



Behavioral Economics in Management Decision Making

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ABSTRACT

Behavioral economics has gained much attention in field of psychology and public policy. The field of study known as *behavioral economics* initially began as a purely academic attempt at modeling irrational consumer choices, thereby challenging the notion of the rational consumer of traditional economics. Management functions in 21st century workplaces have witnessed the paradigm shift in the decision making. According to Richard Thaler (Nobel Memorial Prize winner), Economic Sciences is a nudge for marketers to learn about behavioral economics. His work explains how can marketers nudge quick-thinking, short-attention consumers? This article seeks to examine and explain the difference which behavioral economics can make in formulating marketing strategies using the nudging concept given by Nobel prize winner Richard Thaler.

Keywords— Marketing Application, Marketing Research, Nudge

economic models of consumer choice and market activity. Within marketing science, the analysis of brand choices for fast-moving consumer goods, based on aggregate data, shows that most individuals tend to purchase a variety of brands within a product category. More specifically, such results indicate that, in steady-state markets: (a) only a small portion of consumers buy just one brand on consecutive shopping occasions, that is, few consumers remain 100% loyal to one brand; (b) each brand attracts a small group of 100%-loyal consumers; (c) the majority of consumers buy several different brands, selected apparently randomly from a subset of existing brands; (d) existing brands usually differ widely with respect to penetration level and not so much in terms of average buying frequency (i.e., how often consumers buy it during the analysis period); and (e) brands with smaller penetration levels (or market shares) also tend to show smaller average buying frequency and smaller percentages of 100%-loyal consumers (i.e., “double jeopardy”). These results have been replicated for some 30 food and drink products (from cookies to beer), 20 cleaning and personal care products (from cosmetics to heavy cleaning liquids), gasoline, aviation fuel, automobiles, some medicines and pharmaceutical prescriptions, television channels and shows, shopping trips, store chains, individual stores, and attitudes toward brands (Foxalla, 2007)

Richard Thaler gave the concept of nudging which could be useful for marketers. According to him everyone gets nudged. Sometime you were nudged by a snack wrapper, imploring you to pick up, unwrap and devour its salty-sweet contents. Perhaps you were nudged by a mobile notification: Respond to a friend request, tip your rideshare driver or—hey, it’s raining—order some delivery food.

This use of “nudge,” coined by Thaler and legal scholar Cass Sunstein in their 2008 book *Nudge*, is the potential to alter someone’s behavior without nixing any of their options or changing their economic incentives. Countries like the U.K. and Japan created “nudge units,”

I. INTRODUCTION

Economics and psychology are the two most influential disciplines that underlie marketing. Both disciplines are used to develop models and establish facts,1 in order to better understand how firms and customers actually behave in markets, and to give advice to managers.2 While both disciplines have the common goal of understanding human behavior, relatively few marketing studies have integrated ideas from the two disciplines. This article tries to review some of the recent research developments in “behavioral economics”, an approach which integrate psychological insights into formal economic models. Behavioral economics has been applied fruitfully in business disciplines such as finance (Barberis and Thaler 2003) and organizational behavior .This review shows how ideas from behavioral economics can be used in marketing applications, to link the psychological approach of consumer behavior to the

nudging citizens to cajole them into paying taxes. One of Thaler's favorite examples of a nudge is a small decal of a fly placed in a urinal at Amsterdam's Schiphol Airport. The fly decal improves men's "aim"—the airport reported an 80% reduction in men's room urine spillage after fly decals were installed in all urinals. In marketing, nudges have gone from the bathroom to the boardroom to improve market research, decrease selective attention in stores and convert online shoppers waffling about purchases.

The nudge has elbowed its way to the front of the conversation in behavioral economics, a field of research that blends psychology, economics and the scientific method to examine the human rationality of decision-making. Behavioral economics asks questions like: Why do people buy a bag of candy instead of a bag of vegetables when they're trying to lose weight? Why do people buy \$4 lattes when they're trying to save money? The answer is often irrational.

Economists who believe in rational choice theory are not convinced that nudges change people's behavior. They say that rational agents—aka homo economicus; the economic man; you—make choices based on available information such as costs, benefits, preferences and probability of events. Our choices are our own, these economists say, and a nudge is merely an additional datum in our free market of information. If nudges work, it's because the nudge has given new information to a rational decision-maker. However, research in behavioral economics has shown that humans often behave irrationally, changing their action when the same choices are framed differently.

Dan Ariely, professor of psychology and behavioral economics at Duke University, wrote in his book *Predictably Irrational* about a "Hershey's Kiss" experiment. Ariely and researchers sold Lindt Truffles for 26 cents each and Hershey's Kisses for 1 cent each. Equal numbers of people bought each. When researchers dropped each candy's price by 1 cent, 90% of people took the free Hershey's Kiss. Ariely said the "power of free" makes us irrational.

Daniel Kahneman introduced "prospect theory" with research partner Amos Tversky (who died in 1996) to describe choices that contradict the rational choice theory of economics. In 1979, the duo showed that the psychological cost of losing is twice as big as the psychological benefit of winning. Kahneman and Tversky's prospect theory also discovered quirks in how people think about saving money. The Library of Economics and Liberty gives an example: People are willing to drive an extra 10 minutes to save \$10 on a \$50 toy, but few would drive that extra 10 minutes to save \$20 on a \$20,000 car. Why? Because people frame the savings as a percentage. In their minds, saving 20% on the toy is more valuable than saving 0.1% on the car, even if more money is saved on the car.

Thaler and Hersh Shefrin of Santa Clara University's Leavey School of Business introduced the "economic theory of self-control." This theory says the brain has a "doer" focused on short-term rewards and a "planner" focused on long-term rewards. The doer and planner are always at war, turning our headspace into a battlefield of today versus tomorrow. In later research, Thaler found that if a company creates a 401(k) choice architecture that automatically saves employees' money, employees will save more for retirement. Put differently, employees must opt out if they wish to not save money; the choice architecture saves money for them by default. At the University of California, Los Angeles Shlomo Benartzi, who with Thaler wrote the paper "Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving," estimates that this nudge has helped employees save \$29.6 billion over the past decade.

As the body of behavioral economics research has grown, so too has its influence on marketing. "Every marketer has to understand what it means, particularly for the brands and products that they're trying to manage," Rubinson says. "You have to study it and have a point of view about it. You have to be able to say that these ideas are somehow embedded in the rationale of your marketing program."

Don't We Already Do That?

Marketers who read about nudging, framing and changing behavior may echo marketing legend Philip Kotler, asking, "Isn't this what we've been doing?" Kotler, a professor of marketing at the Kellogg School of Management at Northwestern University and author of *Marketing Management*, says marketers have known that consumers are irrational for 100 years. "Behavioral economics is just a fancy term for marketing," says Kotler, who considers marketing to be a branch of economics. "Classical economists never really studied how sellers and buyers made their decisions, but marketing has always tried to explain the motivations of buyers, sellers and their belief systems."

Not so fast, says Ravi Dhar, professor of management and marketing at the Yale School of Management, director of the Yale Center for Customer Insights and author of the same-name-different-textbook *Marketing Management*. Dhar studied behavioral economics (which he calls "behavioral science") in its incipient days under teachers like Kahneman and Tversky and now researches its intersection with marketing. While marketing and behavioral science have stumbled upon many of the same ideas, Dhar says behavioral science aims to construct a "uniform framework" that marketing has missed. "If they're not embedded into the framework, these [ideas] get lost."

Why Do You Buy What You Buy?

Yale is one of the few universities that combines marketing with behavioral science in its curriculum. The average marketing curriculum doesn't look much different

now than it did 20 years ago, but many marketing practitioners have become autodidacts, learning about behavioral science from perusing books written by Thaler and Kahneman. Thaler's *Nudge* has sold more than 750,000 copies worldwide, and Kahneman's *Thinking, Fast and Slow* has sold more than 1 million copies. Many of the books' combined 2 million readers are CEOs and CMOs, but reading books only goes so far in helping marketers implement and internalize the science.

Dhar focuses his research on devising the common language marketers desire, a language they need to understand how to apply behavioral science. One of Dhar's recent studies—undertaken by the Yale Center for Customer Insights and the Google Food Team at Google's offices—examined how people can be nudged toward healthier eating. Researchers found that employees who poured their drinks at a beverage station 6.5 feet from a snack bar were 50% more likely to grab a snack than those who filled their glasses at a beverage station 17.5 feet away from the snack bar. For male Google employees, 11 feet of proximity correlated with gaining one pound of fat per year.

The Google study underlines a cornerstone of behavioral science: Consumers make quick, intuitive decisions—usually within five to 10 seconds—and rarely reflect on whether their decisions were good or bad. Kahneman would call this “System 1” thinking—fast, automatic and often unconscious. “System 2” thinking is slow, arduous and controlled. Most marketers still believe that consumers are rational agents who weigh each choice carefully, or System 2 thinkers. To the contrary, Dhar says, consumers tend to shop from the gut, just like the Google snacker who mindlessly grabs a snack because it's a few feet closer. Marketers, he argues, must think like System 1 consumers.

“Marketing managers spend 70 hours week thinking about whatever product they are marketing, but the consumer is spending seven seconds,” Dhar says. “To understand the consumer behavior of that seven-second approach is critical.”

II. CHANGING THE FRAMEWORK OF MARKETING RESEARCH

In the glory days of supposedly slow shoppers and even slower research—the 1970s—Rubinson researched economics on the moss-covered University of Chicago campus, the same campus where Thaler refined nudge theory and researched behavioral economics. As a student, Rubinson heard whispers of behavioral economics. He found the topic intriguing, even as other economists pilloried the field as junk science. In 1979, Rubinson began his career as an advertiser, becoming a senior manager of Unilever, and he soon noticed industry changes that reminded him of behavioral economics. The

market sped up: In 1963, consumers spent about \$2 trillion; by 1990, they spent roughly \$6 trillion, per the U.S. Bureau of Economic Analysis. Over the span of Rubinson's next job—25 years as chief research officer of The NPD Group—marketers went from studying retail shops with clipboards and pencils to accessing scanner data from across the country. Then Nielsen and IRI started reporting weekly store data. Billions of dollars shifted from advertising to promotion as consumers spent millions of dollars on the products that captivated them. In the early 2000s, the whisper of behavioral economics became a yell. Data dominated, allowing marketers to target consumers. Marketers could watch in real time as their product campaigns succeeded or failed, changing research tactics to focus on consumer behavior rather than intent. This shift in research became the most important aspect of how nudging and behavioral economics are now used in marketing and advertising, Rubinson says, and the shift carried over to consumer surveys and focus groups.

Survey answers are another series of behaviors, Rubinson says, meaning consumers will answer survey questions differently depending on researchers' word choice and question arrangement. Marketers who accept that a survey's design and language can affect the answers consumers give can solve some of research's systematic problems, such as enormous and unrealistic sales predictions or products that test well but belly-flop into the market.

III. RORY SUTHERLAND - BEHAVIOURAL ECONOMICS, HUMANS, AND ADVERTISING

Behavioral economics research has also found that consumers often make shopping decisions on autopilot. On an average trip to the grocery store, for example, consumers won't research every item they put in their carts. Rubinson says half of the items shoppers plunk into their carts will likely be purchased without thought about the product. Marketers must know how customers shop, especially marketers who craft campaigns for products that consumers likely won't have the patience to research on the go, like eye drops.

“Shopping is the worst form of torture if your eyes are bothering you,” Rubinson says. “It takes you minutes to figure out all the variants on the shelf for a product you don't normally buy. Behavioral economics would lead marketers and retailers to change the way they present [that] category to people.”

But here's the rub: Many marketers are ensconced in their research methods, Yale's Dhar says. They've put in time, money and effort and don't want to change because that would mean even more time, money and effort—as well as a complete shift in philosophy.

“That’s a legacy problem,” Dhar says of businesses resisting change. “As we work with some companies, we can see how hard change is—not because they don’t want to change, but because they don’t want to confuse people. [These processes] need to be embedded in what you’re doing. You’re educating everyone on the insight team, then the marketing team. This is not a three-month process. For many of these companies, it’s a two- to three-year process. That creates uncertainty.”

However, Dhar says marketers who want scientifically sound results from their research must change. “When you look at a concept test for a new product launch, researchers ask people to carefully look at the product. ‘What do you like? What do you dislike? Circle this and circle that,’” Dhar says. “Most companies in the world of consumers would say they’re not happy with the test’s results.” Consumers make snap decisions—in five to 10 seconds—but marketing research treats them as shopping savants. Dhar questions this method of product research.

Research shows market research wasted time and money, adding that the marketing industry had a “focus group bias.” Marketers were easily swayed by human storylines but dubious of lifeless data. We need to find a way to base our judgments and decisions on real facts and data even if it seems lifeless on its own.

In 2017, Ariely says marketers have more data and less bias. “Focus groups were easy to get compared to real data about purchasing and behavior,” Ariely says. “But as the ease of getting real data about behavior gets better, people are relying less on inaccurate .

Avoiding the ‘Dark Nudge’

The behavioral economics revolution has been brewing for 20 years, Dhar says, but its integration into business practice bubbled to a boil when bigwigs from Uber, Tesla, Google, Amazon and Facebook took classes led by Thaler and Kahneman in 2007 and 2008. The New York Review of Books reported that Kahneman taught the audience of Silicon Valley godheads about “priming,” which he said was a crucial area of behavior economics research. An example of priming, Kahneman said, could be flashing a smiley face on a user’s screen at a speed faster than the human eye can detect to influence their mood or behavior. Tamsin Shaw, the author of the NYRB piece and an associate professor of philosophy at New York University, wrote: “If subjects are unaware of this unconscious influence, the freedom to resist it begins to look more theoretical than real.”

Social media companies became the first big investors in concepts like nudging. In 2015, Amazon founder Jeff Bezos told his company’s shareholders that the company sends more than 70 million nudges per week through the company’s Selling Coach program. But with success comes scrutiny; use of behavioral economics in Silicon Valley has drawn ethical questions that marketers would be foolish to ignore.

One ethical question was posed when The New York Times reported that Uber nudged its drivers to work longer hours, possibly pushing drivers into less-lucrative areas. Used this way, nudging meant less money for drivers, but shorter wait times for customers—and more money for Uber. In another example, Facebook revealed that it performed psychological research on 700,000 of its users. The company showed one segment of users posts ranging from neutral to happy in their news feeds and another segment saw posts ranging from neutral to sad. Facebook then monitored the posts of each user segment, finding users inundated with positive posts felt happy and users fed negative news felt sad. Facebook said users had given “informed consent” for the study when they created a Facebook account, but it later apologized for making its users unwitting study participants.

These infelicitous uses of nudging—including nudges in gambling, which Philip Newhall of Technical University Munich has dubbed “dark nudges”—have drawn criticism. Dhar says that while the companies he’s worked with use behavioral science in ways most people would view as ethical—PepsiCo has used behavioral economics to draw people to its healthier snack lines, for example, and pharmaceutical companies have nudged patients into picking up their medication consistently—the question remains whether customers are deciding what they want or marketers and companies are making the decisions for them. If companies are making decisions for consumers, are they making the correct decisions?

“Consumers don’t know all the forces that influence their behavior,” Dhar says. “If marketers know that and pull those levers, then what’s the boundary of ethics? The boundary of ethics was easier when [marketers] said, ‘The consumer knows what they want, and if you try to give them something that they don’t want, that’s a bait-and-switch.’ Now, we’re in a world where the consumer is not quite clear [what they want], and if I move your preferences around, that gets very complicated.”

Just as Google moved snacks farther away from beverage stations to reduce employee snacking, Dhar says companies could just as easily place a soda at each employee’s desk and watch their staff become sugar fiends. Likewise, marketers could nudge consumers toward unhealthy products and habits, such as smoking cigarettes or drinking alcohol. “It raises the question about how marketers should be thinking about responsibility in a world where consumer behavior is impacted by forces outside their awareness,” Dhar says.

Thaler, to his credit, has addressed nefarious nudges by calling out companies that use them, such as businesses that automatically enroll free-trial customers into a purchase if they don’t cancel in advance. Companies must always nudge for good, never bad, he wrote in a New York Times op-ed, and consumers must always be vigilant against nefarious nudgers. “If customers reward firms that act in our best interests, more such outfits will survive and

flourish, and the options available to us will improve,” Thaler wrote.

Don't Be the Gorilla

Rubinson has a simple answer to how marketers can best use behavioral economics: Don't be the gorilla. In 1999, two psychology professors at Harvard University, Christopher Chabris and Daniel Simons, were studying how humans only react to certain stimuli when many stimuli occur at once. This is called selective attention. The professors created a video to test selective attention, featuring two teams—one in white shirts and one in black shirts—passing basketballs. The video asked viewers to keep count of the number of passes between players on the white team. Midway through the video, someone in a gorilla suit lumbers into the middle of the screen and beats their chest. Approximately half of the pass-counting viewers failed to see the gorilla; this is the Invisible Gorilla test.

Selective Attention Test

The moral of Rubinson's anti-gorilla advice is that marketers must ensure their products don't fall into the background of the bustling media landscape, lest customers lose sight of the marketer's products. “Find a way that people are treating you like the gorilla, whether it's in search results or on the shelf or in your advertising ... Find ways that your brand will command their attention,” Rubinson says.

Every company has been the gorilla, he says, and one culprit is ineffective targeting. In 2017, Rubinson worked on a white paper that found advertising is twice as effective when a consumer is probabilistically closer to a purchase. If a consumer just bought a car or a phone or a snack, even the most targeted ad will be the proverbial chest-thumping gorilla.

If marketers take anything from Thaler's Nobel Prize win, Dhar says they should realize that consumers have limitless options but a finite attention span. Technology will evolve to take advantage of consumer's short attention, but marketers who grasp the concept and take the fast-thinking perspective of consumers will ultimately be the most successful.

One way marketers can take the perspective of consumers is to think about their own irrational shortcuts. In academia, for example, Dhar says professors who are hiring new employees only spend a few minutes looking at each résumé, taking small bits of information and accepting or rejecting the applicant based on trivial information—perhaps a common adviser or a shared alma mater—though they believe they processed it carefully. Marketers should stay alert to these mental shortcuts and think carefully, using their rational, slow-thinking System 2 brain to ask what they irrationally overlook at work, in life or as a shopper. They should realize that consumers are irrational in the same ways. Marketers must use this information wisely and never be the gorilla.

IV. CONCLUSIONS

In an increasingly interconnected world, there exists an opportunity to create a closer relationship between customers and companies. Behavioral economics, a relatively new field of study that has developed over the last three decades, is helping marketers to improve the customer experience. According to BehavioralEconomics.com, behavioral economics studies, “cognitive, social and emotional influences on people's observable economic behavior.” Emotions take part in shaping our economics choices, and, in fact, behavioral economists tell us that consumer decision-making is 30 percent rational and 70 percent emotional.

In order to improve engagement, marketers have to understand that customers are human beings whose purchasing decisions are strongly influenced by emotions. Behavioral economics can provide valuable insights for marketers by helping them to identify behaviors and adapt to customers' irrational biases and emotional demands and needs.

Here are eight takeaways from behavioral economics that can help marketers improve the relationship between companies and their customers:

- 1. Social proof:** Customers look to other people for information on what to buy or what service to use. Customers might make a decision based on social norms in order to gain acceptance by others. While traditional word-of-mouth can increase your customer base, online reviews (such as on Facebook, Yelp or Amazon) are also important in serving as social proof for consumers. In a 2014 BrightLocal survey, 72 percent of customers said that positive online reviews made them trust a company more, and 88 percent said that they trust online reviews as much as personal recommendations. Marketers can concentrate on soliciting customer feedback and promoting positive reviews in order to provide social proof.
- 2. Loss aversion:** Consumers are more willing to take risks in order to avoid losing things than to pursue gaining things. Understanding the emotionality involved in risk-taking is key to improving the customer experience. The psychological pain from losing is twice the amount of the pleasure of a gain. Marketers can promote products in a way that demonstrates their purchase will help them to avoid loss. For example, a marketer promoting thermostat upgrades on Twitter might tweet, “Stop losing \$100 every year in energy by buying our programmable thermostat!” instead of, “Save \$100 a year in energy by buying our programmable thermostat!”
- 3. Endowment effect:** Consumers value items they own which they have an emotional attachment to, more than a similar item owned by someone else. Establishing a customer's partial ownership in an item being marketed through customization can increase

emotional attachment. “Where I think customization can be much more useful is to get you to put more of ‘you’ in the product and make it more valuable,” says Dan Ariely, professor of psychology and behavioral economics at Duke University, in an interview with Marketing Sherpa.

4. Default: Defaults are pre-set options or courses of action consumers receive, such as automatic enrollment in a 401(k) by an employer.

Because consumers would rather avoid losing things than take a risk for a gain, they are unlikely to defect from a default option. Furthermore, if marketers give them that default option, they are helping to define the customer’s ownership of the default, making them value that option more and be less likely to part with it. Marketers can use defaults to persuade customers to receive email updates and offers, but should be careful not to opt customers into so many options that they feel taken advantage of.

5. Choice overload: When consumers are presented with too many options, they can become overwhelmed, leading to unrealistic expectations, decision-making paralysis and unhappiness. In a study of jam purchases at a supermarket, 30 percent of shoppers who tried samples made purchases when presented with a choice of six jams, while only 3 percent of shoppers ended up making a purchase when presented with a choice of 24 different jams. Additionally, the shoppers who choose to buy from the selection of six jams reported greater satisfaction with their purchases. Offering fewer choices to consumers can increase sales.

6. Framing: How marketers frame choices, set the context and present information can influence consumers’ decisions. Marketers have found that including a few cheaper options increases the likelihood that consumers will purchase a more expensive option. The impact of framing can be observed in a grocery aisle, where products are organized and displayed by customer preference rather than price. Marketers can influence shoppers’ purchasing decisions by placing promoted products in places consumers are more likely to choose from.

7. Decoy effect: Consumers’ preference for one option over another can change when a third, similar but less desirable, option is presented. Economists Ian Bateman, Alistair Munro and Gregory Poe found that customers are more likely to choose a more expensive pen over \$6 in cash if a third, less expensive pen is introduced. “You can

actually introduce products into the market that nobody chooses but nevertheless have effect on what people end up getting,” explains Ariely in an interview with the American Management Association. The options marketers present ultimately influence customer decisions.

8. Anchoring: Consumers will rely heavily on the first piece of information offered, and use it as a reference and benchmark for other decisions from that point on, whether it makes sense or not. Marketers can present a high price for one option that can influence subsequent consumer purchases by making other options seem cheaper. For example, an online store could offer a \$399 coat that’s been marked down to \$99, creating the idea that an expensive—and therefore more desirable—coat is now a great buy.

Using these insights from behavioral economics can help marketers nurture positive consumer relationships and drive company growth.

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