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B&N Business and Negotiation
CB Consumer Behavior
GRB Gender, Race, and Bias
J&D Judgment and Decision-Making
MJ Moral Judgment
M&P Motivation and Performance
P&C Politics and Culture
PS Pro-sociality

Research Highlights 2021 is a selection of findings and publications that originally appeared between 2018 and 2021.
ABOUT THE CENTER

The Center for Decision Research (CDR) is a dynamic community of behavioral scientists who examine the processes by which intuition, reasoning, and social interaction produce beliefs, judgments, and choices. As part of the University of Chicago Booth School of Business, the CDR is home to faculty whose accolades include the Nobel Prize and MacArthur Fellowship. The CDR conducts world-class behavioral science research, mentors the next generation of leading scholars and practitioners, and serves as an intellectual hub for the discipline—advancing scientific discovery as well as public awareness of behavioral science’s positive impact at both the individual and societal level.

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Founded by Hillel Einhorn in 1977, the CDR helped to pioneer the use of science to explain inconsistencies between actual and theoretically rational human behavior. In the early years, this work centered on decision-making, shaking the foundations of classical economic theory by revealing reliable and unrecognized biases in how individuals understand the choices they face.

The CDR has since led a broad expansion of the field of behavioral science. Using insights from numerous disciplines—including psychology, economics, political science, neuroscience, and sociology—CDR faculty are at the forefront of a field that is proving indispensable for understanding human behavior in finance, marketing, management, health care, politics, charity, and many other domains. In 2017, longtime faculty director Richard Thaler was awarded the Nobel Prize in Economics for his contributions to behavioral economics.

The CDR is currently led by Faculty Director Nicholas Epley and governing board members Ayelet Fishbach, Devin Pope, Richard Thaler, and Bernd Wittenbrink. We’re home to nearly 40 affiliated faculty members, more than two dozen PhD students, a rich community of principal researchers, and a dedicated administrative staff.

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In the fall of 2018, PIMCO and the CDR announced a partnership in support of CDR’s behavioral science research. In recognition of this investment in research, Chicago Booth’s CDR laboratories were renamed the PIMCO Decision Research Laboratories. The PIMCO Decision Research Laboratories yield scientific discoveries with the potential to improve individual and social welfare. The partnership also enabled the creation of a new “storefront” behavioral science research lab, Mindworks, to foster greater engagement with the public, broaden CDR’s reach, and increase the diversity of participants in the studies.

mindworks

The Science of Thinking

In summer 2021, the CDR opened Mindworks: The Science of Thinking, the world’s first discovery center and working lab for behavioral science, in the heart of Chicago’s cultural corridor.

Free and open to the public, Mindworks welcomes visitors to participate in studies that examine the science of human behavior, particularly judgment and decision making, and to experience hands-on exhibits showcasing the powerful, real-world impact of behavioral science.

Mindworks was conceived by faculty at the CDR and was made possible by generous philanthropic support from PIMCO.

Learn more and plan your visit at mindworkschicago.org.
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CROWDSOURCING HYPOTHESIS TESTS: MAKING TRANSPARENT HOW DESIGN CHOICES SHAPE RESEARCH RESULTS

Daniel Bartels
CDR Faculty

Full article: bit.ly/CDR21-Bartels

Abstract

To what extent are research results influenced by subjective decisions that scientists make as they design studies? Fifteen research teams independently designed studies to answer five original research questions related to moral judgments, negotiations, and implicit cognition. Participants from two separate large samples (total N > 15,000) were then randomly assigned to complete one version of each study. Effect sizes varied dramatically across different sets of materials designed to test the same hypothesis: Materials from different teams rendered statistically significant effects in opposite directions for four of five hypotheses, with the narrowest range in estimates being $d = -0.37$ to $+0.26$. Meta-analysis and a Bayesian perspective on the results revealed overall support for two hypotheses and a lack of support for three hypotheses. Overall, practically none of the variability in effect sizes was attributable to the skill of the research team in designing materials, whereas considerable variability was attributable to the hypothesis being tested. In a forecasting survey, predictions of other scientists were significantly correlated with study results, both across and within hypotheses. Crowdsourced testing of research hypotheses helps reveal the true consistency of empirical support for a scientific claim.

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“There are many different ways to formulate tests of research questions, like ‘Are negotiators who make extreme offers trusted less?’ We asked several researchers to formulate their own designs to ask questions like these and found that the answers to these questions varied substantially, demonstrating that how much support we have for scientific hypotheses depends critically on the design choices made by researchers.”
WHY MANY CHILDREN HAVE MORE-LIBERAL ATTITUDES ABOUT GENDER ROLES

The traditional American family of the 1950s—characterized by a homemaker mother and a father employed outside the home—represents a shrinking percentage of US households. Almost 60 percent of married mothers in 2011 were employed outside the home, up from 25 percent in 1960—and almost a quarter of married mothers earned more than their husbands did, up from 4 percent, according to the Pew Research Center. Census data indicate nearly a quarter of children lived with only their mother in 2016, up from just 8 percent in 1960.

Many researchers have been looking at how this cultural shift, and the changing balance of economic power between men and women, has affected attitudes among adults. But what are the effects of this social shift on children? Research by Chicago Booth’s Marianne Bertrand suggests it’s leading many children to develop more-liberal attitudes toward gender roles.

Researchers have in recent years amassed evidence that the changing nature of the American family is causing tension in some households. For example, a study by Bertrand, Chicago Booth’s Emir Kamenica, and National University of Singapore’s Jessica Pan, a graduate of Booth’s PhD Program, suggests that US women who earn more money than their husbands are less likely to report happy marriages and are more likely to divorce.

To examine how changing gender dynamics are affecting children’s notions of gender roles, Bertrand analyzed multigenerational data from the NLSY79, a long-running survey launched by the Bureau of Labor Statistics (BLS) in 1979. The BLS polled a group of almost 13,000 youths (initially aged 15 to 22) annually between 1979 and 1994. Since then, it has continued to contact the participants biennially—plus the children of female respondents.

The survey has always asked its respondents to react to six statements about traditional gender roles. The statements include, “A woman’s place is in the home, not the office or shop.” And, “It is much better for everyone concerned if the man is the achiever outside the home and the woman takes care of the home and family.” Bertrand used reactions from the children of female NLSY79 respondents to construct an index measuring attitudes about gender roles, with higher numbers corresponding to more liberal attitudes, and 24 representing the highest possible index score.
For boys, having either a married, working mother or a mother who was the primary breadwinner meaningfully moved gender-role attitudes in a more liberal direction.

She finds that children of nonmarried mothers exhibited more-liberal gender-role attitudes. They were, for example, less likely to agree that “a woman’s place is in the home” or that women are happier when they “stay at home and take care of their children.” Having a nonmarried mother was associated with a 0.6 increase in the gender-role index for both male and female children.

For the children of married, working mothers, the effect of having a mom who’s employed outside the home differed by gender. Girls’ gender-role attitudes didn’t appear to be meaningfully affected by having a working mom. For boys, however, having either a married, working mother or a mother who was the primary breadwinner did meaningfully move attitudes in a more liberal direction. Having a primary breadwinner mother, in fact, is reflected by an increase of 1.2 in the gender-role index—a magnitude that’s comparable to the average gap in attitudes between girls and boys.

Several other factors are also correlated with gender-role attitudes. For boys, growing up in a household with a higher and more stable income was associated with more-liberal gender attitudes. A mother’s education levels and her own gender-role attitudes seemed to have a particularly strong effect on her daughters’ views.

Bertrand also finds that the family-work arrangements children experience from age 6 to 15 are more strongly correlated with gender-role attitudes than the arrangements they’re exposed to earlier in life. This finding provides support for the theory that mothers’ role modeling (their participation in the workforce, for example), rather than unobserved variables such as fathers’ gender-role attitudes, drove the results. Role modeling is likely to have a stronger effect as children grow older and are more aware of their mothers’ work lives, writes Bertrand.

Boys of working, married mothers who were employed in the formal labor market from economic necessity rather than personal preference displayed less of the liberal shift in gender-role attitudes, the research finds.

Written by Dwyer Gunn for Chicago Booth Review
Originally published June 17, 2019

Works cited

WHEN SAYING ‘I’M SORRY’ AND ‘THANK YOU’ MAKES A BIG DIFFERENCE

Shereen Chaudhry
CDR Faculty

Faux apologies can be irksome, and not receiving an apology at all can feel like a slight.

Small exchanges between people matter a lot, suggests research by Chicago Booth’s Shereen Chaudhry and Carnegie Mellon’s George Loewenstein.

They propose that thanking and apologizing involve costs and benefits, and working from this framework, they uncover a host of predictable patterns in conversation that people engage in to help maintain social cohesion.

In the study, the researchers connect four sentiments—thanking, apologizing, bragging, and blaming—that were previously considered distinct. Chaudhry and Loewenstein argue that these four sentiments involve trade-offs between conveying warmth and competence.

For instance, thanking and apologizing both project warmth and thoughtfulness on the part of a speaker, but simultaneously hint at weakness or incompetence.

Blaming and bragging make a speaker appear more competent, but at the risk of appearing less warm. These effects are different from the point of view of a receiver: receiving a thank you or an apology makes a receiver seem both competent and warm.

The researchers’ theory predicts how people will converse about credit and blame, predicting, for example, that both people in an exchange would prefer a thank you over a brag.

People engage in subtle coordination in conversations to help bring about thanking rather than bragging, the theory suggests.

“Whether people express gratitude can really influence how people feel being on teams, and whom they choose to work with. Often it just comes down to who’s most likeable.”

Chaudhry and Loewenstein had pairs of strangers complete an online math game, in which the results of the higher scorer determined the earnings of both players. The researchers rigged the game so that one player’s version was much easier, leading to a higher score. After they were done, some of the pairs were given the opportunity to chat for a couple of minutes, during which the researchers looked for various types of communication between them.

Most chats—almost 70 percent—involved thanking, while bragging showed up in less than 15 percent of the conversations. So how did the participants coordinate to bring this about? The researchers observed that when a thank you wasn’t immediately offered, the person who wanted to hear it would often subtly prompt the
partner to offer one. This may be a method of keeping things pleasant, but still eliciting a thank you where one is due.

Interestingly, there were consequences to this: pairs that were allowed to chat, versus those that weren’t given the opportunity, were more likely to want to work together in a follow-up task—likely because gratitude was expressed. For the low-performing partner, exhibiting warmth helped compensate for what they appeared to lack in competence.

Chaudhry says that the findings imply workplaces would do well to encourage positive communication around credit and blame. “Whether people express gratitude can really influence how people feel being on teams, and whom they choose to work with. Often it just comes down to who’s most likeable.”

The theory also helps explain why women tend to apologize more than men, a finding of University of Pittsburgh’s Karina Schumann and University of Waterloo’s Michael Ross. It is generally understood, on the basis of societal expectations, that women should appear warmer, says Chaudhry. “Apologizing may include a cost to one’s competence, but apologizing makes you look warmer. So apologizing may have more benefit for women than men—but not apologizing may have more cost. The opposite is true for men.”

Written by Alice G. Walton for Chicago Booth Review
Originally published September 26, 2019

Works cited

Despite India’s growing economy and an increase in education rates among girls, just 26 percent of women there work outside the home, according to the International Labour Organization. But shifting the gender norms that discourage women from working could require long-term, sustained action, suggests research by Chicago Booth’s Joshua Dean and Northwestern’s Seema Jayachandran.

The researchers conducted two employer-led interventions at a private kindergarten provider in Karnataka, a state in south India, that operates over 200 schools and employs young women who reside in the same village as the center. Dean and Jayachandran studied whether a minimal, “light-touch” approach could help young women’s family members become more supportive of their teaching careers.

It has been well documented that some families in India fear the social stigma associated with a woman who works, while others worry about her physical safety during her commute or at her job. The researchers sought to address these concerns through two low-cost interventions that adhered as closely as possible to the recruitment and orientation tools that some employers in rural India already use.

Thinking that family members might be more supportive of women working if they heard firsthand accounts about the benefits, the researchers created two videos with testimonials from the kindergarten provider’s experienced teachers and their families. One video highlighted nonmonetary benefits, such as personal growth, while the other addressed common concerns that were mostly related to safety.

The researchers also conducted guided conversations between the teachers and their family members about the pros and cons of working, a strategy inspired by established practices of the provider. When the school’s human-resources staff learn that a teacher’s family has concerns, they typically send someone to help mediate a discussion between the woman and her family and provide reassurances that the teacher will be safe. Instead of mediation, in this intervention, a member of the research team asked the teachers and their family members open-ended questions—and didn’t offer opinions or facts. The researchers theorized that the conversations would provide an opportunity to correct any misperceptions held by family members, resolve disagreements, address concerns, and possibly minimize future demands on the company’s HR staff.
“It is possible that the most effective way [employers] can shift norms is simply by pursuing their core missions. Providing employment opportunities for women in areas with low female labor force participation could be doing more to shift norms than the firms could achieve through a direct campaign.”

The study included 171 female teachers, who each identified family members in their household who most influenced their decision to work. The teachers and family members were surveyed at the beginning of the study and again a year later, revealing that the interventions had failed to increase retention among female employees at the kindergarten center or to raise support more generally for female employment and empowerment.

Could a more intensive intervention at the community level, such as a series of videos or a leadership seminar, produce a different outcome? Possibly, but the researchers note that such an intensive approach is unlikely to be in an employer’s best interest, given the high cost and the fact that employers are unlikely to capture a significant share of the benefits, as employees may leave for other companies at any time.

However, “this reasoning does not mean we should completely discard the possibility of a role for employers in shifting gender norms,” write Dean and Jayachandran. “It is possible that the most effective way [employers] can shift norms is simply by pursuing their core missions. Providing employment opportunities for women in areas with low female labor force participation could be doing more to shift norms than the firms could achieve through a direct campaign.”

Written by Meredith Lidard Kleeman for Chicago Booth Review | Originally published October 14, 2019

Works cited
EVEN WHEN ALGORITHMS OUTPERFORM HUMANS, PEOPLE OFTEN REJECT THEM

“algorithm aversion” to describe people’s tendency to distrust the predictions of algorithms, even after seeing them outperform humans. Now, further research from Dietvorst and Booth PhD student Soham Bharti suggests that people may not be averse to algorithms per se but rather are willing to take risks in pursuit of exceptional accuracy: they prefer the relatively high variance in how well human forecasters perform, especially in uncertain contexts. If there’s a higher likelihood of getting very good forecasts, they’ll put up with a higher likelihood of very bad ones.

In a series of experiments, Dietvorst and Bharti find evidence that people have “diminishing sensitivity to forecasting error”—in general, the first unit of error a forecaster (whether human or machine) realizes feels more significant than the fifth, which feels more significant than the 15th. The perceived difference between a perfectly accurate forecast and one that’s off by a measure of two is greater than the perceived difference between a forecast that’s off by 10 and a forecast that’s off by 12.

Participants became more likely to choose their own predictions as the level of uncertainty increased. This held even when participants recognized that the algorithm performed better on average.

In one experiment, participants choosing between two forecast models were willing to pay more to upgrade to a model that was more likely to be perfect than they were for other models offering the same average performance—and the same expected earnings—but lower odds of perfection. In other studies, when presented with two models offering the same average performance, participants preferred the one that offered the best chance of a perfect or near-perfect forecast, even though it was also more likely to produce a comparatively inaccurate forecast. People were willing to risk a prediction that was well off the mark for the sake of a shot at a near-perfect prediction.

Data science has created more and better applications for algorithms, particularly those that use machine learning, to help predict outcomes of interest to humans. But has the progress of algorithmic decision aids outpaced people’s willingness to trust them? Whether humans will put their faith in self-driving cars, ML-powered employment screening, and countless other technologies depends on not only the performance of algorithms, but also how would-be users perceive that performance.

In 2015, Chicago Booth’s Berkeley J. Dietvorst, with University of Pennsylvania’s Joseph P. Simmons and Cade Massey, coined the phrase
This premium on perfection or near perfection is what one would expect from diminishing sensitivity to error, Dietvorst says, and can help explain why people often prefer human forecasts to algorithmic ones. Algorithms generally offer consistency and greater average performance, whereas humans are “a little worse on average, but they could do anything,” he says. “They could knock it out of the park. They could have a really bad forecast. You don’t quite know what’s coming with a human.”

Dietvorst and Bharti also explored how the level of uncertainty in a decision-making setting interacts with diminishing sensitivity to error. The researchers assigned participants to forecasting tasks with varying levels of uncertainty and had them choose between their own predictions and those made by an algorithm. Even though the algorithm always followed the best possible forecasting strategy, its odds of a perfect forecast went down as uncertainty went up. This would be the case for any forecaster, algorithmic or otherwise—and yet participants became more likely to choose their own predictions as the level of uncertainty increased.

This held even when participants recognized that the algorithm performed better on average. A belief that their own predictions were more likely to be perfect—even if less accurate on average—was more important, the researchers find.

The findings have implications for business decision-makers and the general public, who often face what the researchers call “irreducible uncertainty”—situations where complete certainty isn’t possible until the outcome is known. For example, there’s no way for managers to know next quarter’s product demand until the quarter ends. If they bypass a superior algorithmic forecast and trust a human instead, hoping for perfection, they’ll end up with a lower average forecast accuracy in the long run, which could lead to unnecessary inventory costs.

Similarly, beliefs that human drivers are more likely than an algorithm to make a perfect decision could cause us to delay adopting self-driving technology, even if such technology would dramatically improve traffic safety on average.

People’s diminishing sensitivity to error and preference for variance could penalize some algorithms less than others. Although he hasn’t studied whether or how these preferences vary across different types of algorithms, Dietvorst says the fact that machine-learning algorithms are capable of perfect or near-perfect forecasts in the future.

When comparing an ML algorithm to one that’s constant, “you might believe that a machine-learning algorithm gives you a relatively higher chance of being near perfect,” Dietvorst says, “even if the past performance that you’ve seen from the two is identical.”

Written by Jeff Cockrell for Chicago Booth Review
Originally published October 27, 2020

Works cited

DEMEANING: DEHUMANIZING OTHERS BY MINIMIZING THE IMPORTANCE OF THEIR PSYCHOLOGICAL NEEDS

Abstract
We document a tendency to "demean" others’ needs: believing that psychological needs—those requiring mental capacity, and hence more uniquely human (e.g., need for meaning and autonomy)—are relatively less important to others compared to physical needs—those shared with other biological agents, and hence more animalistic (e.g., need for food and sleep). Because valuing psychological needs requires a sophisticated humanlike mind, agents presumed to have relatively weaker mental capacities should also be presumed to value psychological needs less compared to biological needs. Supporting this, our studies found that people demeaned the needs of non-human animals (e.g., chimpanzees) and historically dehumanized groups (e.g., drug addicts) more than the needs of close friends or oneself (Studies 1 and 3). Because mental capacities are more readily recognized through introspection than by external observation, people also demean peers’ needs more than their own, inferring that one’s own behavior is guided more strongly by psychological needs than identical behavior in others (Study 4). Two additional experiments suggest that demeaning could be a systematic error (Studies 5 and 6), as charity donors and students underestimated the importance of homeless people’s psychological (versus physical) needs compared to self-reports and choices from homeless people. Underestimating the importance of others’ psychological needs could impair the ability to help others. These experiments indicate that demeaning is a unique facet of dehumanization reflecting a reliable, consequential, and potentially mistaken understanding of others’ minds.

Published October 2020 in Journal of Personality and Social Psychology
LEARN BY FAILING?
NOT SO EASY

Failure is often framed as a great teacher—the successful sometimes crow about the number of times they failed before hitting it big. But failure may not always teach us as much as it could, often because ego gets in the way, suggests research by Chicago Booth Postdoctoral Fellow Lauren Eskreis-Winkler and Booth’s Ayelet Fishbach.

In an experiment, the researchers had telemarketers take a 10-question quiz about customer service. Each question offered two potential answers, only one of which was correct. For example, one question asked, “How much money, annually, do US companies lose due to poor customer service?” The participants had to choose between approximately $90 billion and approximately $60 billion. The correct answer was $60 billion.

Half of the participants received “success” feedback for questions they answered correctly, and the other half received “failure” feedback for wrong answers.

When tested later on what they’d learned, the telemarketers who had received success feedback fared better, answering 62 percent of the follow-up questions correctly, compared with 48 percent for those in the other group.

“Because people find failure ego-threatening, they will disengage from the experience, which means they stop paying attention, or, tune out.”

The researchers then performed a similar experiment that involved symbols, with participants from Amazon Mechanical Turk. As before, success feedback produced much better performance in a follow-up test: participants in the success condition got 80 percent of the answers right, versus 59 percent in the failure condition.

In each successive variation of the experiment, a question only had two possible answers, thus the two types of feedback provided the same amount of information. In that case, why was success a better teacher than failure?

Eskreis-Winkler and Fishbach write that failure can be a big hit to one’s ego, which may reduce motivation. When study participants reported their self-esteem levels following a task, those in the failure condition registered lower self-esteem. And when the researchers removed ego from the equation by having some people learn from others’ wrong answers, not their own, participants learned equally from failures and successes. “Because people find failure ego-threatening, they will disengage from the experience, which means they stop paying attention, or, tune out,” the researchers write.
The results suggest that feedback about failure should be given with caution. And when it is absolutely necessary to give failure feedback—perhaps after a fumbled presentation at work—the researchers suggest that ego be removed from the equation as much as possible, as “reducing the degree to which failure involves the ego will promote learning.”

Eskreis-Winkler and Fishbach further find that although it’s hard to learn from failure, people should still try—there may be benefits for society. Their follow-up work finds that because people don’t realize failures contain valuable information, they don’t share them with others. People’s erroneous belief that failures don’t contain information produces an asymmetrical world of information where failures are common in private but hidden in public.

Ego makes people reluctant to both learn from failure and share much about their failures. But “information on failures is a public good,” says Fishbach. “When it is shared, society wins.”

Written by Alice G. Walton for Chicago Booth Review
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Expressing anger may be a tool for attaining prestige or status, in some circles. Observers associate anger with dominance, strength, competence, and smarts, according to research published in 2001.

But a study by Chicago Booth’s Celia Gaertig and Emma Levine, New York University’s Alixandra Barasch, and University of Pennsylvania’s Maurice Schweitzer suggests there’s a limit to the respect anger commands. Too much anger, particularly in relation to the offense committed, can backfire, especially on people climbing corporate or social ladders, the researchers argue. Exhibiting too much anger can harm the perceptions of competence and warmth, traits that tend to drive hiring and leadership decisions. The more intense the anger, the more likely others may suspect self-serving or harmfully intentioned motives.

The researchers conducted seven studies, some involving fake beverage tasting. In one of the studies, they asked groups of six participants to rate the best-tasting beverage presented in a lab. Both options were actually Coca-Cola, and the researchers didn’t tabulate participants’ responses, as the study was essentially just a decoy. Each group secretly included two actors, one of whom spilled soda on the other’s cell phone, eliciting an angry reaction that was either moderate or more intense. Then the participants had to pick a leader for a group activity, and in doing so rated each other’s (including the angry actor’s) competence and leadership potential.

Actors who reacted with intense anger rather than annoyance were perceived as less competent and were less likely to be selected for leadership roles. The responses held for participants who watched a video of the lab charade rather than participating in it. “Expressing high-intensity anger can be harmful for how an individual is perceived in social settings,” the researchers write.

In another experiment, the researchers had people on Amazon Mechanical Turk read about negative workplace scenarios and the level of anger displayed by the people involved. Again, the results suggest that the intensity of anger plays a role in how observers perceive the person who expresses it. MTurk respondents viewed too much anger from people in the scenarios as indicating that they were less
competent and warm, and that they had problems with self-control, the researchers find.

Exhibiting too much anger can harm the perceptions of competence and warmth, traits that tend to drive hiring and leadership decisions.

When anger seems unwarranted, an inability to moderate the emotion leads to particularly negative perceptions. A participant who expressed a lot of anger—particularly in response to a situation in which little harm was done—was perceived as less competent and less warm than someone expressing mild to moderate anger, sadness, or no emotion, the study finds.

To be sure, failing to express anger in circumstances that warrant it can also be a negative. In certain situations, a leader is expected to display some anger and stand up for others who have experienced harm, for example.

But in general, being able to regulate strong emotions may be helpful, and could even mean a better chance of promotion. “Although mild expressions of anger may boost status, high levels of anger expressions harm status,” the researchers write.

Written by Meena Thiruvengadam for Chicago Booth Review
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PSYCHOLOGY CAN HELP SET THE STAGE FOR BUSINESS SUCCESS

Remember the traditional classrooms you’ve learned in throughout your life. What do they look like and have in common? You’re probably picturing a large space with few distractions, desks facing the front of the room, and all eyes on the teacher. Most students are taking notes; the teacher attempts a joke and students attempt to laugh. The people in the room are a diverse set of individuals and yet they all behave exactly the same way. They are all engaging in classroom behavior.

The first educators to create this environment didn’t know it at the time, but they were following what would later be the advice of the father of the discipline, Kurt Lewin, who said that behavior is a function of a person and their environment.

Business executives and teachers have similar goals for obtaining certain desired behaviors from employees and pupils, but there is little they can do to change the people themselves. Under Lewin’s equation, that leaves the environment, which is something managers have at least some control over. If you want to change someone’s behavior, including your own, your best bet is to go to work changing the circumstances.

“If you want to change the behavior of others, start with your own actions.”

Social psychologists focus on the external circumstances that affect the behavior of individuals. They talk about creating strong environments that help to move people in the direction of their goals, which is what I teach my executive MBA students in classrooms much like the one described above.

So, how do you do it? Business executives decide who is on a given team, the roles they play, how they are compensated, and the resources at their disposal. Your own behavior is a big part of the situation. If you want to change the behavior of others, start with your own actions. As an example, think about how you give team members feedback since that will shape how they feel about coming to you with suggestions or questions in the future.

Consider an underachieving employee. How are you treating him compared to his better-performing coworkers? Perhaps your own behavior is inhibiting his performance. If so, maybe you should consider the factors you could change that would improve his output. Maybe he thrives under different types of deadlines or needs more resources. Try making changes to his environment and see if you get better results.

Now that you have the basics, there are many opportunities to learn more about how to think like a
social psychologist in the business world. My workbook, Choosing Leadership, can give you some of the tools I teach in my classes. There are also scores of podcasts, TED Talks, books, and resources by other social psychologists.

My advice: Remember that while many employees might thrive under certain circumstances, you can't make others fit into the same box. You can, however, use the environment you create to help them, and your company, succeed.

Written by Linda Ginzel for Chicago Booth Review
Originally published January 15, 2021
IS YOUR COMPANY’S NARRATIVE STOPPING YOU FROM PLANNING EFFECTIVELY?

The solution is to incorporate more mathematical thinking in decision making

If you’ve ever been in a courtroom—or if you just enjoy legal dramas—you’ve seen how narratives help people make sense of complex information.

Most of a trial is taken up by lawyers calling witnesses and presenting evidence in what can be a jumble of information. But as is often the climax, the prosecutor or defense attorney weaves those bits together into a closing argument that puts that information into a believable narrative. With minds made more for stories than analyzing data, jurors can determine what most likely happened and render a verdict.

Nancy Pennington of the University of Colorado and I called this way of thinking “explanation-based decision making.” Our work showed how people take the facts at hand and create causal models to make sense of them. We even fill in missing pieces if they fit logically with the information that we have been given.

But there’s a downside to narratives. Explanation-based decision making can lead to the narrative fallacy. When that happens, we’re relying too much on the narrative to explain a conclusion and may be missing data or information. That can be problematic when we rely on a faulty narrative to make decisions about the future.

Consider a business that’s planning an expansion. Maybe the owner’s narrative attributes success to grit, hard work, and determination and expects that to lead to further success. That’s a great story, but what if that business’s to-date success also depended on inept competitors that allowed it to thrive when it otherwise would have struggled? Going forward with an expansion without considering what would happen if competent competitors enter the market could be a recipe for disaster.

The solution is thinking in a more mathematical way, though it’s a method in which we don’t tend to excel. But I’d argue that it’s especially important during the coronavirus outbreak, when our coherent, simple narratives blind us to the massive, intricate ramifications of the dynamic epidemic system.

Luckily, we can combine the two ways of thinking to let logic guide our narratives. One exercise that can help is to conduct a worst-case, in-hindsight simulation. Imagine that the enterprise you are concerned with fails dramatically. Then ask yourself, how did that happen? What story would have the disaster as its conclusion?
An hour spent on this exercise is sure to make your projections more realistic and your reactions to obstacles, if they arise, more constructive. A good planner may think up four or more of these scenarios to ensure that before going forward, her bases are covered.

A story about overcoming adversity creates a strong, helpful narrative to build on going forward, and we all love a good story. But to plan effectively for the future, we need to anticipate more than one future story.

Written by Reid Hastie for Chicago Booth Review
Originally published May 15, 2020

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One reason some people find slot machines so addictive is that they never know when dropping a quarter will win a jackpot. The uncertainty helps keep some people playing.

There's a lesson here for marketers who want people to continually repeat a behavior, such as buying a product or recycling bottles, according to Chinese University of Hong Kong's Luxi Shen (a recent graduate of Chicago Booth's PhD Program), Booth's Christopher K. Hsee, and Carnegie Mellon PhD candidate Joachim H. Talloen. The researchers conducted a series of experiments to study the role of uncertainty in people's decisions to repeat an activity. Their findings demonstrate that uncertain incentives can be more effective than certain incentives, even if the uncertain incentives are objectively less.

In one experiment, the researchers collaborated with a running club in Hong Kong, which recruited 82 new members to participate in an event that promoted active lifestyles. As part of the event, the club encouraged these new members to complete as many track laps (400 m, or about a quarter of a mile) as they wanted. Some were offered five points at the end of each lap, convertible into cash. Others were offered either three points or five points, generated randomly, also at the end of each lap. Shen, Hsee, and Talloen find that those facing an uncertain reward completed an average of 14 laps, almost twice as many as the 7.5 laps by the runners who knew they'd get five points each time around.

“People literally ran ‘the extra mile’ (precisely, 1.61 more miles) for the uncertain incentive,” the researchers write.

Uncertain incentives reduced the chances that workers chose to start doing something... But once workers finished this initial task, uncertain incentives boosted the likelihood they would repeat the task—and improved the ultimate work performance.

In follow-up experiments, the researchers examined what makes uncertainty so motivating. Participants in one study carried out a calculation game where they could practice as much as they wanted and, in fact, were rewarded for practicing more. Those who were offered uncertain rewards with immediate resolution chose to practice twice as much as people in two other groups—one where the rewards were certain, and one where the rewards were uncertain but the uncertainty wasn't immediately resolved. This suggests to the researchers that timely resolution is key to the effectiveness of the element of uncertainty.

And they find another nuance: uncertain incentives reduced the chances that workers chose to...
start doing something, in this case, complete a survey for money. But once workers finished this initial task, uncertain incentives boosted the likelihood they would repeat the task—and improved the ultimate work performance, that is, the number of surveys completed. Thus, uncertainty may not be useful in getting people to start a task but can be an effective tool to get them to repeat it.

The findings have implications for marketing, management, and other areas where a particular behavior is desired. For example, to reward customers who bring reusable bags, retailers might offer variable discounts on groceries. Variable refunds for returning recyclable bottles to the store might transform a dull errand into a satisfying game.

“We recommend changing the certain refund to an uncertain amount,” the researchers write, “essentially transforming the bottle-recycling machine into a bottle-recycling ‘slot machine’ that we predict will gamify the otherwise tedious recycling activity and encourage people to recycle more. Then, recycling could be rewarding not only for the monetary return but also for the pleasure of uncertainty resolution.”

Written by Alice G. Walton for Chicago Booth Review
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Works Cited
Numerous experiments have demonstrated that people are more generous with money they’ve earned unethically. For instance, a salesperson who earns a big commission by misleading a client may mentally cordon off that money and be more willing to spend it on others. But research by Chicago Booth’s Alex Imas, Carnegie Mellon’s George Loewenstein, and Carey K. Morewedge of Boston University finds that there’s a way to avoid this self-imposed penalty: psychologically “launder” the money by obfuscating its source.

Researchers of behavioral finance have spent decades documenting how mental accounting—our propensity to treat money differently depending on things such as where it came from or how we intend to use it—affects decision-making. Mental accounting violates the idea that money is fungible, or perfectly exchangeable: people may treat some of their money more frivolously than the rest of it, for example, if they acquired it easily or by chance. Imas, Loewenstein, and Morewedge’s findings hint at the complicated effects this informal bookkeeping can have, as it can cause people to be generous with dirty money but also to find ways to avoid such generosity.

In a series of experiments, the researchers explored how participants treated ill-gotten gains under various conditions. In one, they set up a game in which some participants were given a monetary incentive to lie to an anonymous and randomly assigned partner. Lying, in these cases, meant maximizing the participants’ own earnings from the experiment but diminishing how much their partners would receive. The researchers then gave all participants the option to donate some of their earnings to charity. The experiment confirmed the finding established in past research that people tend to be more generous with earnings that they have produced unethically.

Imas, Loewenstein, and Morewedge then took the experiment a step further, entering a subset of participants into a lottery in which they risked their experimental earnings but had a very high probability of receiving an identical sum in return. For those whose earnings had come in part through lying, processing the money through this lottery effectively sanitized it: they donated significantly less than those who lied but didn’t play the lottery, and their donation behavior was similar to those who told the truth and then participated in the lottery.

When “dirty” money mixed with clean, participants tended to treat the entire pool of money as though it were ethically earned.
“Internal psychological constraints, both in the form of negative emotions and associations with moral violations that constrain spending, are some of the most effective deterrents to unethical behavior,” says Imas. “Strategies and techniques that eliminate these constraints can potentially make unethical behavior more likely, which is something that institutions and policymakers would want to prevent.”

In further experiments, Imas, Loewenstein, and Morewedge find evidence that mental money laundering also applied to situations in which ethically and unethically earned money was pooled. When “dirty” money mixed with clean, participants tended to treat the entire pool of money as though it were ethnically earned. Moreover, people recognize their tendency to treat laundered money differently than unlaundered money, and seek out opportunities to sanitize it, the research suggests.

The study’s findings have implications for both individuals and businesses. “Most people... that are engaged in morally questionable activities are also engaged in legal, ethical ventures,” the researchers write. New technologies for payments and budgeting, such as Venmo and Mint, “offer novel opportunities for creatively pooling resources” and “may also provide a tool aiding mental money laundering and encouraging behaviors with social costs.”

Mental money laundering may also be a boon to companies whose practices or products have negative social effects. Such companies—which, prior research has shown, often have to pay workers a wage premium to overcome their qualms about the detrimental nature of their labor—may be able to reduce that premium through “greenwashing,” or putting some portion of their revenue toward a prosocial purpose. Doing so could allow employees to mentally launder the company’s revenue, and their role in generating it, by pooling the company’s harmful impact with its positive works.

Written by Jeff Cockrell and Eric Butterman for Chicago Booth Review Originally published January 4, 2021

Works Cited
WHEN GIVING FEEDBACK, FOCUS ON THE FUTURE

When managers give performance-improvement feedback to employees, they presumably want the conversations to result in positive changes—not to inspire defensiveness, excuses for poor performance, or skepticism of the managers’ point of view.

Offering forward-looking feedback can help keep such conversations productive, suggests research by Humanly Possible’s Jackie Gnepp, Chicago Booth’s Joshua Klayman, Victoria University of Wellington’s Ian O. Williamson, and University of Chicago’s Sema Barlas.

Performance-improvement feedback often fails when managers spend too much time diagnosing or analyzing what went wrong in the past, according to the researchers. When managers and employees talk about possible next steps and solutions, however, employees tend to be more receptive to the feedback and more likely to intend to act on it, the researchers find.

Recipients respond just as well to predominately negative feedback as they do to positive feedback, so long as the conversation focuses primarily on how the recipient can best move forward, the research suggests.

“Most organizations and most managers want their workers to perform well,” write Gnepp, Klayman, Williamson, and Barlas. “Most workers wish to succeed at their jobs. Everyone benefits when feedback discussions develop new ideas and solutions and when the recipients of feedback are motivated to make changes based on those.”

The researchers surveyed more than 400 middle and upper managers who reflected on recent work-based feedback situations.

When the managers received negative feedback, they tended to doubt their supervisor’s accuracy and qualifications.

Recipients of negative feedback also tended toward self-protection and self-enhancement, avoiding responsibility for their failures while claiming credit for their successes, the study finds. Recipients were prone to reject the feedback and to blame their poor performance on bad luck or task demands, factors that were outside their control.

“Everyone benefits when feedback discussions develop new ideas and solutions and when the recipients of feedback are motivated to make changes based on those.”

In two other experiments, pairs of managers role-played performance-review discussions and answered questions about the meetings. Managers and employees often disagreed about the causes of poor performance, and this disagreement hurt the employees’ intention to change their behavior moving forward. A
discussion perceived as future-focused didn’t reduce the amount of disagreement, but it nonetheless helped employees accept feedback and move toward change.

On the basis of these results, the researchers offer a template for future-focused performance-improvement conversations that starts with managers clearly stating the goal of improving future performance. Managers and employees should next discuss performance expectations, and then develop targets, milestones, and solutions together.

Critical feedback should be part of the conversation too, but managers should avoid dwelling too much on the causes or explanations of past poor performance.

“A lot of times, those discussions devolve into, ‘Let’s talk about whose fault it was,’” says Klayman. “What we say is, instead, you don’t need to do that. You can talk about what to do in the future without going through the difficult diagnosis phase first.”

Written by Sarah Kuta for Chicago Booth Review
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Works Cited
TRUTH BY REPETITION:
EXPLANATIONS AND IMPLICATIONS

Abstract

People believe repeated information more than novel information; they show a repetition-induced truth effect. In a world of “alternative facts,” “fake news,” and strategic information management, understanding this effect is highly important. We first review explanations of the effect based on frequency, recognition, familiarity, and coherent references. On the basis of the latter explanation, we discuss the relations of these explanations. We then discuss implications of truth by repetition for the maintenance of false beliefs and ways to change potentially harmful false beliefs (e.g., “vaccination causes autism”), illustrating that the truth-by-repetition phenomenon not only is of theoretical interest but also has immediate practical relevance.

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Author Insights

“People reconsume information they enjoy. Thus, convenient knowledge becomes easy to grasp and firmly rooted in memory. Understanding and retention increase impressions of truthiness. This helps to explain why self-selected repetition turns convenient falsehoods into subjective truths—for example, the fake news that ‘coronavirus is a Chinese bioweapon’ and ‘vaccines cause autism.’”
Most people don’t look favorably upon acts of deception. Research finds that deception elicits all kinds of negative emotions in the perceiver and tends to signal incompetence in the deceiver. Why, then, is deception so prevalent in business and the world in general? And how can managers encourage employees to be more honest?

Johns Hopkins’ Brian C. Gunia and Chicago Booth’s Emma Levine had a hunch that deception might not be viewed so negatively for certain professions, such as sales. In occupations with what the researchers call “high selling-orientation,” defined as the “use of high-pressure persuasion tactics to elicit immediate, self-interested economic transactions,” they argue that deception might actually be seen as a signal of competence.

This occurs, they suggest, because people view deception as a particularly effective high-pressure persuasion tactic. As a result, a salesperson who deceives a customer in order to get the customer to buy a product might be seen as a particularly competent salesperson. What’s more, Gunia and Levine find the perceptual link between deception and selling orientation is so strong that even deception that has nothing to do with selling is seen as a signal of competence. For example, the authors find that employees who lie on their expense reports—an act of deception that is costly for companies—are seen as competent employees in high selling-orientation occupations. For those in sales-oriented positions, an inclination to deceive may be associated with competence and thereby be positively reinforced.

Sales isn’t the only occupation where these skills are regarded as beneficial. The researchers suspected that many professions would be seen as high in selling orientation, and as a result, might reward deception. To figure out the set of occupations to which this association applied, the authors ran a pilot study in which they asked 204 participants to rate each of 32 professions including mechanic, doctor, and lawyer on a scale they devised to measure perceived selling orientation. Respondents placed occupations including salesperson, advertiser, and travel agent at the top for selling orientation, and as a result, might reward deception.

Then the researchers studied whether people view deception differently in occupations stereotyped as high versus low in selling orientation. Online
participants read about Julie, an individual on a business trip who exaggerated the cost of a company-reimbursed cab ride by $10. The participants were randomly informed that Julie was either an investment banker, a salesperson, an advertiser, a consultant, a nonprofit employee, or an accountant. Participants rated Julie as more competent when she was from a high sales-oriented occupation such as investment banker or salesperson than when she was from a low sales-oriented profession such as nonprofit employee or accountant, the researchers find.

Another group of online participants read about James, who acted either dishonestly, agreeing with his boating-buff boss that sailing was great, or honestly, admitting he didn’t care for sailing. Participants rated how James would do when changing careers to a high or a low sales-oriented profession. The lying version of James would do better when switching to a high sales-oriented profession than an honest James, the participants said. In other words, in certain occupations (namely sales, advertising, and investment banking), participants believed that deceivers would be more competent employees than honest people.

In a lab setting, Gunia and Levine had participants observe an individual playing the part of the sender in the deception game, an economic game commonly used to measure the use of deception in laboratory studies. The sender has the opportunity to either tell the truth or lie to the receiver, which affects how much money each party will take away. Lying benefits the sender, but harms the receiver. In this study, each participant observed the sender either lying or telling the truth; after that, they had to say how likely they’d be to hire the sender into each of six occupations. Participants were more likely to hire deceptive senders than honest senders into high sales-oriented jobs, but they were more likely to hire honest senders than deceptive senders into low sales-oriented jobs.

Gunia and Levine say their findings may explain why deception is so prevalent in corporations: for those in sales-oriented positions, an inclination to deceive may be associated with competence and thereby be positively reinforced. The researchers suggest that managers who witness deceptive behavior “may wish to publicly admonish it and thus reinforce the need for deception-free competence, potentially supplementing such messages with training in alternative approaches to selling, like customer orientation… This reframing could help to sever the link between deception and competence.”

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THE 3 Cs OF ANTHROPOMORPHISM: CONNECTION, COMPREHENSION, AND COMPETITION

Ann McGill
CDR Faculty

Full article: bit.ly/CDR21-McGill

Abstract
Anthropomorphism, or imbuing nonhuman entities with human traits, is widely prevalent in the marketplace. The last decade of consumer research demonstrates that when imbued with human characteristics, anthropomorphized brands and products become active participants in the consumption experience and are viewed and treated fundamentally differently than those viewed simply as objects. We identify three dimensions around how consumers relate to anthropomorphized entities: connection, comprehension, and competition. The first two Cs highlight how anthropomorphized brands and products benefit consumers by fulfilling belongingness needs (connection) and helping consumers understand unfamiliar situations and products (comprehension). In contrast, the competition dimension highlights how anthropomorphized brands and products are perceived as adversaries or potential threats to consumers’ individual goals. By identifying competition as the third C, we illuminate self-protection as an additional motivation that shapes consumers’ responses to anthropomorphized entities—a motivation that has not been directly accounted for in previous theorizing.

Published September 19, 2019 in Consumer Psychology Review
As data science has developed in recent decades, algorithms have come to play a role in assisting decision-making in a wide variety of contexts, making predictions that in some cases have enormous human consequences. Algorithms may help decide who is admitted to an elite school, approved for a mortgage, or allowed to await trial from home rather than behind bars.

But there are well-publicized concerns that algorithms may perpetuate or systematize biases. And research by University of California at Berkeley’s Ziad Obermeyer, Brian Powers of Boston’s Brigham and Women’s Hospital, Christine Vogeli of Partners HealthCare, and Chicago Booth’s Sendhil Mullainathan finds that one algorithm, used to make an important health-care determination for millions of patients in the United States, produces racially biased results.

The algorithm in question is used to help identify candidates for enrollment in “high-risk care management” programs, which provide additional resources and attention to patients with complex health needs. Such programs, which can improve patient outcomes and reduce costs, are employed by many large US health systems, and therefore the decision of whom to enroll affects tens of millions of people. The algorithm assigns each patient a risk score that is used to guide enrollment decisions: a patient with a risk score in the 97th percentile and above is automatically identified for enrollment, while one with a score from the 55th to 96th percentiles is flagged for possible enrollment depending on input from the patient’s doctor.

Obermeyer, Powers, Vogeli, and Mullainathan find that black patients are on average far less healthy than white patients assigned the same score. For instance, for patients with risk scores in the 97th percentile of the researchers’ sample, black patients had on average 26 percent more chronic illnesses than white patients did. The result of this bias: black patients were significantly less likely to be identified for program enrollment than they would have been otherwise. Due to algorithmic bias, 17.7 percent of patients automatically identified for enrollment were black; without it, the researchers calculate, 46.5 percent would have been black.

“The mechanism of bias is particularly pernicious because it can arise from reasonable choices” on the part of the algorithm’s designers.

The bias stems from what the algorithm is being asked to predict. Health is a concept that can’t be narrowly defined or encapsulated in a single metric, and this makes
it difficult to observe directly in data. The algorithm uses health-care costs as a proxy for health needs, and risk scores reflect the algorithm’s prediction of who will have the highest future health-care costs. On this dimension, the researchers say, the algorithm is well calibrated across races: for any given risk score, the future health-care costs of black patients were similar to those of white patients.

The trouble is that black patients typically generate lower costs than white patients with similar health profiles, because black patients are less likely to receive treatment. “Whether it is communication, trust, or bias, something about the interactions of black patients with the health-care system itself leads to reduced use of health care,” the researchers write. A black patient who generates $5,000 in health-care costs is, on average, sicker than a white patient who generates the same costs.

The algorithm in question is not the only factor used to guide enrollment for care-management programs. However, its focus on cost as the outcome of interest is typical of other algorithms used in the same way, the researchers write. What’s more, they deem the choice to focus on cost reasonable on some level, and not just because most health-care systems want to minimize expenses: health-care costs and health needs do have a strong positive correlation. Sicker patients tend to spend more on health care. “The mechanism of bias is particularly pernicious because it can arise from reasonable choices” on the part of the algorithm’s designers, the researchers write.

Obermeyer, Powers, Vogeli, and Mullainathan report that they took their findings to the algorithm’s manufacturer, which confirmed the finding of bias using a national data set of more than 3.5 million patients. The manufacturer then worked with the researchers to identify variables that could stand in for cost as a proxy for health needs; using a variable that combined cost predictions with health predictions (about the number of active chronic conditions patients would need to manage), they were able to create an algorithm that reduced bias by 86 percent, according to one measure.

Written by Jeff Cockrell for Chicago Booth Review
Originally published October 25, 2019

Works Cited
There’s scientific evidence, it turns out, to back up centuries-old religious teachings that it’s better to give than to receive. Chicago Booth’s Ed O’Brien and Northwestern PhD Candidate Samantha Kassirer find that giving to others might make you happier in the long run and has staying power, whereas the joy of receiving fades quickly.

In an experiment, the researchers gave college students $5 for five days in a row and told them to spend it the same way each day. Half of the students were instructed to spend the money on themselves, say by buying a coffee daily. The other half were told to spend the money on others, for example by donating to a single charity or leaving a tip in the same coffee shop each day. Every night, the participants completed a survey in which they reported how they felt overall that day.

The happiness level of the students who spent money on themselves declined over the five days, the researchers find. But for those who donated the money, their happiness level on the fifth day was similarly high as on the first.

In another experiment, participants carried out 10 online word-search tasks, for each of which they were paid 5 cents. Half the group had to donate their total, 50-cent reward to the charity of their choice, and the other half had to keep the money. After each task, the participants reported their feelings about the outcome—how elated, joyful, or happy they felt.

Once again, the two groups reacted differently. The happiness of the participants who donated money faded a bit over the 10 tasks, but it did so more slowly than for those who kept their earnings. O’Brien and Kassirer believe that the difference could only be explained by the choice of giving versus receiving.

They suggest a couple of explanations for the participants’ reactions. Giving to others may help people feel socially connected, or perhaps it helps people look good and uphold a reputation for prosocial, or communally focused, actions.

Or the phenomenon may have to do with someone’s vantage point, the researchers suggest. When we receive money or goods repeatedly, it’s easy to compare the results and become acclimated to them. In fact, research over several decades has explored “hedonic adaptation,” a theory of happiness that suggests people quickly become accustomed to good things and return to their original happiness level.

But giving seems to work differently, suggest O’Brien and Kassirer. When people give, the endpoint isn’t always apparent,
therefore comparison—and acclimation—aren’t as likely. As they write, “The happiness we get from giving appears to sustain itself.”

Written by Alice G. Walton for Chicago Booth Review
Originally published
April 17, 2019

Works Cited
Ed O’Brien and Samantha Kassirer, “People Are Slow to Adapt to the Warm Glow of Giving,” Psychological Science, in press.
**ATTRIBUTION BIAS IN CONSUMER CHOICE**

Devin Pope  
CDR Faculty

**Full article:** [bit.ly/CDR21-Pope](bit.ly/CDR21-Pope)

**AUTHOR INSIGHTS**

“We often think back on how much we enjoyed something in the past when deciding whether to do it again. Did I enjoy eating at that restaurant? Did I enjoy that vacation? Did I enjoy that movie? Our paper shows that we mistakenly attribute our enjoyment of the actual activity (restaurant, vacation, movie) with the state that we happened to be in when we participated in the activity (was I hungry, did it rain, or was I tired).”

**Abstract**

When judging the value of a good, people may be overly influenced by the state in which they previously consumed it. For example, someone who tries out a new restaurant while very hungry may subsequently rate it as high quality, even if the food is mediocre. We produce a simple framework for this form of attribution bias that embeds a standard model of decision-making as a special case. We test for attribution bias across two consumer decisions. First, we conduct an experiment in which we randomly manipulate the thirst of participants prior to consuming a new drink. Second, using data from thousands of amusement park visitors, we explore how pleasant weather during their most recent trip affects their stated and actual likelihood of returning. In both of these domains, we find evidence that people misattribute the influence of a temporary state to a stable quality of the consumption good. We provide evidence against several alternative accounts for our findings and discuss the broader implications of attribution bias in economic decision-making.

*Published September 18, 2018 in Review of Economic Studies*
Parents who tell children to shake hands to make nice or smooth over a conflict are on to something. Shaking hands increases cooperation between people in various negotiations, according to University of California at Berkeley’s Juliana Schroeder, a graduate of Chicago Booth’s PhD Program; Chicago Booth’s Jane L. Risen; and Harvard’s Francesca Gino and Michael I. Norton.

However, handshaking might also make you more cooperative than you want to be.

The researchers studied how spontaneous handshaking affects multi-issue, integrative negotiations using two scenarios: the hypothetical sale of a car and a hypothetical job offer. Various outcomes held different weights for the two parties, meaning that negotiators could “grow the pie” with both parties increasing their individual final scores. Participant pairs who spontaneously shook hands at the outset scored significantly higher, whether the pairs were friends or strangers, the researchers find.

Does shaking hands cause people to negotiate more effectively? To test that, the researchers assigned some pairs of participants to shake hands, and instructed others to not shake hands. The negotiators were either told it was customary to shake hands before beginning or were seated without the opportunity to do so.

Participant pairs who shook hands had higher negotiation scores, according to the study. When their recorded behavior was rated by observers, who didn’t know whether or not the negotiators had shaken hands, the handshakers were observed as being more open discussing their preferences, making more concessions, lying less, and talking and shaking hands after the deal, all socially oriented behaviors.

Being assigned to shake hands boosted cooperation in a prisoner’s dilemma game as well, even for participants not instructed to shake. In one condition of this experiment, only one participant in the pair was instructed to shake hands. Those who received a proffered hand behaved as cooperatively as those instructed to shake, demonstrating that the handshake, and not the instruction, was critical.

At the heart of handshaking’s effects appears to be a signal of cooperation, which was enhanced for integrative negotiations where working together benefited both parties, but also for a single-issue, distributive negotiation where cooperation tended to hurt, rather than help one of the two parties, an individual carrying out a hypothetical sales transaction.

“Buyers who shook hands with the sellers were less likely to lie—even to their own detriment—which made the outcomes more
equitable and allowed sellers to do better,” the researchers write. They conclude that the “simple ritual of shaking hands can be a powerful gesture to promote cooperation.”

Written by Alice G. Walton for Chicago Booth Review
Originally published December 27, 2018

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Heather Sarsons
CDR Faculty

Stanford’s Edward Lazear and Kathryn Shaw demonstrated in 2007 that businesses and other organizations were increasingly relying on group work. Since then, such work has become a mainstay, especially in the technology and engineering industries.

But this brings some challenges when it comes to assigning credit for work well done, the kind of credit that can lead to promotions and raises. Say five people work together on a project. Who did what?

When an employer can’t directly observe each individual’s contribution to a team’s results, demographic characteristics may come into play and affect who gets credit, suggests research by Chicago Booth’s Heather Sarsons, European University Institute’s Klarita Gërxhani, New York University Abu Dhabi’s Ernesto Reuben, and University of Amsterdam’s Arthur Schram. Their work finds that employers are more likely to assign credit to men, a pattern that they say contributes to and helps maintain gender segregation in certain occupations.

The researchers turned to an industry they know well: academic economics, which has a large tenure gap between men and women, as well as a growing amount of group work.

To quantitatively assess researchers’ work, Sarsons, Gërxhani, Reuben, and Schram looked at the number of papers produced by academic, research-focused economists who were up for tenure over a 20-year period. They constructed a dataset using the curricula vitae of economists who were up for tenure between 1985 and 2014 at 23 of the top PhD-granting universities in the United States, homing in on
schools where research was the greatest factor in promotions. They collected historical faculty lists and took other steps to locate anyone who had gone up for tenure.

To assess the quality of work, they looked at the ranking of journals in which those papers were published, as well as the number of times each paper was cited in other research. And to track career trajectory and outcomes, they recorded whether or not the economists in question received tenure.

Then, considering the degree of collaborative work and reward for that work—and after controlling for factors such as coauthor seniority and length of time to tenure—they compared the results for men and women.

Employers are more likely to assign credit to men, a pattern that they say contributes to and helps maintain gender segregation in certain occupations.

They find that, all else being equal, men and women who solo authored most of their work had similar tenure rates. That changed when the researchers accounted for collaborative papers, however. The tenure gap between men and women became more pronounced the more women coauthored. Each additional piece of coauthored research correlated with a 7.4 percent increase in tenure probability for men but only a 4.7 percent increase for women.

The difference in credit allocation explains 40 percent of the gender gap in tenure rates, the researchers estimate. It also explains 65 percent of the gap that remained after controlling for average paper quality, citations, tenure and PhD institution rankings, and economic subfield.

The gender of a woman’s coauthor may matter, the research suggests. When women coauthored papers with men, they were less likely to receive tenure compared with similarly situated men who also coauthored with men. The gender gap narrowed significantly for women when all the coauthors on their papers were also women.

But that doesn’t necessarily mean that it is better for women economists to write papers alone or only with other women, Sarsons explains. Women are greatly outnumbered in economics, and there are relatively few papers coauthored entirely by women. And besides being impractical, restricting coauthors only to women could potentially have other negative implications.

Rather, workplaces, as opposed to individuals, may draw the most useful lessons from the research. The findings suggest that universities, and indeed all workplaces, need to develop better systems to establish who did what in group work, says Sarsons, who adds that employers need to “slow down and think about whether they’re holding people to different standards.” While it’s difficult to write policies that enforce fair evaluations, doing so could be one step in addressing differences in labor-market outcomes between men and women.

Written by Martin Daks for Chicago Booth Review
Originally published October 21, 2020

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BEHAVIORAL NUDGES REDUCE FAILURE TO APPEAR FOR COURT

Anuj K. Shah
CDR Faculty
Full article: bit.ly/CDR21-Shah

AUTHOR INSIGHTS
“This work suggests it’s important to appreciate that not every offense is carried out intentionally or with great deliberation. Some offenses are simply due to human error. Policies that anticipate such error can be more effective and more humane—in this case, we were able to design nudges that could have helped 30,000 people avoid having warrants issued for their arrest. But when people assume that defendants are skipping court intentionally, people are less supportive of these nudges. So there may be tremendous opportunities for behavioral interventions in the criminal justice space, but we may also need to shift people’s mental models of why some crimes happen.”

Abstract
Each year, millions of Americans fail to appear in court for low-level offenses, and warrants are then issued for their arrest. In two field studies in New York City, we make critical information salient by redesigning the summons form and providing text message reminders. These interventions reduce failures to appear by 13 to 21 percent and lead to 30,000 fewer arrest warrants over a three-year period. In laboratory experiments, we find that whereas criminal justice professionals see failures to appear as relatively unintentional, laypeople believe they are more intentional. These lay beliefs reduce support for policies that make court information salient and increase support for punishment. Our findings suggest that criminal justice policies can be made more effective and humane by anticipating human error in unintentional offenses.

Published November 6, 2020 in Science
Retailers have long set prices ending in 99 cents, knowing that buyers view $4.99, for example, as significantly less expensive than $5. But many companies underestimate consumers’ left-digit bias and should be using these prices more than they do now, according to research by Chicago Booth’s Avner Strulov-Shlain.

Strulov-Shlain analyzed price data from 1,710 popular products in 248 stores of a single US retailer, as well as data on 12 products carried by more than 60 chains and in 11,000 of their stores. He finds that one-quarter to one-third of all prices ended in 99 cents.

But companies tend to miscalculate how customers react to a one-cent price change, Strulov-Shlain asserts. Buyers treat a price increase from $4.99 to $5 as if it were a 15- to 25-cent increase, while companies behave as if customers respond as though it were a 1.5 to 3 cent increase.

To learn how much companies should charge, Strulov-Shlain built a model that combines previously established left-digit bias models with a profit-maximizing formula that takes left-digit bias into account. Using the model and retailers’ pricing data, he estimates what price sensitivity and left-digit bias the companies had in mind when setting prices. Many items would have been better priced with a 99-cent ending, because demand dropped when the dollar digit changed, he finds. That was also the case at higher costs, where selling more units for the lower 99-cent price was more profitable than selling fewer units at a higher price.

Retailers are forgoing 1 to 3 percent of potential gross profits due to their misperceptions.

Left-digit bias can lead to squeezed margins because the cost to manufacture a product might increase but a retailer won’t change the price it charges consumers. For example, even if the cost to make a widget rises from $1.20 to $1.40, a retailer may continue selling it at $2.99 and take a smaller margin. At some point, however, as costs rise, it is better to cross the dollar threshold and raise the price, the research suggests. However, the retailer may raise the price slightly to $3.09, while Strulov-Shlain’s model suggests that such low ending prices are never optimal and that retailers would do better to pick a higher price, even going as high as $3.99.

While it is impossible to say if left-digit bias increases demand or lowers it overall, Strulov-Shlain can evaluate the consequences of underestimating the bias. He evaluated how profits and prices would change if stores set pricing according to the true value of consumers’ left-digit bias as opposed to companies’
much-lower estimation of that bias. He concludes that retailers are forgoing 1 to 3 percent of potential gross profits due to their misperceptions.

However, the effect on consumers of the retailers’ misperception is ambiguous. The prices of many popular retail goods are actually lowered to the 99-cent level in order to sell more units, which ultimately leads to some benefit for buyers, says Strulov-Shlain. Nonetheless, he argues, by using quantitative modeling, rather than relying on rules of thumb about consumer behavior, companies could significantly improve their bottom lines.

Written by Robin I. Mordfin for Chicago Booth Review
Originally published December 11, 2019

Works Cited
rate. The researchers told the participants to imagine they had paid the minimum amount for five months, and then randomly assigned people to one of three groups. One group heard that the 0-percent rate had expired at the end of the previous month. Members of another group were told it would expire the next month, and those in a third learned they had five months before a higher rate would apply. Participants were asked to choose a monthly payment ranging from $200 to $1,000 a month.

Members of the five-month group said they’d pay much more every month than those in groups with the earlier expirations. The researchers explained to all participants the overall cost of the loan across all conditions as they were making their choices.

“Rather than leveraging changes in interest rates as a hidden complexity intended to deceive consumers, lenders can use explicit changes in rates to encourage timely repayment,” the researchers write. Money-management apps could help fill this role by setting calendar reminders well in advance of rate increases. These apps could calculate the ideal timing of such a reminder on the basis of a consumer’s financial circumstances, the researchers write. Debt Manager is one of the few available financial apps that lets consumers see all of the statistics for their debts if an interest rate were to change, although it doesn’t yet have the built-in calendar functionality the researchers suggest. Most money-management apps help consumers repay loans by organizing debt from highest to lowest interest rate and incorporating payment due dates, but don’t have explicit reminders for imminent changes in rates.

“Following these reminders, budget planning tools could go ahead recommending feasible repayment plans to those consumers, thereby helping consumers to save on interest costs,” the researchers write. Consumers who choose a payment plan and stick with it each month “may be particularly effective at reducing debt when rates are increasing in the future,” they write, adding that explicit reminders of changes in rates by credit-card companies or other lenders would also signal transparency as well as concern for their customer base, which could spur brand loyalty.

Written by Alex Verkhivker for Chicago Booth Review
Originally published September 11, 2019

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HISTORICALLY RICE-FARMING SOCIETIES HAVE TIGHTER SOCIAL NORMS IN CHINA AND WORLDWIDE

Abstract

Data recently published in *PNAS* mapped out regional differences in the tightness of social norms across China [R. Y. J. Chua, K. G. Huang, M. Jin, *Proceedings of the National Academy of Sciences*, USA 116, 6720–6725 (2019)]. Norms were tighter in developed, urbanized areas and weaker in rural areas. We tested whether historical paddy rice farming has left a legacy on social norms in modern China. Premodern rice farming could plausibly create strong social norms because paddy rice relied on irrigation networks. Rice farmers coordinated their water use and kept track of each person’s labor contributions. Rice villages also established strong norms of reciprocity to cope with labor demands that were twice as high as dryland crops like wheat. In line with this theory, China’s historically rice-farming areas had tighter social norms than wheat-farming areas, even beyond differences in development and urbanization.

Rice–wheat differences were just as large among people in 10 neighboring provinces (N=3,835) along the rice–wheat border. These neighboring provinces differ sharply in rice and wheat, but little in latitude, temperature, and other potential confounding variables. Outside of China, rice farming predicted norm tightness in 32 countries around the world. Finally, people in rice-farming areas scored lower on innovative thinking, which tends to be lower in societies with tight norms. This natural test case within China might explain why East Asia—historically reliant on rice farming—has tighter social norms than the wheat-farming West.

Published August 18, 2020 in *Proceedings of the National Academy of Sciences*
SUDDEN-DEATH AVERSION: AVOIDING SUPERIOR OPTIONS BECAUSE THEY FEEL RISKIER

Richard Thaler
CDR Faculty

Jane Risen
CDR Faculty

Full paper:
bit.ly/CDR21-ThalerRisen

AUTHOR INSIGHTS

“I have been a behavioral economist for over 40 years but this paper is the first time I ever published a paper in a top psychology journal. It took three real psychologists to make this happen. The paper asks the question ‘why do teams elect a strategy that will win less often but puts off losing by a few minutes (or seconds)?’ We call the malady ‘sudden-death aversion’ where the aversion is not to actual death but to a quick loss. We think businesses can fall into a similar trap, by being unwilling to take a risk now that just delays the eventual demise of the business.’

—Richard Thaler

Abstract

We present evidence of sudden-death aversion (SDA)—the tendency to avoid “fast” strategies that provide a greater chance of success, but include the possibility of immediate defeat, in favor of “slow” strategies that reduce the possibility of losing quickly, but have lower odds of ultimate success. Using a combination of archival analyses and controlled experiments, we explore the psychology behind SDA. First, we provide evidence for SDA and its cost to decision-makers by tabulating how often NFL teams send games into overtime by kicking an extra point rather than going for the 2-point conversion (Study 1) and how often NBA teams attempt potentially game-tying two-point shots rather than potentially game-winning three-pointers (Study 2). To confirm that SDA is not limited to sports, we demonstrate SDA in a military scenario (Study 3). We then explore two mechanisms that contribute to SDA: myopic loss aversion and concerns about “tempting fate.” Studies 4 and 5 show that SDA is due, in part, to myopic loss aversion, such that decision-makers narrow the decision frame, paying attention to the prospect of immediate loss with the “fast” strategy, but not the downstream consequences of the “slow” strategy. Study 6 finds that people are more pessimistic about a risky strategy that needn’t be pursued (opting for sudden death) than the same strategy that must be pursued. We end by discussing how these twin mechanisms lead to differential expectations of blame from the self and others, and how SDA influences decisions in several different walks of life.

Published September 2018 in Journal of Personality and Social Psychology
Instantaneous impressions from facial appearance influence important decisions. Competence impressions, for example, predict leadership success. Using methods for visualizing stereotypes, this research reveals that controlling for attractiveness, the major components of competence impressions are masculinity and expressions of confidence. These findings show biases against women in competence impressions.”

Abstract

Competence impressions from faces affect important decisions, such as hiring and voting. Here, using data-driven computational models, we identified the components of the competence stereotype. Faces manipulated by a competence model varied in attractiveness (Experiment 1a). However, faces could be manipulated on perceived competence controlling for attractiveness (Experiment 1b); moreover, faces perceived as more competent but not attractive were also perceived as more confident and masculine, suggesting a bias to perceive male faces as more competent than female faces (Experiment 2). Correspondingly, faces manipulated to appear competent but not attractive were more likely to be classified as male (Experiment 3). When masculinity cues that induced competence impressions were applied to real-life images, these cues were more effective on male faces (Experiment 4). These findings suggest that the main components of competence impressions are attractiveness, confidence, and masculinity, and they reveal gender biases in how we form important impressions of other people.

Published December 7, 2018 in Psychological Science
HOW IDENTITY SHAPES VOTING BEHAVIOR

Oleg Urminsky
CDR Faculty

Voters make choices based less on only economic self-interest than was once thought and more on political identity, according to a growing body of recent research. London Business School’s Stephanie Y. Chen, a former post-doctoral fellow at Booth, and Booth’s Oleg Urminsky add to mounting evidence that party affiliation is key, finding that people who consider their political party more central to their identity tend to vote along party lines more than those who see it as more peripheral.

This role of an affiliation in a person’s identity is known as “causal centrality.” Consider the hypothetical example of two Republican women in the United States. One says that being a Republican doesn’t inform other aspects of her identity, such as her beliefs and convictions, or even her choice of profession. The other says being a Republican does inform these things. For the second person, being a Republican is more causally central.

**People for whom political identity was more causally central were more likely to vote along party lines, even if they disliked their party’s candidate.**

In an online survey in the US, Chen and Urminsky directed 355 people, who had already disclosed their political affiliations, to think about how being a Republican or a Democrat related to other aspects of their identity. They asked Democrats, “Which of the other features of your personal identity listed below, if any, are caused by you being a Democrat?” The choices included: “being female/male,” “being pro-gun control,” “being pro-choice,” and “being a college graduate.” Participants checked the aspects they agreed with. In some cases, the researchers gave participants the list of options, and in other cases, participants generated their own. They posed a similar set of questions to Republicans.

Chen and Urminsky find that people for whom political identity was more causally central were more likely to vote along party lines, even if they disliked their party’s candidate.

They find that national identity, when it is causally central, can also predict political behavior. A poll they conducted of 243 UK residents about the Brexit referendum reveals that people who evaluated being British or English as more causally central to their identities were more likely to support Brexit than those for whom national identity was less central.

The findings could be used to further segment voters, Urminsky says, but he hopes they will help people better understand those with different politics. A Democrat trying to understand a Republican’s votes might, for example, look at how a person’s family history or political role
models led someone to become a Republican.

“Identity is really the roadmap of our lives,” he says. “A more nuanced understanding of why political parties are important to people may give us strategies for talking to others.”

Written by Alice G. Walton for Chicago Booth Review
Originally published September 21, 2018

Works Cited

GRB  Gender, Race, and Bias

THE EFFECTS OF CATEGORY AND PHYSICAL FEATURES ON STEREOTYPING AND EVALUATION

In Study 1, we tested for linear and quadratic associations between racial prototypicality and stereotyping of Black and White males, while also manipulating the valence of the stereotypes. Study 2 offered a conceptual replication of Study 1 and tested for linear and quadratic associations between gender prototypicality and stereotyping of White males and White females, while again manipulating the valence of these gender stereotypes. Across both studies we replicated previous research showing a positive, linear effect of prototypicality on stereotyping, such that targets greater in prototypicality elicited greater stereotyping. We also found evidence of a quadratic effect of prototypicality on stereotyping, such that average prototypic targets elicited the most stereotyping. Finally, we observed that negative, rather than positive, stereotypes drove both the linear and quadratic effects we report.

Published November 2018 in Journal of Experimental Social Psychology

Bernd Wittenbrink
CDR Faculty

Full paper: bit.ly/CDR21-Wittenbrink

Abstract
Stereotyping and prejudice researchers have provided numerous demonstrations that the greater a target’s prototypicality, the more similar attitudes and inferences will be to the attitudes and stereotypes perceivers have about the group. However, research to date has yet to also test for a possible quadratic association relating target prototypicality to judgment. The current research offers an extension of existing research by testing for both linear and quadratic relationships between target prototypicality and stereotyping using an implicit measure of stereotyping.
One of the repercussions of the COVID-19 pandemic is the closure of businesses across many industries and sectors. Those that have remained open have changed their business models. As a result, companies have and will continue to negotiate new commercial agreements and come to terms on deals with new vendors, producers, and customers.

In these negotiations, buyers want to pay as little as possible and sellers are hoping to get as much as they can. Most of the time, neither party knows how well they truly do because we don’t know how high or low our adversaries were willing to go.

I advise negotiators to do research and take an educated guess about their counterparts’ bottom lines. You might consider it a win if you wind up closer to the number that you believe to be their limit. But one thing is generally true: We often overestimate how good of a deal we brokered.

**Negotiators who can be more bold will wind up with a bigger piece of the pie.**

We show this all the time in our negotiation classes. One student is a buyer and is told that she can spend no more than $50,000 on a product. The other student is the seller and given a bottom line of $35,000. Then we set them loose to get the best deal, with neither knowing the other’s limit. Let’s say they agree to a price of $42,000. After the negotiation is complete, we ask the seller and the buyer to guess their counterpart’s bottom lines. Sellers, in this case, give a number like $45,000, while buyers guess something like $39,000. Both sides walk away thinking that they pushed the other side close to their limit, when in fact the surplus, in this case, was divided pretty equally.

We call this the small-pie bias because both negotiators believe that the pie is much smaller than it actually is. Getting a big piece of a small pie would be a good deal, but the same-sized piece from a much larger pie means that you probably could have done a little bit better for yourself.

As your business attempts to regain its footing after the COVID-19-induced economic downturn, you’ll need to negotiate the best deals you can. My advice is to be more aggressive than you’re probably inclined. Consider going 10 percent higher or lower with an opening offer, or asking for one more concession from your counterpart.

The key is to dial it up just a little more than usual, but not to go so far that you run the risk of scuttling a deal altogether.

That’s always been a fine line to walk in any negotiation. But you can do it more confidently if you realize that the line generally isn’t as narrow as you’re imagining it.

Written by George Wu for *Chicago Booth Review*  
Originally published July 21, 2020
The Center for Decision Research is a dynamic community of behavioral scientists who examine the processes by which intuition, reasoning, and social interaction produce beliefs, judgments, and choices. As part of the University of Chicago Booth School of Business, the CDR is home to faculty whose accolades include the Nobel Prize and MacArthur Fellowship. The Center for Decision Research conducts world-class behavioral science research, mentors the next generation of leading scholars and practitioners, and serves as an intellectual hub for the discipline—advancing scientific discovery as well as public awareness of behavioral science’s positive impact at both the individual and societal level.

The articles here were originally published in the Chicago Booth Review, which publishes research-driven insights on business, policy, and markets. Chicago Booth Review is a publication of the University of Chicago Booth School of Business.

Read more at: review.chicagobooth.edu

In summer 2021, the CDR opened Mindworks: The Science of Thinking, the world’s first discovery center and working lab for behavioral science, in the heart of Chicago’s cultural corridor.

Free and open to the public, Mindworks welcomes visitors to participate in studies that examine the science of human behavior, particularly judgment and decision making, and to experience hands-on exhibits showcasing the powerful, real-world impact of behavioral science.

Mindworks was conceived by faculty at the CDR and was made possible by generous philanthropic support from PIMCO.

Learn more and plan your visit at mindworkschicago.org.
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