

## Behavioral Economics 101:

A beginner's guide to Hyperbolic Discounting, Intertemporal choice, Prospect Theory and a bunch of other fancy words.

**By Elaine Mechanic and Jordan Goldberg**

In recent years, you've probably heard the term "behavioral economics" used with increasing frequency—at conferences, internal strategy meetings, trade journals. Lately it's been gaining steam in political discourse as a tool to influence policy.

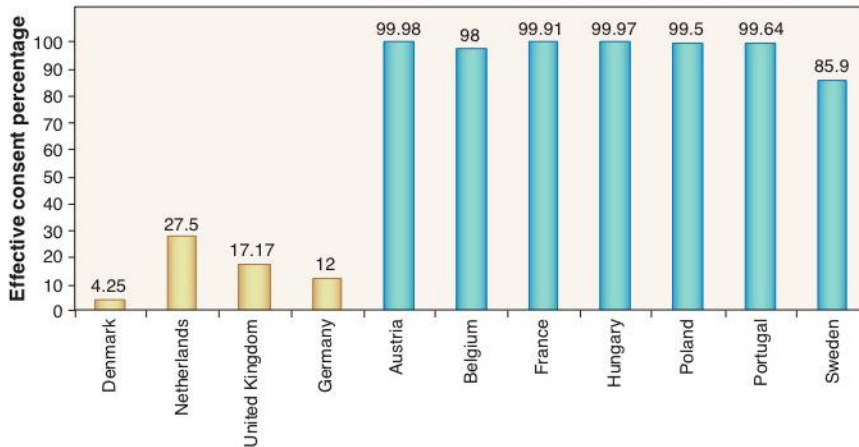
Given its relevance and applications across so many aspects of our lives, not surprisingly it's being tossed around quite a bit in healthcare. But rarely is the topic approached in a setting where you can easily raise your hand and candidly ask, "What is behavioral economics exactly? And, more importantly, how can I apply it to my job?" Focusing exclusively on the study of how *real* people (not theoretical models) actually make choices, behavioral economics recognizes that being human means we can be irrational. Being human means we can be short-sighted, emotional, and even make decisions that aren't in our own best interest.

We're here to cut to the chase and tell you what you need to know about the basics in behavioral economics, and how it can significantly affect how well your employee programs perform. The well is deep—from choice architecture, carrots versus sticks, framing techniques, and reference points, to the power of defaults (opt in vs opt out), progress illusion, incentive design, and accountability.

### Lesson #1: Choice Architecture

A choice architect is anyone who designs an environment in which people make choices. At first blush that may sound benign, but a choice architect maintains great influence over decisions people make, and it is usually done while the decision maker is none the wiser. There are simple, subtle ways that choices can be presented to an individual which impact the likelihood of one selection over others. It is everywhere you look--the design of a restaurant menu, a grocery store layout, a retirement savings plan, an organ donor form, or the shape of your dishes and glasses at home. Each of these examples is often constructed in a calculated manner, generally in a way that guides you into making a choice the designer intends. Whether that's ordering a larger soda, making an impulse purchase near the register, or even donating an organ (yes, an organ).

## Organ Donorship by Country: Opt In vs. Opt Out



**Effective consent rates, by country.** Explicit consent (opt-in, gold) and presumed consent (opt-out, blue).

Let's look at another specific example. Were you aware that the average shopping cart size at your local grocery store is 30% larger today than it was 20 years ago?

This is not happenstance, it is by design. This is a technique called *progress illusion*, which is used to influence your perception of consumption. By shopping with a larger sized cart, the proportion of your groceries relative to the cubic space available in your cart goes down. As a result, you have the "appearance" of purchasing less. Why did you drive all the way to the grocery store, park, and shop only to fill up your cart just a little bit? Why *stop* when you can haul so much *more*? The more room that is left in your cart for groceries, the more likely you are to continue pulling items off the shelves.

In another interesting example, a study lead by Columbia Business School Professor Ran Kivetz, customers of a local coffee shop were given frequent diner cards. One set of customers was given a card that required 10 coffee stamps (i.e. purchases) to earn a free cup; the other set was given a card requiring 12 stamps. However, in the latter group, patrons were given two "bonus" stamps to start with when they were handed the card. In each group, the shop required the purchase of 10 cups of coffee before earning a reward. The difference was that the starting point was not the same. The result? Customers in the 12-stamp group filled their cards out nearly 20% faster than those in the 10-stamp group. The *progress illusion* of being further along in the second group nudged those coffee drinkers in the right direction to complete the desired action.

So, the next time you want to reward employees for choosing healthier options at the onsite cafeteria, start your employees off with a 2 for 12 "Salad Loyalty Card" instead of 0 for 10.

## Group A: 10 stamp card



## Group B: 12 stamp card (with two "bonus" stamps)



### Lesson #2--Loss Aversion

There is a simple postulation accepted by most noted behavioral economists that the fear of losses looms larger than equivalent gains. In other words, people are more likely motivated by the threat of losing their own \$20 than the lure of gaining \$20 they never had.

How many people reading this blog would rather mow their own lawn to save \$50, over mowing their next door neighbor's lawn to make \$75? A rational economist would say that mowing your own lawn wouldn't make sense given these two choices. Pay someone the \$50 you'd otherwise save to mow your lawn, then go mow the lawn next door and pocket the \$25 difference. But a behavioral economist understands that people can make irrational economic decisions--after all, maybe you don't like your neighbor. There are many factors that influence our choices, where sentiments win out over economic logic.

Loss aversion is actually two to four times more powerful than the prospect of earning something of equal value. In a study of students at Cornell University, Richard Thaler (author of *Nudge*) and Nobel Prize winner Daniel Kahneman gave each student in class a \$5 Cornell mug (retail value) as a gift. They were told to bring the mug back to class a few weeks later, and were subsequently asked the price at which he or she would be willing to sell the mug. The average selling price was over \$7. Students in another class were shown the same mugs for the first time, and asked how much they would pay for the mug. The average was less than \$3.50. Losing the item was twice as hard as buying it.

### Lesson #3—The Framing Effect

Many of you ask your employees to contribute towards their health premiums each year. Let's say management would like employee contributions to be \$2,000 towards their premiums if they complete a health risk assessment (HRA) and a biometric screening, and \$2,500 if they do not.

The same scenario can be framed one of two ways to your employees, either as a carrot or a stick, without impacting the financial proposition to the employee:

**Carrot**--Inform your employees that contributions this year are \$2,500. If they complete their HRA and biometric screening, you will offer a \$500 premium reduction.

**Stick**—Inform your employees that contributions this year are \$2,000. If they do not complete their HRA and they do not complete their biometric screening, the employee must contribute an additional \$500 to their health plan.

While this is the same set of economic choices to the employees, when framed as a stick, you will see a higher HRA and biometric completion rate.

Still on the fence? Let's look at another revealing study by Kahneman that dramatically illustrates the "framing effect" and the power of a stick over the carrot:

In this study, Kahneman fabricated alternative solutions for 600 people affected by a hypothetical deadly disease. Participants had two options at their disposal for dealing with the outbreak :

**Solution 1:**

If treatment A is taken by those affected it will save 200 people's lives.

If treatment B is taken by those affected there is a 1/3 chance of saving all 600 people, and a 2/3 possibility of saving no one.

*When presented with these options, 72% of those polled chose treatment A, 28% chose treatment B.*

**Solution 2:**

If treatment A is taken, then 400 people die.

If treatment B is taken, there is a 1/3 chance that no one dies, and a 2/3 probability that all 600 will die.

*When presented with these options, 78% of those polled chose treatment B, 22% chose treatment A.*

In both solutions, Treatment A is the same scenario and Treatment B is the same scenario, yet there was a substantial shift in their selection because people wanted to avoid the perceived 'losses.'

Lesson #4—Reference Points and Mental Accounting

Not all cash is created equal. Research shows that receipt of a single check for \$100 has a greater impact on goal attainment than \$100 spread out over multiple paychecks. Where a single check is “separate and distinct” and perhaps perceived as a windfall, bundling rewards as part of ordinary pay diminishes the power of the reward; in many cases it can go completely unnoticed.

For similar reasons, in most cases non-cash rewards are more powerful than cash rewards. Cash is often used as an incentive because it serves as a common denominator—many people will change their habits for a monetary incentive. However, individuals often respond more to a specific, non-monetary reward than to a cash reward of the same value.

For example, A University of Chicago study showed that people were actually willing to work harder for a certificate for a massage than for its cash equivalent. Even though the cash could be used to buy the same reward, people are disproportionately motivated by indulgences they would not ordinarily purchase. A \$60 cash reward might be used to pay off a bill, but because a \$60 certificate for a massage can’t be used to pay bills, the recipient need not feel guilty redeeming it for the massage.

Still, not all people are motivated by the same rewards. It is important to properly optimize incentives by offering a variety of options reflective of the culture and interests of the target population. For instance, a die-hard Yankees fan may find 2 tickets with a face value of \$80 to be just as motivating as a \$120 restaurant gift certificate. As demonstrated in the Chicago study, items that individuals and family members may not be able to justify purchasing with their own money may serve as the most effective rewards.

These non-cash rewards are powerful because they have emotional value beyond what money can provide; the prospect of the Yankees tickets provokes the user to picture him or herself having a good time at the game.

Additionally, non-cash rewards are effective because they create a different reference point. Rewarding an employee with \$1,000 in cash often causes the employee to value the reward in relation to his or her cash salary. If the recipient earns \$65,000 per year, then the \$1,000 reward has the “appearance” of a 1.5% bonus/raise.

However, if the user is rewarded with a couple’s vacation to Florida worth \$1,000, he or she is more likely to assess the perceived value in relation to their vacation budget, not salary. As a result, proportionally the reward seems greater. It’s the difference between a drop into a big bucket, versus the same size drop into a much smaller bucket. The context matters.

#### Lesson #5: Lotteries

Everyone has a different risk reward profile. Conservative folks who are risk averse may be content with earning a \$20 gift card to Target. However, there are others who have a higher tolerance for risk. This knowledge can be leveraged when designing an incentive program. Some people actually prefer the chance to win a higher priced reward, say a 1 in 8 chance of winning a kindle, over the smaller, guaranteed gift card. This is known as prospect theory, which postulates that people overestimate their

likelihood of winning a lottery. Use this to your advantage, as it is a rare chance to keep motivation high, and costs low.

In summary, we refer to the concepts and tools discussed throughout this blog as libertarian paternalism. It sounds like an oxymoron. Libertarianism calls for protection of the individual's right to choose. Paternalism calls for doing what you can to improve the welfare of people. But a choice architect that leverages behavioral economics seamlessly weaves the two together. We don't restrict choice (after all, this is America). Options remain on the table. They are just organized in a way that induces the greatest likelihood of people selecting what is in their own (and ultimately, in our collective) best interest.

*Jordan Goldberg*  
CEO, *stickK*  
(o) 347-394-4967  
(m) 410-241-4368  
[jgoldberg@stickk.com](mailto:jgoldberg@stickk.com)

*Elaine Mechanic*  
VP Business Development, *stickK*  
(o) 212.759.5397  
(m) 646.957.3544  
[emechanic@stickk.com](mailto:emechanic@stickk.com)