

# Improving Program Outcomes with Behavior Science

By John Kamensky

For years, government policymakers encouraged workers to increase their investments in tax-free retirement savings. But they were baffled by how many workers were leaving “free money” on the table by not signing up to participate in employer-matched 401K pension plans. However, when some companies changed their enrollment process from having workers “opting in” to the program vs. automatically enrolling them (and allowing them to opt out), enrollment rates increased by 50 percent.

Why did that minor change in the enrollment process make such a big difference? It turns out that a natural human tendency is to rely on the default option—that is, to take what’s given, even if that’s not the best choice. This human tendency is one of a range of human tendencies studied in what is called social “behavioral science” research.

In the private sector, insights based on behavioral science have been used extensively for years in sales, marketing, and negotiations. But there are intriguing implications for use in the public sector as well. Pioneers in government have tested strategies to entice citizens to recycle, volunteer, vote, and give to charity.

Using insights based on behavioral science isn’t new, but it has received increased prominence in the past five years at all levels of government. It is increasingly becoming an important part of policy and process design thinking because it is seen as a powerful way to improve program outcomes in lieu of traditional policy tools such as spending, taxes, and regulatory mandates.

## What Is Behavioral Science?

Behavioral science research “studies how people react to changes in cues or incentives,” according to the Behavioural Insights Team, which originated as a temporary British government agency in 2010 to promote its use by government policymakers and program managers. A key premise underlying the field of behavioral science is that everyone is prone to “cognitive bias.” That is, we can’t



assume people will make decisions based on rational behaviors. Therefore, we shouldn’t assume customers or citizens will respond rationally to rationally-designed policies, systems, directives, or processes.

This premise—that people cannot be assumed to be rational and will make decisions that may not necessarily be in their own best interest—upended the field of economics in the 1990s. This same upending is in the process of happening in the field of public administration.

Understanding the insights provided through behavioral science research may help answer an age-old public administration dilemma: Why do well-constructed, rational policy initiatives fail? As a result, policymakers and program implementers can leverage this greater understanding of human behavior to better design policies and programs to avoid predictable cognitive biases. Or they could use it to leverage cognitive biases as part of a policy initiative to more effectively achieve intended outcomes.



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## Some Underlying Concepts for Understanding Behavioral Science: “System 1 and System 2” Thinking and Cognitive Bias

In explaining the historical evolution of concepts underpinning behavioral science, scholars note that before the 1940s the dominant model used to describe decision making “features a rational decision maker who has clear and comprehensive knowledge of the environment, a well-organized system of preferences, and excellent computational skills to allow for the selection of optimal solutions.”

In the late 1940s and 1950s, scholars began to question the dominant decision-making model featuring a rational decision maker. An historical review of the field in a 2018 *Public Administration Review* article by Nicola Bellé and his colleagues found that “people make decisions for themselves and for others by relying on a limited number of heuristic principles [mental short cuts] that reduce the complex tasks of assessing probabilities and predicting values to simpler judgmental operations.”

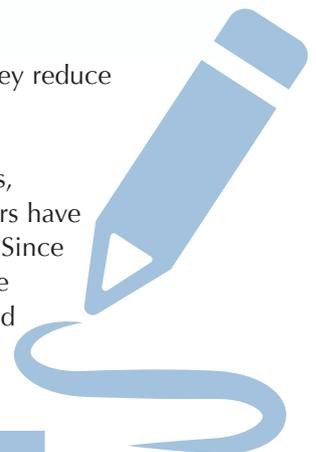
Based on this new insight, they conclude that “decision makers are prone to cognitive biases [errors in thinking] that systematically affect their estimates, judgments, and choices in any domain.”

**What Is “System 1 and System 2” Thinking?** Pioneering psychologists Daniel Kahneman and Amos Tversky describe the differences between the use of heuristics and rational decision making as System 1 and System 2 thinking, where:

- **System 1 thinking** is perceptual, fast, intuitive, automatic, and effortless. An example is judging the potential actions of other drivers while driving home from work using the same route each day. The advantage of this use of mental shortcuts reduces complexity and allows fast, effortless, automatic and associative decision making.
- **System 2 thinking** is reason-based, slow, takes mental effort, and is rule governed. Judgments are based on intentional and explicit processes. An example is choosing a health plan. Sometimes it involves the use of external decision support models, software, or group decision making.

Under System 1, the use of heuristics (rules of thumb/mental shortcuts) can be effective in that they reduce complexity. However, they tend to lead to systematic errors, which are called “cognitive biases.”

**What is Cognitive Bias?** Award-winning author on emotional intelligence, Travis Bradberry, writes, “Cognitive bias is the tendency to make irrational judgments in consistent patterns . . . Researchers have found that cognitive bias wreaks havoc by forcing people to make poor, irrational judgments . . . Since attention is a limited resource, people have to be selective about what they pay attention to in the world around them. Because of this, subtle biases can creep in and influence the way you see and think about the world.” But cognitive bias isn’t just one “thing.” One researcher has cataloged 170 different kinds of cognitive biases.



## Behavioral Science in the Federal Government

The use of behavioral science tools has evolved rapidly over the past five to seven years in the public sector. This growth is in tandem with related evidence-based trends such as data and analytics, rapid cycle testing, and pressures to improve customer experience with government services.

In the U.S. federal government, these different threads intersect in the Office of Evaluation Sciences (OES). This small office in the U.S. General Services Administration (GSA) was created in 2015 to provide a cadre of talent to help agencies use these new techniques to get better results in their programs.

Interestingly, this office preceded the adoption of the Evidence Act earlier this year, which will create an even greater demand for its specialized talents as agencies are pressed to develop their own evidence and evaluation strategies, which also include the use of behavioral science techniques. For example, the Department of Labor has already developed a guide for its operational bureaus on how to best use behavioral interventions in their programs.

## The Office of Evaluation Sciences

OES is a multidisciplinary team that blends a range of professional disciplines comprising the field of behavioral science. These include psychology, economics, political science, ethnography, statistics, and program evaluation. Under the leadership of Kelly Bidwell, the office conducts work that spans behavioral science, evidence, and evaluation. It supports agencies, for example, in implementing the Office of Management and Budget's



implementation guidance for the recently-passed Foundations for Evidence-Based Policymaking Act of 2018.

The office is located in GSA's Office of Governmentwide Policy and has a staff of about 15 to 20 specialists that are a mix of career civil servants and rotational staff from academia or nonprofits who serve one- to four-year terms. Staff members typically oversee two to four projects at a time. Office director Bidwell says the use of rotational staff keeps the career staff connected to cutting edge intervention design techniques such as appropriate sample size, evaluation design, analytic techniques, etc.

She also says that, because they are federal employees, they have greater access to the use of federal administrative data sets for analyses than would academics or other nonfederal researchers.

The OES team's approach is to undertake rapid cycle projects, using low-cost solutions (e.g., redesigning a notification letter). Their core deliverables are actionable results to drive better programs and policies—all projects are posted and summarized on their website.

## What They Do

Agencies approach OES to help them conduct projects that require expertise that they may not have on their own staffs. OES typically works on 20 to 30 projects at a time with a wide range of agencies to help clarify identified problems (e.g., define the gap between a program's goal and reality in order to identify the key trip points), test interventions (often using randomized control trials and large existing data sets), and where successful to help agencies determine how to scale the pilot to a larger population.

According to Bidwell, many of the OES team's solutions are inexpensive to apply and can be implemented relatively quickly, based on 6- to 12-month trials. Their proposed interventions typically don't require legislation, regulatory changes, or significant funding. Where possible, they like to conduct large-scale testing using federal administrative data, develop rigorous findings and results, and use evaluation techniques. Their approach is experimental—typically iterative, and trial-and-error. Oftentimes their solutions involve changing the way a program is described, timing, and/or the sequence of choices being offered.

Bidwell says her team likes to work in partnership with agencies with the goal of transitioning ownership of the project to the agency partner. Over the long run, Bidwell

says, they hope to create an appetite for using behavioral and analytic techniques and create a new capacity for them to use.

Actions taken by their agency clients might vary from scaling up a successfully-tested intervention to advice on reorganizing their administrative data so it can be used to answer related questions or retest a successful intervention on a different population. So far, they found that agencies are more reluctant to changing a program's design (such as changing default settings on application forms) than they are to making small changes (such as fine-tuning the presentation of information). However, they hope to generate evidence on the effects of more substantial changes in the near future.

### Examples of the Range of Projects They Undertake

What kind of projects does OES undertake with different federal agencies? Team members work across the government to provide end-to-end support in the design of an evidence-based programmatic change and test the change to measure its impact. Bidwell says that sustaining such change is more effective when the OES team collaborates with internal agency champions who drive the process, participate in the design and implementation of an evaluation, assist in the analysis and interpretation of results, and make decisions about scale and program implications.

Recent projects they've undertaken span a wide range of policy areas, such as:

- Simplifying applications for school lunch eligibility
- Encouraging vaccination uptake rates
- Improving participation in programs to reduce student loan defaults
- Increasing retirement savings for active duty service members

Bidwell says that lessons learned in one program are sometimes transferrable to programs in other agencies. This even includes publicly posting “null findings”—that is, when the experimental interventions failed to produce any changes.

### Who Else Could Use It

Behavioral science techniques are being applied in a wide range of policy areas. And they are being used by many different government players. Peter John, in a recent book, *How Far to Nudge*, says that it should not be just a tool of technocrats but decentralized to agencies and local



governments to incorporate into their own autonomous activities where it “can help the creation of an automated and self-regulating system whereby people get to their goals and where there is a synergy between social and individual aims.”

To that end, behavioral science techniques can be useful to:

- **Policy and program design analysts** to expand their range of policy levers beyond the use of regulations, mandates, market mechanisms, tax incentives, insurance, etc.
- **Customer experience officers** to better understand and improve how agency clients interact with programs
- **Design thinking teams**, agility teams, and innovation offices
- **Citizen engagement teams** to identify ways to illicit greater participation and response
- **Chief risk officers** as a tool to assess or manage risks in implementing programs
- **Chief human capital officers** to improve employee engagement
- **Chief cybersecurity officers** to predict potential weaknesses in how individual users might be tricked into installing malware, etc.
- **Program evaluation officers** to assess why programs may not be delivering results as anticipated

## How Far Can We Go?

While behavioral science has been around for a number of years in different pockets of the government, how far might its use expand? How does it fit into the context of traditional policy and implementation tools?

There may be more questions than answers at this point with regard to the need for more proof or validation. But the federal Office of Evaluation Sciences, for example, has been very good at being transparent about its projects, describing both what works and what doesn't. It certainly can't be accused of painting targets around the bullet holes!

There are opportunities to expand its use to improve the probabilities of successful program design and implementation, but probably more research needs to be done at the federal level to show how these approaches can be applied in the context of the traditions of administrative law and the Administrative Procedures Act. For example, behavior science assumes more interactive, test-and-fix approaches—while traditional administrative law assumes more linear and logical design approaches to program design and implementation. Also, the skill sets—data analysts vs. legal analysts—are different.

However, the best approach is probably to keep experimenting and engage a wide range of different talents to make it work.

## Additional Resources

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