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Autonomy as civic motivation: Associations between autonomy and civic duty, civic action, and voting

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Research Article

Keywords: Political psychology, voting behavior, motivation, self-determination, civic engagement

Posted Date: July 15th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-9902241/v1

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Additional Declarations: No competing interests reported.

Abstract

Autonomy is a central value in American democracy, but is not well integrated into civic and political engagement research as a psychological source of motivation. In this preregistered study, we applied a Self-Determination Theory framework to investigate autonomy as a motivator for civic action across four U.S. elections (N = 2,480). We assessed autonomy both as a trait and a context-specific motivational state and found that both trait and context-specific autonomy were related to stronger civic attitudes, intentions to vote, and actual voting behavior. In contrast, extrinsic or controlled motivations were weakly or not related to these outcomes. This study provides robust and replicable evidence for the role of autonomy in civic and political engagement. It extends our theoretical understanding of what motivates voting and civic engagement and offers practical insights that can be applied to increase the effectiveness of voter mobilization strategies.

Introduction

Voter turnout in the United States of America (the U.S.) is consistently low compared to other democratic countries (Desilver, 2022). In the U.S., nearly a fifth of eligible voters are not registered to vote (Pew Research Center, 2022; Pew Charitable Trusts, 2017) and roughly a quarter of adults feel that their political system does not represent them (Pew Research Center, 2023). Only about half of the voting age population has participated in presidential elections over the past 25 years (The American Presidency Project, UCSB), and this turnout gap is particularly high among younger adults (Pew Research Center, 2023), who tend to be disengaged from traditional political action (e.g., voting) while holding high levels of concern about political issues (Pew Research Center, 2018; Martin, 2012). Given that low turnout creates disconnection between representatives and their constituents, undermining both real and perceived representativeness and legitimacy of government (Blais et al., 2020), it is critical to identify solutions to increase turnout. The present research addresses this issue by applying a motivational approach to understand what motivates voting, as well as civic and political engagement more broadly. We focus on the role of autonomy, which is a basic psychological need (Deci & Ryan, 2000) and also a core principle of American democracy.

Autonomy and motivation

Autonomy describes the condition of having freedom to make choices and act voluntarily and is a key component of well-being (Deci & Ryan, 2000; Ryff, 1989). From a Self-Determination Theory (SDT) perspective, autonomy entails a subjective experience of regulating one's own behavior and acting in ways that are consistent with core interests and values, as compared to being compelled or controlled by external pressures, such as through social expectations or coercion. The literature on goal pursuit tends to group behavioral motivations into overarching categories of "want to" motivations (autonomous motivations) and "have to" motivations (controlled motivations) (Werner & Milyavskaya, 2018). Autonomous motivations can be *intrinsic* (a behavior is inherently enjoyable, such as eating delicious food), *integrated* (connected to one's values, such as exercising in order to be healthy), or *identified*

(personally important and meaningful, such as volunteering to help others). Controlled motivations can be *extrinsic* (driven by external pressure or benefit, such as peer pressure or monetary gain) or *introjected* (driven by shame or guilt, such as brushing your teeth better than usual before visiting the dentist) (Werner & Milyavskaya, 2018). Autonomous motivations are foundational to action and goal pursuit both individualistically and socially (Deci & Ryan, 2000; Werner & Milyavskaya, 2018), and autonomy is interrelated with other foundational psychological needs including a sense of belonging (Deci & Ryan, 2000).

Autonomy in a social context

In contrast to political theory that closely associates autonomy with independence (Stoljar, 2000), the SDT literature conceptualizes autonomy as orthogonal to individualism and selfishness (Chirkov et al., 2007; Deci & Ryan, 2012). That is, an autonomous sense of duty to a social group is possible, as is autonomous *inter*dependence (Deci & Ryan, 2012; Chirkov et al., 2007; Bandura, 2000). For example, making a personal sacrifice on behalf of a social group would be autonomous behavior if personally valued.On the other hand, being coerced into such a sacrifice would reflect controlled, not autonomous motivation. Values are themselves constructed socially (Deci & Ryan, 2000), and personal identity is socially constructed and partly defined by group membership and social identity (Turner et al., 1987; Van Zomeren, 2016). Ultimately, this manifests as personal identification with socially oriented and group-relevant values (*identified motivation* in SDT) and integration of social values into one's sense of self (*integrated motivation* in SDT*)*. Thus, autonomy and social belonging are deeply interconnected psychological processes.

In collective decision-making, expression of autonomy does not necessitate the individual's control over an outcome. Indeed, people tend to be more satisfied with collective decisions if they had a chance to express voice as part of the decision process, even when the outcome does not align with their original preferences (Merkley et al., 2019; Terwel et al., 2010; Tyler, 1987; though see Bos and Spruijt, 2001). Having a meaningful opportunity to participate in decision-making is itself an opportunity for autonomous expression. In sum, autonomy is not incongruent with social identity or socially constructed values, and autonomy can manifest meaningfully in collective processes even without personal control over outcomes. This is particularly relevant to civic contexts, where autonomy and a sense of civic duty coexist.

What motivates civic engagement and voting?

Civic engagement includes a variety of behaviors (Zukin et al., 2006) and is broadly characterized by action (especially coordinated action) in service of one's social group or community, especially for the sake of improving conditions of the group or shaping the group's future (Adler & Goggin, 2005). Voting is one well-studied form of civic engagement that is motivated by a variety of factors, including: personal political interest in issues or candidates, sense of civic duty (i.e., one's attitudes and beliefs about the responsibility individuals hold regarding community involvement), sense of social belonging, the

perceived importance of the election, and the ease of registration to vote or of voting itself (Blais & Daoust, 2020; Harder & Krosnick, 2008; Shaw & Petrocik, 2020, Chap. 3). Prior research on voting considers motivations not only with respect to a desired outcome (e.g., an election outcome), but also with respect to the behavior itself (e.g., voting). However, we argue that key insights from social psychology highlighting the need for autonomy as a primary motivator are underrepresented in this literature and would augment theory while also offering practical inroads for interventions designed to motivate voting or other civic behaviors.

Autonomy in a civic context

Many modern democracies have been constructed around an ideal of protecting individual autonomy (Cunningham, 2002, Chaps. 3–4). However, few models of voting or civic behavior highlight the role of psychological autonomy. One exception is the expressive theory of voting, wherein voting is treated as a form of self-expression (Brennan and Lomasky, 1993). It has been considered a paradox among democratic theorists, however, that while democracy is conceptualized normatively to protect autonomy, the construction and stability of democracy itself relies on social norms of civic identity and a sense of civic duty (Cunningham, 2002, p. 57). This view of autonomy and civic duty as oppositional can also be reflected in the salience of only the latter in practical applications of voting theory. Get-out-the-vote campaigns, for example, often make salient the responsibility or duty of adherence to the collective body (Waldfogel et al., 2024). Overall, autonomy in political research is traditionally framed in the context of independence and individualism, in contrast to civic duty, civic obligation, or participation as a collective responsibility (Jacob, 2015; Christman, 2003; Stoljar, 2000). Thus, psychological conceptualizations of autonomy are often overlooked as a source of motivation that can be leveraged to promote civic and political engagement.

There is currently limited empirical evidence for the relationship between autonomous and controlled motivations and votingPeer-reviewed studies (Losier & Koestner, 1999; Koestner et al., 1996) and preprints (Wuttke, 2020a) suggest that identified but not intrinsic motivations are associated with voting behavior and the perceived self-relevance of elections. However, these studies did not measure integrated (i.e., value-aligned) motivation, which may be important for voting. They also found mixed results regarding the role of controlled motivations. Some studies found no or a weak relationship between controlled motivation and voting and other forms of political engagement (Wuttke, 2020a; Koestner et al., 1996), while another study found that introjected motivations were associated with election self-relevance (Losier & Koestner, 1999). While this initial evidence is suggestive, a robust assessment of these relationships—including integrated motivation—with larger samples from across multiple elections would add evidential value. Moreover, the prior studies reflect a political landscape that has substantially changed within the 21st century (Koestner et al., 1996, Losier & Koestner, 1999) and were conducted in Canada and Germany, making it unclear whether these results generalize to modern American electoral contexts.

Autonomy as both a trait and context-specific motivational state

Although psychological models of well-being consider autonomy as a universal human need (Deci & Ryan, 2000; Ryff, 1989), people vary in their propensity for autonomously motivated behavior (Deci & Ryan, 2000; Weinstein et al., 2012). Trait-like propensity to act autonomously can be measured as an individual's level of *autonomous functioning*, as compared to *controlled functioning*—the propensity to be motivated by external influences (Weinstein et al., 2012). However, trait-like tendencies are not universal policies; *context* operates in concert with traits to produce behavior and influences expression of autonomous vs. controlled functioning (La Guardia & Ryan, 2007). Autonomous behavior can also be modulated based on the level of support for autonomy in a given behavioral context and individual goals can vary in their degree of autonomous vs. controlled motivation (La Guardia & Ryan, 2007). Thus, it is useful to consider both trait-like autonomous functioning and context-specific personal motivations when investigating the role of autonomy in civic and political participation.

The present study

This study seeks to advance our understanding of autonomy as a civic motivator by closing several knowledge gaps: 1) Whereas prior studies on psychological autonomy and voting examined identified and intrinsic autonomous motivations, they did include not integrated motivations (Losier & Koestner, 1999; Koestner et al., 1996; Wuttke, 2020a). 2) No prior empirical research on civic engagement and voting including both trait-like and context-specific autonomy. 3) No prior work has addressed these relationships across multiple elections or election types, or in a U.S. context. Thus, existing evidence is limited, outdated, or lacking the robustness of examination across multiple samples and elections. In this study, we clarify the relationship between autonomy and voting by combining nine independent samples from four U.S. elections (including primaries, midterms, and presidential elections) into a single robust sample including trait-like and context-specific motivations to vote. Given that autonomy and civic duty are framed disparately across psychological and political science literatures, we also investigate relationships between autonomy and sense of civic duty more broadly.

Preregistered hypotheses

We predicted that autonomous motivation to vote, as well as broader trait-like autonomous functioning, would positively relate to (H1) voting intentions, (H2) voting behavior, (H3) sense of civic duty, and (H4) civic engagement behaviors. In contrast, we expected that controlled functioning and controlled motivation to vote would be negatively related or not related to these outcome measures (H5-8). Whereas we had strong directional hypotheses regarding autonomous motivation and functioning based on the literature, we were less confident about the nature or direction of the relationship with controlled motivation given conflicting evidence in the literature (Losier & Koestner, 1999; Koestner et al., 1996; Wuttke, 2021).

Methods

Transparency and openness

The hypotheses and analysis plan for the first study including the 2020 student and general samples were preregistered ([redacted for anonymous review]). Subsequent samples were collected to increase robustness and generalizability across different samples and elections. Deviations from the preregistration include: 1) original analyses combined intentions to register and vote into a single composite score but for simplicity and interpretability, we just focus on intentions to vote in the main manuscript (analyses using the composite score are reported in Supplemental Materials); 2) we did not pre-register the use of multi-level modeling to account for variability across samples as we did not originally intend to collect numerous samples. The 2021 student sample ([redacted for anonymous review]), 2024 student sample, the 2022 student and general samples were part of larger projects examining psychological motivations of information sharing, civic engagement, and voting ([redacted for anonymous review]). The data and code needed to reproduce these analyses are available online (anonymized for review: https://anonymous.4open.science/r/GOTV-autonomy-public-4C54/). Demographic data is not shared in order to maintain participant privacy.

Participants

This study combines data from nine samples recruited as part of six studies on civic engagement, voting, and message perceptions. Each study was collected prior to an election. Detailed information about each study is provided in Supplemental Materials. Participants (*N* = 2,511) were recruited from online platforms including Amazon's Mechanical Turk and Prolific, and the student psychology pool at the [redacted for anonymous review]. Eligibility requirements included being: fluent in English, 18 or older, and eligible to vote in the upcoming election. Participants could be excluded if they had no variability in responses (i.e. the percentage of individual questionnaires that have no variability; N = 0) or failed at least one attention check in the general population samples (N = 31). This yielded a final sample of N = 2,480. Of these participants, 563 also completed a follow-up, post-election survey including self-reported voting behavior. Participant demographics are reported in Table 1 and demographics per sample are included in Supplemental Materials (Table S1). All studies were approved by the [redacted for anonymous review] Institutional Review Board. All participants gave informed consent and were compensated for their participation financially or via course credit.

Power

The size for each sample was determined individually, as reported in study registrations ([link redacted for anonymized review]). For the combined analyses reported in this study, the analysis with the smallest number of observations (*N* = 534) gives us roughly 90% power to detect small effects (*r* = .14 or larger), while our analysis with the largest number of observations (N = 2,404) gives us > 99% power to detect small effects (*r* = .1 or larger).

Procedure

Participants were recruited prior to elections between 2020–2024, including the 2020 general election, the 2021 primary election in [redacted for anonymous review], the 2022 midterm election, and the 2024 general election. Participants completed an online survey where they reported their autonomous and controlled motivation to vote in the upcoming election and intention to vote. In some samples, participants also rated trait autonomous functioning, sense of civic duty, and civic engagement behaviors. In the 2020, 2022, and 2024 student samples, we followed up with participants after the election and asked them to report whether or not they voted. The measures included in each sample are described in Table 3.

Materials and measures

Sense of civic duty and civic engagement behaviors

Sense of civic duty was measured using the 8-item Attitude subscale of the Civic Engagement Scale (scale anchors: 1 = Strongly disagree, 7 = Strongly agree; Doolittle & Faul, 2013).The scale showed high internal consistency in our samples (Cronbach's alpha = 0.93, 95% CI = 0.93–0.94). Civic engagement behaviors during the prior 12 months were measured using a 17-item checklist adapted from Zukin et al. (2006) and endorsed behaviors were summed.

Table 1

Demographics Across All Samples

Variable	***N* (%)**	**Variable**	***M* (*SD*)**
Gender		Age	30 (14)
Genderqueer/ Genderfluid	6 (0.2%)	Subjective social status (10-pt scale)	5.95 (2.05)
Non-binary / third gender	26 (1.0%)	Political party identification*	2.99 (1.98)
Prefer not to say	23 (0.9%)		
Self-described	3 (0.1%)		
Woman	1,389 (56%)		
Man	1,030 (42%)		
Race			
American Indian or Alaskan Native	12 (0.5%)		
Asian (East, Southeast, and/or South Asian)	433 (17%)		
Black or African American	219 (8.8%)		
Native Hawaiian or Other Pacific Islander	2 (< 0.1%)		
Middle Eastern or North African	5 (0.2%)		
White	1,594 (64%)		
More than one race or race not listed	147 (5.9%)		
Prefer not to say	64 (2.6%)		
Hispanic/Latinx			
No	2,195 (89%)		
Yes	269 (11%)		

Note. For demographics per sample, please see Supplemental Materials (Table S1). *Scale anchors: 1 = strong Democrat, 4 = Independent, 7 = Strong Republican.

Table 2

Overview of the Makeup and N of Each Sample

Sample	Source	Election year & type	Pre-election N	Already voted (pre-election survey)	Post-election N
2020 general	Mechanical Turk	2020 general	316	117	–
2020 student	Student pool	2020 general	191	13	166
2021 student	Student pool	2021 primary	146	6	–
2022 general 1	Prolific	2022 midterm	256	56	–
2022 general 2	Prolific	2022 midterm	707	246	–
2022 student 1	Student pool	2022 midterm	137	1	111
2022 student 2	Student pool	2022 midterm	219	5	158
2024 student 1	Student pool	2024 general	329	-	39
2024 student 2	Student pool	2024 general	179	-	89

Note. The student pool includes only undergraduate students from the University of Pennsylvania.

Table 3

Overview of Key Variables Measured Per Sample

Sample	Predictor variables		Dependent variables			
	Motivations to Vote	Index of Autonomous Functioning	Voting Intentions	Voting Behavior	Sense of Civic Duty	Civic Engagement Behavior
2020 general	✓	✓	✓	Not collected	✓	✓
2020 student	✓	✓	✓	✓	✓	✓
2021 student	✓	Not collected	✓	Not collected	✓	✓
2022 general 1	✓	✓	✓	Not collected	✓	✓
2022 general 2	✓	✓	✓	Not collected	✓	Not collected
2022 student 1	✓	✓	✓	✓	✓	✓
2022 student 2	✓	✓	✓	✓	✓	✓
2024 student 1	✓	✓	✓	✓	✓	✓
2024 student 2	✓	✓	✓	✓	✓	✓

Voting intentions

Intentions to vote were typically measured with a single-item (e.g., “I plan to vote in the [upcoming] election”) with a 8-point scale (1 = definitely not, 7 = definitely yes, 8 = I already registered/voted). Participants in the 2020, 2021, and 2022 samples who reported having already voted (intentions = 8) were recoded as having definitive intentions (intentions = 7) for analyses of voting intentions and were also included in analyses of voting behavior (n = 444). Voting intentions in the 2024 student 2 sample were reported with a single item (“I plan to vote in the 2024 US general election”) with a 101-point scale (0 = strongly disagree, 100 = strongly agree), which was transformed to a 7-point scale prior to analysis. If participants indicated they were definitely not going to vote, they did not complete questionnaires regarding autonomous and controlled motivations to vote (n = 19).

Voting behavior

Students who completed the 2020, 2022, and 2024 surveys (N = 1,055) before the election were invited to complete a follow-up survey (N = 563) to report their voting behavior using a single item (“Did you vote in

the 2020 presidential election?"). A subset of these participants from 2020 and 2022 (N = 223) provided their permanent address where they were registered to vote and we used this information to verify their voting status (described in Supplementary Material).

Motivation to vote

Autonomous and controlled motivation were assessed using a 5-item scale (scale anchors: 1 = not at all for this reason, 7 = completely for this reason) adapted from Milyavskaya et al. (2015). Autonomous motivation to vote was measured with the following three items: intrinsic = "I expect it will be fun and enjoyable—the primary reason is simply my interest in the experience itself"; integrated = "It represents who I am and reflects what I value most in life"; identified = "I really believe that it is important to do." Controlled motivation to vote was measured with the following two items: introjected = "I would feel ashamed, guilty, or anxious if I didn't"; external = "Somebody else (parent, professor, friend, etc.) wants me to, or because I'll get something from someone if I do." Participants who reported they would definitely not vote (N = 19 across all samples) did not complete the motivation to vote scale.

Autonomous functioning

Autonomous functioning was measured using the Index of Autonomous Functioning scale (scale anchors: 1 = Not at all true, 7 = Completely true; Weinstein et al., 2012). Autonomous functioning was operationalized as the 5-item authorship/self-congruence subscale, and controlled functioning was operationalized as the 5-item susceptibility to control subscale. These scales had high internal validity within our sample, for both the autonomous functioning subscale (Cronbach's alpha = 0.85, 95% CI = 0.83–0.86) and the controlled functioning subscale (Cronbach's alpha = 0.81, 95% CI = 0.79–0.82).

Reasons for voting

We conducted exploratory analyses to examine how individual differences in autonomy were related to self-reported reasons for voting. Based on open-ended elicitation surveys and conversations with undergraduate students, we generated a list of reasons and asked participants in each post-election follow-up study (2020, 2022, and 2024 student samples) to select the reason(s) they either voted or did not vote. Included items are shown in Supplemental Materials (Table S9).

Statistical analyses

In linear mixed effects models, intercepts were allowed to vary randomly across samples and degrees of freedom were calculated using the Satterthwaite approximation. Coefficients are considered statistically significant at $p < 0.05$. We interpret findings as supporting a hypothesis if the coefficients are in the hypothesized direction and meet this statistical significance threshold.

Preregistered analyses

As preregistered, all continuous predictor and outcome variables that were more than 3 SDs from the mean were winsorized (to 3 SD) to reduce the impact of outliers on model coefficients. All continuous

predictor and outcome variables were z-scored to standardize model coefficients. All tests were conducted across samples using linear or logistic mixed effects regression models. In separate models, each outcome variable was regressed on the fixed effects of autonomous and controlled motivation to vote or autonomous and controlled functioning. Relationships per sample (including an interaction term for sample) are included for visualization of the marginal effects per sample included in main results.

Exploratory analyses

First, we attempted to replicate prior research considering each type of motivation separately (Losier & Koestner, 1999; Koestner et al., 1996; Wuttke, 2021; Wuttke, 2020a) by conducting exploratory analyses separating autonomous and controlled motivation to vote into separate items. Using linear mixed effect models, we regressed each outcome variable on the fixed effects of external, introjected, identified, integrated, and intrinsic motivation. Second, we tested potential interactions between trait and context-level motivations by including an interaction term between autonomous and controlled motivation in the preregistered models. This statistical analysis was preregistered, but we did not have directional hypotheses. Third, we examined causal pathways by testing the degree to which the relationships between voting motivation and subsequent voting behavior were mediated by intentions. Structural equation models were used to address this question and autonomous and controlled voting motivation were included within the same model. Fourth, we examined whether individual differences in autonomous motivation and functioning were associated with reporting different reasons for voting after the election. Using linear mixed effects logistic models, we regressed a dummy-coded variable for whether or not the reason was selected on the fixed effects of autonomous and controlled motivation to vote or autonomous and controlled functioning. Finally, given that voting behavior and autonomous functioning vary as a function of age, we examined age as a potential moderator of voting intentions by including it as an interaction term. Further statistical modeling details and results are reported in Supplemental Material.

Sensitivity analyses

We conducted sensitivity analyses controlling for person-level variables (age, gender, race, ethnicity, subjective socioeconomic status, and strength of political party affiliation) and iterative leave-one-sample-out analyses to assess robustness across samples. Statistical modeling details and results are described in Supplemental Materials.

Results

Descriptive analyses

Participants reported high intentions to vote (M = 6.30, SD = 1.34) and a positive sense of civic duty (M = 5.47, SD = 1.18), and moderate civic engagement (M = 6; SD = 4). Means and correlations between autonomous and controlled functioning and motivations to vote are shown in Table 4.

Table 4
Means, SDs, and Correlations Among Autonomous and Controlled Functioning and Motivations

Variable	Mean	SD	1. MV-A	2. MV-C	3. AF-A
1. MV-A	4.48	1.24			
2. MV-C	2.81	1.43	.31** [.27, .34]		
3. AF-A	3.89	0.70	.37** [.34, .41]	.00 [-.04, .04]	
4. AF-C	2.46	0.90	.13** [.09, .17]	.47** [.43, .50]	− .07* [-.11, − .03]

Note. MV = motivation to vote; AF = autonomous functioning; A = autonomous; C = controlled. Mean, SD, and Pearson's correlation values with 95% CIs are shown. Asterisks indicate statistical significance: *p < .05, ** p < .01.

Context-specific autonomous and controlled motivation to vote

Below we report standardized regression coefficients or odds ratios and 95% confidence intervals. All model parameters and statistics are reported in Table 5 and relationships are visualized in Fig. 1. Sensitivity analyses including models with demographic controls and leave-one-sample-out tests of each hypothesis are included in Supplemental Materials (Tables S2-S5). Where sensitivity analyses reveal discrepancies, we report those findings here.

Hypothesis 1: Voting intentions

In line with our preregistered hypotheses, autonomous motivation to vote was positively associated with voting intention (β = 0.45, 95% CI [0.41, 0.48]), while controlled motivation was negatively associated with voting intention (β = -0.10, 95% CI [-0.13, -0.06]).

Hypothesis 2: Voting behavior

As hypothesized, we found that people who reported higher autonomous motivation to vote before the election were more likely to vote (OR = 1.95, 95% CI [1.53, 2.49]), whereas controlled motivation was not related to voting behavior (OR = 0.92, 95% CI [0.72, 1.18]).

Hypothesis 3: Sense of civic duty

As expected, autonomous motivation to vote was positively related to sense of civic duty (β = 0.43, 95% CI [0.39, 0.46]), whereas controlled motivation was not related to it (β = 0.00, 95% CI [-0.04, 0.04]).

Hypothesis 4: Civic engagement behavior

Consistent with our hypothesis, we found that autonomous motivation to vote was positively related to civic engagement behavior (β = 0.26, 95% CI [0.21, 0.30]). In contrast to our hypothesis, we also observed a positive relationship between controlled motivation to vote and civic engagement behavior (β = 0.15, 95% CI [0.10, 0.20]). However, sensitivity analyses revealed that the positive relationships between controlled functioning and civic engagement behavior was driven by the 2020 general sample, which exhibited an abnormal response pattern to the behavioral checklist. When removing this sample using a leave-one-sample-out procedure this relationship was no longer statistically significant (β = -0.01, 95% CI [-0.06, 0.04]). Given that seven out of nine samples show null relationships and this sample is a clear outlier, it appears reasonable to interpret the latter model and conclude that controlled motivation to vote is not generally related to civic behavior. Findings from leave-one-sample-out analyses for every measure and the details of each sample's reported civic engagement behavior are included in Supplemental Materials (Tables S4-S5 and Table S7).

Table 5

Relationships Between Autonomous and Controlled Motivations to Vote, Voting and Civic Engagement

DV	*N*	*Marginal R^2 / Conditional R^2*	*Variable*	*Estimate*	*CI*	*Statistic*	*p*	*df*
H1: Voting intentions	2404	0.22 / 0.27	Intercept	0.04	-0.13–0.21	0.59	0.572	7.71
			MV-A	**0.45**	**0.41–0.48**	**26.62**	**< 0.001**	**2397.11**
			MV-C	**-0.10**	**-0.13 – -0.06**	**5.67**	**< 0.001**	**2400.89**
H2: Voting behavior*	534	0.09 / 0.26	Intercept	5.48	2.37–12.70	3.97	**< 0.001**	-
			MV-A	**1.95**	**1.53–2.49**	**5.36**	**< 0.001**	-
			MV-C	0.92	0.72–1.18	0.62	0.535	-
H3: Civic duty	2401	0.18 / 0.26	Intercept	0.11	-0.11–0.33	1.15	0.284	8.14
			MV-A	**0.43**	**0.39–0.46**	**22.76**	**< 0.001**	**2393.28**
			3MV-C	0.00	-0.04–0.04	0.04	0.966	2396.94
H4: Civic behavior			Intercept	0.04	-0.16–0.24	0.50	0.634	6.98
	1713	0.11 / 0.16	**MV-A**	**0.26**	**0.21–0.30**	**10.68**	**< 0.001**	**1707.18**
			MV-C	**0.15**	**0.10–0.20**	**6.39**	**< 0.001**	**1709.97**
Civic behavior†	1404	0.07 / 0.15	Intercept	0.02	-0.22–0.25	0.16	0.877	6.03
			MV-A	**0.25**	**0.20–0.29**	**10.66**	**< 0.001**	**1396.23**
			MV-C	-0.01	-0.06–0.04	0.47	0.638	1399.34

Note. MV = motivation to vote; A = autonomous; C = controlled. Main effects that are statistically significant at $p < .05$ are bolded. *Estimates are odds ratios and statistics are Z-values. In all other

models, estimates are standardized regression coefficients and statistics are t-values. †Model excluding the 2020 general sample.

Figure 1

Relationships between autonomous and controlled motivations to vote and voting and civic engagement

Notes. Model predictions from analyses for autonomous and controlled motivations to vote (H1-H4). Autonomous motivations were positively related to (A) voting intentions, (B) voting behavior, (C) sense of civic duty, and (D) engagement in civic behavior. Controlled motivations were not significantly related to voting intentions, voting behavior, or sense of civic duty. Controlled motivation was significantly related to engagement in civic behavior, though this relationship was driven exclusively by the 2020 general sample. The relationship excluding this sample is visualized with a dotted line in panel D. Top sections of panels show fitted regression lines with 95% confidence intervals. Bottom sections of panels visualize the marginal effects per sample with 95% CIs.

Exploratory analyses: Individual types of motivation

Treating each type of motivation separately (Table 6), we found that the relationship between autonomous motivation to vote and voting intentions was driven by identified (β = 0.41, 95% CI [0.37, 0.45]) and integrated (β = 0.13, 95% CI [0.09, 0.17] but not intrinsic motivation (β = -0.01, 95% CI [-0.05, 0.02]). Identified (OR = 1.48, 95% CI [1.14, 1.93]) and integrated (OR = 1.64, 95% CI [1.22, 2.20] motivations were also related to voting behavior, whereas intrinsic motivation was negatively associated with voting behavior (OR = 0.73, 95% CI [0.55, 0.97]). We also found that identified, integrated, and intrinsic motivation were all positively associated with sense of civic duty and civic behavior (Table 6). However, the relationship between intrinsic motivation and civic behavior was null in the model excluding the 2020 general sample (β = -0.01, 95% CI [-0.06, 0.04]), indicating they are likely unrelated.

Table 6

Individual item analysis: motivations to vote as related to voting and civic engagement

DV	*N*	*Marginal R^2 / Conditional R^2*	*Variable*	*Estimate*	*CI*	*Statistic*	*p*	*df*
H1: Voting intentions	2404	0.33 / 0.37	Intercept	0.04	-0.11–0.20	0.63	0.546	7.69
			External (C)	**-0.04**	**-0.08 – -0.01**	**2.52**	**0.012**	2397.80
			Introjected (C)	0.02	-0.01–0.06	1.53	0.127	2394.86
			Identified (A)	**0.41**	**0.37–0.45**	**21.02**	**< 0.001**	2392.96
			Integrated (A)	**0.13**	**0.09–0.17**	**6.72**	**< 0.001**	2394.84
			Intrinsic (A)	-0.01	-0.05–0.02	0.82	0.414	2392.21
H2: Voting behavior*	534	0.16 / 0.35	Intercept	5.91	2.36–14.77	3.80	**< 0.001**	-
			External (C)	0.87	0.67–1.12	1.09	0.276	-
			Introjected (C)	1.24	0.94–1.64	1.50	0.133	-
			Identified (A)	**1.48**	**1.14–1.93**	**2.92**	**0.003**	-
			Integrated (A)	**1.64**	**1.22–2.20**	**3.28**	**0.001**	-
			Intrinsic (A)	**0.73**	**0.55–0.97**	**2.16**	**0.031**	-
H3: Civic duty	2401	0.20 / 0.27	Intercept	0.11	-0.11–0.33	1.17	0.276	8.14
			External (C)	-0.01	-0.05–0.03	0.56	0.575	2393.80
			Introjected (C)	**0.06**	**0.02–0.09**	**2.84**	**0.005**	2390.91
			Identified (A)	**0.19**	**0.14–0.23**	**8.04**	**< 0.001**	2389.47

DV	*N*	*Marginal R^2 / Conditional R^2*	*Variable*	*Estimate*	*CI*	*Statistic*	*p*	*df*
			Integrated (A)	**0.26**	**0.21–0.30**	**11.02**	**< 0.001**	2390.90
			Intrinsic (A)	**0.08**	**0.04–0.12**	**4.18**	**< 0.001**	2388.91
H4: Civic behavior	1713	0.12 / 0.17	Intercept	0.04	-0.16–0.25	0.49	0.640	6.96
			External (C)	**0.15**	**0.10–0.20**	**5.85**	**< 0.001**	1706.97
			Introjected (C)	**0.06**	**0.01–0.11**	**2.36**	**0.018**	1704.97
			Identified (A)	**0.09**	**0.04–0.15**	**3.20**	**0.001**	1703.06
			Integrated (A)	**0.18**	**0.12–0.24**	**6.20**	**< 0.001**	1704.85
			Intrinsic (A)	**0.07**	**0.02–0.12**	**2.67**	**0.008**	1702.85
Civic behavior[†]	1404	0.10 / 0.18	Intercept	0.01	-0.23–0.25	0.09	0.931	6.02
			External (C)	-0.05	-0.10–0.00	1.78	0.075	1396.14
			Introjected (C)	**0.06**	**0.01–0.11**	**2.28**	**0.023**	1395.87
			Identified (A)	**0.10**	**0.05–0.16**	**3.61**	**< 0.001**	1394.21
			Integrated (A)	**0.18**	**0.12–0.23**	**6.13**	**< 0.001**	1395.52
			Intrinsic (A)	-0.01	-0.06–0.04	0.54	0.587	1392.67

Note. (A) = autonomous, (C) = controlled motivation to vote. Main effects that are statistically significant at p < .05 are bolded. *Estimates are odds ratios and statistics are Z-values. In all other models, estimates are standardized regression coefficients and statistics are t-values. [†]Model excluding the 2020 general sample.

Trait-like autonomous and controlled functioning

Below we report standardized regression coefficients or odds ratios and 95% confidence intervals. All model parameters and statistics are reported in Table 7 and relationships are visualized in Fig. 2.

Hypothesis 5: Voting intentions

Consistent with our preregistered hypotheses, people with higher autonomous functioning had stronger voting intentions (β = 0.23, 95% CI [0.19, 0.27]. In contrast, controlled functioning was not related to intentions to vote (β = -0.04, 95% CI [-0.08, 0.00]).

Hypothesis 6: Voting behavior

Autonomous functioning was positively associated with voting behavior but was not statistically significant (OR = 1.15, 95% CI [0.92, 1.43]). In line with our hypothesis, controlled functioning was not related to voting behavior (OR = 1.00, 95% CI [0.79, 1.26]).

Hypothesis 7: Sense of civic duty

As hypothesized, people with higher autonomous functioning also tended to report a stronger sense of civic duty (β = 0.44, 95% CI [0.40, 0.47]). However, in contrast to our hypothesis, controlled functioning was also positively associated with sense of civic duty (β = 0.10, 95% CI [0.06,0.14]), albeit less strongly than for autonomous functioning.

Hypothesis 8: Civic engagement behavior

Mirroring civic attitudes, civic engagement behavior was positively related to both autonomous (β = 0.17, 95% CI [0.12,0.22]) and controlled functioning (β = 0.20, 95% CI [0.15,0.25]). However, as with controlled motivation to vote, the latter was driven by the 2020 general sample. Excluding this sample in leave-one-sample-out analyses revealed that the positive relationship was no longer statistically significant (β = 0.02, 95% CI [-0.03,0.06]).

Table 7

Relationships Between Autonomous and controlled functioning, voting, and civic engagement

DV	*N*	*Marginal R^2 / Conditional R^2*	*Variable*	*Estimate*	*CI*	*Statistic*	*p*	*df*
H5: Voting intentions	2312	0.06 / 0.08	Intercept	0.03	-0.11 – 0.17	0.52	0.618	6.50
			IAF-A	**0.23**	**0.19 – 0.27**	**11.45**	**<0.001**	**2308.30**
			IAF-C	-0.04	-0.08 – 0.00	1.83	0.068	2290.32
H6: Voting behavior*	563	0.00 / 0.16	Intercept	4.40	2.11 – 9.19	3.95	**<0.001**	-
			IAF-A	1.15	0.92 – 1.43	1.23	0.220	-
			IAF-C	1.00	0.79 – 1.26	0.00	0.998	-
H7: Civic duty	2311	0.19 / 0.25	Intercept	0.06	-0.15 – 0.26	0.65	0.560	7.12
			IAF-A	**0.44**	**0.40 – 0.47**	**23.51**	**<0.001**	**2304.14**
			IAF-C	**0.10**	**0.06 – 0.14**	**5.30**	**<0.001**	**2307.93**
H8: Civic behavior	1627	0.07 / 0.11	Intercept	-0.05	-0.25 – 0.15	0.62	0.560	6.14
			IAF-A	**0.17**	**0.12 – 0.22**	**7.10**	**<0.001**	**1621.49**
			IAF-C	**0.20**	**0.15 – 0.25**	**8.49**	**<0.001**	**1623.99**
Civic behavior†	1311	0.04 / 0.09	Intercept	-0.08	-0.29 – 0.14	0.93	0.393	5.04
			IAF-A	**0.18**	**0.13 –**	**7.51**	**<0.001**	**1305.73**

		0.23			
IAF-C	0.02	-0.03 – 0.06	0.61	0.545	1307.97

Note. IAF = Index of autonomous functioning; A = autonomous; C = controlled. Main effects that are statistically significant at p < .05 are bolded. *Estimates are odds ratios and statistics are Z-values. In all other models, estimates are standardized regression coefficients and statistics are t-values. †Model excluding the 2020 general sample.

Figure 2

Autonomous and controlled functioning as related to voting and civic engagement

Notes. Model predictions from analyses for autonomous and controlled functioning (H5-H8). Autonomous functioning was positively related to voting intentions (top left), civic duty (bottom left), and civic behavior (bottom right). The relationship between autonomous functioning and voting behavior was not significant. Controlled functioning was not significantly related to voting intentions (top left), voting behavior (top right). Controlled functioning was positively related to civic behavior (bottom right), though this relationship was driven exclusively by the 2020 general sample and therefore should be interpreted with caution (see reported results in the main text for caveats). Controlled functioning was related to civic duty (bottom left). Top sections of panels show fitted regression lines with 95% confidence intervals. Bottom sections of panels visualize the marginal effects per sample with 95% CIs. In (D), the dotted line represents controlled motivation to vote, excluding the 2020 general sample.

Exploratory analyses: Interactions between context-specific and trait-like motivation

The results from analyses examining potential interactions between context-specific motivations to vote and trait functioning are reported in detail in Supplemental Materials (Table S6). Briefly, we found that context-specific and trait motivations shared some variance, but did not tend to interact. Overall, autonomous motivation to vote tended to be the strongest predictor across outcomes.

Exploratory analyses: Causal pathways among voting motivation, intentions, and behavior

We examined potential indirect effects between voting motivation and subsequent behavior via intentions using structural equation modeling. We observed an an indirect effect of autonomous motivation on voting behavior through intentions (a1*b path: β = 0.25, 95% CI [0.20, 0.32]), but no indirect effect on behavior for controlled motivation (a2*b path: β = -0.02, 95% CI [-0.06, 0.03]). Full results are reported in Table S14.

Exploratory analyses: Reasons for voting

Motivation to vote

We examined whether individual differences in autonomous motivation and functioning were associated with reporting different reasons for voting, and we found that autonomous motivation to vote tended to be more strongly related to reason endorsement than controlled motivation. Model details per reason are included in Supplemental Materials (Table S10) and visualized in Figure 3. Greater autonomous motivation to vote increased the probability of endorsing all reasons except personal financial impact, spite, and normative expectations about adulthood. In contrast, greater controlled motivation to vote only decreased the probability of endorsing reasons for voting related to election consequences and issues advocacy. Consistent with expressive theories of voting, greater autonomous motivation increased the probability of endorsing expressive reasons for voting (e.g., “make my voice heard”, “express myself”). Notably, autonomous motivation was also associated with reporting numerous social reasons for voting (e.g., “my civic duty”, “build a better world”)

Autonomous functioning

General trait-like autonomous functioning was less consistently related to reasons for voting. Greater autonomous functioning increased the probability of endorsing several reasons including: being worried about the future, issue advocacy, supporting one’s family, supporting one’s community, building a better world. Greater controlled functioning only decreased the probability of endorsing issues advocacy. The odds ratios for each model are visualized in Figure 3; model details are included in Supplemental Materials (Table S11).

Figure 3

Self-reported reasons for voting as a function of autonomy

Note. Reasons for voting related to (A) Motivation to vote; (B) Index of autonomous functioning. Odds ratios and 95% CIs are plotted, with higher opacity for significant results. Dashed line indicates no effect (OR = 1). Model details are included in Supplemental materials (Tables S10 and S11). *Indicates reasons categorized as civic and/or social.

Exploratory analyses: Moderation by age

We also examined the expression of autonomous and controlled motivations and functioning across age, and how context- and trait-level motivations interact with age to affect voting intentions and sense of civic duty. We found that higher age is associated with higher autonomous motivations to vote and higher autonomous functioning, but lower controlled motivations and functioning (Table S15 and Figure S8). We also found that autonomous motivations and functioning were more strongly associated with voting intentions in younger adults, as compared to older adults; but autonomous motivations were more strongly associated with sense of civic duty in older adults, as compared to younger adults. Controlled motivations to vote had no significant interactions with age predicting voting intentions or sense of civic duty; controlled functioning also had no significant interaction with age predicting voting intentions, but

was more strongly associated with voting intentions in older, as compared to younger, adults. Model details are included in Table S16 and visualized in Figures S9-S12.

Discussion

Autonomy is a foundation of human motivation, but psychological frameworks of autonomy have not yet been fully integrated into cross-disciplinary scholarship on civic and political engagement. Using data from nine American college student and general population samples, spanning four elections, we tested the overarching hypothesis that autonomy is a key motivator for civic engagement. Overall, we found robust evidence that people who tend to behave autonomously or have greater autonomous motivation to vote reported higher voting intentions and subsequent behavior, as well as stronger civic attitudes and behavior. In contrast, the degree to which people are susceptible to external pressures or are motivated to vote for external reasons (i.e. controlled motivation) was less strongly related to civic and political engagement. Together, these findings offer new insights into what motivates people to vote and participate politically.

Autonomous and controlled motivations to vote

Consistent with theoretical and empirical studies highlighting the importance of autonomy in goal pursuit (Deci & Ryan, 2000; Werner & Milyavskaya, 2018; La Guardia & Ryan, 2007), we found that autonomous ("want to") but not controlled ("have to") motivation to vote was positively related to voting intentions and behavior, sense of civic duty, and civic engagement behavior. Extending these correlational analyses, structural equation models examining potential causal pathways suggest that autonomous motivation increases voting behavior by strengthening intentions. This finding is consistent with recent models of behavior change (Hagger & Hamilton, 2020) integrating Self-determination Theory and the Theory of Planned Behavior (Ajzen, 1991). These results help contextualize prior findings from the voting literature. For example, the relationship between voting and personal sense of duty but not concern about social image (Bali et al., 2020) can be explained through a motivational lens suggesting the value of civic duty can be internalized as an identified or integrated motivation rather than being a form of external, social pressure. Consistent with this idea, people with greater autonomous motivation were more likely to report that they voted because it was their civic duty.

Exploratory analyses treating each motivation item separately showed that identified and integrated motivation but not intrinsic motivation explained the relationship between autonomous motivation and voting intentions and behavior. This is consistent with limited evidence from the elections in Canada (Losier & Koestner, 1999; Koestner et al., 1996) and Germany (Wuttke, 2020a), and suggests that people vote primarily because they find it personally meaningful and value-aligned, but not because it is inherently enjoyable. However, we found that all three autonomous motivations (identified, integrated, and intrinsic motivation) were related to sense of civic duty. This suggests that people may not be motivated to vote because it is inherently enjoyable, but that enjoying voting is related to broader civic orientation.

Autonomous and controlled functioning

Extending prior work focused on context-specific motivations for voting, we found that people with higher autonomous functioning also had stronger intentions to vote, a stronger sense of civic duty, and engaged in more civic behavior. On the other hand, controlled functioning was not consistently associated with these outcomes and was only positively associated with a sense of civic duty. Neither autonomous nor controlled functioning was associated with voting behavior. When including both trait and context-specific motivations in the models, autonomous motivation to vote was consistently the strongest predictor across outcomes. This suggests that context-specific motivation may matter more than individual differences in trait level motivation in civic and political contexts..

These findings help contextualize related literature on voting and generate new hypotheses. For example, social norms messaging can be effective at increasing voting intentions among individuals who vote infrequently (Gerber & Rogers, 2009). Our results suggest that infrequent voters may have higher controlled functioning and may therefore benefit from interventions that evoke controlled reasons for voting, such as social pressure. While future research is needed to test this hypothesis, our approach provides a framework to do so.

Theoretical implications

These results offer robust new empirical insights regarding the link between autonomy and civic and political engagement. The finding that higher autonomous motivations but not controlled motivations (at both trait and context-specific levels) were associated with a stronger sense of civic duty complicates political theory that considers autonomy and civic duty as oppositional (Cunningham, 2002). Additionally, in the specific context of voting, autonomous and controlled motivations were positively correlated, indicating that individuals can experience both autonomous drive to vote as well as a sense of social responsibility. This is further supported by exploratory analyses revealing that reasons for voting related to social and civic responsibility were associated with autonomous, but not controlled, motivations to vote. That identified and integrated, but not intrinsic, motivations explain the relationship between autonomous motivation and voting provides additional evidence that autonomy and civic orientation may be co-constructed; the identification and integration of civic values into personal identity is a social process that fosters voting and other civic behaviors as autonomous action. Together, these findings highlight how adopting a motivational approach can add nuance and generate new insights into existing frameworks of civic and political engagement.

Practical implications

In addition to extending theories about why people vote, these findings offer practical suggestions for get-out-the-vote campaigns. Since motivational states can be influenced by perceptions of the behavioral context—i.e., by a context's affordances for autonomous motivations—interventions on the context itself or on perceptions of the context can foster action from autonomous motivations. For example,

autonomy-supportive persuasive messaging strategies have been effective in the domain of health behavior change (Murphy et al., 2024, Solovei et al., 2024; Moon et al., 2021; Smit et al., 2019; Williams et al., 1999). There is also some evidence for a positive effect of autonomy-supportive frameworks on civic and political engagement. For example, autonomy-supportive parenting can stimulate future political engagement (Wuttke, 2020b), and autonomy-supportive frameworks can increase engagement in community programs (DeCaro and Stokes, 2008). Get-out-the-vote messaging is often generic (e.g., "Vote!"), informational (e.g., how to register), social norms driven (e.g., "your friends can see if you voted"), or otherwise persuasive on the grounds of responsibility or expectation. However, this research suggests that people may be more persuaded by messages and interventions using autonomy-supportive frameworks or reflecting autonomous motivations.

Recent empirical evidence supports this idea. For example, get-out-the-vote messages targeting beliefs related to the personal importance (i.e., identified motivation) and value-alignment (i.e., integrated motivation) of voting were more effective than other types of messages (Lydic et al., 2025). Likewise, in a large-scale (N = 12,896) mega-study comparing interventions to promote voter registration, an intervention targeting the personal importance of voting (i.e., identified motivation) increased intentions to vote and voter registration website clicks among people motivated to vote, and was overall one of the more effective interventions in the study (Mason et al., 2025). Overall, these findings suggest that campaigns might create opportunities—through messaging, canvassing, or other activities—that support individuals to identify why voting is personally important or aligned with their values to increase voting.

Limitations and future directions

Despite the notable strengths of our approach—aggregation of multiple samples across multiple elections, consideration of trait and context-specific motivation, and examination of several civic and political outcomes—the results should be interpreted in light of several limitations. Notably, we did not collect data on how people perceive elections, polling, or the political system in terms of whether the context itself affords autonomous engagement. We also did not explore barriers to voting and civic engagement or the reasons people did not vote. Yet, understanding the precursors for disengagement are as important as understanding the precursors for engagement in order to comprehensively understand the landscape of civic and political participation. Our analyses of civic engagement behavior revealed differences across samples, namely with one online general population sample showing a pattern of civic behavior distinct from other samples. It is unclear whether this is an issue of data quality, or simply a real behavioral difference in this sample. In addition, we used retrospective reporting of civic behavior that did not consider how often people engage in civic behaviors or how strongly people intend to do so in the future, as we measured with voting. This study predominantly used cross-sectional survey methods, but future work can employ experimental, experience sampling, and longitudinal methods over longer timescales to articulate the relationships among context, perceptions of context, traits, and behavior-specific motivations. More broadly, we also see a need for a critical, multi-disciplinary analysis of the affordances for autonomy and other psychological needs within democratic systems; we see this inquiry

into the context of voting itself as an important opportunity for applying SDT to political systems scholarship in future work.

Conclusions

We found that autonomous motivations both in the specific context of voting and as a trait-like individual difference were positively related to voting, a sense of civic duty, and one's breadth of civic engagement. In contrast, controlled motivations tended to be weakly or not related to these outcomes. Importantly, we demonstrate that autonomy and civic duty are mutually reinforcing rather than at odds, highlighting the usefulness of psychological motivation theories to political behavior research. By integrating psychological theories of motivation with political models of civic engagement, we can gain a more robust and comprehensive understanding of civic and political participation. Our findings highlight autonomy as an important motivator of voting and provides practical insights towards future efforts to encourage civic engagement and voting.

Declarations

Funding statement

This work was supported by departmental and center funds at the senior authors' institutions.

Author Contribution

Conceptualization: K.L., D.C., E.B.F.; Data curation: D.C.; Formal analysis: K.L., D.C.; Funding acquisition: D.C., E.B.F.; Investigation: D.C., N.C.; Methodology: D.C., E.B.F., N.C., M.D.C., A.D.; Project administration: D.C., N.C.; Resources: D.C.; Supervision: D.C., E.B.F.; Visualization: D.C., K.L.; Writing (original draft): K.L., D.C.; Writing (reviewing and editing): K.L, D.C., E.B.F., M.D.C., N.C., A.D.

Data Availability

All study materials (data, code) are shared via online repositories and are linked in the manuscript. Study registrations are available on OSF (https://osf.io/caxfq/registrations), and the analysis preregistration is available on OSF (https://osf.io/4tgda). Data and analysis code are available in a Github repository (http://github.com/cnlab/GOTV-autonomy-public/). Study materials (questionnaires) are described in full in the manuscript or, when indicated, in Supplementary Materials.

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Figures

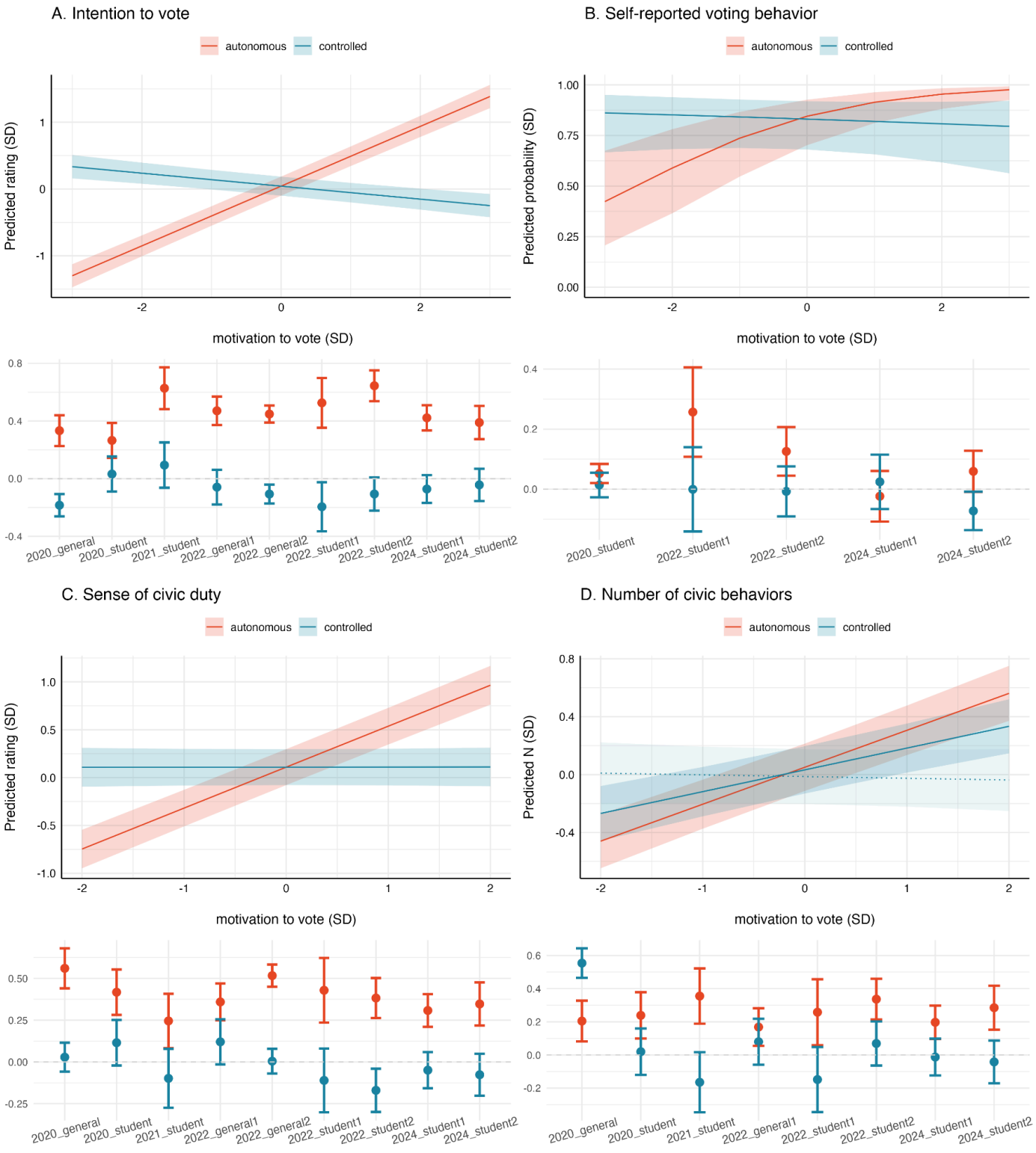


Figure 1

Relationships between autonomous and controlled motivations to vote and voting and civic engagement

Notes. Model predictions from analyses for autonomous and controlled motivations to vote (H1-H4). Autonomous motivations were positively related to (A) voting intentions, (B) voting behavior, (C) sense of civic duty, and (D) engagement in civic behavior. Controlled motivations were not significantly related to

voting intentions, voting behavior, or sense of civic duty. Controlled motivation was significantly related to engagement in civic behavior, though this relationship was driven exclusively by the 2020 general sample. The relationship excluding this sample is visualized with a dotted line in panel D. Top sections of panels show fitted regression lines with 95% confidence intervals. Bottom sections of panels visualize the marginal effects per sample with 95% CIs.

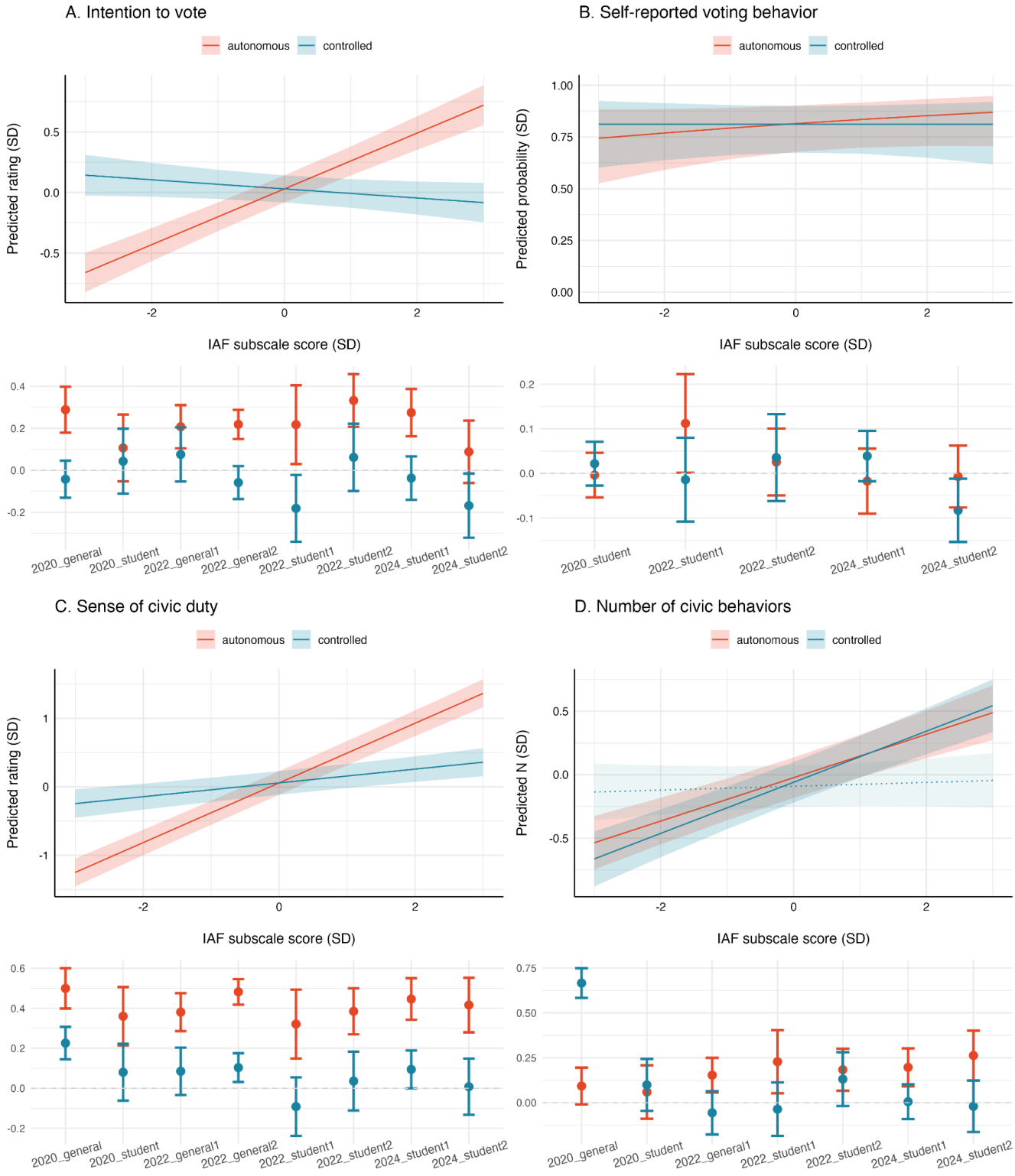


Figure 2

Autonomous and controlled functioning as related to voting and civic engagement

Notes. Model predictions from analyses for autonomous and controlled functioning (H5-H8). Autonomous functioning was positively related to voting intentions (top left), civic duty (bottom left), and civic behavior (bottom right). The relationship between autonomous functioning and voting behavior was not significant. Controlled functioning was not significantly related to voting intentions (top left), voting behavior (top right). Controlled functioning was positively related to civic behavior (bottom right), though this relationship was driven exclusively by the 2020 general sample and therefore should be interpreted with caution (see reported results in the main text for caveats). Controlled functioning was related to civic duty (bottom left). Top sections of panels show fitted regression lines with 95% confidence intervals. Bottom sections of panels visualize the marginal effects per sample with 95% CIs. In (D), the dotted line represents controlled motivation to vote, excluding the 2020 general sample.

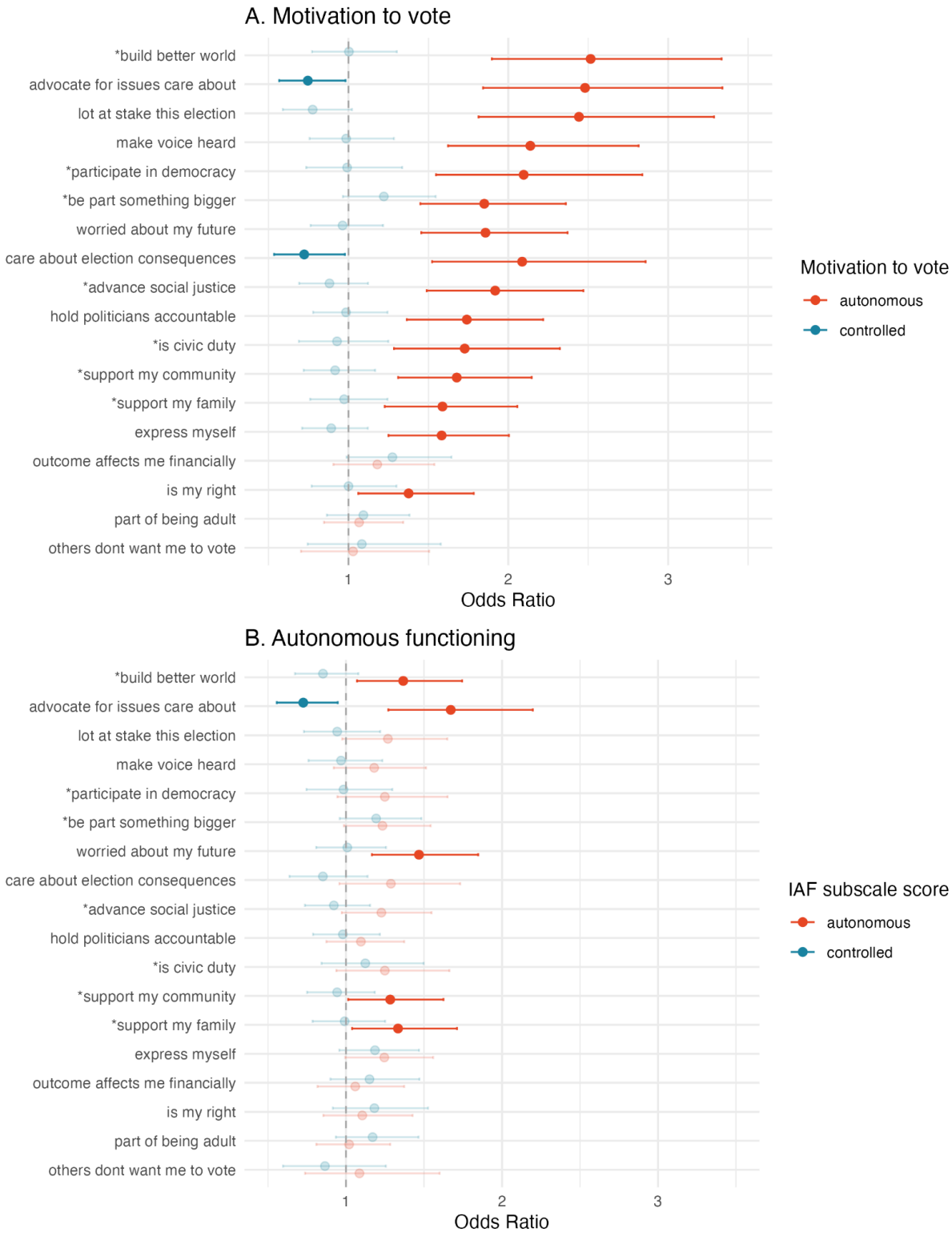


Figure 3

Self-reported reasons for voting as a function of autonomy

Note. Reasons for voting related to (A) Motivation to vote; (B) Index of autonomous functioning. Odds ratios and 95% CIs are plotted, with higher opacity for significant results. Dashed line indicates no effect

(OR = 1). Model details are included in Supplemental materials (Tables S10 and S11). *Indicates reasons categorized as civic and/or social.

Supplementary Files

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