

Applying Behavioral Science & Experimentation in Reward Program Design

Behavioral science is less a discrete arena of study, and more an interdisciplinary approach to gaining a better understanding of why people do what they do – and, by extension, how to influence their thoughts, actions, and choices. Sound familiar? While the science remains ill-defined – and, for most, a little mysterious – incentive, reward, and recognition (IRR) program designers have been practicing behavioral science for decades.

Applied behavioral science helps organizations gain a better understanding of their employees, customers, and other stakeholders. This understanding goes well past traditional economic notions of rational behavior and into the powerful realm of **how emotions influence peoples' thinking, behaviors, and decisions**. Popular books, including *Nudge*, *Thinking Fast & Slow*, and *Predictably Irrational* have popularized the science, giving rise to behavioral science (or “nudge”) teams and units in academia, government departments, and in organizations.

In organizations, **behavioral science has been used to influence employee behaviors and consumers' purchase and use of products**. Wise and ethical firms use the science to benignly encourage win-win behaviors and actions. You might influence an employee or consumer to act against their best interests in doing something good for the firm, but only for a time. When they catch on, you may lose a customer or a good employee – or many if news of your unethical behavior spreads.

For organizations less experienced in behavioral science, it makes sense to start internally; to use the science in conjunction with incentives and rewards in determining how to positively influence employee engagement, learning, wellness, safety, good corporate citizenship, and productivity. **An internal-first focus helps establish ethical use of behavioral science** before tackling its potentially thornier applications in the consumer world.

Internally, well-known behavioral science ‘tools,’ including loss aversion, social proofing, framing, and choice architecture might, for example, improve uptake in incentive or wellness programs, lead to better decisions around enrollment in 401K programs, or even encourage more use of vacation days. This is especially powerful where people want to make beneficial choices or take positive actions but could use a nudge to pass the tipping point in the decision.



“Over the past five years, experimentation as a core business function has become more the norm than the exception at large tech-based companies precisely because they have come to understand the value of it.”
- Rachelle Martino, Building Behavioral Science in an Organization

Working with behavioral scientists, incentive and reward designers add and integrate complementary, proven elements of behavioral design into programs intended to inspire employee performance and encourage pro-social behaviors such as idea-sharing, for example. But the term 'science' is there for a reason. When IRR professionals work with behavioral scientists, they benefit from the latter's inclination to experiment.

Behavioral science experiments do not need to take a great deal of time or disrupt employees. IRR professionals and behavioral scientists construct and carry out **fast, cheap, and low-risk experiments to see what works before committing to a course of action** or designing a new incentive program. Following experimentation, behavioral scientists can make recommendations based on outcomes.

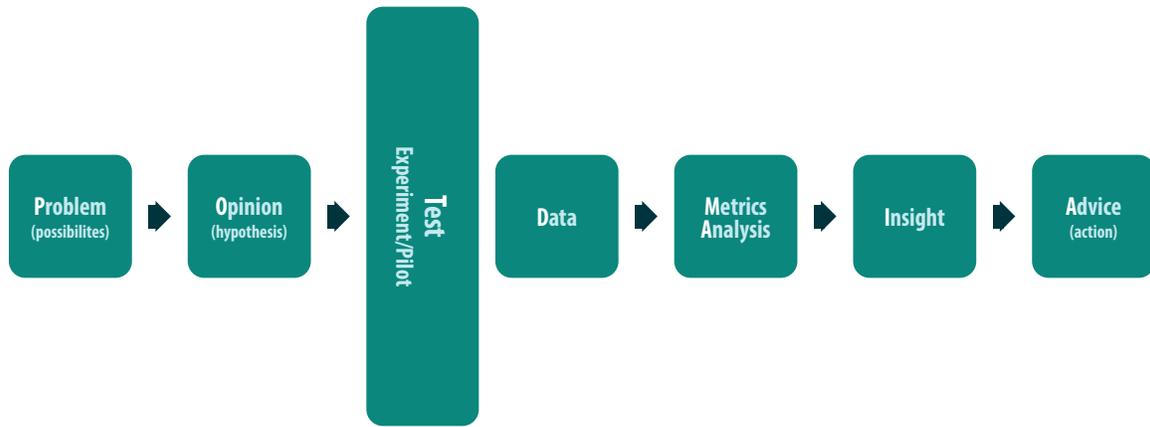
For example, a firm with one of the largest sales forces in India wanted to test whether two proven applications of behavioral science might drive better sales performance versus a more traditional reward approach. They conducted a randomized, controlled experiment to test the application of loss aversion, reciprocity, and gift exchange for 80 sales employees over a six-month period. In the traditional incentive condition, salespeople were rewarded with a cash bonus at the end of each week provided they met or exceeded quota (20% higher than normal sales). Those who didn't meet quota did not receive a bonus. A second group – Loss Aversion – received the cash bonus upfront but had to return it if they didn't reach quota. The third group – Reciprocity Condition – were rewarded unconditionally, whether or not they met the quota.

The loss aversion effect proposed first by Avos Tversky and Daniel Kahneman in 1979 would suggest that giving a salesperson a bonus upfront – on condition of having to pay it back if their goals aren't met – would spur more effort than a traditional incentive. It has in repeated experiments in the past. However, while framing the bonus as a potential loss sparked greater effort initially, it did not last. This is consistent with past findings which have found that loss aversion has less effect where *cash* rewards are involved.

Research has consistently shown that non-performance-contingent gifts spark a desire to reciprocate. But in these experiments, where such gifts were used, efforts increased at only half the rate of the performance-contingent bonuses used in the traditional incentive condition. This suggests that salespeople, in keeping with the conventional wisdom, might be more extrinsically driven in general than the average employee in a non-sales role. It is also possible, according to the researchers, that due to high inflation in India, salespeople view cash bonuses as entitlements against the eroding value of their regular pay. In general, salespeople seem to expect and respond to traditional performance-contingent rewards and bonuses, making their use a safe bet, at least in the short-term.

Giving a salesperson a gift *before* a sales period begins appears to improve performance in that period only among high performers. The researchers believe this is because the typical salesperson infers that the bonus is in recognition of their performance in the *previous* period. Thus, non-performance contingent rewards, if used at all for salespeople, might be better presented *after* the sales period for most salespeople, even if the salesperson knows they are to receive the reward regardless of their performance. Even for top performers though, receiving a non-contingent gift ahead of performance might spark better effort and performance due partly to novelty. Behavioral scientists (and IRR designers) know that the effects of habituation and entitlement erode novelty over time.

Figure 1: POTAMIA – Using the Scientific Method



The important point from this example is not that behavioral science doesn't work; there are countless other examples where loss aversion has improved sales and performance, and the reciprocity effect has met with expected results. The point is that **every workplace differs, as do the employees within.** IRR professionals and behavioral scientists should **experiment before simply assuming a 'nudge' will work and applying it broadly.** In the case above, the firm wanted to test an opportunity (the use of behavioral science to increase sales). They hypothesized that loss aversion and/or the reciprocity effect might boost sales beyond what a more traditional reward program might. They ran a controlled experiment, collected and analyzed the results, and were able to determine that for the bulk of their salesforce, a straight bonus-based reward program was most effective. They also learned that for high performers, a reciprocity approach using non-contingent, non-cash gifts might spur greater effort in future, especially when that gift comes after the effort, not before. You might recognize this process as the scientific method. Every leader or manager, and every IRR designer will benefit by donning the scientist hat and experimenting more.

INSIGHTS & KEY TALKING POINTS	SOURCE
<p>Behavioral science may seem ill-defined and mysterious, but incentive and reward program designers have been using it for decades.</p>	<p>Fernando R. Jiménez, Richard A. Posthuma, Michael A. Campion, <i>Effective Incentive Compensation for Sales Employees During Tough Economic Times</i>. <i>Organizational Dynamics</i> (2013) 42, 267—273</p> <p>Rushana Khusainova, Nick Lee, Ad de Jong, John M. Rudd. <i>Re-defining Salesperson Motivation: Current Status, Main Challenges, and research Directions</i>. <i>Journal of Personal Selling and Sales Management</i>. Jan 2018 DOI: 10.1080/08853134.2017.1415761</p> <p>Scott Jeffrey, Monmouth University. <i>Journal of Behavioral & Applied Management. The Motivational Power of Incentive Travel: The Participant's Perspective</i> (2014). Vol. 15 Issue 3, p122-139. 18p.</p>
<p>Behavioral science has revealed a steady stream of insights into small, subtle “encouragements” that organizations can employ to influence employee and consumer choices, actions and behaviors. The positive encouragements are often referred to as “nudges,” the negative, as “sludges.”</p>	<p>Gary Latham (2017) <i>A Speculative Perspective on the Transfer of Behavioral Science Findings to the Workplace: “The Times They are A-Changin’”</i> Academy of Management.</p> <p>Bilal Afsar, Mariam Masood (2017) <i>Transformational Leadership, Creative Self-Efficacy, Trust in Supervisor, Uncertainty Avoidance, and Innovative Work Behavior of Nurses</i>. https://doi.org/10.1177/0021886317711891</p> <p>Silverman, K., Jarvis, B. P., Jessel, J., & Lopez, A. (2016). Incentives and motivation. <i>Translational Issues in Psychological Science</i>, 2(2), 97–100. https://doi.org/10.1037/tps0000073</p> <p>Stephen Wendel (2020) Book: <i>Designing for Behavior Change</i>. O'Reilly Media</p>
<p>Organizations new to behavioral science may be better off applying it internally – to nudge employees – before attempting it externally, with consumers. An initial internal focus can build on the long experience of IRR design – programs aimed at improving performance, engagement, and participation in beneficial programs like wellness, 401K and safety. The combined experience of IRR professionals and behavioral scientists might lead to new insights and breakthroughs.</p>	<p>Scott Young (2020) <i>Getting Started With an Ethical Foundation</i>. <i>Designing for Behavior Change</i>. P117-127. O'Reilly Media</p>
<p>Like incentive design, application of behavioral science introduces risks of unintended consequences. Just because loss aversion, choice architecture, the reciprocity effect or any number of other nudges might work in general, there is no guarantee they will work in your unique culture, with the specific employees you hope to motivate. Experiment first.</p>	<p>Antti Kauhanen. <i>The Perils of Altering Incentive Plans</i>. <i>Managerial and Decision Economics</i>. <i>Decis. Econ.</i> 32: 371–384 (2011)</p> <p>Doug J. Chung and Das Narayandas. <i>Incentives Versus Reciprocity: Insights From a Field Experiment</i>. <i>Journal of Marketing Research</i>, Vol. LIV (August 2017), 511–524. DOI: 10.1509/jmr.15.0174</p> <p>Rachelle Martino (2020) <i>Research in the Real World</i>. P99-117 Building Behavioral Science in an Organization. Action Design Press.</p>