



ASSETS

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► Behavioral Decision
Making

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SPOTLIGHT

Behavioral decision making is the study of how human beings make choices. Behavioral economics has been an important area in the field from its inception just a few decades ago. In this edition, Assets takes a look at the field's history and highlights some of the cutting-edge research being done by UCLA Anderson's Interdisciplinary Group in Behavioral Decision Making. Founded in 2003 to create a community of researchers with similar interests from diverse backgrounds, members come not only from UCLA Anderson but also from the university at large and beyond. The group has a world renowned reputation, and their findings have real-world impact in a wide range of business subjects on both the individual and market levels.



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FEATURE

Behavioral decision making is an academic research area which seeks to understand the process by which human beings come to judgments and make choices. The findings from this work are broadly applicable, impacting virtually all the subjects studied in management education and practiced in real-world business. Historically, one of the key areas in the field is behavioral economics, where some early research called into question the then standard beliefs. This older rational approach did not reflect actual results, leading to a revolutionary change in the underlying assumptions. The better understanding provided by the new behavioral decision making approach can lead to improved outcomes. Analysis of the recent economic downturn has uncovered the series of misjudgments that created the crisis, along with the obvious need for making better choices to facilitate recovery.

In the few short years since its inception in 2003, UCLA Anderson's Interdisciplinary Group in Behavioral Decision Making has made it one of the school's research strengths and garnered a reputation that places it among the elite in this field. The group is a dynamic environment for the exchange of ideas that has led to some exciting discoveries. Its success has also been a key consideration in attracting new faculty members and students to the school. The behavioral lab was created about the same time to support studies in the area.

Economic Acting Lessons

Using Insights into Human Behavior, a UCLA Anderson Special Research Group is Helping to Transform Economics

For many years, Shlomo Benartzi, professor of accounting at UCLA Anderson, has studied a problem that has vexed policymakers: the failure of individuals to save adequately for retirement.

Benartzi found in his research that people fall short in their savings strategies because they do not have the self-control to postpone consumption into the future.

But for Benartzi, identifying the problem wasn't enough. He set out to find a solution. He understood that although people may not want to forgo current income, they will relinquish money they don't have now. So with University of Chicago economist Richard Thaler, Benartzi designed the "Save More Tomorrow" or SMarT program, which commits employees to setting aside some of their scheduled future pay increases for retirement savings.

Tried at workplaces in the late 1990s, the SMarT program proved highly successful. More than three quarters of employees joined the plan, and 80 percent of those stayed in it during the four-year study period. Participants nearly quadrupled their savings rates. SMarT is now being used by half of the large corporations throughout the United States and is expanding to other countries.

"People sometimes can be clueless when it comes to money, so there are many opportunities to help them if you understand their behavior," said Benartzi. "I'm excited by things that work. I want what I do to have a positive effect on people's lives."

Benartzi's SMarT program is one of many projects produced in the last six years by members of UCLA Anderson's Interdisciplinary Group in Behavioral Decision Making. This collection of scholars conducts groundbreaking research at the boundary of psychology and economics, drawing on a range of other disciplines that stretches from political science to anthropology to law.

Some researchers in the group focus on practical matters: How can people be motivated to conserve energy? What is the best way to plan a big vacation? Others in the group examine larger questions that can affect all of society: Why do markets spiral up and down, seemingly without relation to what is happening in the economy? What accounts for the recent boom-bust cycles in commodities, tech stocks and real estate?





Shlomo Benartzi, professor of accounting at UCLA Anderson (left), and Craig R. Fox, professor of policy at UCLA Anderson and professor of psychology at UCLA (right), are co-founders of UCLA Anderson's Interdisciplinary Group in Behavioral Decision Making.

Understanding the Head and Heart

The idea that economists should pay much attention to psychological or social factors is a fairly new one, and it challenges long-held beliefs and approaches in the field. Neo-classical economics, which held sway for most of the 20th century, assumes that people are basically rational and that they behave in ways that maximize their self-interest. Markets are efficient and self-correcting, according to the conventional view.

Behavioral economics, on the other hand, assumes that human decision making results from a complex mix of motivations – emotional, cognitive and social – with rationality often taking a back seat. Behavioral economists point out numerous everyday examples in which people reliably behave in ways that are clearly irrational or at odds with their self-interest: Gamblers at a casino feed bills into slot machines, knowing they are destined to lose. Participants in lawsuits, labor strikes and divorce proceedings reject financially advantageous bargains. Individuals vow sincerely to exercise and lose weight and then do not do so.

Behavioral economists also like to note that while they have only recently been accepted as legitimate members of the economics profession, their approach is not exactly new. No less a figure than Adam Smith, the father of modern economics, recognized the complexities of judgment and morality in his 1759 book, “The Theory of Moral Sentiments,” published 17 years before his better known “Wealth of Nations.” Jeremy Bentham, an influential English philosopher and a contemporary of Smith’s, wrote at length about “the happiness factor” or pleasure-pain calculations present in human actions.

But in the 19th century, neo-classical economics was ascendant, and it forced these earlier notions of why people behave the way they do to the side. The discipline sought to become more scientific, and the concept of Homo economicus took hold. In the neo-classical view, economic man was rational, self-interested and reasonably predictable. As economics became more like physics, researchers could apply mathematical analysis to all manner of economic questions.

Insights into Economics from Psychology

Then, late in the 20th century, the neo-classical grip began to weaken. A pair of psychologists, Daniel Kahneman of Princeton and Amos Tversky of Stanford, questioned assumptions of rational choice and introduced more psychologically valid models of judgment and decision making. In particular, they published a paper in the journal *Econometrica* in 1979 arguing that people’s decisions are determined by how options are perceived relative to a reference point, and this reference point can be influenced by how options happen to be described. In general, people tend to avoid risks that are perceived as gains and seek risks that are perceived as losses. For example, most people choose to avoid risk when choosing between health policies that are described in terms of the number of lives that would be saved, whereas they choose to seek risk when choosing among health policies that are described in terms of the number of lives that would be lost. This notion that changes – gains and losses – are the carriers of value challenged a key assumption of neo-classical thought, which is that all that matters to people when confronted with a choice is how options affect one’s final state of wealth so that reference points don’t matter and decisions are not affected by how options are described. The paper is often cited as the founding of behavioral economics.

Throughout the 1980s, behavioral economists continued to make inroads in the neo-classical paradigm. Richard Thaler, who was at Cornell then, wrote a regular column, “Anomalies,” in the *Journal of Economic*

Perspectives. In provocative style, Thaler explored glaringly non-rational phenomena, such as the fact that people strongly prefer avoiding losses to acquiring gains and will demand much more to give up an object than they are willing to pay to acquire it. His collected columns would later become a popular book, “The Winner’s Curse.”

A milestone came in 1997 when the Quarterly Journal of Economics devoted an entire issue to behavioral economics. Then, in 2002, the Nobel Prize in economics went to the psychologist Kahneman, only the second time until then that a non-economist had won the award (his collaborator, Tversky, had died six years earlier and was therefore not eligible for the prize).

UCLA Anderson at the Forefront

By the early 2000s, a number of scholars at UCLA Anderson and the larger university community were exploring the many aspects of the burgeoning field of behavioral economics. In keeping with the hybrid nature of the field, these researchers represented different academic disciplines and were employed by different departments spread across the UCLA campus. Rakesh Sarin, chairman of the business school’s faculty at this time, recognized the need to bring together these individuals with diverse backgrounds and similar interests.

Sarin, now the Paine Chair in Management at UCLA Anderson, encouraged Shlomo Benartzi, who had studied under Thaler at Cornell, and Craig Fox, professor of policy at UCLA Anderson and professor of psychology at UCLA, who had trained under both Kahneman and Tversky, to launch the Interdisciplinary Group in Behavioral Decision Making.

“The behavioral decision making group provided a forum to connect all these researchers with a common theme,” Sarin said.

A decision was made early on to invite to the business school program not only researchers from across the university but others from institutions beyond the UCLA campus. Today, official members of the group include faculty from California Institute of Technology and the University of Southern California, as well as members of UCLA’s psychology, anthropology, political science and communication studies departments, and the law school. Within a year of its founding, the behavioral decision making group at UCLA was ranked among the top behavioral decision making programs in the world, and today it is commonly regarded to be the strongest group in the Western United States.

Bringing the Best Minds to Campus

One of the first initiatives of Fox and Benartzi, who have been co-chairs of the group since its founding, was a seminar series to bring in the world’s leading researchers in behavioral economics. The gatherings would expose students and faculty to the top minds in the field and underscore the reputation of UCLA Anderson’s interdisciplinary group as a leader in the increasingly influential academic movement. One of the first seminar speakers was the father of behavioral economics, Nobel Laureate Daniel Kahneman.

Today, the seminar series, which meets twice monthly during the academic year, is one of the best attended on the UCLA campus, drawing participants from not only the business school, but also the law school, medical school and many diverse academic departments. In addition, a number of participants meet weekly to discuss current research in progress and seek feedback from one another.

Another key feature of the interdisciplinary group is its series of working papers, which highlights cutting-edge research produced by group members. The group also offers two MBA elective courses, Managerial Decision Making, taught by Fox, and Psychology and Personal Finance, taught by Benartzi, along with a number of doctoral seminars.

Some researchers in the group focus on practical matters: How can people be motivated to conserve energy? What is the best way to plan a big vacation? Others in the group examine larger questions that can affect all of society: Why do markets spiral up and down, seemingly without relation to what is happening in the economy? What accounts for the recent boom-bust cycles in commodities, tech stocks and real estate?

The presence of the Interdisciplinary Group in Behavioral Decision Making has helped UCLA Anderson recruit top faculty and students. Suzanne Shu is an assistant professor of marketing who received her doctorate in behavioral science under Thaler at the University of Chicago in 2004. “My decision to come to UCLA Anderson was greatly influenced by the existence of the behavioral decision making group here,” Shu said. “This is a vibrant community that helps us move our research forward more quickly than if we were working on our own.”

Real Solutions to Real-World Problems

Shu uses her background in behavioral economics and marketing to analyze consumers’ saving and spending decisions. Her research draws on her expertise in both these subjects to analyze these choices for both consumables and financial purchases. For example, with consumables, her work on procrastination of positive experiences has looked at consumer’s search for the right time to use their frequent flier miles, drink that special bottle of wine or use their gift cards. Her findings show a tendency to wait too long in all these situations.

She also has a special interest in consumer behavior for financial decisions. Unlike others in behavioral finance, her focus here remains on individual consumer’s decisions to purchase or not purchase a product. Her investigations explored topics like loans and mortgages, including recently looking at how people decide to invest in annuities or use reverse mortgages.

“When it comes to choosing loans, I have found that people pay a lot of attention to the total amount of interest they pay instead of just paying attention to annual percentage rate,” Shu said. “This can affect other aspects of the mortgage decision, such as how long of a loan to take or whether or not to pay points on the mortgage.”

Getting people to conserve energy is on almost everyone’s agenda these days. It is a goal of governments, businesses, utilities, environmentalists and consumer activists. Millions of dollars have been spent on the cause. Noah J. Goldstein, assistant professor of human resources & organizational behavior, decided to tackle the problem. And he made the task more difficult by deciding beforehand

that the solution he came up with had to be inexpensive.

He began by hypothesizing that people do not want to be very different from their neighbors. So with the cooperation of San Diego Gas & Electric, he had notes added to bills telling customers whether they were using more or less energy than people in their neighborhoods.

As Goldstein expected, those who were told they exceeded the norm responded by cutting consumption in subsequent billing cycles. But while solving one problem, the messages in the bills created another. When customers who had been using less than the norm were notified of their success, they increased their usage – presumably to be more like their neighbors.

Goldstein pondered how to counter this phenomenon. He knew that while people want to see themselves as normal, they also want approval. So he and his colleagues hatched the idea of putting smiley faces on the bills of those using less electricity. It worked. After receiving bills with smiley faces, conserving consumers kept their energy use down. The results were so clear and convincing that after Goldstein published his findings, several major U.S. utility companies adopted the practice.

“You can also influence people by spending \$10 million on an advertising campaign,” said Goldstein. “But I’m interested in finding what can be done with very few resources. Most organizations don’t have a lot of spare cash now.”

Like Goldstein’s energy conservation project, much of the research coming out of the interdisciplinary group combines rigorous theory with very practical applications.

Wendy Liu, assistant professor of marketing, devised strategies for planning a vacation by using her knowledge of how the brain balances emotions and practical concerns. Aimee Drolet, professor of marketing, has done research into decision making and aging that concluded that people over 65 can handle mixed stimuli better than younger people and that maybe we shouldn’t feel so bad about getting older after all.

What Marketers Need to Know about Decision Making

If marketing is about satisfying customers, then behavioral economics has much to offer the field of marketing. Successful marketers need to know how and why people make choices.

Sanjay Sood, associate professor of marketing and faculty director of UCLA Anderson's Behavioral Lab, discovered in his research that consumers' evaluation of a product or service depends greatly on whether it is presented by itself or as one in a group of options. Something offered in isolation tends to be much more highly thought of than when the same option is presented as part of a group, Sood found.

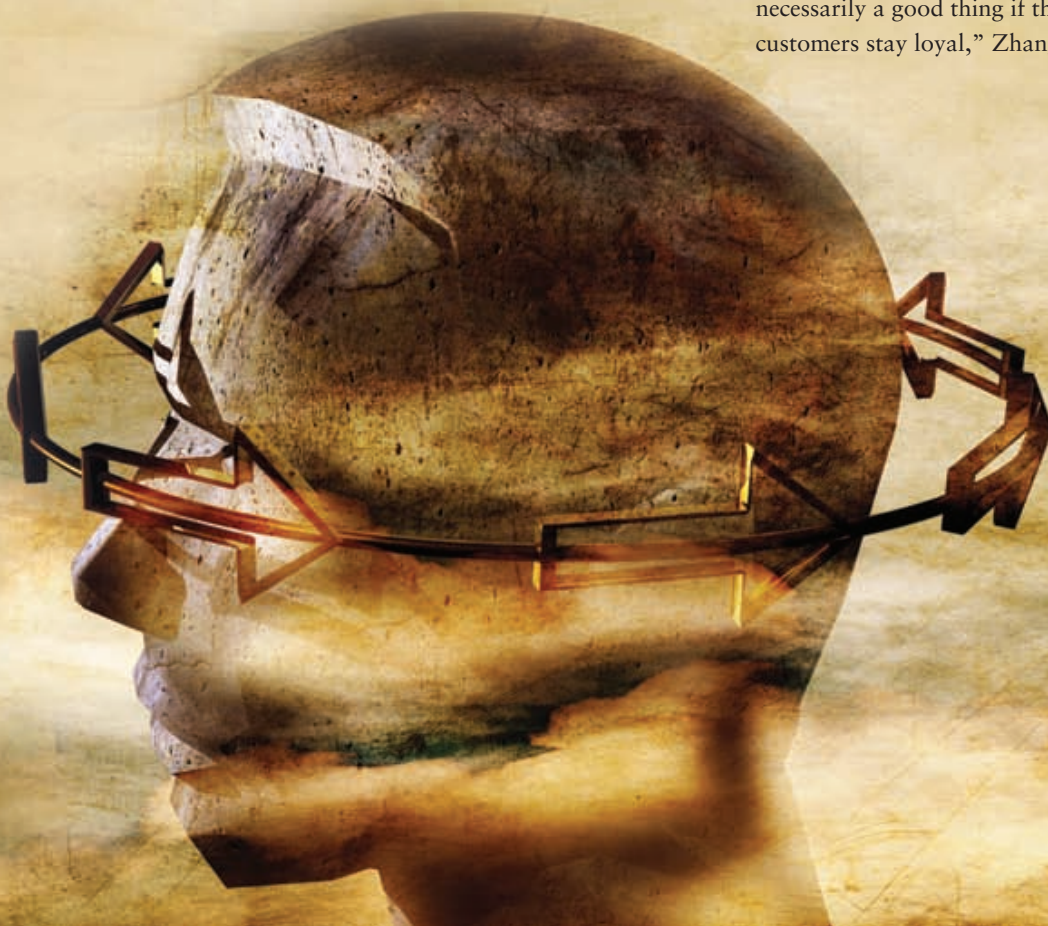
Asking people whether they would like to take a vacation in Hawaii usually will elicit a positive response from most people. But ask them whether they would like to go to Hawaii, Las Vegas, Miami or New York, and the Hawaii vacation seems less desirable because people think of the positives (e.g., beautiful beaches) and negatives (e.g., no gambling), according to Sood's research.

These findings are consistent with the seminal 1979 paper of Kahneman and Tversky that described the principle of loss aversion – that losses have more impact than equivalent

gains. In this case, the losses are negative features that come to mind because of the presence of other options in the group. Even though choosing the group offers a kind of flexibility to keep one's options open, the negative features that come to mind reduce the perceived value of an option compared to when it is presented in isolation.

Shi Zhang, associate professor of marketing, found that giving consumers difficult choices among competing products can build strong brand loyalty. In several experiments, he observed that difficult choice decision making led consumers to be more attentive to product features, and later, these consumers recalled more features. However, at the same time, they confused the source of features, incorrectly attributing more positive features to the chosen option. These distorted memories bias future evaluations of similar products. As a result, consumers were more likely to stick with their original choice and less likely to switch to a new option, even if the new option was objectively superior. But when choices were easy, fewer features were recalled with less source confusion, hence there was less memory distortion, and consumers were more open to new options.

“Making the choice easier for consumers, as marketers now preach and practice, is not necessarily a good thing if the goal is to have customers stay loyal,” Zhang said. “These





To maximize the group's exposure to the latest ideas, the Interdisciplinary Group in Behavioral Decision Making sponsors a well-attended twice-monthly research seminar series throughout the academic year, which has featured the biggest names in the field.

findings are applicable to a wide group of settings involving memory distortion in decision making, showing a lack of objective judgment when reviewing past decisions in any context.”

Irrational Markets and Getting to Know Your Stock Analyst

For behavioral economists, financial markets provide volumes of research material. If the financial crisis demonstrated anything, it is that there is much more to markets than rationality.

Avanidhar Subrahmanyam, professor of finance, or Subra as he is known on campus, spends much of his time studying the stock market. In a study that tracked the Consumer Confidence Index with stock market fluctuations over a six-year span, Subra and two other researchers found that when investors are overly optimistic, stock prices first tend to run up quickly, yielding big profits. Then prices reverse direction and fall into decline – the same phenomenon seen in the financial crisis.

The study found that price reversals occurred only after optimistic periods, leading to the insight that investor psychology is a trigger for the boom-bust cycles.

“I genuinely believe that there are many episodes in the stock market that cannot be reasonably attributed to rational behavior,” said Subra. “Look at the tech stock boom and bust, and the real estate boom and bust. Look at what happened to gasoline and oil prices, which spiked by 60 percent over three months. These are hard to account for using rational demonstrations.”

Subra also has studied the stock analyst industry, comparing the behavior of younger and older analysts. He found that younger

analysts tend to be more impulsive and make snap decisions about whether to upgrade a stock. Older analysts tend to be more moderate and think things through. When young analysts decide to upgrade a stock, its value spiked in the short run but reversed long-term. If older analysts upgraded a stock, its price tended to rise and stay there.

Subra's advice to investors: Consider age and experience when evaluating a stock analyst's enthusiasm.

Detecting Risk and Reward in the Brain

A cornerstone principle of behavioral economics, articulated in Kahneman and Tversky's 1979 paper, is known as loss aversion: people are more sensitive to losses than equivalent gains. This leads people to favor the status quo over changes that entail potential gains and losses, and leads people to demand more to sell objects that they own than they would have been willing to pay to acquire them in the first place. It also leads people to avoid taking risks that involve possible gains and losses.

Fox, co-chair and co-founder of UCLA Anderson's Interdisciplinary Group in Behavioral Decision Making, explores this issue at the level of basic biology. In a collaboration with neuroscientist Russell Poldrack, he has used functional magnetic resonance imaging (fMRI) to scan the brains of people while they are making decisions. This technology tracks the flow of blood to electrically activity parts of the brain, allowing researchers to see which parts of the brain are most active when people face choices involving risk and reward.

Using this technique, Fox and Poldrack determined that the primary reward center of the brain is more sensitive to potential losses than gains, just as Kahneman and Tversky's model predicted 30 years ago.

“For the first time, we were able to detect loss aversion at work in the brain, literally seeing its neural signature,” said Fox. “We found that this reward circuitry is generally about twice as sensitive to loss as it is to gains, but it varies widely from person to person. More exciting, we can predict to a high degree of accuracy how loss averse a person is when making decisions by examining how much more sensitive his or her brain is to losses than gains.”