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The Compromise Effect . . . And the New Thinking About Money Is That Your Irrationality Is Predictable

By Steven Pearlstein Washington Post Staff Writer Sunday, January 27, 2002

Chances are you know someone who sells his stocks only if they have gone up, never if they have gone down. Or the person who regularly runs up credit card debt but would never think of dipping into her savings account. Or maybe the guy who refuses to pay $15 to have someone else mow his lawn but wouldn't dream of mowing anyone else's lawn for $15. And what about those folks who flock to all-you-can-eat buffets and cell-phone plans with unlimited minutes?

According to traditional economic theory, such people shouldn't exist. People aren't supposed to careen through life systematically making bad bets, leaving money on the table, assigning different values to the same products and paying too much for things they don't really want. Homo economicus is supposed to make intelligent, rational choices that maximize his or her wealth and financial well-being.

Reality, of course, turns out to be quite different from theory. As economic actors, people are as likely to be governed by their emotions as by reason, by prejudices as by careful cost-benefit analysis. Their rationality is bounded by limits on their time, intelligence and the information at their disposal.

Take the bargain hunters in the headline above. They get so excited about the 50 percent discount on that sweater they don't realize it's just as worthwhile for them to drive across town to get a 1.3 percent discount on a $750 chair. Ten dollars is ten dollars, anyway you slice it.

Or that investor who won't sell a falling stock, because that would mean admitting a loss. He would be better off deciding which stocks to hold on to based solely on his expectation of their future performance, regardless of what happened in the past. And by what logic should people be buying things for prices that are vastly different from what they are willing to sell them for, such as their time (mowing lawns) and their money (the high interest rates paid on credit cards compared with the low rates earned on savings deposits)?

As for folks with unlimited calling plans, they get so enchanted with all the extra long-distance calls that seem as if they are free, they don't focus on the fact that their monthly bills are higher. In recent years, a growing cadre of economists and psychologists has begun to challenge the economic orthodoxy. Relying on clever laboratory experiments and data from businesses and financial markets, they have not only documented how irrational people become around issues of money and prices, but also demonstrated how predictably irrational they are.

"A lot of problems we have in real life come from our inability to deal with money," explained psychologist Daniel Ariely at the Sloan School of Management at the Massachusetts Institute of Technology. "Money is an abstract concept that we, as human beings, don't understand. How much money is it worth to eat sushi? Economists used to think we could calculate that, but it is really impossible. At any moment in time I may be able to say that I prefer sushi to a banana. I may even have a notion of how many bananas I would trade for one piece of sushi. But how much money are they worth? I have no idea."

To demonstrate the point, Ariely and two colleagues, MIT's Drazen Prelec and Carnegie Mellon economist George Loewenstein, corralled dozens of campus volunteers into a room and showed each volunteer one of several products: a cordless keyboard computer, a videogame, a bottle of wine. The subjects were then offered the opportunity to buy the item at a price equal to the last two digits of their Social Security numbers -- essentially a random price. Additionally, they were each asked the maximum price they would be willing to pay.

What the research revealed was that the maximum price the subjects assigned was driven largely by the random offer they had received only moments before: Those with high Social Security numbers systematically bid more than those with low ones. Because they didn't have a clue about what the merchandise was worth to them, they were vulnerable to suggestion and manipulation.

The Compromise Effect

While such insights may be revolutionizing economics, they are hardly news to marketers and pitchmen. When Oriental-rug salesmen and charitable fundraisers start out by mentioning a ridiculously high price or suggested donation, it's not because they think they'll get it but rather to establish the highest possible reference point in the minds of buyers and donors. They know they will get more than they would otherwise by starting high and coming down. The same goes for the "full" fares posted by airlines, the suggested retail prices listed in department-store ads and the posted room rates for hotels. Similarly, many consumers shrink from buying either the highest- or lowest-priced item, seeming to prefer something in between.

Companies have relied on this "compromise effect" to manipulate their product lines to increase sales of their most profitable items. Professor Itamar Simonson of the Stanford Business School notes that retailer Williams-Sonoma Inc. was able to increase sales of its $275 bread machine a decade ago by adding a second, slightly larger model to its catalogue at a price of just over $400.

And Thomas Nagle, a well-known pricing consultant based in Waltham, Mass., reports that Xerox Corp. boosted sales of its high-volume copier to large corporations only after it brought out a higher-priced model with a few extra bells and whistles that purchasing managers could feel good about rejecting.

"The general view is that the top of the line is only for people with more money than brains," Nagle said.

The Endowment Effect

Another well-documented tendency in people's economic behavior is that they assign higher value to things they already have. Ziv Carmon, a French marketing professor, and MIT's Ariely divided a group of nearly 100 Duke University students into two groups. One group was asked to state the highest price they would pay for a ticket to the NCAA Final Four basketball tournament, a highly prized item on that campus. The other group was told to imagine they had such a ticket and was asked for the lowest price at which they would be willing to sell it. The median selling price was $1,500; the median buying price was $150.

This tenfold difference, according to Carmon and Ariely, results from the different ways in which buyers and sellers think about a transaction. Buyers tend to think about what else they could do with the same amount of money, while sellers focus on the pleasure or enjoyment they would forgo.

Marketers had already formed an intuition about this "endowment effect." The Book-of-the-Month Club was founded on the proposition that people are more likely to buy the monthly selection once they have the thing in their hands. And magazine publishers figured out that the best way to persuade subscribers to renew is to focus on the pleasures readers will lose if they let the subscription lapse. When furniture stores or art galleries encourage customers to take something home and try it out for a while, they're not just being friendly.

Fairness

One of the blind spots of traditional economic theory is that it can't explain why people do generous things with their money, such as leaving large tips for waitresses in restaurants they'll never visit again. Behavioral economists reason that it's because people have an emotional preference for fairness that competes with the desire to maximize wealth.

Consumers react very negatively to what they perceive as price gouging. The Miami Heat basketball team found that out when it doubled the price of tickets for Game 5 of the NBA championships back in 1997. Fans were so outraged many refused to buy tickets, leaving hundreds of empty seats and forcing the team to return prices to their normal levels for Game 7.

"While it is true that people prefer more money to less, we also like to be treated fairly -- and like to treat others fairly," said Richard Thaler of the University of Chicago, a leading behavioral economist. "To the extent these objectives are contradictory, people make trade-offs where their behavior appears to vary widely, depending on the context."

Sometimes the trick for the marketer is to manipulate that context. Thaler notes that most people think it fair for an auto dealer to suspend a $200 rebate program for particularly hot models that are in short supply. But only half as many thought it fair for the dealer to impose a $200 surcharge, even though the final price would be the same.

The Hilton hotel in Pasadena, Calif., tries to skirt the surcharge problem during the Rose Bowl by setting aside most rooms for $999 packages that include meals, tickets and transportation to the game. "The same people who like that proposition wouldn't tolerate it if we raised the room rate to a higher price," explained Dennis Koci, senior vice president for the hotel chain.

Mental Accounting
What's something worth? It all depends on how you calculate it. Tom Nagle recalls his days as a young business professor, when he decided to do a little freelancing by offering companies a two-day pricing seminar, to be provided to 20 of their marketing executives, anywhere they wanted. He set the price at $9,000 and waited a long time before a potential buyer called. It was an assistant to a company president who said her boss was very interested but was having trouble with the idea of paying any college professor $4,500 per day. The boss was looking at the price in terms of the professor's pay. The next time someone called, however, Nagle framed it differently. When they questioned the price, he explained that if the company were to send 20 executives to attend the same program offered by his university, it would cost $480 for each one, or $9,600 total. In that context, the $9,000 price seemed fair enough.

Another way to reframe the pricing conversation is by adjusting the time parameters. Public television stations have discovered they can get significantly higher pledges from viewers by breaking the total amount down to so many cents a day; 41 cents a day doesn't sound as bad as $150 a year. On the other hand, the folks at Smokers Anonymous like to remind their pack-a-day clients that they can take a short Caribbean vacation for the $1,500 a year they spend on cigarettes.

For most people, figuring out which is the right time frame to use in their mental accounting is not always obvious. In a recent study, Thaler, Loewenstein and two other researchers found that New York taxi drivers could earn 20 percent more each year if they would put in longer days when demand was high (rainy days, for example) and shorter ones when demand was low. Instead, drivers preferred to work each day until they covered their costs and paid themselves a target wage -- then quit for the day regardless of the market condition.

One of the key assumptions of economic theory is that money is money. But behavioral economists have shown that people routinely violate that principle by segregating income or costs into different mental buckets or accounts, even when it winds up hurting them financially.

Many people, for example, have vacation homes and time-share condominiums that wind up costing them more for each day of use than if they had vacationed at a nearby hotel. But more often than not, such comparative calculations are never made because vacations are supposed to be paid for out of "current income" while the condo is mentally accounted for under a separate "investment" category.

Other studies show that while people are apt to go right out and spend all of an unexpected windfall such as a bequest from a distant aunt, they are loath to spend profits they make on investments.

Spending and Guilt
For consumers, it turns out that their view of what something is worth can be influenced by the currency in which it is paid. One reason casinos use chips rather than money is that people tend to be looser with something that has the appearance of play money. Similarly, people seem to

spend more on things overseas because it just seems less painful to part with those funny bills and coins than "real" American cash.

And then there are credit cards. MIT's Prelec recently ran an experiment in which a group of men were asked to submit bids on a ticket to a big sporting event. Half of the group was told they could pay only in cash, the other half told they could pay only by credit card. The cash bids were half as high as the bids made with plastic.

"People feel guilty about spending money, which is part of the big appeal of credit cards," explained Prelec. "With the card, the payments are not only delayed, they are lumped in with all sorts of other expenses."

In fact, marketers have now come up with all sorts of schemes to separate the buying and paying and take advantage of this all-too-human instinct to avoid guilt about spending. Although people probably wind up spending more money on their vacations by going to all-inclusive resorts, paying in advance offers the emotional advantage of not feeling guilty every time you have the urge to play tennis or get another planter's punch from the pool bar. All-you-can-eat restaurants and high-volume calling plans work on the same premise.

"We are able to get slightly more money from our customers in a way that they perceive is a value to them," said Harry Campbell, a Sprint vice president for marketing and sales, explaining his company's successful new $25-for-500-minutes plan. "People like the fact that they know what their bill is going to be and they can increase their usage in a guilt-free way."

Less guilt, yes, but not quite guilt-free. Having paid for goods or services in advance, people can feel bad if they don't get their money's worth. Health clubs, for example, notice that people come to work out much more frequently in the first months after paying the annual membership fee. And Thaler found in an experiment that regular patrons at a pizza joint that offered unlimited slices for $5 wound up eating considerably more than a group given a coupon allowing them to eat for free.

In fact, experience shows that people get very confused when thinking about "sunk costs" -- the money they have already spent for a project or purchase or investment. Rationally, they should forget about sunk costs and focus only on what the costs and benefits are going forward. Emotionally, they can't.

Psychologists Amos Tversky and Daniel Kahneman of Princeton University explored a situation in an oft-cited experiment involving a theater ticket back in 1984. They told one group of subjects to imagine that they have arrived at the theater only to discover that they have lost their ticket. Would you pay another $10 to buy another ticket? they asked. A second group was asked to imagine that they are going to the play but haven't bought a ticket in advance. Then, when they arrive at the theater, they realize they have lost a $10 bill. Would they still buy a ticket?

In both cases, the subjects were presented with essentially the same simple question: Would you want to spend $10 to see the play? That's largely the way the cash-losing group thought of it, with 88 percent opting to buy the ticket. But the ticket losers, focusing on sunk costs, tended to

frame the question in a different way: Am I willing to spend $20 to see a $10 play? Only 46 percent said yes.

This focus on sunk costs and the aversion to losses play out everyday in financial markets. Numerous studies have shown that investors systematically make bad decisions because of their reluctance to sell stocks or bonds on which they have a loss. And Thaler has done extensive work showing that the reason stocks have outperformed bonds over long periods of time is that investors have exaggerated perceptions of the relative riskiness of stocks. As a result, investors generally put too much money in bonds and too little into stocks, driving their relative prices in opposite directions. Absent that bias, Thaler argues, the returns on stocks and bonds would have probably converged -- just as economic theory predicted.

Fear of risk also animates insurance markets, where independent studies show that people pay too much to insure themselves against risks of high frequency and low financial impact (low-deductible auto policies, for example, and service contracts on home appliances) while often failing to insure themselves against low-frequency, high-impact events (floods and earthquakes).

Homo Economicus vs. Homo Sapiens

Okay, so we're a bit crazy when it comes to money. But once we are confronted with these facts, surely we'll learn our lesson and become more rational in our economic behavior, right? Alas, the early evidence is that we won't. In several of the experiments cited here, subjects were later presented with the results and the analysis and asked to go through the exercise again. In most cases the results were nearly identical.

"The thing that is striking is how little people learn," said Kahneman, the Princeton psychologist. Yet, like others in the behavioral economics crowd, Kahneman is loath to call such behavior crazy or silly or even irrational. "A lot of the so-called mistakes are the simplification people need to do just to get on with their lives," he said. "We don't have unlimited horizons, our attention can be switched from one thing to another, and our brains are limited. Putting bad words on it is unnecessary. We don't expect people to be able to run 50 miles an hour. So why should we expect them to have 360-degree recognition?"

Economist Loewenstein at Carnegie Mellon agreed. "People make these choices and behave this way because it makes them happier," he said. "I don't find that unreasonable or irrational."