On the misplaced politics of behavioral policy interventions*

David Tannenbaum†
University of Chicago

Craig R. Fox
University of California, Los Angeles

Todd Rogers
Harvard University

Abstract

One common criticism of “nudges” — general-purpose interventions derived from behavioral science that can be applied to a range of policy objectives — is that such interventions are manipulative and coercive. In this article we show that this criticism sometimes reflects a partisan nudge bias, whereby attitudes toward policy goals or policymakers distort feelings about policy interventions. In particular, people find nudges more ethically problematic when they are applied to policy objectives they oppose, or when applied by policymakers they oppose, while they find the same nudges more acceptable when they are applied to political objectives they support or by policymakers they support. Both political liberal and conservative respondents exhibit partisan nudge bias, as do practicing policymakers. Furthermore, partisan differences disappear when nudges are described without mention of a particular policy objective, suggesting that nudges are not inherently partisan. Thus, we argue that in order to have an honest debate about the appropriateness of behavioral policy interventions we must strip away the policy objectives to which they are applied and the parties that endorse them.

Introduction

Insights from the behavioral and social sciences have recently been put to use in crafting effective public policies. These approaches are typically designed to nudge behavior that policymakers believe will promote individual or societal interests while preserving freedom to choose.¹ For instance, one powerful behavioral insight is the bias for people to select options designated as the default. As such, policies promoting automatic enrollment of employees into retirement saving plans with the ability to opt-out (rather than enrolling them only if they opt-in) have substantially increased retirement saving rates in the United States.² However, such behavioral interventions (sometimes called “nudges”) have also sparked controversy. In the United Kingdom, the conservative administration of David Cameron has been at the forefront in applying behavioral insights to public policy, drawing strong criticism from the British political left. For example, one contributor for The Guardian, a

---

*We are grateful to David King at the Harvard Kennedy School for assistance in data collection for Study 3A, and to Catherine McLaughlin and Christian Flynn at the Harvard Institute of Politics for their assistance in data collection on Study 3B. We also thank Dan Walters and Carsten Erner for their useful comments on an earlier draft of this paper.

†Correspondence should be addressed to David Tannenbaum, Chicago Booth School of Business, 5807 S. Woodlawn Ave, Rm 373. Email: david.tannenbaum@chicagobooth.edu.
left of center British publication, remarked that “however sympathetic we are to the goals nudge is trying to achieve... we should be deeply skeptical of its tactics, which involve influencing the public without them knowing it is happening.” Meanwhile, in the United States, the Obama administration — partly inspired by the successes of the Cameron administration — announced the creation of a U.S. Social and Behavioral Sciences Team to scale rigorously evaluated and scientifically validated behavioral interventions. This idea has prompted much criticism, this time mostly from the political right. For instance, Fox News contributor Monica Crowley described the initiative as “an Orwellian horror show”, while Lou Dobbs said it “sounds purely like propaganda and mind control.”

The controversy surrounding behavioral policy interventions, it appears, does not fall along consistent ideological lines. In the U.K., advocates of smaller government have embraced the use of behavioral science as a means of enhancing policy efficiency by empowering individual choice. In the U.S., many individuals who advocate for smaller government have viewed such applications as a threat to individual autonomy. This disparity of views raises the question of what, exactly, drives attitudes towards behavioral policy tools? The criticisms of nudges in the U.K. by the political left, but in the U.S. by the political right, suggests that such reactions may reflect distrust of the policymaker and their objectives more than substantive disagreement with the use of behavioral science insights to inform policy design.

In this article we examine whether laypeople and policymakers exhibit a partisan nudge bias, whereby their political attitudes toward policy goals or policymakers distorts their feelings about general-purpose policy tools that are used to accomplish those goals. To investigate this issue, we asked people to evaluate the extent to which a range of behavioral policy approaches were manipulative, coercive, and unethical. Crucially, these nudges were (randomly) attached to a particular policymaker or political objective that participants supported or opposed, allowing us to assess how different political objectives might color evaluations about general policy tools. Table 1 provides an overview of our studies.

Our research question is not merely an academic exercise. To the extent that resistance to behavioral policy tools is consistent and principled then we can and should focus debate on the acceptability of their use by policymakers and practitioners. But to the extent that resistance to behavioral policy tools reflects misplaced discomfort with the particular policy application or agent, then we should refocus the debate on where the disagreement truly lies — on relevant policy objectives. To the extent that behavioral policy tools are not inherently partisan tools, they should be more acceptable to a wide range of governing coalitions.

**Study 1: Evaluations of Nudges are Biased by the Policymaker Endorsing Them**

Do people disapprove of policy nudges especially when they are implemented by policymakers they distrust? To answer this question, we asked participants in our first study to evaluate a key provision of the 2006 Pension Protection Act (PPA) that encouraged employee retirement savings behavior through the use of automatic enrollment defaults. The PPA was endorsed and implemented by both
| Study 1 | Policymaker Bias: Do people confuse their feelings about policy nudge with feelings about policymaker? | Online adults from Mechanical Turk labor market | Automatic enrollment provision of the 2006 Public Protection Act | 1) Obama implements PPA 2) Bush implements PPA 3) No policymaker info provided | Liberals tended to favor auto-enrollment as a general policy tool when implemented under Obama compared to Bush; Conservatives showed the opposite tendency |
| Study 2 | Policy Application Bias: Does policy application bias extend to other nudges beyond default options? | Online adults from Mechanical Turk labor market | 1) Automatic enrollment defaults 2) Planning prompts 3) Leveraging loss aversion 4) Prompt public commitments 5) Descriptive social norms | 1) control/no example provided 2) food stamps 3) tax breaks 4) safe sex education 5) intelligent design education | Liberals tended to favor policy nudges as general policy tools when applied to liberal policy objectives compared to conservative policy objectives; Conservatives showed the opposite tendency |
| Study 3A | Do experienced policymakers show a policy application bias? | High-level bureaucratic leaders | Automatic enrollment defaults | 1) low-income citizens automatically receive food stamps but can opt-out 2) high-income citizens automatically receive tax breaks but can opt-out | Liberals tended to favor auto-enrollment as a general policy tool when applied to food stamp assistance for the poor compared to tax breaks for the wealthy; Conservatives showed the opposite tendency |
| Study 3B | Do real policymakers show a policy application bias? | U.S. Mayors | Automatic enrollment defaults | 1) high school students automatically receive safe sex education, but parents can opt-out 2) high school students automatically receive education on intelligent design, but parents can opt-out | Liberals tended to favor auto-enrollment as a general policy tool when applied to increasing safe sex education compared to intelligent design education; Conservatives showed the opposite tendency |
the George W. Bush and Barack Obama administrations, providing a straightforward means to examine how information about specific policymakers influence evaluations about the nudge. We simply mentioned to participants one of the following: (a) the Bush administration had enforced the law, (b) the Obama administration had enforced the law, or (c) neither (we omitted information about policymakers altogether as a control condition). If individuals project their feelings about the policymaker onto their feelings about the nudge, then liberals should view the use of defaults negatively when they learn that the Bush administration enforced the law but positively when they learn that the Obama administration enforced the law. Meanwhile, conservatives should show the reverse pattern.

Methods  We recruited an online sample of 379 adults who were unfamiliar with the Pension Protection Act\(^6\) (54% male, mean age = 31 years, range: 18–63 years), using Amazon.com’s Mechanical Turk online labor pool.\(^7\) Participants were provided with a brief statement about the use of strategically selected default options as a general approach to public policy. As an illustration of the concept, participants were told that the U.S. Congress had recently passed a law (the PPA) that encouraged companies to automatically enroll employees into retirement savings plans, but allowed employees to opt-out if they wished to do so. We randomly assigned participants to conditions where they read that the PPA had been enforced under the George W. Bush administration, the Barack Obama administration, or that it had simply been enforced by “lawmakers”.\(^8\)

After reading about the policy nudge, we reminded participants that defaults could be used “across a wide range of policies beyond the illustration above” and asked how they felt, setting the particular application aside, “about actively setting default options as a general approach to public policy.” Participants then responded to a six-item scale indicating how much they supported and opposed using defaults as a general approach to public policy, and how ethical, unethical, coercive, and manipulative they found the strategic use of defaults to be (1 = strongly oppose, 5 = strongly support). All items were combined to form a single, highly reliable index of nudge evaluations, with higher numbers indicating more supportive attitudes (Cronbach’s \(\alpha = .89\)).

At the end of the study, we asked participants to rate their political orientation separately for economic and social issues (1 = very liberal, 7 = very conservative) and averaged the two responses to create a general index of political orientation.\(^9\) Finally, we asked participants to separately rate the degree to which they found George W. Bush and Barack Obama trustworthy (1 = not at all trustworthy, 7 = extremely trustworthy).

Results  Confirming existence of a partisan nudge bias, participants tended to conflate their feelings about the use of defaults with their feelings about the policymaker who enforced them: evaluations of policy nudges were significantly influenced by the interaction between participants’ political orientation and information about the policymaker implementing the policy\(^10\) (\(p = .05\) for the interaction between the Obama vs. Bush conditions). When participants were informed that the PPA had been enforced by Barack Obama, liberals tended to display relative support for the use of defaults as a general policy tool whereas conservatives tended to oppose their use (\(b = -.14,\))
SE = 0.06, \( p = .017 \)). However, when participants were told that the same policy nudge had been enforced by George W. Bush, the pattern was eliminated (\( b = 0.03, \text{SE} = 0.07, p = .60 \)).

This pattern of results suggest that participants tended to evaluate the use of defaults in a partisan fashion, which we illustrate in Figure 1A by displaying the expected point difference in evaluations under Obama versus Bush across the range of political orientations in our sample. The Figure reveals a biasing effect of political orientation that is strongest among respondents who exhibited the most extreme political views, and virtually absent among respondents who described themselves as moderate (the midpoint of the political orientation scale). Likewise, we found no apparent relationship between political orientation and nudge evaluations in the control condition where specific policymaker information was omitted (\( b = -.04, \text{SE} = 0.06, p = .56 \)). Thus, liberals and conservatives did not systematically disagree about the appropriateness of using defaults as nudge, provided they did not know which political administration was doing the nudging.

It seems plausible that the results we observe are driven by respondents’ feelings of trust toward the agent applying the nudge. Thus, direct measures of trust towards a policymaker should provide even stronger results than before. Indeed, ratings of trust in Obama were positively associated with nudge evaluations when participants had been informed that Obama enforced the PPA (\( r = .46, p < .001 \)), but was not when Bush had enforced the PPA (\( r = .085, p = .30 \)). Similarly, trust in Bush was positively correlated with nudge evaluations when participants were told that Bush enforced the PPA (\( r = .18, p = .03 \)), but not when Obama had enforced the PPA (\( r = -0.12, p = .16 \)). In both cases, the difference between the two correlations differed significantly by condition (\( p \)-values ≤ .01).

**Study 2: Evaluations of Nudges are Biased by the Policies Used to Illustrate Them**

Results of Study 1 suggest that people have difficulty separating their feelings about a nudge from their feelings toward an associated policymaker. In our next study we investigate whether this pattern of judgments extends to differences in the political objective attached to the nudge. If people have difficulty separating their feelings about a nudge from their feelings towards the policy objective to which it is applied, then they should endorse the general application of policy nudges when they are illustrated using policies that they support but reject those same policy nudges when illustrated using policies that they oppose.

In addition to automatic enrollment defaults, we examined four empirically established, field-tested nudges: (1) prompting individuals to articulate concrete action plans to enhance follow-through\(^{11}\) (“implementation intentions”), (2) strategically underscoring the potential costs of undesired behaviors rather than potential benefits of desired behaviors, leveraging the well-established tendency for losses to loom psychologically larger than equivalent gains\(^{12}\) (“highlighting losses”), (3) prompting individuals to publicly commit to behaviors in advance\(^{13,14}\) (“commitment and consistency”), and (4) providing individuals with information about how other people decide and behave\(^{15}\) (“descriptive social norms”). We experimentally manipulated the policy objective to which each behavioral tool was applied, allowing us to identify the independent effect each political
Figure 1: Expected differences, based on regression coefficients, in evaluation of nudges. For Study 1, difference scores represent evaluations under Bush vs. Obama. For Study 2, difference scores represent evaluations when illustrated by liberal vs. conservative policy objectives (conservative policy illustrations included tax breaks and intelligent design education, and liberal policy illustrations included food stamps and safe sex education). For Study 2 data was aggregated over all types of policy nudges. For Study 3A, difference scores represent evaluations when illustrated by tax breaks vs. food stamps. For Study 3B, difference scores represent evaluations when illustrated by intelligent design vs. safe sex. In all figures, error bars represent robust standard errors.

Study 1

Study 2

Study 3A

Study 3B

A secondary goal of Study 2 was to compare the relative impact of a partisan nudge bias to more established and principled attitudes concerning the role of government on individual choice. In particular, we asked individuals to rate their endorsement of libertarian versus paternalistic values. Presumably, libertarian-leaning respondents will be more likely to oppose nudges as a general approach to policy than respondents who endorse more paternalistic values. Measuring libertarian/paternalistic values allows us to compare, as a first approximation, the “unprincipled” effect of a partisan nudge bias to more “principled” values when evaluating policy nudges as acceptable policy tools.
Methods  We recruited an online sample of 503 adults from MTurk (65% male, mean age = 32 years, range: 18–74 years). As in Study 1, participants read and responded to various approaches to public policy. This time participants responded to five different types of policy nudges: (1) automatic enrollment defaults, (2) implementation intentions, (3) public commitments, (4) highlighting losses, and (5) descriptive social norms. (See the Supplementary Online Materials for the complete set of study materials).

For each nudge, participants were provided with an example policy objective that illustrated how the nudge could be applied. Illustrative policy objectives included: (a) increasing participation by low-income individuals in existing food stamp and supplemental nutrition assistance programs ("food stamps"), (b) increasing claims by high-income individuals on existing capital gains tax breaks ("tax breaks"), (c) increasing participation in safe sex and effective contraception use educational programs for high-school children ("safe sex"), (d) increasing participation in intelligent design educational programs for high-school children ("intelligent design"), and (e) a generic, context-free policy illustration ("control condition"). The first four policy objectives were designed to appeal to economic liberals, economic conservatives, social liberals, and social conservatives, respectively. We randomized the order in which policy nudges were presented as well as the specific policy illustrations associated with each nudge, subject to the constraint that every participant viewed each nudge and policy objective once and only once.

After reading about each policy nudge, participants were reminded that the approach was general and could be used across a wide range of policies. Next, they evaluated nudges using the same six-item scale used in Study 1 (Cronbach’s $\alpha$ ranged from .87 to .89). Afterward, we assessed political orientation in the same manner as before, and also asked participants to complete a six-item scale that measured individual differences in libertarianism (e.g., “It’s not the government’s business to try to protect people from themselves”, “Sometimes government needs to make laws that keep people from hurting themselves”). Participants rated their agreement with each statement (1 = strongly disagree, 7 = strongly agree), and all items were combined such that higher scores indicating greater endorsement of libertarianism (Cronbach’s $\alpha = .83$).

Results  Consistent with the policymaker bias observed in Study 1, we found that partisans’ evaluations of nudges were biased by the political objectives used to illustrate them. In particular, when the nudges were applied to traditionally liberal policies (food stamps, safe sex), liberals were relatively supportive of nudges as policy tools while conservatives were relatively opposed to their use ($b = -0.12, SE = 0.03, p < .001$ for food stamps; $b = -0.05, SE = 0.03, p = .061$ for safe sex). However, this pattern reversed when those same nudges were applied to traditionally conservative policy goals ($b = 0.06, SE = 0.03, p = .041$ for breaks; $b = 0.05, SE = 0.03, p = .049$ for intelligent design). Extending the results of Study 1, this pattern implies that participants tended to evaluate the use of wide range of policy nudges in a partisan fashion, as depicted in Figure 1B. Overall, participants with more extreme political orientations tended to be more biased in their evaluation of nudges by their attitudes toward policy illustrations; meanwhile political moderates
tended to be less affected by the policy illustrations.

For the control condition, in which the nudge was attached to a generic policy objective, we found virtually no association between political orientation and nudge evaluations ($b = 0.00$, $SE = 0.03$, $p = .89$). This finding is noteworthy because it suggests, like the results of our control condition in Study 1, that liberals and conservatives did not differ substantially in their attitudes toward policy nudges when the application of the policy tool had been described in only generic terms.

As in Study 1, we observed a stronger partisan nudge bias when using direct measures of attitudes toward policy objectives, rather than overall political orientation. For every policy illustration, we found a significant relationship between support for the corresponding policy objective and support for the use of nudges as general policy tools (correlations ranged from .13 to .36; all $p$-values < .01).

Finally, we examined whether evaluations of policy nudges were better predicted by individual differences in libertarianism (which presumably reflect principled attitudes about the acceptability of government influence on citizen behaviors) or by attitudes toward the policy objective used to illustrate each nudge (which, in principle, is irrelevant to evaluation of nudges as general policy tools). To do so, we regressed libertarianism scores and policy objective attitudes onto nudge evaluations. Strikingly, we found that policy outcome attitudes were a considerably stronger predictor of responses ($b = 0.13$, $SE = 0.01$, $p < .001$) than were individual differences in libertarianism ($b = −.07$, $SE = 0.02$, $p < .001$). The test statistic from the regression coefficients was over three times larger for the former compared to the latter (z-statistics were 12.81 and 3.62, respectively), a highly significant difference ($p < .001$).

**Study 3: Policymakers Exhibit Political Nudge Bias**

Study 2 demonstrated partisan nudge bias among a diverse online sample of respondents, but one might naturally ask whether this bias also applies to experienced policymakers. Active policymakers are in a better position to evaluate the appropriateness of policy tools without a need for specific context. Furthermore, experienced policymakers ought to have well thought-out positions on different policy tools, and they actively contribute to the debate on how to best accomplish various policy objectives. It is therefore worthwhile to know whether the partisan nudge bias documented in Study 2 extends to policymakers. To find out, we sampled a group of high-level public servants (Study 3A) and U.S. city mayors (Study 3B).

**Methods** For Study 3A, we recruited 110 high-level bureaucratic leaders in state and local government (20% female, mean age = 46 years, range: 25–63 years) enrolled in a multi-week on-site public policy executive education course at the Harvard Kennedy School. Respondents were sent an email with a link to complete the study online (no payment was given for their participation). In our sample, 60% of respondents reported being elected or appointed to public office and 77% reported having the authority to directly affect public policy.

Our policymakers completed a survey in which they read about the strategic use of automatic
enrollment defaults that was illustrated with either a liberal or conservative policy objective. Half of the policymakers read an example in which low-income earners were defaulted to automatically receive supplemental food assistance benefits, and the other half read an example in which high-income earners were defaulted to automatically receive capital gains tax benefits. Like our previous studies, we reminded participants that they were evaluating the use of the nudge as a general-purpose policy tool, and we asked them to evaluate policy tools using the same six-item scale as before (Cronbach’s $\alpha = .88$). Next, participants reported their political orientation for social and economic issues, as well as their attitudes toward the policy objective used to illustrate the nudge, using the same procedure as in our previous studies.

For Study 3B, we recruited 48 U.S. city mayors with an average constituency base of 108,000 citizens (range: 8,000–620,000 citizens). Respondents were approached at a U.S. Conference of Mayors event and were asked to complete a 1-page survey in return for a copy of Thaler and Sunstein’s book *Nudge: Improving Decisions About Health, Wealth, and Happiness*. The design was identical to Study 3A except that the policies used to illustrate automatic enrollment were programs that sent public school children additional educational materials on either safe sex practices or intelligent design.22

**Results**  Echoing the results for lay participants in Study 2, policymakers tended to conflate their feelings about the policy nudge with their feelings about the policy objective used to illustrate the nudge (the interaction between political orientation between political orientation and policy objectives was statistically significant, $p = .027$ for Study 3A and $p = .056$ for Study 3B).23 In Study 3A, when defaults were used to enroll low-income individuals to receive food stamps, liberal public servants were more likely than conservative public servants to support their use as general policy tools ($b = -.39$, SE = 0.06, $p < .001$). Meanwhile, this pattern was eliminated when defaults were instead used to enroll high-income to receive tax benefits ($b = -.15$, SE = 0.10, $p = .951$). In Study 3B, when defaults were used to enroll into safe sex educational programs, liberal mayors were more likely than conservative mayors to support their use as general policy tools ($b = -.36$, SE = 0.17, $p = .045$). Meanwhile, this pattern was eliminated when defaults were instead used to enroll students into intelligent design educational programs ($b = -.04$, SE = 0.12, $p = .614$). Thus, in both Studies 3A and 3B, policymakers tended to evaluate the use of defaults in a partisan fashion, as depicted in Figures 1C and 1D.

Finally, we note that as in Study 2 we observed a systematic relationship between attitudes towards the policy objective and evaluations of the policy nudge ($r = .10$, $p = .15$ for Study 3A; $r = .24$, $p = .05$ for Study 3B).24

**General Discussion**

There are a number of valid reasons why policymakers may choose to embrace or reject the application of behavioral insights to public policy, but a partisan nudge bias should not be one of them. The
results of our studies suggest that we should be wary of partisans who misplace their feelings toward a policy objective onto the behavioral tool being used to advance it. We found that both laypeople and active policymakers evaluate policy nudges in ways that are biased by their political attitudes. People tend to view nudges as more unethical, coercive, and manipulative when implemented by a policymaker whom they oppose compared to one they support (Study 1), or when illustrated using policy objectives they oppose compared to objectives they support (Studies 2). Even experienced policymakers exhibit this partisan nudge bias (Studies 3A and 3B).

The partisan nudge bias we observe is consistent with psychological research documenting people’s difficulty disentangling their attitudes towards different attributes of targets they evaluate. For instance, people typically value offers and concessions made by an adversary less than those same offers made by an ally.25 Similarly, people often evaluate the quality of thinking underlying a decision more favorably when it is followed by a good outcome than when that same decision is followed by a bad outcome.26 Likewise, ethical evaluations of new technologies used to detect unconscious discrimination (e.g., brain imaging) depend strongly on whether the type of discrimination in question (rooting out racism vs. anti-Americanism) accords with the respondent’s political orientation.27

It is worth emphasizing the lack of partisanship in the evaluation of policy nudges when the specific policy context was removed. In Studies 1 and 2 we administered control conditions that only provided information about the policy nudge (and no information about the policymaker or the political objective). When presented in de-identified or generic terms, both liberals and conservatives endorsed policy nudges to roughly the same extent, suggesting that they were not viewed in an inherently partisan light. Furthermore, when a range of policy nudges were presented in a decontextualized way (Study 2 control condition), most nudges were on averaged rated positively (i.e., reliably above the scale midpoint of 3 on a 1–5 scale).28 This finding is consistent with past surveys suggesting that policy nudges are generally viewed as acceptable, especially when compared to more traditional forms of regulation29 (e.g., imposing taxes).

It seems self-evident that public policies should be designed to be as efficacious and cost-effective as possible. Policy interventions that leverage behavioral insights are one potentially fruitful approach to achieving these goals. However, the studies we report here suggest that partisans may prematurely dismiss effective policy approaches for misplaced reasons. Such rejection based on partisan prejudice also does a disservice to the critics of nudges who have substantive concerns about their potential merits. We hasten to add that partisan nudge bias can also make policymakers too eager to apply policy nudges to their favored political objectives (even when more suitable policy approaches are available). Disentangling policy means from policy ends serves two purposes. First, it focuses political debate where it is most fruitful: on policy priorities. Second, it clarifies the terms of the debate about the legitimacy of using behavioral policy tools to advance those priorities.

Notes


http://www.theguardian.com/commentisfree/2014/feb/05/nudge-say-no-more-behavioural-insights-team


http://mediamatters.org/embed/clips/2013/07/31/31291/fbc-dobbs-20130730-dobbsnudge

At the end of the survey we asked participants whether they were familiar with the PPA, and excluded 75 additional participants who had reported familiarity with the law from the analyses.

One participant in Study 1 reported an age of 267 years. We interpreted this as a typo, and omitted this response when calculating age statistics of the sample.

Following common disclosure guidelines we have provided the full list of stimuli and measures for this study, as well as all subsequent studies, in the Supplemental Materials.

When reporting political orientation, participants also had the option of indicating that they were unsure or had not given much thought to their political orientation. Our primary analysis use political orientation as a predictor variable, so we excluded these participants from the analysis (n = 24). We repeat this procedure for subsequent studies, excluding 36 participants in Study 2, 3 participants in Study 3A, and 0 participants in Study 3B. In the Supplementary Materials we also report two additional studies, and exclude 8 (Study 4A) and 13 participants (Studies 4B).

For all studies we analyze results using robust standard errors.


Because participants responded to multiple scenarios, we analyzed responses using a mixed-effect linear model with crossed random effects for participants and policy nudges (see references 18 and 19). Our predictor variables were participants political orientation, the policy objective attached to the nudge, and the interaction term. From the regression model, we recovered average marginal effects of political orientation for each policy objective.

We implemented a mixed-effect linear model with crossed random effects for participants, policy nudges, and policy objectives.

Comparing the relative strength of regression coefficients is often done by converting all predictors into standard units (i.e., scaling responses so that each predictor variable possesses a mean of 0 and standard deviation of 1). However, such standardization becomes problematic for nested data, as it is unclear over what level of aggregation the data should be standardized. We instead report the z-statistics for each predictor because doing so approximates a similar standardization approach (the z-statistic reflects the size of a predictor’s coefficient divided by its standard error). Regardless of standardization issues, we note that the coefficient for policy objective attitudes was larger than the coefficient for libertarianism despite the fact that the former had the smaller standard error (and thus by any comparison should be considered the stronger predictor).

Also different from Study 3A was that respondents responded to a shorter set of evaluation items (how much they supported the nudge, opposed the nudge, found it manipulative, and found it coercive; Cronbach’s α = .89) and instead reported their general political orientation using a single-item scale.

The sample sizes of Studies 3A and 3B were relatively small, and so we took some additional precautions. Conventional parametric approaches rely on the large-sample properties of test statistics, and therefore may be inappropriate for our analysis. To address this problem we calculated one-tailed p-values using exact permutation tests (10,000 permutations per test), which are independent of sample size. We justify the use of one-tailed tests based on the consistent pattern of findings we observed in the previous studies. As a robustness check we also conducted (large-sample) bootstrapping procedures and found qualitatively similar results to those we report.

The weak correlation between policy objective attitudes and nudge evaluations in Study 3A masks an unexpected difference between conditions. The correlation between attitudes toward food assistance programs and nudge evaluations was positive and significant (r = .38, p = .007), whereas the correlation between attitudes toward high-income tax breaks and nudge evaluations was not reliably different from chance (r = .10, p = .47). The first correlation was significantly larger than the second correlation (Z = 2.47, p = .014) and mirrors the initial interaction effect we observe when using political orientation to predict nudge evaluations.


Restricting the analysis to the control condition, three of the five nudges were reliably above the midpoint (implementation intentions, commitment and consistency, highlighting losses), one nudge was reliably below the midpoint (automatic enrollment defaults), and one was not reliably different from the midpoint (descriptive social norms). Descriptive and inferential statistics are provided in the Supplmentary Materials.