



Applied behavioral economics

| By Michael Lieberman

snapshot

Rather than a new addition, Michael Lieberman makes the case that behavioral economics is already a part of the marketing researcher's toolbox.

The 2017 Nobel prize in economics was awarded to Richard H. Thaler, an American economist at the University of Chicago, for his contributions to behavioral economics. The Nobel committee described Thaler as a pioneer in the study of how and why people don't always make rational economic decisions. His work explores "the consequences of limited rationality, social preferences and lack of self-control," which reveal how humans' flaws "systematically affect individual decisions as well as market outcomes."

A formal definition of behavioral economics is: a "field that studies the effects of psychological, social, cognitive and emotional factors on the economic decisions of individuals and institutions. It explores the consequences for market prices, returns and resource allocation, also more generally, of the impact of different kinds of behavior, in different environments of varying experimental values." The field was, in essence, created in 2008 by two pioneering tomes, *Predictably Irrational* by Dan Ariely and *Nudge* by Richard Thaler.

If one searches a job Web site like Indeed.com using the keywords "behavioral economist," the employment possibilities that emerge range from a behavioral scientist, applied psychologist or operations researcher to data analyst. However, there are no specific positions requesting a behavioral economist.

Yet behavioral economics has become the new sexy term, with the big players in our

industry attempting to construct behavioral economic departments as quickly as they are moving to construct big data laboratories.

The most well-known use of behavioral economics is nearly universal: loss aversion. In economics and decision theory, loss aversion refers to people's tendency to strongly prefer avoiding losses to acquiring gains. Most studies suggest that losses are twice as powerful, psychologically, as gains. Loss aversion was first demonstrated by Amos Tversky and Daniel Kahneman. Kahneman has recently spawned a new industry, System 1 research, in his seminal work, *Thinking, Fast and Slow*.

Another well-known use of behavioral management is status quo bias. Status quo bias is an emotional bias; a preference for the current state of affairs. The current baseline (or status quo) is taken as a reference point and any change from that baseline is perceived as a loss.

Behavioral economics is also entering the conversation at industry conferences. At a recent pharmaceutical marketing research event, a panel of pharma executives discussed the incorporation of behavioral economics into their mainstream marketing applications. Given that the pharmaceutical industry does not move quickly and that behavioral economics is still emerging, the challenge according to the panelists was a practical application. At that point in the seminar, I raised my hand and mentioned that three common analyses I have been employing for years come under the umbrella of behavioral economics. I mentioned these to the panelists



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and a Merck executive replied, “Yes, but those are sophisticated analyses.” While I took the comment as naïve, this executive did have a point: Marketing researchers will not be able to integrate behavioral economics unless it is easy.

Two easily understood analyses that have been applied for years could be placed under the umbrella of behavioral economics. While their application has not been considered behavioral economics, in reality, these analyses do the same as behavioral economics. All are inexpensive to put in the field and can yield concrete, numerical results.

In this piece, I am going to cover these analyses (without going into operational detail) to show that behavioral economics is alive and well and already in the marketing research quiver.

Differ widely

A key component in behavioral economics is the perception of the value of ownership versus the perception of the value of a person seeking to obtain the item. In *Predictably Irrational*, Ariely showed repeatedly that value perceptions differ widely from buyer to seller. It can almost be comical.

Thus, a behavioral economic application on a problem would be: What is the best way to divide up a conflicting claims problem? How much is fair for a multiparty partnership to pay for a service? What would be an optimal settlement for a divorce?

If asked directly, behavioral economics theory would most likely predict that each party would overstate their respective claim and understate their respective contributions.

As technology advanced, the discipline moved out of the mathematician’s lab and into the mainstream. Today the application of game theory can be found in social network formation, political coalition-building, biology, ethical

Aircraft	Adding A	Adding B	Adding C	Adding D	Shapley value
Marginal Cost	\$8,000,000	\$3,000,000	\$2,000,000	\$5,000,000	\$0
Cost to A	\$2,000,000	\$0	\$0	\$0	\$2,000,000
Cost to B	\$2,000,000	\$1,000,000	\$0	\$0	\$3,000,000
Cost to C	\$2,000,000	\$1,000,000	\$1,000,000	\$0	\$4,000,000
Cost to D	\$2,000,000	\$1,000,000	\$1,000,000	\$5,000,000	\$9,000,000
Total	\$0	\$0	\$0	\$0	\$18,000,000

behavioral and business strategy. Game theory originally was developed mainly for the field of economics. A game is, in essence, a mathematical representation of a conflict situation. The solution is a prediction of the outcome based on anticipated player moves – behavioral economics.

Let’s take a common example involving an airport. Several airlines are sharing an airstrip and the airport authority is considering lengthening the airstrip. Each airline has different needs for the facility. For example, the airline with the largest planes (let’s call it Airline D) needs a longer strip. Airlines with smaller planes (let’s call the smallest one Airline A) can use a longer strip, though it is not required. Thus, they do not want to pay the additional costs of maintaining a longer runway.

The question is, how should the cost be divided among airlines?

I am pretty sure that if you asked Airline D executives, they would say the cost of building and maintaining the airstrip should be equally spread between the four airlines. After all, all airlines are using the facility. I am fairly sure Airline A would disagree, chafing at the shared cost of too much runway.

These kinds of analyses are often called transferable utility cooperative games. Each player has a stake in the best outcome. Airline D might insist that the smaller airline, Airline A, pay an equal share. However, Airline D cannot build the airport without Airline A’s involvement. They seem to be at an impasse. What is the solution?

In our cases, we would compute the Nash equilibrium (recall the film *A Beautiful Mind*) using algorithms

which are now available, open-source, from the R stat package. Their proposed solution is:

- Divide the cost of providing the minimum level of the required facility for the smallest type of aircraft equally among the number of landings of all aircraft.
- Divide the incremental cost of providing the minimum level of the required facility for the second smallest type of aircraft (above the cost of the smallest type) equally among the number of landings of all but the smallest type of aircraft. Continue until finally the incremental cost of the largest type of aircraft is divided equally among the number of landings made by the largest aircraft type.

Examining the table, we see that the startup of adding Airline A is high but Airline D, which is the last to be added, has the largest capacity. Thus our Shapley value column has calculated how much each airline should pay for the facility. Airline D might not like it but this is the most equitable solution. It is also applied behavioral economics.

The Culture Code

An early work in behavioral economics, though it was not formally named as such, is *The Culture Code* by Clotaire Rapaille. In its description of the book, Amazon asks, “Why are people around the world so very different? What makes us live, buy, even love as we do? The answers are in the codes.”

As Rapaille says, the culture code “is the unconscious meaning we apply to any given thing – a car, a type of

food, a relationship, even a country – via the culture in which we are raised.” The code, Rapaille continues, “gives us unprecedented freedom over our lives. It lets us do business in dramatically new ways. And it finally explains why people around the world really are different and reveals the hidden clues to understanding us all.”

In other words, understanding the codes are a way to predict behavior – the definition of behavioral economics.

Rapaille’s background is based on psychology and his methods are primarily qualitative. However, advances in technology have allowed the mathematical calculation of culture codes. A platform called GlimpzIt is an example of such technology. On its Web site, it states that, “GlimpzIt analyzes unstructured data (pictures, videos, and text) using machine learning enabling you to build personalized offerings that resonate with your customers on a deep emotional level.”

I have downloaded a few of GlimpzIt’s publicly available case studies. What they do, in essence, is to connect emotions to a brand or product by eliciting consumer-generated feedback in the form of structured and unstructured data such as pictures, videos or text.

Heather Wendlandt from GlimpzIt supplied us with an example. GlimpzIt ran a project with a jeans brand whose sales were stagnating and who was looking for ways to

avoid competing on price alone. It wanted a campaign that highlighted how its brand fits seamlessly into the lives of its consumers, most of whom were urban Millennials.

The brand reached out to 20-to-35-year-olds and asked them to take a picture of where they store their jeans and explain why. After collecting over 1,800 data points, GlimpzIt processed the results, automatically tagging or categorizing each piece of data for both objective markers and subjective context. The result is a near human-like analysis of unstructured data.

For example, while objectively, an image might be tagged as “jeans” and “drawer,” GlimpzIt’s AI system also identified tags such as “organized” and “accessible” – a categorization that simulates a human’s subjective assessment. One of the key insights that the system found was that while people stored their jeans in a variety of ways (on a hanger or sprawled all over the floor), they did so because the jeans had to be easily accessible.

The jeans brand also used GlimpzIt’s filtering capabilities to dig deeper into subsegments of the target audience. It could, for example, filter the data by targeting criteria and screener questions to see if there were any major differences in the preferences amongst various ethnic groups. Based on these insights, the brand came up with a marketing campaign that showcased how people organized jeans in their homes

– from rolling them neatly into drawers to leaving them on the floor. The brand messaging was simply, “You can fold our jeans or drop them on the floor. They are always a perfect fit when you need them.”

The strength of GlimpzIt’s approach is that unstructured data can now be structured. Within this structure multivariate analyses like regression can be run. These regressions point to a linear solution, a quantified culture code. Or, an analytical example of applied behavioral economics.

Yields actionable results

As Thaler has said, “My mantra is, if you want to get people to do something, make it easy.” Today, behavioral economists are having to link behavioral economics to “easy” – not a simple task. Although behavioral economics is still considered a somewhat separate subject within the broader disciplines of economics and psychology, it has the buzzword qualities of “sophistication” and “innovation” that companies are passionate about. While using behavioral economics-related approaches isn’t always easy, this article should illustrate that we can go to our clients, state that we are applying behavioral economics, that it is feasible, not prohibitively expensive and yields actionable results. 

Michael Lieberman is founder and president of Multivariate Solutions. He can be reached at michael@mvsolution.com.