Public policy for thee, but not for me: Varying the grammatical person of public policy justifications influences their support

James F. M. Cornwell[*]   David H. Krantz[†]

Abstract

Past research has shown that people consistently believe that others are more easily manipulated by external influences than they themselves are—a phenomenon called the "third-person effect" (Davison, 1983). The present research investigates whether support for public policies aimed at changing behavior using incentives and other decision "nudges" is affected by this bias. Across two studies, we phrased justification for public policy initiatives using either the second- or third-person plural. In Study 1, we found that support for policies is higher when their justification points to people in general rather than the general "you", and in Study 2 we found that this former phrasing also improves support compared to a no-justification control condition. Policy support is mediated by beliefs about the likelihood of success of the policies (as opposed to beliefs about the policies' unintended consequences), and, in the second-person condition, is inversely related to a sense of personal agency. These effects suggest that the third-person effect holds true for nudge-type and incentive-based public policies, with implications for their popular support.

Keywords: third-person effect, public policy, decision architecture, incentives, attitudes.

1 Introduction

In recent years, interest has grown in "nudge" economics (Thaler & Sunstein, 2009) that make use of research on decision making to structure choice sets so that the most socially desirable choice is the one that individuals tend to choose (Thaler, Sunstein, & Balz, 2010; Johnson et al, 2012). These "nudges" are used to counteract biases leading individuals to make decisions benefiting themselves at the cost of society, or benefiting their present selves at the cost of their future selves (Kahneman, 2011), by making more pro-social or more long-term choices more often selected. One famous example of what has sometimes been called "libertarian paternalism" is related to organ donation and default options—countries with "donor" as the default, while still allowing "non-donor" as an option, have higher rates of organ donor status than those who start with "non-donor" as the default option (Johnson & Goldstein, 2003).

Similar to this approach, public policy has long been based on the assumption that people generally make decisions based on self-interest. Interventions by the state, whether through the application of disincentive or incentive structures, have for some time now attempted to make use of self-interest in order to shift choices toward those that are considered more pro-social or desirable over the long term (Oliver, 1980). The general idea is that such structuring helps people make better decisions both for themselves (present-self vs. future-self) and for others (self vs. society).

However, in order for these policies (whether nudge-based or incentive-based) to become a reality, they need to achieve popular support among the electorate. Substantial evidence indicates that framing effects can influence support or opposition to particular proposals. For example, simply proposing a carbon "offset" rather than a carbon "tax" can shift support dramatically. (See Hardisty, Johnson, & Weber, 2010; and Walton, 2014, for a wider review of these kinds of framing effects.) We suggest that another type of framing may have an influence as well: whether it is suggested that the policy is mainly aimed at improving decisions of people in the abstract (third-person) or people including oneself (second-person).

There are two reasons why this difference in framing may affect people's support of a policy initiative. The first is that second-person framing may influence attention. It may call attention to costs to citizens as individuals, to benefit society, and they may be more reluctant to pay these costs than to impose similar costs on others (Attari, Krantz, & Weber, 2014). Likewise, second-person framing may reduce attention to benefits for others.

The other obstacle is in many ways complementary to the first, and is the major focus of the present research.

*Columbia University, Department of Psychology, 406 Schermerhorn Hall, 1190 Amsterdam Ave. MC 5501, New York, NY 10027. Email: jfc2134@columbia.edu
†Columbia University, Department of Psychology

Not only do voters need to be convinced that proposals will not have unintended negative consequences for themselves, they also need to be reasonably convinced that the public policy scheme will actually work to influence decisions for the better. People may see libertarian paternalism and "nudge" economics as methods of mass manipulation: ways that economists and public officials "trick" individuals into making the decisions they want them to make. Individuals may be willing to believe that people generally are susceptible to such manipulative schemes, but see their own decisions as more self-willed and resistant to external influence. This phenomenon is referred to as the "third-person effect" (Davison, 1983).

The third-person effect has been well documented in research on public perceptions of the effects of mass communications on individual behaviors and decisions. For example, research has shown that people believe that others' opinions will be more influenced by negative media messages than their own (Perloff, 1989, 1993). Furthermore, across content domains, people generally see the opinions of others as being more susceptible to effects of mass communication than their own opinions (Gunther, Perloff, & Tsfati, 2008; Perloff, 2009). More generally, cognitive psychologists have shown that there is an overall bias among individuals to see themselves as less susceptible than others to external influences (Pronin, Gilovich, & Ross, 2004), and research on organizations has shown that people see others as generally more motivated by extrinsic factors than they themselves are (Heath, 1999).

This third-person effect, we believe, is of particular interest to the study of support for public policies of the "nudging" variety, perhaps over and above the general desire to avoid personal costs. Many of these libertarian paternalist proposals specifically create opt-outs, in order to minimize personal costs, Similarly, some incentive schemes (such as tax credits for charitable giving) can lead only to potential personal benefits, with costs distributed across society more widely. However, these designs all depend upon the belief that people's choices can be shaped by the framing of decisions and their accompanying incentive structures, and since the above research has shown that people are less likely to believe this about themselves than they are about others, public policy proposals framed in a way that calls attention to the self may therefore garner less support than proposals framed as being aimed at people more generally.

To examine this possibility we took advantage of an ambiguity in rules surrounding grammatical personhood in the English language. When referring to people in general, one can use the plural "you" or "they" (for example, Merriam-Webster lists "used to refer to any person or to people in general" as the second definition of the word "you"). However, since "you" also functions as the second-person singular pronoun (the first definition in

Merriam-Webster's dictionary), this phrasing should cause more attention to be paid to oneself compared to the third-person phrasing, which will draw one's attention more to others. We believe that this manipulation will create significant differences in support, and that, consistent with the third-person effect regarding beliefs about the effects of manipulation, these differences will be driven by beliefs about the likelihood that of the policies will achieve their goals, rather than a consideration of their potential unintended consequences.

A related prediction, extending from the research on the third-person effect, is that people's unwillingness to believe they can be manipulated will be related to the degree to which they see their actions as being the product of their own personal agency. Among those whose attention is drawn to the self, higher perceptions of personal agency (i.e., that one's decisions are self-willed rather than due to external influences) should be negatively correlated with public policy support. In Study 1, we examine the validity of these predictions.

2 Study 1

The first study was designed to measure whether public policy initiatives with rationales phrased using the third-person plural rather than the second-person plural produce higher levels of support, consistent with the third-person effect. It was also aimed at determining the mediating cause for this difference, should it exist, and whether it has any associations with a sense of personal agency, in line with theoretical foundations outlined above.

2.1 Methods

2.1.1 Participants

Eighty-six participants were recruited from Amazon's Mechanical Turk for the sum of $1.50. One participant indicated that she did not believe that the public policy proposals proposed in the study were real, and was therefore removed from the dataset. This left 37 females, 47 males, and one unspecified; there were no sex differences for any of the variables measured in the study. Since the public policies were all "proposed" by agencies within the United States government, the participant pool was limited to those residing within the United States. Also, since many of these public policies have the greatest practical impact for non-student adults, we opted for the Mechanical Turk subject pool over a pool of university students to lend more external validity to the findings. These latter two rationales were also applied to the choice of participant pool in Study 2.

2.1.2 Procedure

Participants were asked to judge four public policies: taxes on fuel to discourage carbon dioxide emissions, increases in criminal penalties to discourage petty crime, tax incentives to encourage community service, and tax credits to encourage more saving and investment. These policies were selected because they involve both the encouragement and discouragement of behaviors, and because some are more likely to be supported by political liberals and others by political conservatives. The order of presentation of the public policy initiatives was randomized.

Participants were randomly assigned to either the second-person or third-person condition. Participants saw every policy using the same phrasing, so that the comparisons are between subjects. By way of example, the taxes-on-fuel policy was phrased as follows in the second-person condition:

> The EPA is considering new fuel economy standards to reduce the release of harmful greenhouse gas emissions by increasing the price of gasoline. The theory is that when you need to pay more for gasoline, you will drive less to save money. Thinking about how you tend to make decisions, please answer the following questions about this policy:

In contrast, in the third-person condition, this policy was presented as follows:

> The EPA is considering new fuel economy standards to reduce the release of harmful greenhouse gas emissions by increasing the price of gasoline. The theory is that when people need to pay more for gasoline, they will drive less to save money. Thinking about how people tend to make decisions, please answer the following questions about this policy:

The other policies had similar phrasing, but different content. Appendix A has a complete list of policies (including those used in Study 2).

For each policy, participants were asked, on scales from 1 to 7, to indicate the degree to which they support such a policy (1 indicating "not at all" and 7 indicating "very strongly"), the degree to which they thought the policy was likely to achieve its intended goals (1 indicating "very unlikely" and 7 indicating "very likely"), and the degree to which they thought the policy would result in unintended consequences (with, again, 1 indicating "very unlikely" and 7 indicating "very likely"). These latter two questions were designed to differentiate between two major obstacles facing "nudge" and incentive-based public policies described in the introduction—aversion to personal costs and skepticism regarding the manipulations' effectiveness. If differences in policy support are primarily due to a greater attention to their costs, then the "unintended consequences" question could mediate the effects of the manipulation. However, if the differences in policy support are primarily due to the third-person effect, then the "achieve goals" question should mediate the effects of the manipulation.

Furthermore, since the third-person effect would also predict that support for policies in the second-person condition would be negatively related to beliefs about one's ability to control one's own actions without regard to external influences, we measured the degree to which participants felt agentic during the task following the presentation of the public policy scenarios, as a means of probing an overall sense of personal agency. This consisted of six questions designed to measure perceived willfulness and sense of control (Wegner, Sparrow, & Winerman, 2004). Appendix B shows the agency scale used in both studies. Finally, since political ideology was no doubt related to support for these initiatives, we asked participants to indicate the degree to which they identify as liberal or conservative on a scale from 1 to 7 (1 indicating "very liberal" and 7 indicating "very conservative") in order to control for effects of ideology. Lastly, participants completed a series of demographic questions and were invited to state whether they found anything suspicious about the study and to provide open-ended comments.

2.1.3 Analysis

Since support varied greatly from policy to policy, and support of one policy was not necessarily predictive of support of the other policies ($\alpha = 0.42$), we analyzed the data in long format, using a crossed random effects mixed model design in Stata (version 13.1). This model was designed to remove random effects associated with individual differences as well as those associated with differences between the different scenarios without specifying that one random effect be nested within another (Baayen, Davidson, & Bates, 2008). That is, some individuals may rate public policy options higher overall compared to others, so including an individual-level random effect into the model addresses this. Furthermore, some scenarios may garner higher support than others across individuals, so we included scenario differences as a crossed random effect in the model to address this possibility, in addition to a random slope term representing the manipulation's effect across policies. Generally, the recommendation for the minimum number of levels for a random effect is six. Since we only had four policies, though our analysis achieved model convergence, we report the individual effects of the manipulation on each policy in footnotes.

Figure 1: The impact of the proposal wording on public policy support (error bars represent +/- 1 SE around the mean).
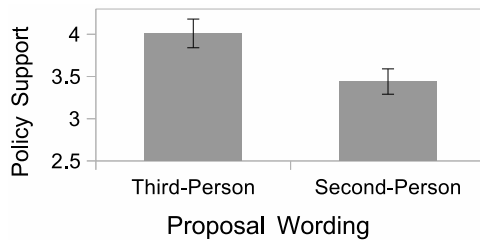

Table 1: Means and 95% confidence intervals for each policy within each condition.

Policy	Third-person		Second-person	
	Mean	95% CI	Mean	95% CI
1	2.97	[2.45, 3.50]	2.30	[1.75, 2.85]
2	4.19	[3.59, 4.79]	4.09	[3.49, 4.69]
3	5.50	[5.05, 5.95]	5.19	[4.63, 5.74]
4	3.40	[2.85, 3.96]	2.16	[1.73, 2.58]

Since standardization of coefficients can be misleading in a mixed model, particularly models involving rescaling to incorporate random effects (Bauer, 2009), we will report only the significance levels and 95% confidence intervals for each of the analyses below. Generally, multilevel models computed in Stata assume an asymptotic sampling distribution, and since our sample was sufficiently large (N = 85) all tests will be reporting the z-statistic (Rabe-Hesketh & Skrondal, 2008; Bolger & Laurenceau, 2013).

2.2 Results

Several predictions consistent with the third person effect were confirmed. First, overall support for the public policy initiatives was significantly higher in the third-person condition (coded as zero) compared to the second-person condition (coded as one; $z = -2.21$, $p = 0.03$, 95% CI = [−1.10, −0.07]).[1] This effect was significant even when controlling for political ideology ($z = -2.11$, $p = 0.04$, 95% CI = [−1.07, −0.04]).[2] The main effect is shown in Figure 1. The means and confidence intervals for each

policy are available in Table 1.

Regarding the "unintended consequences" and "achieve goals" questions, both the former ($z = -10.81$, $p < 0.001$, 95% CI = [−0.71, −0.50]) and the latter ($z = 17.38$, $p < 0.001$, 95% CI = [0.66, 0.83]) were significantly associated with public policy support, indicating that both concerns about unintended consequences and skepticism about the effectiveness of the policies detracted from their support. However, only the "achieve goals" question was significantly affected by the manipulation ($z = -2.96$, $p = 0.003$, 95% CI = [−1.04, −0.21]).[3] The manipulation had no significant effect on the "unintended consequences" question ($z < 1$). These results suggest that shifting attention to the self versus people in general causes people to be less optimistic about the policies' manipulative power, rather than necessarily making them more concerned about unintended consequences of the policies, consistent with the predictions of the third person effect.

However, from these analyses alone, it is still uncertain whether the effect of the manipulation on public policy support is mediated by the way it shifts participants' beliefs about the likelihood that those policies will achieve their goals. Though there is no standard approach for mediation using crossed random effects mixed models, we were able to show results in our mixed model consistent with the logic of mediation (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). As noted above, the independent variable (the framing manipulation) is significantly predictive of both the proposed mediating variable (the "achieve goals" question; $z = -2.96$, $p = 0.003$, 95% CI = [−1.04, −0.21]) and the dependent variable (public policy support; $z = -2.21$, $p = 0.03$, 95% CI = [−1.10, −0.07]). Another analysis showed that when the manipulation was regressed together with the "achieve goals" question predicting public policy support, only the latter was significantly associated with the dependent variable ($z = 17.07$, $p < 0.001$, 95% CI = [0.66, 0.83]); the manipulation dropped to non-significance ($z < 1$).[4] This suggests that the effect of the manipulation of second- vs. third-person framing on policy support is driven by its effect on beliefs about the likelihood that those policies will achieve their goals. An illustration of this mediation using the estimated unstandardized coefficients from these analyses is shown in Figure 2.

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[1]This effect was almost significant for policy 1 ($\beta = -0.19$, $t(83) = -1.80$, $p = 0.08$), non-significant for policies 2 ($t < 1$) and 3 ($t < 1$), and significant for policy 4 ($\beta = -0.37$, $t(83) = -3.62$, $p = 0.001$). Notably, however, all of the effects are in the predicted direction.

[2]This effect was a non-significant trend for policy 1 ($\beta = -0.17$, $t(82) = -1.58$, $p = 0.12$), non-significant for policies 2 ($t < 1$) and 3 ($t < 1$), and significant for policy 4 ($\beta = -0.33$, $t(82) = -3.45$, $p = 0.001$). Again, all of the effects are in the predicted direction.

[3]This effect was non-significant for policies 1 ($\beta = -0.12$, $t(83) = -1.07$, $p = 0.29$) and 2 ($t < 1$), almost significant for policy 3 ($\beta = -0.21$, $t(83) = -1.95$, $p = 0.05$), and significant for policy 4 ($\beta = -0.37$, $t(83) = -3.68$, $p < 0.001$). As above, all of the effects are in the predicted direction.

[4]The achieve results-policy support association was significant across policies (1: $\beta = 0.55$, $t(82) = 6.15$, $p < 0.001$; 2: $\beta = 0.79$, $t(82) = 11.63$, $p < 0.001$; 3: $\beta = 0.77$, $t(82) = 10.37$, $p < 0.001$; 4: $\beta = 0.57$, $t(82) = 6.31$, $p < 0.001$). The effect of the manipulation dropped in all scenarios, but was almost significant with respect to policy 4 ($\beta = -0.15$, $t(82) = -1.70$, $p = 0.09$).

Figure 2: Mediation of the second- vs. third-person framing's effect on policy support by beliefs about the likelihood of policy success (numbers represent unstandardized estimated coefficients). * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$.
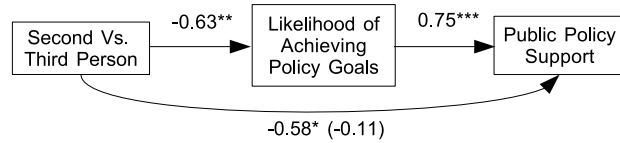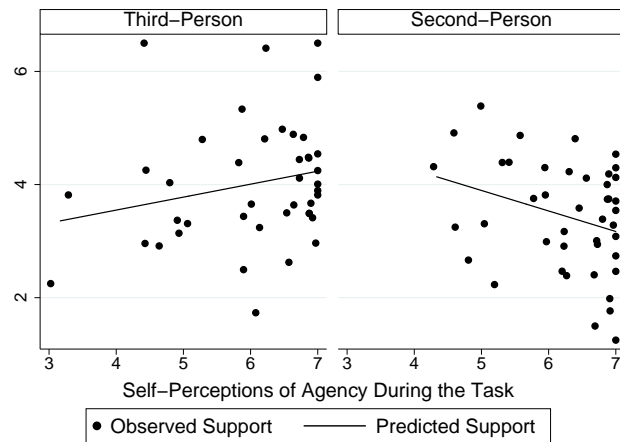

Figure 3: Public policy support as a function of personal agency by proposal wording (observations have been "jittered" to prevent stacking).

Finally, if this drop in public policy support is indeed due to the third person effect as the above results indicate, then, among those in the second-person condition, support should be negatively associated with an overall sense of personal agency, since this would indicate the degree to which participants believe their actions are resistant to external manipulation (i.e., self-willed). We found that, as predicted, in the second-person condition, agency was significantly negatively associated with support ($z = -2.11$, $p = 0.04$, 95% CI = $[-0.70, -0.03]$). This was not simply due to an overall negative association between personal agency and support, because this relation was not significant in the third-person condition ($z = 1.48$, $p = 0.14$, 95% CI = $[-0.08, 0.53]$). An analysis of the interaction between experimental condition and personal agency showed that this negative relation of agency to public policy support was significantly more negative in the second-person condition than in the third-person condition ($z = -2.51$, $p = 0.01$, 95% CI = $[-1.05, -0.13]$).[5] These effects are shown in Figure 3.

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[5]This interaction was significant in the simple regression model as well ($\beta = -1.79$, $t(81) = -2.47$, $p = 0.02$).

2.3   Discussion

All of these results are consistent with the third-person effect. People believe that others (i.e., "people in general") are more easily manipulated by incentive schemes and decision "nudges" than they themselves are. This belief in the effectiveness of these policies in changing others' behaviors, in turn, leads to higher levels of support for said policies. This explanation was further bolstered by the results indicating that personal agency was negatively associated with public policy support in the second-person condition, consistent with the ideas that the more an individual believes his or her actions are resistant to external influence, the less he or she is willing to support policies that depend upon such influence to achieve their goals.

3   Study 2

Study 2 was intended to replicate the findings from Study 1, and to extend them in a variety of ways. First, we added two control conditions. In the first, the justification provided for the policies was given using the passive voice to determine whether rationales provided using the second-person decrease support for public policies or whether those using the third-person increase support or both. We also included a second control condition in which the rationale for the policies was removed entirely to determine precisely how much of the support effects were due to the presence or absence of a policy rationale.

Second, we increased the number of different policies from four to sixteen in order to increase the variety of initiatives under consideration (see Appendix A). Specifically, we included not only policies featuring incentives and punishments to increase and decrease the frequency of behaviors, respectively, but also "nudges" based upon decision architecture theory, such as altering defaults in organ donation (making "donor" the default rather than "non-donor") in order to increase the frequency of donation (Johnson & Goldstein, 2003).

3.1   Methods

3.1.1   Participants

Three hundred participants were recruited from Mechanical Turk for the sum of $1.50. Four participants were excluded because they stated that they believed the proposals in the study were not real. This left us with 155 females and 141 males. Due to the fact that this study showed only half of the scenarios to each participant and that we added two additional conditions, we dramatically increased the number of participants to increase our experimental power. There were no differences based on sex for any of the variables analyzed below. As in the previous

study, the participant pool was limited to those residing in the United States for identical reasons.

3.1.2 Procedure

The overall procedure was identical to that in Study 1, except that each participant saw eight of the total sixteen scenarios. The selection and the order of the eight were random for each participant. Once again, participants were also randomized into different conditions through which the phrasing of the justifications for the policy changes was presented. The third-person and second-person conditions were identical to those used in Study 1, and, as stated above, additional control conditions were added in which the justification for the policy was either written in the passive voice or omitted entirely.

Following the presentation of each policy, participants were once again asked to rate their support, the likelihood that the policy would achieve its intended goals, and the likelihood of unintended consequences of the policy. Following the policy presentations, participants were asked to rate their sense of personal agency during the study. We also asked a follow-up question to behave as a manipulation check: "In answering the questions about the policies proposed in this study, did you consider how they would impact your behavior personally or how they would impact the behavior of people in general?" This question was answered on a scale from 1 to 7 (1 indicating "more about me" and 7 indicating "more about people in general"). Once again, participants completed standard demographic questions, and were invited to state whether they found anything suspicious about the study and provide open-ended comments.

3.2 Results

Prior to analyzing the data in a multilevel model, we examined the manipulation check question. We did indeed find that those in the third-person condition rated their judgments as significantly more about effects on people in general versus effects on them personally compared to the second-person condition ($t(147) = 5.50$, $p < 0.001$, 95% CI(difference) = [0.92, 1.95]). Interestingly, this difference was also significant when comparing the "control" conditions to the second-person condition, both for the passive-voice condition ($t(148) = 5.38$, $p < 0.001$, 95% CI(difference) = [0.89, 1.91]) and the no-justification condition ($t(145) = 4.22$, $p < 0.001$, 95% CI(difference) = [0.62, 1.71]). There were no differences in this rating between the third-person condition and either of the "control" conditions (passive-voice or no-justification; ts < 1). This suggests that the "default" manner of assessment of public policy is to consider its impact on "people in general" as opposed to its impact on oneself. It is worth noting

that across conditions the mean response was greater than 4; that is, people in every condition reflected on the impact on people in general more than how it would affect them personally.

We then reshaped the data to long format so that we could enter it into a two-way crossed random effects multilevel mixed regression as in Study 1. Analyzing a categorical variable in a regression requires selecting a "base" condition, which acts as the comparison for each subsequent condition. Since reporting of the results from this method can sometimes lack clarity, we created a table (Table 2) for reference, which contains the estimated unstandardized coefficients associated with each condition's comparison with each of the other conditions for the three major dependent variables of interest.

Using the third-person condition as the comparison condition, the model showed significant differences in support between the third-person condition and both the second-person condition ($z = -2.29$, $p = 0.02$, 95% CI = [−0.77, −0.06]) and the no-justification control condition ($z = -2.29$, $p = 0.02$, 95% CI = [−0.78, −0.06]). These effects remain significant even controlling for political ideology (third-person *vs.* second-person: $z = -2.22$, $p = 0.03$, 95% CI = [−0.76, −0.05]; third-person *vs.* no-justification control: $z = -2.26$, $p = 0.02$, 95% CI = [−0.77, −0.05]). The difference between the third-person condition and the passive-voice condition was non-significant. Means and confidence intervals for each policy within each condition are available in Table 3.

Having replicated the main effect from Study 1, we altered the model in such a way so as to test whether the third-person wording was increasing support or the second-person wording was decreasing support. First we examined the passive voice condition as the comparison condition, we found that it was not significantly different from any of the other conditions (third-person condition: $z = 1.01$, $p = 0.31$, 95% CI = [−0.17, 0.54]; second-person condition: $z = -1.29$, $p = 0.20$, 95% CI = [−0.59, 0.12]; no-justification condition: $z = -1.30$, $p = 0.19$, 95% CI = [−0.60, 0.12]). Therefore, we could not conclude the directionality of the effect while examining the passive voice condition as the control.
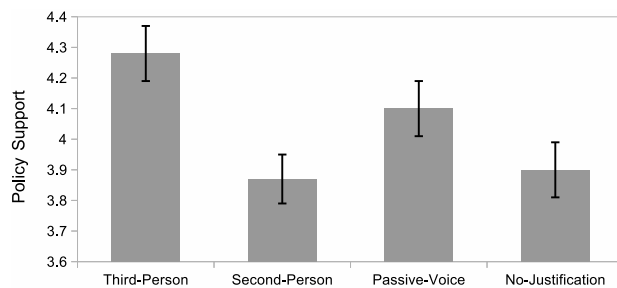
However, adjusting the model to use the no-justification control condition as the comparison condition, the difference between it and the third-person condition was significant ($z = 2.29$, $p = 0.02$, 95% CI = [0.06, 0.78]), but the differences between it and the second-person condition and the passive voice condition were non-significant (second-person condition: $z < 1$; passive voice condition: $z = 1.30$, $p = 0.19$, 95% CI = [−0.12, 0.60]). This suggests that the third-person rationale is increasing support for the policies and that providing a second-person rationale is no better than giving no rationale at all. These effects are illustrated in Figure 4.

Table 2: Differences between each combination of conditions for the three main dependent variables of interest (estimated unstandardized coefficients).

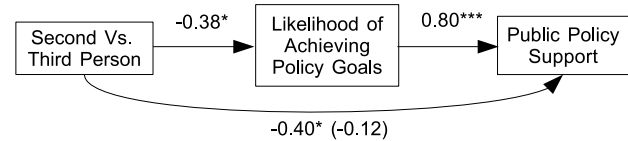| Conditions compared	Policy support	"Achieve results"	"Unintended consequences"
Third-person vs. Second-person	−0.42*	−0.38*	0.08
Third-person vs. Passive-voice	−0.18	−0.35*	0.11
Third-person vs. No-justification	−0.42*	−0.52**	0.09
Second-person vs. Passive-voice	0.23	0.03	0.04
Second-person vs. No-Justification	−0.00	−0.14	0.02
Passive-voice vs. No-Justification	−0.24	−0.17	−0.02

* = $p < 0.05$; ** = $p < 0.01$

Figure 4: Public policy support as a function of proposal justification wording (error bars represent +/- 1 SE around the mean).

Figure 5: Mediation of the second- vs. third-person framing's effect on policy support by beliefs about the likelihood of policy success (numbers represent unstandardized estimated coefficients). * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$.

We next returned the third-person condition as the comparison condition in our model and turned to the "achieve goals" and "unintended consequences" questions. Regarding policy support, both beliefs about the likelihood of the policies' achieving the intended effects ($z = 46.44$, $p < 0.001$, 95% CI = [0.77, 0.83]) and beliefs about the possibility of unintended consequences of the policies ($z = −27.66$, $p < 0.001$, 95% CI = [−0.60, −0.52]) were significantly associated with overall support, replicating Study 1. However, as in Study 1, we found no significant differences between conditions with respect to the "unintended consequences" question (all zs < 1). We did, however, find significant differences between the third-person condition and all other conditions with respect to the "achieve goals" question (second-person condition: $z = −2.35$, $p = 0.02$, 95% CI = [−0.69, −0.06]; passive-voice condition: $z = −2.20$, $p = 0.03$, 95% CI = [−0.66, −0.04]; no-justification condition: $z = −3.22$, $p = 0.001$, 95% CI = [−0.84, −0.20]).

We next examined whether the "achieve goals" question was acting as a mediator between our manipulation and policy support as it was in Study 1. We found that if the "achieve goals" question was controlled for, both ef-

fects of the manipulation mentioned above (third-person *vs.* second-person and third-person *vs.* no-justification) dropped to non-significance (third-person *vs.* second-person: $z = 1.01$, $p = 0.31$, 95% CI = [−0.34, 0.11]; third-person *vs.* no-justification control: $z < 1$). However, even controlling for condition, the association between the "achieve results" question and policy support remained significant ($z = 46.33$, $p < 0.001$, 95% CI = [0.77, 0.83]). Since, as noted above, the manipulation had a significant direct effect on the "achieve results" question, and public policy support, we can infer from this result that the change in policy support caused by the manipulation is due to the manipulation's effect on the perceived likelihood that those policies will achieve their intended goals. The model of the mediation for the second- versus third-person effect is illustrated in Figure 5. Taken as a whole, these results are strongly consistent with the third person effect. Participants were much more likely to think that the policies would work on others than they were to think they would work on themselves, and this difference explained the differences that we found between conditions with respect to support for those policies.

Finally, we examined differences associated with participant agency in each of the conditions to see whether, in the second-person condition, beliefs about personal agency were negatively associated with support. Similar

Table 3: Means and 95% confidence intervals for each policy within each condition.

Policy	Third-person Mean	95% CI	Second-person Mean	95% CI	Passive-voice Mean	95% CI	No-justification Mean	95% CI
1	3.07	[2.38, 3.76]	2.25	[1.71, 2.79]	2.41	[1.81, 3.00]	2.54	[1.88, 3.20]
2	4.23	[3.44, 5.03]	4.31	[3.63, 4.98]	4.03	[3.37, 4.68]	4.03	[3.41, 4.65]
3	5.32	[4.70, 5.93]	4.95	[4.40, 5.49]	5.15	[4.65, 5.66]	5.20	[4.65, 5.75]
4	2.78	[2.15, 3.41]	3.05	[2.47, 3.64]	2.74	[2.17, 3.30]	2.06	[1.52, 2.59]
5	3.95	[3.28, 4.62]	3.79	[3.06, 4.53]	4.13	[3.42, 4.82]	4.05	[3.29, 4.82]
6	4.00	[3.30, 4.70]	3.36	[2.75, 3.97]	4.26	[3.64, 4.86]	3.53	[2.88, 4.17]
7	6.06	[5.56, 6.55]	5.11	[4.50, 5.73]	5.29	[4.70, 5.88]	5.21	[4.60, 5.82]
8	4.75	[4.09, 5.41]	3.90	[3.29, 4.50]	4.29	[3.68, 4.89]	4.33	[3.61, 5.06]
9	2.74	[1.95, 3.53]	2.95	[2.14, 3.75]	2.95	[2.19, 3.71]	3.00	[2.23, 3.77]
10	3.59	[2.89, 4.30]	2.81	[2.28, 3.33]	3.64	[3.03, 4.25]	2.79	[2.23, 3.36]
11	4.83	[4.19, 5.48]	4.45	[3.89, 5.01]	4.68	[4.03, 5.32]	3.97	[3.19, 4.75]
12	4.92	[4.19, 5.65]	4.50	[3.70, 5.30]	4.55	[3.86, 5.24]	4.61	[3.85, 5.36]
13	4.38	[3.74, 5.01]	3.97	[3.36, 4.58]	4.08	[3.39, 4.78]	3.17	[2.49, 3.85]
14	5.74	[5.21, 6.28]	5.08	[4.51, 5.65]	5.67	[5.20, 6.13]	5.63	[5.15, 6.11]
15	4.56	[3.83, 5.28]	4.57	[3.88, 5.25]	5.39	[4.80, 5.98]	5.03	[4.33, 5.72]
16	3.74	[2.99, 4.49]	3.03	[2.46, 3.59]	2.58	[2.05, 3.11]	2.76	[2.14, 3.38]

Figure 6: Public policy support as a function of personal agency by proposal wording (predicted values).
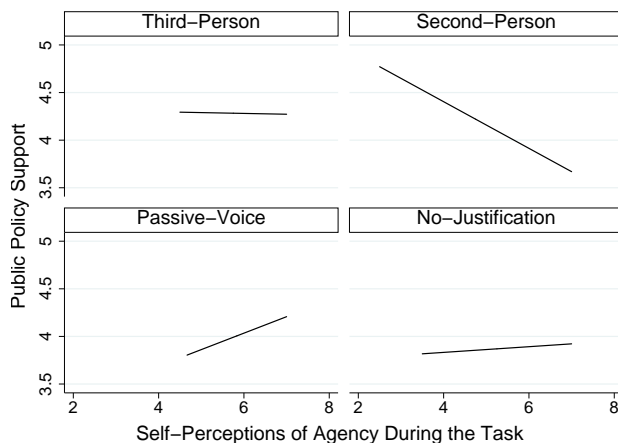
to Study 1 only the second-person condition showed any relationship between sense of agency and support for the public policy, showing an almost-significant negative relationship ($z = -1.77$, $p = 0.07$, 95% CI = [−0.58, 0.02]). In neither the third-person ($z < 1$), nor either the passive-voice ($z = 1.28$, $p = 0.20$, 95% CI = [−0.11, 0.50]), nor the no-justification ($z < 1$) conditions was there a significant relationship between agency and policy support. To determine whether, like in Study 1, the association be-

tween agency and support was significantly more negative in the second-person condition compared to other conditions, we analyzed an interaction between the agency scores and whether or not participants were randomized into the second-person condition. We found a significant interaction predicting support ($z = -1.98$, $p = 0.05$, 95% CI = [−0.72, −0.003]). The predicted values associated with these effects can be seen in Figure 6.

Like the mediation results, these results are consistent with the results from Study 1 showing that, when participants' attention are drawn to the self, their own beliefs about how in control of their actions are negative influences on their support of public polices aimed at influencing their actions. All of these results are consistent with prior research on the third person effect.

4   General discussion

This research shows that individuals are more likely to support public policies aimed at improving decision making when the target of such policies seem to be people in general. When phrasing of the rationale for the public policy uses the second-person plural, and thus induces participants to consider themselves one of the targets of these policies, support for them drops. This drop in support does not appear to be related to beliefs about unintended consequences (though these beliefs do have a sig-

nificant and substantial impact on policy support), but instead due to belief that others are more easily manipulated by these policy schemes than they themselves are, and are therefore more likely to "work" when aimed at others than when aimed at them. This latter rationale is further reinforced by the fact that support is negatively related to one's overall sense of personal agency—i.e., the degree to which participants see their own actions as being especially self-willed and thus impervious to external manipulation.

These results are all consistent with the classic third-person effect (Davison, 1983), demonstrating its importance for areas of research beyond mass communication and public opinion where it has been most widely considered. This research represents an interesting extension of the third-person effect into the realm of political psychology, suggesting that differences in how people judge their own versus others' biases can actually influence attitudes towards policies aimed at improving the general welfare. An interesting extension of this research would be to investigate whether this bias translates into justifications for or against other kinds of policies beyond "pocket-book" issues, such as social issues and national security issues.

This research also provides useful information for those interested in public policy and those who support it or oppose it alike. In a liberal democracy, the framing of the rationale for public policies is important, since voters need to be persuaded that the policy will be effective at achieving its desired ends in order to gain support, and changing so much as a word can sway opinion on an entire policy matter (e.g., Hardisty, Johnson, & Weber, 2010). Those who work toward the implementation of such policies ought to use care when expressing their rationale publicly, focusing on the ways in which the changes will positively influence the decisions of people generally. Those who oppose them should suggest to listeners that the likelihood of success of such policies rests on how much they believe it will influence their own decision making process.

In addition to these possibilities, this research does have a number of limitations that need to be acknowledged. First, the studies as they are currently designed do not explicitly rule out or control for all other effects that may also be related to the manipulation resulting in differences in policy support. In particular, one important possible effect is a shift in perception of the cost-benefit ratio from each of the policies. In the third-person condition, individuals may be more attentive to the societal benefits than in the second-person condition, since most of the policies are designed without immediate individual benefit in mind, resulting in greater support for policies therefore deemed more worthwhile. It is notable in this regard that, across the two studies, policies that placed a cost-benefit ratio in its starkest relief were very likely to achieve significance on their own (see Appendix A).

This cost-benefit approach does not account for the effects of personal agency that we find across studies, which seem to relate much more closely to the means that the policies employ to achieve their ends (i.e., incentive structures and "nudges"), rather than the ends themselves. Still, this perception of costs and benefits is an important factor in understanding the popularity of these kinds of public policies, and it may also be related to the manipulation used in these studies. The lack of any measure to explicitly account for or control for it should thus be regarded as a limitation of their design. Future research should clarify these distinct effects, and perhaps explore how they may be related to one another in interesting ways.

Another limitation is that each of the policies in question involves a move from a more libertarian option to a more restrictive one, even if there is no necessary cost associated with that restriction or an opt-out is provided. A number of other public policy proposals that have the potential to shape behavior involve the removal of restrictions (e.g., more libertarian anti-drug laws) or the expansion of choice options (e.g., legalizing additional forms of gambling), with aims like reducing incarceration rates or increasing tax revenue for society's benefit. It is unclear precisely how our manipulation would influence proposals like these. Indeed, the effects may run in the opposite direction, because participants may see others as particularly susceptible to social ills associated with, for instance, gambling and marijuana use, whereas they see themselves as impervious to these influences.

An additional limitation of our research concerns the specific policies we proposed. Many of these policies (see Appendix A) involve decisions of people belonging to certain categories that may not include all participants (e.g., one policy addresses costs for higher education for dependents and not all participants may have or want children). Though the "you" of the second-person condition was intended to refer to "people in general" in the phrasing of the policy rationales, it is certainly possible that its effects relative to the third-person phrasing were diminished in cases lacking personal relevance for the participant reading it. Future research will need to acquire additional demographic information to determine whether these policies produce differences among the public generally, or only subsets for which they are particularly relevant.

One final limitation of this study is that this research relied heavily on self-report, particularly in the case of the examination of mediating variables. There are a variety of motivations underlying support or opposition to particularly public policies, and it is certainly possible that, absent a question that directly pertains to any given individuals' actual reasons for their decisions regarding support, they may simply settle upon the rationale suggested those follow-up questions that are asked. Future research should probe these motivations more broadly, perhaps al-

lowing participants first to provide open-ended responses indicating their rationales in order to avoid overlooking important motivations that are not captured by the theory under consideration in this paper.

Though these limitations exist, we believe that they primarily serve as an encouragement for additional research to further explore this phenomenon, building upon the effects explored in this paper. Our research suggests that the biases inherent in differences for how we judge our own versus others' decision processes can have real consequences for support or lack of support for public policy initiatives that span the political spectrum. This research should be seen as a starting point for understanding the wider implications of this third-person effect.

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Appendix A

Below are the public policy initiatives used in these two studies. The first 4 were used in both Studies 1 and 2; the latter 12 were used only in Study 2. All policies below use the third-person phrasing for ease of comparison.

In the body of the paper we report overall support effects from combining responses from all policies, but not whether each policy on its own showed significant differences in support between the third- and second-person conditions. Below, policies that showed at least marginal significance in Study 1 on their own are marked with a

dagger (†); those that achieved at least marginal significance in Study 2 on their own are marked with an asterisk (*).

1. The EPA is considering new fuel economy standards to reduce the release of harmful greenhouse gas emissions by increasing the price of gasoline. The theory is that when people need to pay more for gasoline, they will drive less to save money. (†) (*)

2. The Justice Department is considering new standards to reduce the incidence of petty crimes by increasing fines for minor infractions. The theory is that when people have a threat of greater punishment, they will be less likely to commit these crimes.

3. The federal government is considering new standards to increase the incidence of community service around the country by offering tax incentives for volunteering hours in addition to donating money. The theory is that when people have an opportunity for a reward, they will be more likely to donate their time to community service projects.

4. The Senate is considering new rules to increase the incidence of saving and investment by taxing a portion of income at a higher rate unless it is placed into a retirement account. The idea is that by when people need to pay more in taxes in order to spend their money, they will be more likely to put that money away for retirement. (†)

5. The government is considering a policy change to increase the proportion of the population volunteering for organ donation by changing the default from non-donor with the option of opting in to the default of donor with the option of opting out. The idea is when the default position is switched and the easier choice is being a donor, people will be more likely be organ donors.

6. The House of Representatives is considering new rules to decrease truancy from public schools by making tax credits like the Child Tax Credit contingent on their school-age children not having more than a week of unexcused absences from school. The idea is when there is the possibility of loss of tax benefits when people fail to ensure that their students attend school, they will be more likely to actively fight truancy.

7. The Department of Agriculture is considering a subsidy for small farmers who supply the market with cage-free chicken and grass-fed beef. The idea is when people need to pay less for these options, they will be more likely to choose them over the factory-farm alternatives. (*)

8. The Department of Housing and Urban Development is considering rules requiring real estate agencies to list their homes in order of energy efficiency, with the most energy-efficient on the top of the list. The idea is when people see energy efficient homes first, they will be more likely to choose them over the less efficient alternatives. (*)

9. The Federal Communications Commission is attempting to make it more expensive to access internet pornography by placing a substantial new tax on it. The idea is when people need to pay more for access to pornography, they will be less likely to consume it.

10. The Federal Elections Commission is attempting to increase civic engagement by making donations to political organizations tax deductible. The idea is when people have an opportunity to pay less in taxes, they will be more likely to engage in the political process. (*)

11. The National Institutes of Health is considering new regulations to fight obesity by requiring grocery stores to put healthier foods at eye level and less healthy foods in harder-to-find places. The idea is that when people see the healthy foods first, they will be more likely to purchase them over alternatives.

12. The Bureau of Alcohol, Tobacco, and Firearms is considering a new tax on the distribution of tobacco products in order to reduce smoking. The idea is that when people need to pay more for tobacco, they will be less likely to choose to smoke.

13. The Department of Homeland Security is considering a policy to reduce the incidence of unregistered guns by offering a small discount on ammunition by maintaining detailed gun registration. The idea is that when people have the opportunity pay less on, they will be less likely to own unregistered guns.

14. The Department of Education is considering a policy to help parents plan to pay for their children's college education by providing tax exemption for up to a certain amount of savings designated for higher education per year. The idea is that when people can reduce their levels of taxation by placing the funds in a special savings account, they will be more likely to save for their children's education. (*)

15. The Department of Transportation is considering a policy to improve road safety by dramatically increasing the penalties for those who engage in unsafe activities while driving including talking on mobile phones and texting while driving to an immediate license suspension. The idea is that when people face more severe penalties for engaging in unsafe driving, they will be less likely to engage in the activities that endanger the safety of others.

16. The Department of Health and Human Services is considering a change in rules about health insurance in order to increase the use of preventative medicine (e.g., annual physicals) by increasing the cost of medical procedures for preventable medical problems for

those who have not taken advantage of preventative medicine. The idea is when people need to pay more for medical procedures for preventable problems, they will be more likely to take advantage of preventative medicine. (*)

Appendix B

Below are the six questions included in the agency questionnaire (adapted from Wegner, Sparrow, & Winerman, 2004).

1. How much control did you feel in the experiment?
2. To what extent did you feel your actions to be deliberate?
3. To what degree did you feel that your actions belonged to you?
4. To what degree did you feel you were responsible for your answers in this experiment?
5. To what extent did your actions feel voluntary?
6. To what extent did you feel willful?