

Do our theories of moral progress predict whether we vote? Evidence from the 2024 US election

Casey Lewry (lewry@princeton.edu) and Tania Lombrozo (lombrozo@princeton.edu)

Department of Psychology, Princeton University

Abstract

Why do people vote—or fail to? We explore whether people’s intuitive theories of moral progress shape their intentions and behavior. Specifically, does believing that *human action* is the driver of moral progress predict voting intention and actual voting behavior? In Study 1a ($N=356$), conducted one week before the 2024 U.S. presidential election, participants who endorsed stronger beliefs in human action as necessary for moral progress reported stronger voting intentions, mediated by a greater sense of personal responsibility. Study 1b ($N=287$), conducted post-election, found that human action beliefs did not directly predict actual voting, but indirectly predicted voting when mediated by responsibility. Efficacy (believing that voting is effective) was the only significant predictor of actual voting. Together, these findings highlight the role of personal responsibility and efficacy in driving voting behavior, with potential implications for the role of lay theories in shaping intentions and behavior more broadly.

Keywords: voting; moral progress; responsibility; efficacy; intention-behavior gap

Introduction

In recent US presidential elections, between 35 and 40 percent of eligible voters did not vote (UF Election Lab, 2024). There are certainly practical barriers to voting, such as the difficulty of obtaining childcare or getting time off work, as well as structural barriers, including strict ID requirements and lack of language-accessible voting materials (Carnegie Corporation of New York, 2019). But regardless of whether one faces these barriers, psychological factors – including cognitive factors – also impact whether one votes.

We propose that people’s lay theories of moral progress may be a particularly important cognitive factor. Lay theories are causal-explanatory models of how the world works that help us organize and explain complex ideas and make predictions (Gottlieb & Lombrozo, 2018; Shtulman, 2015). Lay theories are often developed early in childhood, influenced by our parents, peers, and education, and determine how we think about and participate in the social world (Carey, 2000; Keil, 2011). Thus, theories likely shape how we engage with social change. In this paper, we assess how participants explain the complex mechanisms driving social change and whether this drives them to act.

Recent work investigated people’s lay theories of moral progress, and found that when asked to consider *how* the world might get morally better, participants recruited from the United States varied in the extent to which they agreed that human action is necessary to drive this change (Lewry et al., 2024). Those who more strongly think that human action is necessary for moral progress were more likely to view their

personal actions as important in addressing a moral setback, and were more likely to report an intention to donate to a charity that would address that moral setback. In other words, our lay theories and explanations about how the world gets better—such that human actions are necessary or not—predict donation intentions.

In this paper, we investigate whether lay theories of moral progress affect another kind of behavior: voting. Study 1a collects voting intention data from voting-eligible participants one week prior to the US presidential election. Study 1b collects voting behavior data from the same participant set one day after the election. We measure whether the human action theory of moral progress predicts voting intention and actual voting, and compare this effect to other potentially related cognitive factors, including perceived efficacy (whether voting is effective), controllability (whether one has control over the outcome of the election), and perception of voting in a swing state. These studies also go beyond prior work on investigating *why* the human action theory of moral progress might predict voting. In other words, if there is a relationship between a human action theory of progress and voting, what explains this relationship? We hypothesize that believing human action drives moral progress leads one to feel personally responsible for creating change, which in turn predicts voting.

Existing research has highlighted the important roles that perceived efficacy and controllability play in civic engagement. Efficacy is the belief that one has the capacity to achieve one’s goals (Morgan, 2012). Bernardi et al. (2023) found that depression can decrease one’s sense of efficacy, which in turn decreases voting. Many other studies suggest that efficacy is key to understanding civic engagement: if my actions will be effective at creating change, I am more likely to take action (Kerby, 2024; Hope et al., 2014). Similarly, if I feel that I have control over outcomes, I am more likely to exercise that control by taking action (Hines, 1987). While efficacy and controllability likely affect engagement, no prior work has explored whether people’s theories of how the world morally improves also play a role. We hypothesize that if one believes human actions are necessary to create change, one might be more compelled to act.

If this hypothesis is supported, why expect responsibility to moderate this relationship? Skarmeas et al. (2020) propose a pathway model in which various cognitive theories influence perceived personal responsibility, which in turn influences behavior. For example, if a person strongly believes in a just world, they may feel less personal responsibility to create change, which decreases their likelihood of donating. Dang et al. (2022) propose a similar

pathway model in which neighborhood ties, such as friendship and trust, increase personal responsibility, which increases civic engagement intention. These models suggest that perceived responsibility might help clarify why theories of progress predict voting.

Further, Gerstenberg et al. (2015) examined how pivotality—the degree to which an agent could have changed an outcome by acting differently—influences responsibility judgments. They found that in hypothetical voting scenarios, participants judged fictitious committee members as more responsible for a policy outcome if their vote was more pivotal. This provides strong evidence for a link between cognitive factors (e.g., perceptions of how much a vote influences an outcome) and perceived responsibility (see also Zultan et al., 2012; Gerstenberg et al., 2023; Lagnado & Gerstenberg, 2023). However, it does not address how responsibility predicts intentions and behavior, nor does it distinguish between causal and moral responsibility. Gerstenberg et al. (2015) essentially measure causal responsibility, but less is known about how moral responsibility, a conviction to do what is right, drives intention and behavior (Lewry & Lombrozo, m.s.).

In the current work, we aim to determine which cognitive factors, among human action beliefs, efficacy, controllability, swing state perception, and responsibility, predict voting intention and action. By extending work on theories of moral progress to voting behavior, this paper aims to explore the cognitive mechanisms of civic engagement.

Study 1a: Pre-election

In Study 1a, we hypothesized that participants who more strongly believe human action drives moral progress will report stronger intention to vote in the 2024 US presidential election. We hypothesized that this effect would hold even when controlling for participants' beliefs about the efficacy of voting, controllability of the outcome, and perception of being in a swing state. Finally, we hypothesized that the effect of human action beliefs on voting intention, if present, would be mediated by the belief that one has a responsibility to vote.

The goal of this study was to determine whether believing that human action drives moral progress, which has been shown to predict donation intention (Lewry et al., 2024), extends to other kinds of civic engagement, namely, voting intention. If this relationship exists, we aimed to better understand *why*. Thus, we measured participants' beliefs about personal responsibility as a potential mediator.

Method

Participants Participants in Study 1a were 356 US adults (184 men, 4 non-binary, 168 women) recruited via Prolific. An additional 15 participants were excluded for failing an attention check and 235 were excluded for reporting that they

had already voted. Participants comprised a representative sample based on political affiliation (113 very conservative or conservative, 113 independent, 128 very liberal or liberal), age ($M=43$, range=18-81), and sex. Participants were screened out of the study if they were ineligible to vote.

Participants in both studies were paid at a rate of \$12.50 per hour, pro-rated to our 5-minute task, and participation was restricted to workers in the US who had completed at least 100 prior tasks with a 95% approval rating. Both studies were pre-registered and data, code, and materials are publicly available.¹

Materials and Procedure The first item in the survey (after consent and CAPTCHA verification) was an attention check. This was a filler paragraph about fruit that asked participants to write the word “instructions” in a text box.

Voting intention After proceeding, all participants first reported whether they had already voted in the upcoming presidential election, which was the following week. If not, they reported how likely it is that they will vote in this election on a 6-point scale from “Very unlikely” to “Very likely.”

Next, participants answered questions about their personal beliefs in four blocks, the order of which was randomized. Within each block, the order of statements was also randomized.

Human action One block contained the Human Action subscale of the Mechanisms of Moral Progress scale ($\alpha=.81$; Lewry et al., 2024), measuring the extent to which participants believe moral progress is driven by the actions that people take. For example, one item reads “If people did not actively work to make the world better, moral progress would not occur.” Participants rated their agreement with four items on a 7-point scale from “Strongly disagree” to “Strongly agree.”

Efficacy A second block measured beliefs about the efficacy of voting ($\alpha=.84$). Its two items assessed personal efficacy (“How effective do you think your personal vote is?”) and general voting efficacy (“How effective do you think voting is in general?”). Participants rated their agreement on a 6-point scale from “Very ineffective” to “Very effective.”

Controllability A third block measured the extent to which participants thought the outcome of the election was controllable ($\alpha=.61$). Its three items assessed personal control (“I feel like I have personal control over the outcome of this election.”), voter control (“Voters like me have control over the outcome of this election.”), and general control (“Are you the actor in, or the director of your own life?”; Rutjens et al., 2010). Participants rated their agreement on a 6-point scale from “Strongly disagree” to “Strongly agree” (or from “Actor” to “Director” for general control).

Responsibility A fourth block measured beliefs about responsibility for voting ($\alpha=.75$). Its two items assessed

¹ Pre-registrations available at <https://osf.io/h6kzs/registrations>. Data, code, and materials available at <https://osf.io/h6kzs/components>.

causal responsibility (“It is my responsibility to vote because it will make a difference.”) and moral responsibility (“It is my responsibility to vote because I have a moral obligation to.”). Participants rated their agreement on a 6-point scale from “Strongly disagree” to “Strongly agree.”

Demographics Finally, participants answered demographic questions, including whether they consider their state to be a swing state (on a 4-point scale from “Definitely no” to “Definitely yes”), who they plan to vote for (Trump, Harris, a third party or other candidate, or do not plan to vote), the state they reside in, their political views (from “Very conservative” to “Very liberal”), gender, age, race, and ethnicity. Participants were then debriefed and exited the survey.

Results

All reported analyses were pre-registered, except where noted.

To test our first hypothesis that voting intention is predicted by believing that human action drives moral progress, we fit a regression treating voting intention as the dependent variable and human action score (participants’ mean score on the Human action items) as the predictor. As our hypothesis predicts, we found that human action score was a significant, positive predictor of voting intention ($\beta=0.33$, 95% CI=[0.20, 0.46], $p<.001$; see Figure 1).

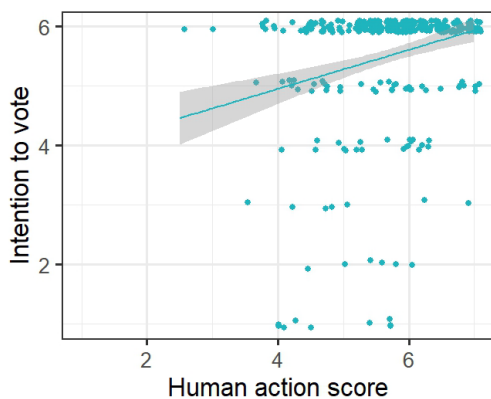


Figure 1: Relationship between mean score on the Human action scale and intention to vote. Each jittered point corresponds to one participant, line indicates best fit line from regression analysis, and error bars indicate standard error.

To determine whether this effect holds when controlling for beliefs about the efficacy of voting, controllability of the outcome, and perception of being in a swing state, we fit a multiple linear regression treating voting intention as the dependent variable and human action score, efficacy score, and controllability score as predictors. For all predictors, we used the mean score for each participant across all items (e.g., all three items in the controllability block), but results were similar with individual items. As our second hypothesis predicts, we found that human action score ($\beta=0.23$, 95% CI=[0.09, 0.37], $p=.001$) was a significant, positive predictor

of voting intention. Efficacy was also a significant, positive predictor ($\beta=0.28$, 95% CI=[0.16, 0.41], $p<.001$), but controllability and swing state perception were not ($ps>.10$; see Figure 2).

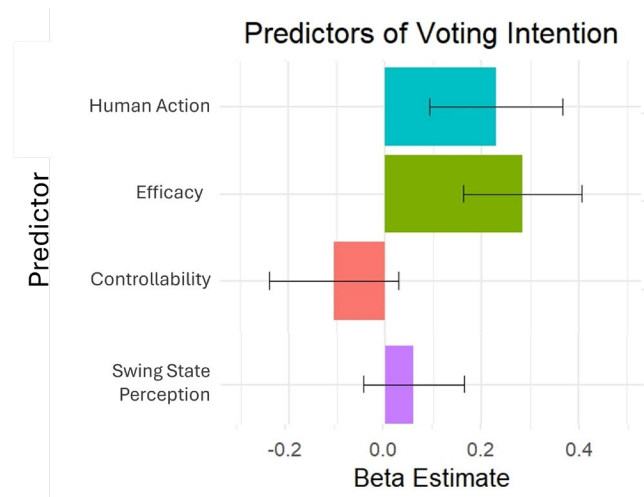


Figure 2: Beta estimates (with 95% CIs) for predictors of voting intention.

Since human action predicted voting intention, we next tested our third hypothesis, that perceived responsibility mediates this relationship. We fit a mediation model using the R package lavaan (Rosseel, 2012) and a path model was specified to estimate the direct and indirect effects. Perceived responsibility (a mean of the causal and moral responsibility items) significantly mediated the relationship between human action and voting intention ($\beta=0.24$, $p<.001$; see Figure 3). 74% of the total effect of human action on voting intention was mediated through responsibility, and the direct effect of human action on voting intention was not significant ($\beta=0.08$, $p=.31$).

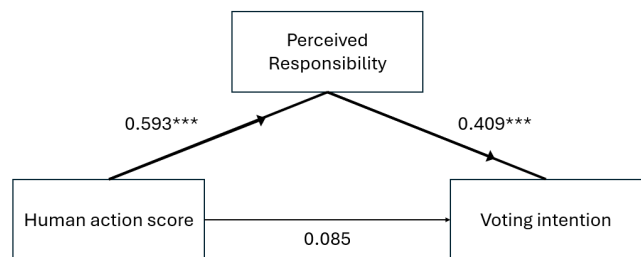


Figure 3: Path diagram displaying the mediation relationship between human action, perceived responsibility, and voting intention (***) $p<.001$.

As an exploratory analysis (that we did not pre-register), we also tested a mediation model with human action score as the predictor, individual causal and moral responsibility items (rather than the mean responsibility score) as mediators, and voting intention as the dependent variable. Indirect effects were calculated for each mediator, and a difference in mediation effects (causal responsibility minus moral responsibility) was tested. The indirect effect of human

action on voting intention via causal responsibility was significant ($\beta=0.08$, $p=.02$). The indirect effect via moral responsibility was also significant ($\beta=0.17$, $p=.001$). The difference between the mediation effects of causal and moral responsibility was not significant ($diff=-0.10$, $p=.13$).

Discussion

In Study 1a, we found that those who more strongly think that moral progress is driven by human action are more likely to intend to vote. In other words, participants whose lay theories of *how* the world gets morally better include a role for human action are more likely to personally intend to take action in the form of voting.

When simultaneously considering the effects of human action with efficacy (is voting effective?), controllability (do I have control over the outcome of the election?) and swing state perception (am I voting in a swing state?), the effect of human action on voting intention remains significant. Efficacy also significantly predicts voting intention, suggesting that considerations of whether one's vote will make a difference also play an important role in whether one intends to vote.

Finally, we found that the effect of human action beliefs on voting intention is fully mediated by perceived responsibility: if I believe that human action is what makes the world morally better, then I believe I have a causal and moral responsibility to vote, thus I intend to vote. This is driven similarly by causal and moral responsibility.

Study 1b: Post-election

In Study 1b, we followed up with participants from Study 1a one week later, which was one day after the election. We asked them nearly identical questions as in Study 1a, but in retrospective form (e.g., “How effective do you think your personal vote was?” rather than “[...] is?”). We also measured reported actual voting (“Did you vote in the 2024 United States election?”) rather than intended voting.

The goal of Study 1b was to determine whether intention translates to action: are our hypotheses supported, as they were in Study 1a, when measuring actual voting? In Study 1b, we hypothesized the same three relationships as in Study 1a, but replaced actual voting as the dependent variable: (1) that human action predicts actual voting, (2) that this relationship holds when controlling for efficacy, controllability, and swing state perception, and (3) that if this relationship exists, it is mediated by perceived responsibility.

Method

Participants Participants in Study 1b were 287 US adults (153 men, 2 non-binary, 132 women) recruited via Prolific. All participants had completed Study 1a one week prior, passed the attention check, and had not already voted at the time of Study 1a. According to a power analysis using the

effect sizes in Study 1a, our sample size was just below the recommended number of participants ($N=289$) to detect the effect. Ongoing work is exploring these hypotheses with a larger sample.

Materials and Procedure The materials and procedure were nearly identical to Study 1a with the following exceptions:

Actual voting Instead of intended voting, participants responded “Yes” or “No” to the question, “Did you vote in the 2024 United States election?”²

Human action Human action items were exactly the same, since they measure beliefs about the mechanism by which moral progress occurs and are not specific to any particular timepoint such as the election.

Efficacy, controllability, and responsibility These items were minimally modified to past tense, such that they asked about the election retrospectively. For example, “How effective do you think your personal vote was?” rather than “is”; “Voters like me had control over the outcome of this election” rather than “have”; and “It was my responsibility to vote because it made a difference” rather than “makes.”

Results

Of participants who intended to vote in Study 1a (voting intention at or above “slightly likely”), 89% of them (245 out of 275) reported in Study 1b that they voted. In the entire sample, 86% of participants voted (248 out of 287). Since actual voting is a binary outcome (yes or no), and since a majority of participants voted, our power was significantly reduced in Study 1b. Thus, these results should be interpreted with caution and awareness of the differences between them and the results of Study 1a.

To test our first hypothesis that actual voting is predicted by believing that human action drives moral progress, we fit a logistic regression treating actual voting as the dependent variable and human action score as the predictor. Failing to support our hypothesis, we found that human action score did not significantly predict actual voting ($OR=1.38$, 95% $CI=[0.89, 2.15]$, $p=.15$; see Figure 4).

We then fit a multiple binomial regression treating actual voting as the dependent variable and human action score, efficacy, controllability, and swing state perception as predictors. Efficacy significantly predicted actual voting ($OR=2.19$, 95% $CI=[1.50, 3.26]$, $p<.001$), but human action, controllability, and swing state perception did not ($ps>.30$).

Although we failed to find a significant effect of human action on actual voting, this does not preclude the possibility of an indirect effect of human action on voting via perceived responsibility (Rucker et al., 2011). In fact, as in Study 1a, we found that perceived responsibility mediated the relationship between human action and actual voting (mean responsibility score: $\beta=0.28$, $p<.001$). However, unlike in Study 1a, we found that this effect may be driven more by

² Although we did not collect personally identifying information and cannot cross-check voting records, we refer to this measure as “actual voting” to distinguish it from intended voting.

moral responsibility than causal responsibility. In a model testing the mediation effects of individual causal and responsibility items, the indirect effect of human action on voting intention via causal responsibility was not significant ($\beta=0.01, p=.13$). The indirect effect via moral responsibility was significant ($\beta=0.08, p<.001$), and the difference between the mediation effects of causal and moral responsibility was significant ($diff=-0.08, p=.001$).



Figure 4: Mean human action scores for participants who voted or did not. Each point corresponds to one participant and error bars represent 95% CIs.

Discussion

In Study 1b, we did not find evidence that human action beliefs predict actual voting. In other words, although participants were more likely to intend to vote if they believe that human action drives moral progress, they were not more likely to actually vote.

There are several possible explanations for this finding. One possibility is that the effect exists, but our study was underpowered to detect it. Due to participant drop-off in the second round of data collection, we were slightly underpowered to detect the same effect we found in Study 1a. Compounded with that, our dependent variable changed from continuous to binary, which further decreased our power. And lastly, a majority of participants (86%) reported in Study 1b that they voted, which further decreased the variance that human action would have been able to explain.

A second possibility, compatible with the first, is that the effect is real but small. Theories about how moral progress occurs may in fact lead people to vote, but this can be outweighed by more salient considerations, such as whether your vote makes a difference (i.e., efficacy). If this is the case, we should see the effect of human action in a larger sample, and it is worth further exploring the relationship between human action, efficacy, and responsibility.

Finally, a third possibility is that human action predicts voting intention, but this does *not* translate to action. In line with other work on the gap between intention and action (Conner & Norman, 2022; ElHaffar et al., 2020; Rhodes et al., 2022), people may feel more motivated to vote because

of their theories of moral progress, but this may have little influence on their actual behavior.

General Discussion

These results provide insight into the psychological mechanisms that drive voting behavior. Study 1a demonstrated that participants who believe human action drives moral progress are more likely to intend to vote, an effect mediated by a heightened sense of personal responsibility. These findings align with prior work suggesting that beliefs about human action motivate donation intention (Lewry et al., 2024). However, Study 1b revealed a more complex picture: while human action beliefs predicted perceived responsibility, they did not directly predict actual voting behavior. Instead, efficacy—the belief that voting is effective—was the only significant predictor of whether participants voted.

An important direction for future work is to examine this gap between intention and action. As laid out in Study 1b, there are several reasons why human action might have failed to predict actual voting, including insufficient power. However, it is possible that there is a real gap here: what motivates us to intend to vote may differ from what causes us to actually get out and do it. Actual behavior may depend more strongly on other factors, such as practical and structural barriers, or other psychological factors.

Research on the intention-behavior gap suggests that intention strength is an important mediator of whether someone is likely to follow through on a behavior (Conner & Norman, 2022). For example, if someone has an intention (e.g., to vote) that is stable over time and resistant to change, they are more likely to act. Additionally, the authors identify features of the goal as moderators, including whether the goal is difficult or conflicts with other goals (see also ElHaffar et al., 2020; Rhodes et al., 2022).

Future work should explore whether this voting intention-behavior effect is robust with a larger sample. If it is, it would be useful to measure how stable and resistant to change the initial intentions are. As Conner and Norman's (2022) findings suggest, weak initial intentions are unlikely to translate to action. Work on the intention-behavior gap also recommends paths for intervention, including messaging reminders or social norm interventions (Milkman et al., 2022; Yamin et al., 2019).

Finally, it would be useful to further clarify the dependence between human action, efficacy, and responsibility. It is possible that feeling a sense of personal responsibility depends on believing that one's actions can make a difference: If I have no efficacy, I am not responsible (Lauermann & Karabenick, 2011). Does responsibility similarly depend on human action beliefs? It seems likely that this would be the case: If humans play no role in whether the world gets better, I have no responsibility. But here, responsibility may be more easily diffused. One might believe that human actions are necessary for moral progress, but believe that other people will pick up the slack, thus minimizing one's own responsibility. Particularly for those

with low efficacy beliefs, human action alone may not be enough to motivate actual voting.

In terms of our studies, consider the following: Carla, a hypothetical participant, believes that without human action, nothing will get better (she scores high on the human action scale). Because of this, she feels a sense of responsibility, and plans to vote (high responsibility and intended voting in Study 1a). However, when the election rolls around, Carla is unable to easily access a polling center and thinks about how many other people are able to vote and make a difference. Thus, she doesn't vote. In Study 1b, even though she still scores high on human action, she scores low on efficacy and low on personal responsibility. This is one of many possible scenarios that could help explain our results, and it is worth exploring this and other possible explanations.

These studies also contribute to our understanding of responsibility. Researchers often measure "responsibility" as a singular construct, asking participants to rate their agreement with statements such as, "To what extent do you feel responsible for taking action to reduce climate change?" (see Lewry et al., m.s., for a review). But while moral responsibility is often thought to depend on causal responsibility (one cannot be held morally responsible if they did not cause the outcome; Kant, 1797), they can come apart in everyday reasoning. Theoretically, one may feel moral responsibility even when causal responsibility is low, for example in cases of collective action. The results presented in this paper provide evidence for this theory. Therefore, it is helpful if researchers are clear about which kinds of responsibility are being measured to better understand their generalizability.

As an additional note, Studies 1a and 1b differ in that the first is prospective (asking about intention and one's responsibility to take a future action) and the second is retrospective (asking about actions taken and responsibility that one had to take those actions). Future work should clarify whether prospective and retrospective notions of responsibility operate similarly (see Lewry & Lombrozo, m.s.).

This research contributes to a growing body of literature on the psychological factors that drive civic engagement. By linking lay theories of moral progress to voting behavior, it underscores the importance of theories of moral progress as a motivator for intended action. Confronted with the need to further explore the action-behavior gap and the relationship between these factors, the challenge remains: How can we use psychological factors to explain why a large portion of eligible US voters don't vote?

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