

# the white house social & behavioral sciences team: lessons learned from year one

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## abstract

On September 15, 2015, President Obama signed Executive Order 13707 titled "Using Behavioral Science Insights to Better Serve the American People." The order directs federal agencies to integrate behavioral insights into their policies and programs and formally establishes the Social and Behavioral Sciences Team (SBST). Originally launched in 2014, SBST translates insights from behavioral science research into improvements in federal policies and programs. In its first annual report, SBST detailed results from projects that drew on behavioral insights to promote retirement security, expand college access and affordability, connect workers and small businesses with economic opportunities, improve health outcomes, and increase program integrity and government efficiency. The results of SBST projects offer important lessons for bringing a behavioral perspective to federal policy. The executive order provides a framework for future policy applications.

## The White House Social & Behavioral Sciences Team: Lessons learned from year one

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In 2014, the White House Office of Science and Technology Policy created the Social and Behavioral Sciences Team (SBST) to translate research findings and methods from the social and behavioral sciences into improvements in federal policies and programs for the benefit of the American people. Building on SBST’s first year of work, President Obama signed Executive Order 13707, “Using Behavioral Science Insights to Better Serve the American People,” on September 15, 2015.<sup>1</sup> The order directs federal agencies to integrate behavioral

insights into their policies and programs and formally establishes SBST.

The third paragraph of Executive Order 13707 perhaps best articulates SBST’s goals:

To more fully realize the benefits of behavioral insights and deliver better results at a lower cost for the American people, the Federal Government should design its policies and programs to reflect our best understanding of how people engage with, participate in, use, and respond to those policies and programs. By improving the effectiveness and efficiency of Government,

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behavioral science insights can support a range of national priorities, including helping workers to find better jobs; enabling Americans to lead longer, healthier lives; improving access to educational opportunities and support for success in school; and accelerating the transition to a low-carbon economy.

SBST strives to achieve these goals by identifying federal policy and program objectives that depend on the decisions or actions of individuals. It then leverages insights from behavioral science research to redesign those policies and programs accordingly. Successful SBST projects to date demonstrate that behavioral science research can help government programs better serve Americans.

SBST projects have implications for policymakers throughout government, as well as for behavioral science researchers in academia and elsewhere. By virtue of its wide array of programs and the scale at which those programs operate, the U.S. federal government is in a unique position to realize the potential social payoffs from behaviorally informed policymaking. Policymakers, program administrators, and behavioral science researchers all share a stake in the success of this initiative.

Results from SBST's initial projects offer some early lessons for developing behavioral applications to federal policy. Below, we explore a few of those lessons. We also expand upon the framework of Executive Order 13707, which builds on some of the early work and provides direction for future policy applications of behavioral science research.

## Lessons from SBST's First Year of Work

SBST's first year was a demonstration of proof of concept. The goal was to show that the federal government could launch a coordinated effort that effectively applied behavioral science insights to a range of federal government programs. In September 2015, SBST released its first annual report, which detailed the results of a set of initial projects that drew on behavioral insights. These projects helped promote retirement security, expand college access and affordability, connect workers and small businesses with economic opportunities, improve health outcomes, and increase program integrity and government efficiency.<sup>2</sup> (See

Table 1 at the end of this article for brief descriptions of the projects.) Several important lessons emerged from this initial portfolio of collaborations, including those illustrated by the four case studies described below.

## The Case for Change Is Cumulative

In its first year, SBST focused on executing projects in which behavioral insights could be embedded directly into programs at a low cost and potentially generate immediate, quantifiable improvements in program outcomes. Given the short time frame, most large policy design features, such as default settings of policy choices, were taken as fixed. That said, these quick, small-scale projects set the stage for larger projects and collaborations down the line.

A sequence of collaborations with the Department of Defense (DOD) promoting retirement security illustrates this point. In 2014, only 42% of active duty service members—compared with 87% of civilian federal employees—were enrolled in the Thrift Savings Plan (TSP), the federal government's workplace savings program. One likely cause for this difference is that the federal government automatically enrolls civilian employees in TSP, but has not done so with service members (a practice due to change in 2018).

Given the extensive body of behavioral science research that addresses retirement savings, SBST identified this policy area as a ripe opportunity to apply behavioral insights.<sup>3,4</sup> To quickly demonstrate the impact of behavioral insights on DOD programs and to gain momentum in support of future large-scale efforts, SBST and DOD looked first for a chance to rapidly implement a low-cost, quantifiable behavioral intervention.

SBST identified one such opportunity in December 2014, when DOD indicated that it planned to send out an e-mail notice to approximately 140,000 service members enrolled in a Roth TSP, a type of TSP plan. The notice alerted service members of a change in the online military pay system that would require them to reenroll in their Roth TSP in January 2015 to avoid having their contributions suspended indefinitely. SBST worked with DOD to leverage behavioral insights to redesign the notice and to embed a low-cost, randomized evaluation into a broader outreach campaign. The redesigned version of the e-mail emphasized the New Year as a chance for service members to make a fresh start with their finances, clarified the steps needed to

complete the reenrollment process, and encouraged action to avoid losing the chance to contribute savings.<sup>5</sup>

Within one week of the e-mails being sent, the redesigned e-mail using behavioral insights led to a 5.2-percentage-point increase (from 23.5% to 28.7%) in reenrollments in the Roth TSP relative to the original notice. On the basis of this result, DOD scaled up the effective behavioral messaging in follow-up email messages to all service members that encouraged them to act before the reenrollment deadline.

More important, on the basis of this initial pilot study and its demonstration that behavioral insights were a low-cost, effective tool for supporting DOD's goal of service member financial security, DOD entered into a larger-scale, multiyear collaboration with SBST. Over the course of 2015, DOD and SBST collaborated on two additional projects. The first was a pilot study that prompted service members not enrolled in TSP to make a yes or no choice about whether to sign up for TSP during an orientation briefing upon their arrival at a new military base. This pilot study led to a significant boost in TSP enrollments.<sup>4</sup> The second was an e-mail campaign that sent approximately 720,000 nonenrolled service members messages about TSP that were designed using behavioral insights: these insights included framing the decision to enroll as a choice between two options ("Yes, I want to enroll" or "No, I do not want to enroll") and charting out clear action steps for enrolling.<sup>6</sup> In this campaign, messages informed by behavioral insights led to roughly 4,930 new enrollments and \$1.3 million in savings in just the first month after the messages were sent.

On the basis of the success of these efforts, SBST and DOD continue to expand the scope of this work. DOD has committed to applying insights from the military base pilot study to bases and installations across the country with higher troop concentrations. Moreover, DOD now sends service members periodic e-mails informed by behavioral insights about the benefits of TSP. (In an action independent of the efforts described above, Congress in 2015 passed legislation that will require that new service members be automatically enrolled in TSP beginning in 2018.)

### Pilot Studies Are Only Starting Points

Although SBST conducts much of its work as empirical projects, research is not its end goal. Demonstration

projects and evaluations are merely ways to identify whether an intervention has an effect and to develop evidence for how to better design programs and policies. Ensuring that policies and programs incorporate the lessons of those empirical projects requires independent attention and effort.

A project with the General Services Administration (GSA) demonstrates this point. When the government purchases goods and services from vendors under certain contracts, those vendors are required to do two things: first, report those sales to the government and, second, pay a small fraction of their reported sales to the federal government as an administrative fee known as the Industrial Funding Fee (IFF).

To promote more accurate self-reporting of the sales and, consequently, more accurate payments of the IFF, SBST and GSA introduced a required signature box at the top of an online payment form for a random sample of roughly 18,000 contractors. The signature box asked contractors to confirm the truth and accuracy of the information they were about to report. This intervention is based on research showing that requiring people to sign their names to confirm the accuracy of self-reported statements at the top of a form can reduce self-reporting errors.<sup>7</sup>

Results demonstrated that the signature box at the top of the form was effective. The median self-reported sales amount was \$445 higher for vendors signing at the top of the form compared with those vendors who were not required to make this confirmation. The combined amounts collected totaled \$28.6 million from those for whom the confirmation was required, compared with \$27.0 million from those for whom it was not. In other words, by introducing the signature box, the federal government collected an additional \$1.59 million in fees in a single quarter.

Although this was an exciting result, crucially, the work of SBST did not end there. SBST continued its collaboration with GSA to help bring this pilot study's result to scale. GSA is now making permanent changes to the online form to incorporate a signature box so that it can achieve improved IFF program integrity on an ongoing basis.

### Testing Is Feasible, Effective, and Informative

At its core, SBST's mandate is one of translation: using promising research findings to create pragmatic

program solutions. But designing optimal ways to communicate with the public, to structure choices and incentives, and to help qualifying individuals access public programs is not as simple as reviewing the scientific literature and implementing its findings. Decades of behavioral research has shown that the ways in which individuals respond to program details, such as the presentation of information or the structure of choices, is highly context specific.

As a result, any effort to translate behavioral research to policy will benefit from frequent evaluation and feedback. Whenever possible, SBST works with agencies to rigorously test the impact of behavioral insights on program outcomes before implementing them widely. In this way, SBST can learn about what works, what works best, and what does not work. Moreover, because agencies can often embed these tests directly into their programs and evaluate impacts using existing administrative data, the tests can be relatively quick and inexpensive.<sup>8,9</sup> Two null results from projects in SBST's first year illustrate the importance of this approach. In both cases, SBST and agency collaborators leveraged research showing that highlighting the contrast between the actions of an individual and the social norm (how most people act) can successfully prompt action.<sup>10,11</sup>

In one project, SBST worked with the Department of the Treasury's Debt Management Service (DMS) to increase collections from individuals with outstanding nontax debt. Individuals might incur this type of debt by, for example, failing to repay Medicare for an overpayment they received. SBST and DMS redesigned DMS's standard collection letter to include simplified language, a shortened web address for making online payments, a personalized salutation, and a prominent reference to the total amount owed in the letter's opening line. It also included an accurate statement that 91% of Americans pay their debts on time (appealing to a social norm of timely payments).<sup>12</sup>

DMS sent approximately 21,000 letters to debtors. There was no observed difference in payment rates between those who were sent the redesigned collection letter and those who were sent the standard collection letter. The age and status of this debt may have been contributing factors. Recipients of these letters were already 180 days or more behind in their payments.

The second project involved the Centers for Medicare and Medicaid Services' (CMS's) efforts to combat inappropriate drug prescribing. Drawing again on social

norms, SBST and CMS produced a letter sent to a subset of providers with unusually high billing patterns for Schedule II prescriptions such as opioids. Each letter compared the recipient's prescribing rates with those of his or her peers and provided educational information about proper prescribing practices. No measurable impact on prescription rates was seen over the 90 days after the letter was mailed.<sup>13</sup> On the basis of this finding, CMS and SBST are implementing additional approaches to reducing overprescribing that will alter the design, timing, and frequency of the government's letters.

## Results Build Evidence for Broader Changes

To serve its mission, SBST ensures its projects always include the goal of supporting broader conclusions about ways to improve the operations of government, the administration of federal programs, or the design of federal policies. This goes beyond simply applying the direct results of a test to a program or adopting interventions that work and abandoning those that do not. In many cases, the success or failure of a particular intervention can inform decisions about broader policy changes.

One example comes from a project with the Department of Veterans Affairs (VA). The goal was to expand veterans' access to benefits designed to help service members successfully reintegrate into civilian society. Through its Chapter 36 benefits program, the VA offers a variety of education, training, and job placement services.

SBST worked with the VA to increase awareness and participation in this benefits program with low-cost informational e-mails. The VA sent veterans either one of two e-mails or no e-mail (the business-as-usual practice).<sup>14,15</sup> One e-mail highlighted veterans' eligibility for the benefit; the other e-mail highlighted that veterans had *earned* the benefit through their years of service. The e-mail emphasizing that the benefit was earned led to more action; nearly 9% more veterans who received it clicked through to the benefit application than did those who received the e-mail that simply emphasized that they were eligible.

Still, the number of benefit applications that veterans filled out remained quite low. Between November 2014 (when the e-mails were sent) and March 2015, only 146 veterans (0.3% of the people who received e-mails) applied for Chapter 36 benefits. The results suggest that barriers to enrollment in the Chapter 36 benefit program lie elsewhere and that more extensive changes may be

necessary to promote access to these benefits. Results such as these can compel deeper analysis into the true barriers that may limit access to or effective engagement with government programs.

Even in instances where a light-touch intervention is effective, SBST results can suggest potentially more ambitious changes to program and policy designs. For example, if prompting service member enrollment in a retirement savings plan at key points during service member careers can significantly boost participation, what might that mean for how access to that plan should be designed in the first place? If a single informational e-mail can help individuals choose a student loan repayment program, what might this suggest about how best to structure that choice set? Through small changes to program administration, the impacts of SBST projects point to broader opportunities for policymakers to use behavioral insights to achieve policy goals across the federal government.

## Future Directions under the Executive Order

In addition to the directives described above, Executive Order 13707 provides a high-level framework for identifying elements of policies, programs, and operations where behavioral insights might strongly contribute to desired policy outcomes.<sup>16–20</sup> This framework provides a point of departure for policymakers who seek to apply research insights from behavioral science to current policy challenges. In doing so, it also provides a potentially instructive point of reference to behavioral science researchers outside of government regarding avenues of investigation or research questions that are most directly and immediately policy relevant. Below we elaborate on how SBST interprets this framework.

### Rules and Procedures Governing Access to Programs

The order encourages agencies to “identify opportunities to help qualifying individuals, families, communities, and businesses access programs and benefits” (see reference 1, section 1[b](i)). Behavioral science research demonstrates that seemingly small barriers to program access—such as lengthy or complex applications—can limit participation in programs by eligible individuals.<sup>21</sup>

Further, a behavioral perspective suggests that complex eligibility criteria may in some instances impose costs to program access that outweigh the

benefits of improved targeting efficiency. For example, research indicates not only that the complexity of the application for federal student aid deters some students from enrolling in college.<sup>22</sup> It also provides evidence that basing aid determinations on less information about financial aid applicants would have modest effect on the program’s goal of providing aid to people who need it most.<sup>23</sup> Together these results provide important evidence regarding the optimal design not just of the application process, but also of the underlying eligibility criteria that determine student aid amounts.

The order’s emphasis on access also highlights the value of research examining behavioral determinants of participation in federal programs. The success and impact of the policy applications of research on financial aid applications and retirement plan participation follow, in part, from the direct policy relevance of that research.<sup>22,3</sup>

### Provision of Information

Agencies are encouraged to “improve how information is presented to consumers, borrowers, program beneficiaries, and other individuals” (see reference 1, section 1[b](ii)). Many federal policies provide, require, or set standards for the provision of information to the public to help inform individual decisions. A behavioral perspective emphasizes the importance of presenting information in ways that are meaningful to individuals and allow for the effective use of that information.

For this reason, research into how behavioral factors interact with the content and presentation of information provided or regulated by federal agencies is valuable for policy. To take one example, research shows that individuals are better able to form accurate judgments about automotive fuel efficiency when information is presented as gallons per mile rather than miles per gallon. This research has directly informed the design of the sticker required by the Environmental Protection Agency on new cars.<sup>24, 25</sup>

### Presentation and Structure of Choices Offered by Programs and Policies

The order encourages agencies to “identify programs that offer choices and carefully consider how the presentation and structure of those choices . . . can most effectively promote public welfare” (see reference

1, section 1[b][iii]). In situations where federal programs offer individuals choices, a behavioral perspective emphasizes how contextual factors, such as the complexity of choices or the number of options, are likely to influence decisions.<sup>26</sup>

Behavioral insights can address important issues related to program choice not just by simplifying the presentation of or assisting with those choices, but also by streamlining the number of options or the dimensionality of choice attributes. Behavioral insights can also help in situations where individuals are not presented with explicit menus of program choices but still have options in how they use programs—for example, the choice of when to claim a benefit.

The order's emphasis on choice also highlights the value of continued behavioral science research on the construction of choice sets and the presentation of choices in federal programs. Examples include research on choices among health insurance plans offered by programs such as Medicare<sup>27,28</sup> or research exploring how people choose when to claim retirement benefits in Social Security.<sup>29</sup>

#### Use of Incentives to Achieve Policy Objectives

Finally, agencies are urged to “review elements of their policies and programs that are designed to encourage . . . specific actions, such as saving for retirement or completing education programs” (see reference 1, section 1[b][iv]). A central insight from behavioral science is that individuals do not respond to financial incentives as neatly as predicted by, for example, standard economic theory.<sup>30,31</sup> In addition, individuals respond, sometimes strongly, to nonprice or nonfinancial incentives.<sup>17,32</sup>

Behavioral insights point to how the salience, structure, and timing of financial incentives can mediate their effectiveness.<sup>33</sup> In addition, research from behavioral science reveals instances when nonfinancial incentives may be more effective or efficient than financial incentives. For example, research has shown that automatic enrollment is, in some contexts, more effective at encouraging savings in retirement savings plans than tax incentives are.<sup>34</sup>

The order's emphasis on incentives also highlights the value of research aimed at understanding behavioral responses to the incentives created by federal policies.

One example is research demonstrating that some individuals may be more responsive to tax incentives to save for retirement if the benefit is structured as a match to savings rather than as a tax credit.<sup>35,36</sup>

#### Next Steps for Program Officials, Researchers, and Policymakers

SBST's work to date has produced improvements in outcomes across a range of federal policy areas. But in many ways, it illustrates just how much more work there is to be done, by researchers and policymakers alike, before the sustained translation of behavioral science insights into federal policy reaches its full potential. Identifying and realizing these broader applications will be ongoing work and involve the continued and collaborative engagement of program officials, policymakers, and researchers.

For program officials who are working to apply behavioral insights at various levels of government, the lessons of SBST's first year are possibly instructive: Quick proof-of-concept work can build momentum for larger efforts, but lasting program and policy changes remain the end goal for this initiative. Agency officials may find it especially productive to look for opportunities to apply behavioral science insights to improve outcomes when they are administering or implementing rules that govern program access, offer choices, present information, or provide incentives.

For researchers, the framework laid out by the executive order provides a view into the elements of federal policies and programs where behavioral science research is likely to be most immediately and directly relevant. In this context, the order suggests questions for future research. For example, what can behavioral science teach policymakers about how to ensure that income-support programs reach their intended beneficiaries efficiently? How should policymakers provide consumers with information that help them make energy-saving choices among appliances, automobiles, or homes? How can we most effectively structure choices for borrowers among student loan repayment plans? The list of open questions remains long.

Researchers should also continue to seek opportunities to work with the federal government directly on applications of their research to policy. The order calls on agencies to both “recruit behavioral science

**Table 1. Results from the Social and Behavioral Sciences Team 2015 Annual Report**

Project	Description	Result
Service member Thrift Savings Plan (TSP) enrollment campaign	To promote participation in TSP, a workplace savings plan, SBST and the Department of Defense (DOD) launched an e-mail campaign. The DOD sent approximately 720,000 not-enrolled service members one of nine e-mails, with messages that applied various behavioral insights such as framing the decision to enroll as a choice between two options (“Yes, I want to enroll” or “No, I do not want to enroll”). <sup>6</sup>	Compared with no message, the most effective message nearly doubled the rate at which service members signed up for TSP. E-mails informed by behavioral insights led to roughly 4,930 new enrollments and \$1.3 million in savings in just one month. DOD is scaling up this intervention by sending periodic e-mails informed by behavioral insights to service members about the benefits of TSP.
TSP enrollment on base	To further promote saving, SBST and DOD prompted service members to make a yes or no choice about whether to contribute to TSP during an orientation briefing upon their arrival at a new military base. This intervention drew on research finding that asking employees to actively choose whether to participate in workplace savings plans can increase enrollment. <sup>4</sup>	The number of service members enrolling in TSP increased during the prompted-choice pilot study: 8.7% of nonenrolled service members enrolled, compared with 2.9% on average at three comparison bases and 4.3% during comparison periods at the pilot study’s base. On the basis of that success, DOD intends to apply insights from this pilot study across bases and installations with higher troop concentrations.
Roth TSP reenrollment	To assist nearly 140,000 service members who were required to reenroll in their Roth TSP to continue making contributions, SBST and DOD redesigned an e-mail that alerted service members to the requirement to reenroll, incorporating behavioral insights such as emphasizing the new year as a chance for service members to make a fresh start. <sup>5</sup>	The redesigned e-mail led 22% more service members to reenroll in TSP within a week—3,770 more reenrollments than among those sent a standard message. On the basis of this result, DOD immediately scaled up the successful messaging in subsequent outreach efforts to remind service members to reenroll in TSP.
Curbing college enrollment summer melt	To help students enroll in college, SBST and the Department of Education’s office of Federal Student Aid (FSA) provided technical expertise to researchers and the nonprofit uAspire on the crafting of messages notifying high school graduates accepted to college of tasks required for matriculation. This trial built on prior work showing that sending students low-cost text message reminders to complete such tasks can curb summer melt. <sup>37</sup>	A series of eight personalized text messages to low-income students reminding them to complete the required tasks led to a 5.7-percentage-point increase in college enrollment, from 66.4% to 72.1%.
Student loan payment reminders	To help federal student loan borrowers repay those loans, SBST and FSA sent a reminder e-mail to over 100,000 borrowers who had missed their first payments. Research from other contexts suggests that low-cost reminders of this nature can help individuals make payments. <sup>38–40</sup>	In the first week after it was sent, the reminder e-mail led to a 29.6% increase in the fraction of borrowers making a payment, moving the total from 2.7% to 3.5%.
Income-driven student loan repayment	To increase awareness of income-driven repayment (IDR) plans among student loan borrowers, SBST and FSA sent an informational e-mail about IDR plans to more than 800,000 borrowers who had fallen behind on payments. This project built on research finding that timely notices increase the use of benefits such as tax credits. <sup>41</sup>	The low-cost, timely message led to a fourfold increase in applications for IDR plans, with 4,327 applications for IDR plans made within 20 days of the e-mail being sent.
Education and career counseling veterans benefits	To increase veterans’ use of education and career counseling benefits, SBST and the Department of Veterans Affairs sent notices informing veterans of their benefits and the steps needed to apply.	Highlighting that the veterans had earned the benefits led nearly 9% more veterans within the sample to access the application for the benefits. <sup>14,15</sup>
Microloans for farmers	To improve economic outcomes for small-scale and specialized farmers, SBST and the United States Department of Agriculture (USDA) collaborated on a campaign to increase knowledge and use of loan options.	Farms that were sent a personalized letter with a customized set of action steps for applying for a microloan were 22% more likely to obtain a loan, increasing from 0.09 to 0.11%.

(continued)

**Table 1. Results from the Social and Behavioral Sciences Team 2015 Annual Report (continued)**

Project	Description	Result
Federal health insurance marketplace enrollment	To assist individuals and families with obtaining health insurance, SBST and the Department of Health and Human Services (HHS) sent one of eight behaviorally designed letter variants to each of more than 700,000 individuals who had already begun but not completed the enrollment process. The letters varied behavioral dynamics, including action language, an implementation intention prompt, a picture, social norm messaging, a pledge, and loss aversion. <sup>10,42-44</sup>	Those sent the most effective version of the letter were 13.2% more likely to enroll in health insurance than were those not sent a letter, with enrollment rates of 4.56% and 4.03%, respectively.
Industrial funding fee reports	To improve the accuracy of sales figures self-reported by vendors selling goods and services to the government, SBST and the General Services Administration (GSA) redesigned an online data-entry form to include a signature box at the top of the page where a user had to confirm the accuracy of self-reported sales. This intervention was based on research finding that a confirmation entered at the beginning of a form reduces self-reporting errors. <sup>7</sup>	Because vendors pay the federal government a small fee based on those sales reports, introducing this box led to an additional \$1.59 million in fees collected within a single quarter. On the basis of this result, GSA is making permanent changes to the form to incorporate a signature box.
Delinquent debt repayment	To increase debt recovery from individuals with outstanding nontax debt, SBST worked with the Department of the Treasury's Debt Management Service (DMS) to redesign a collection letter. On the basis of recent research from the United Kingdom showing that social comparisons can increase tax collection revenues, the new letter highlighted the fact that 91% of Americans pay their debts on time. <sup>11,12</sup>	No difference in payment rates was observed, but changes such as shortening the web address for making an online payment led 45% more individuals to pay online, representing an increase from 1.5% to 2.2%. DMS has permanently shortened the web link in the collection letter.
Letters to controlled-substance prescribers	To reduce inappropriate prescribing of controlled substances, SBST and HHS's Centers for Medicare and Medicaid Services (CMS) sent providers with unusually high billing patterns a letter comparing their prescribing rates with prescribing rates of their peers. Educational information about proper prescribing practices was included. This intervention was based on research showing that physicians respond to normative messages, for example, receiving feedback on their vaccination rates relative to those of their peers. <sup>45</sup>	No measurable impact was seen on prescription rates. <sup>15</sup>
Moving Treasury accounts online	To determine if letters could encourage security holders to transfer accounts to an online platform, SBST collaborated with the Department of the Treasury's Bureau of the Fiscal Service to design outreach to account holders.	Letters that included a personal appointment made with a call center led to 23% higher call-in rates than standard letters did, representing an increase from 10.6% to 13.0%. The default appointment intervention builds on behavioral science research finding that individuals are more likely to follow through on plans that identify specific moments of action. <sup>46</sup> Account conversion rates remained low for both groups, however.
Tenant satisfaction survey	To increase response rates to a workplace survey that is used to determine federal office space management strategies, SBST and the GSA incorporated behavioral insights into the timing and messaging of e-mails announcing the survey.	Among other findings, e-mail click rates were highest at lunchtime, with 15.3% of e-mails sent at 11:55 a.m. resulting in recipients clicking through to the survey, compared with 13.3% click-through from the 8:55 a.m. letters.
Double-sided printing	To encourage double-sided printing, SBST and the USDA's Economic Research Service (ERS) created a dialog box that asked employees to change their default printer setting to double-sided after employees had initiated a single-sided print job.	This prompt increased the likelihood of double-sided printing by 5.8 percentage points, from a baseline of 46%. On the basis of this finding, ERS plans to change the default setting of all printers to double-sided.

The SBST 2015 report is available at <https://sbst.gov/assets/files/2015-annual-report.pdf>

experts” and to “strengthen agency relationships with the research community” (see reference 1, section 1[a] [iii–iv]). SBST is eager to foster relationships and collaborations between agencies and the behavioral science research community. Direct engagement with agencies and programs is often the best way for researchers to understand the details of programs and identify feasible behavioral recommendations.

For policymakers, the work of SBST and the executive order point to the potential for still broader social impact. Policy applications of behavioral insights to date, as illustrated by the examples above, have been primarily retrospective. They involve reviewing existing programs through a behavioral science lens and updating programs and policies to reflect recent advances from the field. Going forward, this work should be done on a more prospective basis: Behavioral science findings and methods should be incorporated into policy design as policies are being developed so that they reflect those insights from the start. In other words, much work remains to be done.

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### author note

This paper draws heavily on the 2015 Social and Behavioral Sciences Team Annual Report, and the findings reported here reflect the work of the entire Social and Behavioral Sciences Team, as well as agency and program officials across the federal government who collaborated on this work. Any errors or oversights in this paper are, of course, the responsibility of the authors alone.

## References

1. Exec. Order No. 13707, 3 C.F.R. 56365–56367 (2015). Retrieved from <http://www.gpo.gov/fdsys/pkg/FR-2015-09-18/pdf/2015-23630.pdf>
2. Social and Behavioral Sciences Team. (2015). *Annual report*. Retrieved from <https://sbst.gov/assets/files/2015-annual-report.pdf>
3. Madrian, B. C., & Shea, D. F. (2001). The power of suggestion: Inertia in 401(k) participation and savings behavior. *Quarterly Journal of Economics*, *116*, 1149–1187.
4. Carroll, G. D., Choi, J. J., Laibson, D., Madrian, B. C., & Metrick, A. (2009). Optimal defaults and active decisions. *Quarterly Journal of Economics*, *124*, 1639–1674.
5. Dai, H., Milkman, K. L., & Riis, J. (2014). The fresh start effect: Temporal landmarks motivate aspirational behavior. *Management Science*, *60*, 2563–2582.
6. Putnam-Farr, E., & Riis, J. (2015). “Yes, I want to enroll”: Yes/no response formats increase response rates in marketing communications (University of Pennsylvania working paper).
7. Shu, L. L., Mazar, N., Gino, F., Ariely, D., & Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. *Proceedings of the National Academy of Sciences, USA*, *109*, 15197–15200.
8. Cody, S., Perez-Johnson, I., & Joyce, K. (2015). Administrative experiments: Unlocking what works better and what works for whom. *American Journal of Evaluation*. Advance online publication. doi:10.1177/1098214015600784
9. Simon, H. A., & Divine, W. R. (1941). Controlling human factors in an administrative experiment. *Public Administration Review*, *1*, 485–492.
10. Allcott, H. (2011). Social norms and energy conservation. *Journal of Public Economics*, *95*, 1082–1095.
11. Hallsworth, M., List, J. A., Metcalfe, R. D., & Vlaev, I. (2014). *The behavioralist as tax collector: Using natural field experiments to enhance tax compliance* (NBER Working Paper 20007). Retrieved from National Bureau of Economic Research website: <http://www.nber.org/papers/w20007>
12. “91 percent of Americans...” calculated based on data available at: [newyorkfed.org/householdcredit/2013-Q1/data/xls/HHD\\_C\\_Report\\_2013Q1.xlsx](http://newyorkfed.org/householdcredit/2013-Q1/data/xls/HHD_C_Report_2013Q1.xlsx)
13. Sacarny, A., Yokum, D., Finkelstein, A., & Agrawal, S. (Forthcoming). Reducing inappropriate prescribing of controlled substances in Medicare Part D: Evidence from a randomized intervention. *Health Affairs*.
14. Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1990). Experimental tests of the endowment effect and the Coase theorem. *Journal of Political Economy*, *98*, 1325–1348.
15. Hossain, T., & List, J. A. (2012). The behavioralist visits the factory: Increasing productivity using simple framing manipulations. *Management Science*, *58*, 2151–2167.
16. Chetty, R. (2015). Behavioral economics and public policy: A pragmatic perspective. *American Economic Review*, *105*, 1–33.
17. Madrian, B. C. (2014). Applying insights from behavioral economics to policy design. *Annual Review of Economics*, *6*, 663–688.
18. Shafir, E. (Ed.). (2012). *The behavioral foundations of public policy*. Princeton, NJ: Princeton University Press.
19. Congdon, W. J., Kling, J. R., & Mullainathan, S. (2011). *Policy and choice: Public finance through the lens of behavioral economics*. Washington, DC: Brookings Institution Press.
20. Bhargava, S., & Loewenstein, G. (2015). Behavioral Economics and Public Policy 102: Beyond nudging. *American Economic Review*, *105*, 396–401.
21. Bertrand, M., Mullainathan, S., & Shafir, E. (2006). Behavioral economics and marketing in aid of decision making among the poor. *Journal of Public Policy & Marketing*, *25*, 8–23.
22. Bettinger, E. P., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L. (2012). The role of application assistance and information in college decisions: Results from the H&R Block Fafsa experiment. *Quarterly Journal of Economics*, *127*, 1205–1242.
23. Dynarski, S. M., & Scott-Clayton, J. E. (2007). *College grants on a postcard: A proposal for simple and predictable federal student aid* (Hamilton Project Discussion Paper 2007-01). Washington, DC: Brookings Institution.
24. Larrick, R. P., & Soll, J. B. (2008, June 20). The MPG illusion. *Science*, *320*, 1593–1594.

25. Sunstein, C. R. (2013). *Simpler: The future of government*. New York, NY: Simon & Schuster.
26. Johnson, E. J., Shu, S. B., Dellaert, B. G. C., Fox, C., Goldstein, D. G., Häubl, G., . . . Weber, E. U. (2012). Beyond nudges: Tools of a choice architecture. *Marketing Letters*, *23*, 487–504.
27. Kling, J. R., Mullainathan, S., Shafir, E., Vermeulen, L. C., & Wrobel, M. V. (2012). Comparison friction: Experimental evidence from Medicare drug plans. *The Quarterly Journal of Economics*, *127*, 199–235.
28. Ubel, P. A., Comerford, D. A., & Johnson, E. (2015). Healthcare.gov 3.0—Behavioral economics and insurance exchanges. *New England Journal of Medicine*, *372*, 695–698.
29. Liebman, J. B., & Luttmer, E. F. P. (2015). Would people behave differently if they better understood Social Security? Evidence from a field experiment. *American Economic Journal: Economic Policy*, *7*, 275–299.
30. Gneezy, U., Meier, S., & Rey-Biel, P. (2011, Fall). When and why incentives (don't) work to modify behavior. *Journal of Economic Perspectives*, *25*(4), 191–210.
31. Kamenica, E. (2012). Behavioral economics and psychology of incentives. *Annual Review of Economics*, *4*, 427–452.
32. Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. New Haven, CT: Yale University Press.
33. Chetty, R., Looney, A., & Kroft, K. (2009). Salience and taxation: Theory and evidence. *American Economic Review*, *99*, 1145–77.
34. Chetty, R., Friedman, J. N., Leth-Petersen, S., Nielsen, T. H., & Olsen, T. (2014). Active vs. passive decisions and crowd-out in retirement savings accounts: Evidence from Denmark. *Quarterly Journal of Economics*, *129*, 1141–1219.
35. Duflo, E., Gale, W., Liebman, J., Orszag, P., & Saez, E. (2006). Saving incentives for low- and middle-income families: Evidence from a field experiment with H&R Block. *Quarterly Journal of Economics*, *121*, 1311–1346.
36. Saez, E. (2009). Details matter: The impact of presentation and information on the take-up of financial incentives for retirement saving. *American Economic Journal: Economic Policy*, *1*, 204–228.
37. Castleman, B. J., & Page, L. C. (2015). Summer nudging: Can personalized text messages and peer mentor outreach increase college going among low-income high school graduates? *Journal of Economic Behavior & Organization*, *115*, 144–160.
38. Karlan, D., McConnell, M., Mullainathan, S., & Zinman, J. (2016). Getting to the top of mind: How reminders increase saving. *Management Science*. January. doi:10.1287/mnsc.2015.2296
39. Cadena, X., & Schoar, A. (2011). *Remembering to pay? Reminders vs. financial incentives for loan payments* (NBER Working Paper 17020). Available from National Bureau of Economic Research website: <http://www.nber.org/papers/w17020>
40. Baird, P., Reardon, L., Cullinan, D., McDermott, D., & Landers, P. (2015). *Reminders to pay: Using behavioral economics to increase child support payments* (OPRE Report 2015-20). Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
41. Bhargava, S., & Manoli, D. (2015). Psychological frictions and the incomplete take-up of social benefits: Evidence from an IRS field experiment. *American Economic Review*, *105*, 3489–3529.
42. Milkman, K. L., Beshears, J., Choi, J. J., Laibson, D., & Madrian, B. C. (2011). Using implementation intentions prompts to enhance influenza vaccination rates. *Proceedings of the National Academy of Sciences, USA*, *108*, 10415–10420.
43. Bertrand, M., Mullainathan, S., Shafir, E., & Zinman, J. (2010). What's advertising content worth? Evidence from a consumer credit marketing field experiment. *Quarterly Journal of Economics*, *125*, 263–306.
44. Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, *47*, 263–291.
45. Kiefe, C. I., Allison, J. J., Williams, O. D., Person, S. D., Weaver, M. T., & Weissman, N. W. (2001). Improving quality improvement using achievable benchmarks for physician feedback: A randomized controlled trial. *JAMA*, *285*, 2871–2879.
46. Rogers, T., Milkman, K. L., John, L. K., & Norton, M. I. (2015). Beyond good intentions: Prompting people to make plans improves follow-through on important tasks. *Behavioral Science & Policy*, *1*(2), 33–41.