Who’s buying your pricing strategy?
Applying behavioral insights to understand the psychology of pricing

By Timothy Murphy and Richard Hayes
Who's buying your pricing strategy?
Dust off your microeconomics textbook and read about “econs”: fully rational, always calculating individuals who make decisions with actuarial precision. Econs view companies’ negotiation tactics and sales promotions as useless clutter, obstacles to avoid as they try to maximize their utility.
In this vein, a few years ago, J. C. Penney decided to remove the noise and offer customers straightforward prices that reflected “everyday low prices.” The retailer’s goal was to make things simple, cut through the distractions, and offer prices that would pave a path to profitability while balancing consumer market demands. But what seemed like an attractive policy on PowerPoint yielded disturbing results: Store traffic decreased by 10 percent and sales plummeted by more than 20 percent.

Though hindsight would suggest that this was a bad idea from the start, at the time it seemed as rational as the economics textbooks would advise. In fact, after the announcement to offer “fair and square” pricing, J. C. Penney’s stock immediately rose. But behavioral economics teaches us that straightforward policies do not always yield straightforward results. Unlike econs, humans instinctively consider a number of other factors when measuring the merits of a purchase. They are often accustomed to anchoring on reference points—that is, relying heavily on an opening number, such as a car manufacturer’s suggested retail price (MSRP). They are also highly sensitive to how much their neighbors paid for the same product. And timing matters. Consumers can be fickle, and the behavioral sciences suggest that is completely natural, even if not necessarily rational.

In the case of J. C. Penney, many customers were accustomed to, and comfortable with, typical pricing practices—that is, presenting merchandise with relevant price points and running periodic sales and promotions. The good news: Since reverting back to this model, J. C. Penney’s earnings have increased substantially, even relative to the competition.

These phenomena aren’t confined to only the purchaser experience. Frontline salespeople also succumb to behavioral biases, which can affect their ability to maintain price points. This means that organizational leaders should strive to ensure that their sales representatives are complying with their firm’s carefully planned strategies and not succumbing to these same cognitive inclinations. Two common pricing pitfalls organizations face:

1. **Underestimating the importance of reference points.** “Anchoring”—the tendency to give disproportionate weight to an opening number—can drive customers’ reactions to pricing far more than “objective” arguments. This suggests the need to pay close attention to both the opening offer and any external perceptions of value upon which customers may anchor.

2. **Allowing sales representatives to undercut themselves—and the organization’s pricing strategy—even before setting a price.** For salespeople, losses can loom larger than gains; they often fear turning away an opportunity to close a deal. “We can’t charge that!” is a common worry when salespeople lack confidence in the
company’s pricing strategy. Taking a step back, the numbers may suggest otherwise.

There is hope. By confronting these mistakes head-on, organizations can set up guardrails that account for behavioral biases and faulty execution. Following are some tactics leaders can use to develop more behaviorally savvy pricing strategies and help their sales organizations carry them through to execution.

**IT’S A TRAP! HOW COGNITIVE BIASES HINDER WELL-INTENTIONED PRICING**

“You hear about how many fourth-quarter comebacks that a guy has and I think it means a guy screwed up in the first three quarters.”

—Peyton Manning

For fans, there’s nothing better than a big comeback, and nothing worse than the immense heartbreak that comes from letting it all slip away. People can be profoundly affected by where something starts and how it finishes. And this doesn’t stop with fandom. When someone buys a new car, one of the first things you might hear is how much of a discount they received from the list price. Or if an airline adds a $30 surcharge for checking in an extra bag, a grumbling customer may feel taken advantage of (even if the total price is still cheaper than an alternative carrier).

**The role of reference points**

Daniel Kahneman and Amos Tversky, in their Nobel Prize-winning work, demonstrated that the reference points people pick have drastic effects on their perceptions of value. Since then, further research has shown that the tie to reference points goes even deeper—that people will often anchor on the chosen reference point even when other relevant market information is readily available to inform their decision making.

An experiment conducted on real estate values, in which trained negotiators were assigned the role of either the seller or the purchaser, illustrates this point. Participants were given a brochure with relevant property and market information to inform their negotiations. Four groups were randomly provided with brochures that had one of four options: a high asking price, a low asking price, a market asking price, or no asking price at all. After the negotiation was completed, the results showed that both sellers and purchasers systematically overweighed the importance of the asking price, despite having other relevant market information readily available. Those with high asking prices started with higher opening bids and negotiated prices. The reverse occurred for the low-asking-price group. And, as would be
assumed, the market-consistent asking price held constant. The most interesting finding: Those with no asking price settled upon the expected market value when all that they had to rely upon was the property and market information. This suggests that, if people are provided with relevant information, they have the ability to discern market value—but our cognitive tendencies find it more attractive to anchor on an easy-to-reference value.

Under these circumstances, it’s no wonder that people preferred J. C. Penney’s reference point discounts. They offered an easier means to determine or, more accurately, perceive market value—especially when other relevant market value information was not easily accessible.

One loss is worse than two wins

When developing pricing strategies, it’s also important to understand how people view losses. According to traditional economic theory, if we win $10, we should be just as happy as we would be upset if we lost $10. In practice, this is rarely the case.

If we were to offer you a $100 bet on a coin toss, would you take the risk? In other words, if the coin lands on heads, you win $100, but if it shows tails, you lose $100.

Most people would answer no, though mathematically, they should be indifferent to the outcome:⁸ There is a 50 percent chance of winning. However, the idea of losing $100 is so distasteful that most would shy away from the bet unless they could win at least $200 for the risk of losing $100.⁹ This indicates that people are loss averse: They hate losses twice as much as they enjoy gains.

Even when market conditions suggest that price increases are warranted, people may feel like they are being taken advantage of; consequently, the feeling of “losing” hurts even more. Behavioral economist Richard Thaler demonstrates how a market-based price change can elicit negative customer sentiment:¹⁰

The morning after a blizzard, a hardware store that has been selling snow shovels for $15 raises the price to $20. Is that fair? People hate it. Now I asked my MBA students that question and most of them thought it was just fine. After all, that was the correct answer in a different course, right? In their microeconomics class, they would say there’s a fixed supply, demand shifts to the right, and the price goes up. Now what do real firms do? Well, after a hurricane the cheapest place to buy plywood will be at [for example] Home Depot in the regions where the hurricane hit. . . . And if they double the price of plywood the day after a hurricane, good luck getting people to come in and buy all the stuff they’re going to need to remodel their house.

This holds true for standard, and even anticipated, price increases as well. For example, customers often cancel their cable subscriptions after the introductory price expires and transitions to a “market-based” price. And
fast-food chains often suffer social media backlash when they increase prices on promotional items (even when rising food costs necessitate the change for the chain to maintain profitability).

**The fear of a lost sale**

If customers are highly sensitive to the *pains* of losing, sometimes regardless of economic circumstances, it can also be argued that sales representatives often *fear* losing. Kahneman and Tversky use another coin-toss example to show us our natural tendency to avoid losses.

Which is preferred?²¹

- **Scenario A:** a 50 percent chance to win $1,000 and a 50 percent chance to win nothing

- **Scenario B:** a definite $450 payout

Under these circumstances, most choose the sure thing of the $450 payout, even though, mathematically, the coin toss is a better bet (an expected value of $500). If you ran each scenario one hundred times, you should expect to average $500 in Scenario A (11 percent more than your take in Scenario B).

Salespeople regularly deal with scenarios where the same mental calculations occur. And unlike in the example above, they are making a number of bets where the larger sample size will almost certainly redound to their benefit.²²

Another experiment reinforces the loss aversion concept when sales representatives negotiate student loan interest rates.²³ Prior to engaging in the negotiation, the sales force was asked to identify the lowest rate they would settle for in order to win the deal. But when confronted with the possibility that the customer would learn what a competing bank would offer, the negotiator would routinely open the bid at a lower rate and provide concessions beyond his or her initial threshold just to “win” the customer’s business—even without knowing if the competitor’s rates would be higher or lower. Preoccupied with the risk of losing the deal, these salespeople failed to aggressively price their opening bids in pursuit of greater gains.

**PRICING FOR HUMANS**

Given these pricing tendencies and traps, how can organizations price their products and services to achieve profitability and remain viable in the marketplace? How can they effectively communicate the value behind those prices? Here, behavioral economics lessons can be leveraged to devise tactics that speak to consumers’ intuitions and methods of perceiving value.

**Anchors aweigh: Altering the anchor to better present your value**

If what we anchor our decisions upon becomes the reference point for value perceptions, organizations need to dictate that reference point early.
Many believe that consumers will immediately disregard the anchor if it does not align with their personal value propositions, but research indicates that this is not always true.

One of Tversky and Kahneman’s most famous studies demonstrates how powerful even random anchors are in influencing perceptions.\textsuperscript{14} Participants were asked to spin a wheel that ranged from 0 to 100. They were unaware that the wheel was fixed to land only on 10 or 65. Each participant was then asked if they thought the percentage of African countries affiliated with the United Nations was higher or lower than the number they spun on the wheel. After answering that question, they were asked to guess the overall percentage of African countries that were members of the United Nations. Even though participants inherently understood that the number on the wheel had no bearing on the question, they were nonetheless influenced. Those who landed on 10 estimated 25 percent on average, while those who hit 65 estimated 45 percent. This phenomenon is referred to as \textit{anchoring and adjustment}.

The takeaway isn’t to anchor on randomness but, instead, to make the value of the product or service known right away. Mixrank, an automated inside-sales services provider, advertises with the tagline: “Find your next 100 customers and get the list into your CRM in minutes.”\textsuperscript{15} Immediately, Mixrank’s anchors are clearly communicated: the number of customers they claim they will find for you and the amount of time you will save.

Alternatively, price strategists use anchors to help customers assess value when being offered a number of alternatives. If you recently purchased popcorn at a movie theater, you may have unknowingly relied upon anchoring to make your decision. Was the large size only $1 more than the medium? If you bought the large based on the minimal price difference, you anchored on the price of the medium to determine that the large was a “good deal.”

\textbf{Price still matters, but anchor on fairness}

Beyond value-based anchors, price still plays a major role in decision making. Behavioral economics shows that the concept of fairness weighs heavily both on consumers and on the sales force. For this reason,\textit{ social norms} and \textit{social proof} can play major roles in assessing value.

To increase taxpayer compliance, the United Kingdom’s Behavioral Insights team leveraged social proof to positively influence behavior. In this landmark case, the team crafted an outreach letter to taxpayers who were behind on payments that started with, “Nine out of 10 people in your town pay their taxes on time.”\textsuperscript{16} Those who received this message paid their taxes 23 percent faster than those who received a nearly identical letter without the social proof message. Given its success, this experiment has since been referred to as the “190-million-pound sentence.”
Social proof can be applied both implicitly and explicitly to pricing valuations. People take cues from their peers on how to behave and, similarly, on how to form valuations. Here are some industry examples of how to effectively leverage social proof to inform behavior:

- Tech companies hold large launch events featuring large lines of eager customers waiting to purchase the newest wearable to implicitly demonstrate the value of their products. These launches provide a window to outsiders, showing them that many people already see the value in the merchandise.

- When selling a house, more open-house time is better, right? Not necessarily. In *Negotiation Genius*, Deepak Malhotra and Max Bazerman suggest that minimizing open-house times promotes social proof by increasing the number of people simultaneously looking at the property.17

- Explicitly, many automobile dealers reference Kelley Blue Book valuations of their trade-ins to inform customers what others are receiving for similar used cars.

Salespeople in negotiation positions can also benefit from this information. Since many pricing strategies are driven by analytical segmentation, it’s helpful to provide the same information to the sales force in a customer relationship management (CRM) solution. In our own work, we have embedded peer information such as geographic pricing data in a number of client CRM systems to both assure sales representatives that the pricing is fair and
Even at a very low dollar amount, most customers were able to choose the higher-valued offer, but once the temptation of free entered into the equation, rational behavior disappeared.

Accurate and, often, provide a relevant data point for consumers to reference. This can also mitigate fears of loss aversion, since salespeople will then be armed with more than their last handful of customer interactions to inform their strategy.

**Discounts are great; free is better**

While people enjoy discounts, getting something for “free” is a much more compelling story. When something is free, people instinctively overweight the value of the item even in comparison to its market price. In behavioral economics, this is referred to as the zero-price effect.\(^{18}\)

One study illustrates how powerful the zero-price effect can be when people are evaluating options. Participants were offered a choice between two Amazon gift cards: They could receive a $20 gift card for $7 or a $10 gift card for free.\(^{19}\)

Though the $20 gift certificate had $13 of value ($20 - $7 = $13) versus only $10 for the free card, all 65 participants chose the free card.

Interestingly, this changes when there is no free option and dollar values are minimal. Repeating the experiment, participants were offered either a $20 gift card for $8 or a $10 gift card for $1.

In this scenario, the $20 gift card only had a $12 value (vs. $13 in the prior example) and the $10 card, a $9 value (more than the $7 value of the free card). This time, the results were very different: 64 percent decided to forgo the $10 gift card in favor of the $20 gift card (the better value).

The implications of these findings are significant: Even at a very low dollar amount, most customers were able to choose the higher-valued offer, but once the temptation of free entered into the equation, rational behavior disappeared.

Pricing strategies may benefit from highlighting items that come “on the house.” This can take a variety of forms. For example:

- Hulu and Netflix memberships start with free one-month trial offers. With many of these services hovering around $8 monthly, this strategy is more effective than offering a discounted trial offer, such as four months for $2. Also, when the free period ends and they start paying full prices, customers rarely suffer from loss aversion because they inherently understand that free cannot last forever.
### Table 1. Behavioral and audience considerations

<table>
<thead>
<tr>
<th>Behavioral consideration</th>
<th>Organizational audience</th>
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<tbody>
<tr>
<td><strong>Anchoring on value</strong></td>
<td>For your consumers, establish the reference point based upon your product or service’s value.</td>
</tr>
<tr>
<td></td>
<td>For your sales force, train them to open negotiations by highlighting key product information before discussing price.</td>
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<tr>
<td><strong>Anchoring on fairness</strong></td>
<td>For your consumers, use social proof to signal that peers perceive value in the product or service.</td>
</tr>
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<td></td>
<td>For your sales force, embed analytical segmentation analysis into the CRM system. This will provide your sellers with a line of sight into the fairness of the price point.</td>
</tr>
<tr>
<td><strong>Using the zero-price effect</strong></td>
<td>For your consumers, forgo discounts in favor of free services. This may include free trials rather than discounted rates.</td>
</tr>
<tr>
<td></td>
<td>For your sales force, embed free service information into the CRM system. If a free service call was done in the past, make sure the seller can highlight it.</td>
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- Southwest Airlines promotes its “Transparency” pricing strategy to underscore the free services it includes versus its competitors. It emphasizes free checked bags and live television along with a zero-dollar change fee.

- Other organizations promote the social contributions that accompany customer purchases. The shoe manufacturer TOMS carries the tagline “The One for One company.” With every pair of shoes purchased, a second pair is donated to a person of need on the purchaser’s behalf at no additional cost.

Pricing strategists need to consider what anchors to establish, how to incorporate social proof, and when to forgo offering discounts in favor of free services. Table 1 provides a summary of some considerations to make and which audience should receive the message.

**Frame it: Make the choice easy**

“I must have a prodigious quantity of mind: It takes me as much as a week, sometimes, to make it up!”

—Mark Twain

These behavioral-based tactics lay the foundation for implementing pricing policies that speak to our human intuitions. However, managers should also carefully consider how.
options are presented to both salespeople and consumers so that neither is confused or overwhelmed with information.

Richard Thaler and Cass Sunstein, two of the leading experts in behavioral economics, describe how *choice architecture* plays a key role in influencing the choices people make. Choice architecture explains how small changes in the design of options sway how, or even if, a choice is made (see sidebar, “Insights from choice architecture for pricing”).

**MAKE A PLAN**

We know that reference points matter and that everybody hates losing. To make navigating these behavioral tendencies easier on those interacting with a carefully planned pricing strategy, organizations should set the anchor to align with their value proposition. When getting to the base price, organizations should try to incorporate the social expectations of both the consumer and sales force. Finally, when weighing what discounts to offer, sellers should highlight what’s free first (see figure 1 for a summary of these tactics within Deloitte’s behavioral economics framework for managers).

Your own pricing strategy might start with spreadsheets, market segmentation, and high-powered algorithms, but all that hard work can go to waste if you don’t focus enough on the humans making the decisions. After the econs are done with the plan, consider making these four steps a priority before launch:

1. Be the first to set the anchor, and communicate the value when anchoring. What about the product or service makes it special? Tell that story.

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**Figure 1. Summary of concepts**

<table>
<thead>
<tr>
<th>Business objective</th>
<th>Improvement pricing strategy compliance</th>
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</thead>
<tbody>
<tr>
<td>Choice dimension</td>
<td></td>
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<tr>
<td>Implement behavioral concept</td>
<td>Establish value-based anchors early for the seller and consumer to consider</td>
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<tr>
<td>Promote or mitigate</td>
<td>Calculate bias (How individuals process uncertainty)</td>
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<tr>
<td>Outcomes valuation</td>
<td>How we value outcomes</td>
</tr>
<tr>
<td>Promote anchoring</td>
<td>Use social proof and social norms to reinforce validity of pricing strategy</td>
</tr>
<tr>
<td>Mitigate aversion</td>
<td>Use the zero-price effect to highlight product value</td>
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INSIGHTS FROM CHOICE ARCHITECTURE FOR PRICING

1. **Choice overload.** Too much information may result in *choice overload.* If too many options are available, both customers and salespeople can become overwhelmed. In one experiment involving jams, customers were more likely to make a purchase if only 6 options were offered versus 24.

2. **Positive framing.** Knowing that people are generally loss averse can help inform an offer's messaging. When given the opportunity, look to frame your message with positive attributes. What sounds more appealing when purchasing ground beef: 5 percent fat or 95 percent lean?

3. **Smart defaults.** Whenever possible, make the most desirable option the default choice. To help combat choice overload, defaults give decision makers an easy-to-reference option. For 401(k) enrollment, companies that transitioned to default enrollments (where participants needed to “opt out” rather than “opt in”) saw enrollment increase from 20 percent to 90 percent in the first three months.
Your own pricing strategy might start with spreadsheets, market segmentation, and high-powered algorithms, but all that hard work can go to waste if you don’t focus enough on the humans making the decisions.

2. Wherever possible, promote social fairness. If negotiating is part of the process, start with the sales representative and end with the consumer. After all, if the salesperson does not feel comfortable complying with the strategy, the customer will never see it. If using analytical segmentation, make those insights readily available to the sales force by embedding them into the CRM system.

3. Put a spotlight on the little extras you offer. If service calls come at no additional price, for example, highlight a $0 service call on the invoice.

4. Keep it simple. The choice architecture that you establish directs how your stakeholders will interact with your policy. Make sure it is easy to understand. If they need to overthink it, it may be too difficult.

Many pricing professionals take great care to ensure their strategies are profitable and feasible. Behavioral economics helps make them accessible. DR

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Endnotes
3. Ibid.


8. Expected value is calculated as 50 percent chance to win $100 and 50 percent chance to lose $100, which is $0 (.5 x 100 + .5 x -100). Therefore the individual should be indifferent to taking the bet.


11. Kahneman and Tversky, “Prospect theory.”

12. This is under the assumption that the analytical analysis correctly priced the product and opening bid.


17. Deepak Malhotra and Max Bazerman, Negotiation Genius: How to Overcome Obstacles and Achieve Brilliant Results at the Bargaining Table and Beyond (New York: Bantam Books, 2007).


19. Ibid.


27. Thaler and Sunstein, Nudge.