a lecturer's dream come true," said Hanan Frenk, the professor and mentor. "He haunted his lecturers and pressed them relentlessly for answers. I had very few students like him, and I took an immediate interest in him. He visited me during office hours and drove me to the limits of my knowledge."

In his Duke office, Ariely is similarly pressed by students for his attention and his insights. Canvassing former students and associates, one hears over and over about his generosity and genuine concern for his students. "He's an extremely compassionate guy," said John G. Lynch Jr., who was Ariely's Ph.D. advisor at Duke. "When he was at M.I.T., if he had money to support some post-

doc students having a rough time, he'd hire them just to help them out."

When he is not teaching a class in behavioral economics, Ariely is on the phone with colleagues and students with whom he is conducting experiments.

Few things rattle academics more than a fellow academic with a best-selling book. Ariely's work, lauded by many in the field, has come under fire from outside and even within behavioral economics. In reviewing Ariely's book for *The New Republic*, Alan Wolfe, a political science professor at Boston College, took Ariely to task for what he calls "selection bias" in conducting his experiments. By relying almost completely on research about students from M.I.T. and a couple of other campuses, Ariely is making unfounded assumptions about the general population, Wolfe wrote.

"Ariely is obligated to remind his readers, most of whom are neither psychologists nor economists, of the problems of selection bias that follow from his over-reliance on students as subjects. But he fails to do so. In fact, he does the opposite, he generalizes from M.I.T. classrooms to humankind as a whole and with abandon," Wolfe wrote. "This might be called the technique of the Big Slip, gliding imperceptibly from a controlled and artificial experiment to a breathtaking generalization about matters that have puzzled philosophers and theologians through the ages. It makes for entertaining reading. Alas, it tells us little about the kind of creatures we are."

This naysaying about the value of his work has become a nagging and seemingly ever-present fact of Ariely's life. "The rational Chicago economists don't think what we're doing is very useful," he said. "When I present a talk in the department of economics, there are people who stop me every 90 seconds and tell me I'm an idiot. This is fine. It's academic debate and they can have their opinion, I can have mine. I try to convince them and I don't take it personally."

Academic disagreements, of course, are not unusual and Ariely, though he dis-

dains the personal attacks, is unmoved by the controversy. He believes a degree in psychology is more valuable than an economics degree and there is demonstrable value in illuminating what is wrong with economic thinking while providing lessons in how to change damaging behavior. Because he opted to publish a popular, mass-market book rather than an academic tome, Ariely feels the debate has moved beyond academia into the public domain. "In some sense, we are trying to bypass the economists, and we're doing that rather well," he said.

He has also heard Wolfe's criticism of his experimental procedures and stands by his conviction that his experiments on students accurately reflect behavioral tendencies across the general

gians, have set beliefs and build their theoretical models around the idea that people are essentially rational, Ariely said. He is willing to embrace whatever the empirical evidence reveals, whether the results are rational or irrational. Finding room for the gray area that is human behavior is essential, he said. It is reckless to assume that any discipline has all the answers.

It is not that traditional economics is wrong, according to Ariely. "It's just that it's not perfectly right," he said. "As a psychologist, I would never say every moment in psychology perfectly describes human behavior. It is capturing some essence of human behavior. Economics is the same. The difficulty is that economists, unlike other people, don't

tools (perfectly rational individuals, efficient markets) by Milton Friedman's generation were so sacrosanct that economics wasn't economics without them."

Including irrationality in the debate has become a requirement for many economists.

"Economists will have to learn to live with messiness," Krugman concluded.

If anyone is comfortable with messiness, it is Ariely. He calls himself a "social hacker" and seeks fixes to complex problems. How about a nonprofit bank run by an individual making \$500,000 who

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population. People are people and characteristics like maturity, experience and wisdom do not negate human tendencies.

"The belief in economic academic circles, as well as on the street, was that these experiments were cute and nice but these are students, so clearly all these irrationalities will disappear when these people get into real jobs and are making big decisions for lots of money and work in the competitive environment of the market," Ariely said. The economic crisis strongly suggests otherwise, he said.

Ariely writes that he is a proponent of making use of all tools that allow a problem to be addressed "with the dispassion of science." He continues, "We should explore different hypotheses and possible mechanisms and submit them to rigorous empirical testing." In a perfect world, no public policy would be implemented without the scrutiny of a panel of experts from many disciplines and testing of the plan, he believes.

As an empiricist and an agnostic, Ariely says he is not beholden to any one doctrine. Economists, like theologians,

have the humility. The way economics presents itself to the outside world is 'We have the answers!' And that's the dangerous part."

As behaviorists gain more credibility, their influence is on the rise. Several of President Obama's top advisors, including Peter R. Orszag, the director of the Office of Management and Budget, and Austan Goolsbee, a chief White House economic advisor, hail from the behavioral economics camp. Economics is under fire on a number of fronts.

Paul Krugman, a Nobel Prize-winning economist and columnist for *The New York Times*, wrote about the economics profession's failure to anticipate the financial crisis and what that revealed about its failings in an article entitled "How Did Economists Get It So Wrong?" in *The New York Times Magazine*. Of his colleagues in economics, Krugman wrote, "They were so enamored of the elegance of their models and the consistency of their logic that they had come to believe that assumptions that were originally adopted merely as

is in it for the important role banking plays in society rather than for obscene amounts of personal wealth, he mused.

But as the world has grown more complex, fixes are harder to achieve. "Are we more irrational now?" he asked. "I don't think we, as people, are different, but we have more opportunities to behave irrationally, and the cost of irrationality is increasing. I look at life and there are lots of things I don't like. And I ask myself, 'What are the little things I can do to make things better?' Social science provides an answer for that." 

Glenn Rifkin has written for *The New York Times*, *Fast Company*, *Strategy + Business*, and many other publications. He is co-author of "MBA in a Box: Practical Ideas from the Best Brains in Business" and other books.

