

Turnout as a Habit

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Abstract It is conventional to speak of voting as “habitual.” But what does this mean? In psychology, habits are cognitive associations between repeated responses and stable features of the performance context. Thus, “turnout habit” is best measured by an index of repeated behavior and a consistent performance setting. Once habit associations form, the response can be cued even in the absence of supporting beliefs and motivations. Therefore, variables that form part of the standard cognitive-based accounts of turnout should be more weakly related to turnout among those with a strong habit. We draw evidence from a large array of ANES surveys to test these hypotheses and find strong support.

Keywords Habit · Voter turnout · Automaticity

Turnout to vote is one of the fundamental acts of democratic politics. As such, there has been a huge literature seeking to understand it—and a great deal has been learned. Even though a wide panoply of factors are, as hypothesized, related to turnout, those that are also related to candidate choice are almost invariably more strongly related to vote choice than to the decision to turnout. For example, Campbell et al. found that the

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intensity of partisan preference was strongly related to turnout (1960, Table 5-1, p. 97), but they also showed a substantially stronger relationship between intensity of partisan choice and candidate preferences (Table 4-1, p. 69). Equally, voting as an act of political participation is less strongly explained by relevant variables than, for example, participation in campaigns or other modes of political participation. Verb and Nie, for example, found that their turnout-to-vote factor was noticeably less strongly related to overall political participation than were their campaign and communal activity factors (1972, Table B-2, p. 358).

We consider in this paper whether there may be a reason for this asymmetry in predicting vote choice as opposed to turnout. In particular, we explore empirically whether turnout reflects two styles of decision making. Some people decide to turnout as it is usually understood, as the result of deliberation or conscious weighing of relevant factors. Other citizens determine whether to vote as the result of what is understood theoretically in social psychology as habituated responses, responding automatically to quite different sorts of cues. If there are people both with and without a strong habit for voting, then turnout behavior is determined in two distinct ways, with two distinct sets of predictive variables. With some citizens deliberating and others responding more automatically, it is unsurprising that empirical accounts based on the uniform decision-making assumption yield estimates that are biased downward for individuals who employ the assumed decision-making model, and inflated for those who do not.

Turnout and Habit

What might it mean that people vote out of habit? A well developed theory in social psychology, with a large amount of empirical evidence, points toward a specific understanding of “habit” (Wood and Neal 2007). We will develop this theory, and the testable hypotheses that flow from it, in detail below. For now, we offer a simple indication of what the theory entails. Habit involves repetition of a response under similar conditions so that the response becomes automatically activated when those conditions occur. Everyone necessarily starts off with no strength of habit for turnout at all. Turnout, like any other response, becomes automated through behavioral repetition.

Repetition is, however, insufficient to develop a strong habit. A habit forms from repetition of a response in the same, or very similar, context. In this way, voting differs from some other behaviors that are profitably studied by the theory of habit. Consider, for example, seat belt use. Many people have formed a habit to use their seat belts. They did so by repeatedly clicking on their seat belts every time they got in the car. For this response, repetition is variable (some people repeat the behavior, others do not), but the decision context is fixed, or very nearly so. One is always in the car, the seat belt is always in the same location, and so on. Thus, the critical difference in explaining who does and who does not have a habit for seat belt use is simply repetition. For turnout, like a great many behaviors, however, the context is not fixed, and so we must consider not only the repetition of that behavior but also whether those repetitions are made in similar contexts.

A great many variables shape the context in which the turnout decision is made. We focus here on one in particular—moving to a new community. We examine moving because it has been studied, is easily measurable, and has been consistently measured in the ANES data we evaluate. But we also focus on it because, once a voter does move, the context is necessarily sufficiently disrupted that any existing habit is no longer employable, and the voter cannot be deciding to turnout based on contextual cues that stimulate a habit. Virtually all who move must register to vote again, find their new precinct polling place, and so on. The requirement to consciously consider the process of voting necessarily returns turnout to a conscious, deliberate, and non-habitual response. Thus, we will be able to make a fairly clean division in our data. Those who have just moved cannot be turning out due to a habitual response. Those who have not moved *might* be turning out due to recurring cues that activated the habitual response.

Similarly, repetition of behavior allows for nearly as clean a break in the data. Those who have not voted regularly cannot have a habit. Those who do vote regularly *might*. It is this interactive structure—of two variables that are both necessary conditions but neither alone is sufficient for a voter to have responded from habituation—that we exploit empirically. Using measures of both context stability and repeated past voting we test a number of hypotheses, including the one-model-fits-all assumption discussed above. Before turning to our analysis, however, we first place these expectations within the framework of past work in political science that relates decision making variables, social mobility, and past voting to turnout behavior. We then provide in more detail the psychological theory of habit we advocate and specify our hypotheses.

Variables Shaping Turnout and Habit: Decision Making Variables

The study of turnout has been dominated by work that assumes that voters consciously weigh a variety of factors in determining whether they vote. Whether those factors are understood as attitudes, psychological traits, or measures related to cognitive processing in the social psychological tradition, or as preferences, expectations, costs and benefits in the rational choice tradition, all presume that voters are consciously aware of these factors (although they may not be aware of how they enter into their voting calculus). Indeed, there is a fairly high degree of consensus on what those factors are. Campbell et al. (1960, chapter 5) examined closeness of the election, the intensity of partisan preferences, interest in the election, concern about the outcome, political efficacy, and citizen duty in their pioneering development of the social psychological approach to the study of turnout. Riker and Ordeshook (1968) used a subset of those variables (closeness, concern about the outcome, and citizen duty) in their equally pioneering development of the rational choice explanation of turnout. The difference was not about what to measure but about how to understand and interpret the measures. Of course, much has happened since then. The list of variables has grown longer and understanding of them more refined, but these two approaches remain the dominant theories, and their choices of variables remains virtually identical.

Variables Shaping Turnout and Habit: Moving as an Exemplar of Context

The U.S. is an unusually mobile society, and mobility has a strong negative correlation with political participation. To explain this relationship, Squire et al. (1987) noted that moving requires reregistering to vote. Elaborating further, Rosenstone and Hansen wrote (1993, p. 156), “Finally, the social matrix in which people live also structures the benefits and costs of political involvement in consequential ways.” Specifically, moving might shape voting because it affects social embeddedness. That is, information flows more strongly among those with the greatest social ties, and social approval and respect for voting is highest among those most embedded. Also, changing the context of voting requires reregistering, often just as the costs are highest to get established in new homes, schools, and jobs. Thinking along these two lines led Rosenstone and Hansen to measure length of time lived in the home rather than whether people had recently moved or not. Highton (2000) directly tested these two hypotheses about mobility more recently. His conclusion was that “...it appears that the explanation for the relationship between moving and turnout derives more from the need to register after moving than the disruption of social ties” (2000, p. 109). The theory of habit anticipates just this effect. The disruption of social and physical context removes the environment as a cue to repeated choice, requiring the voter to think not only about whether but also about how to go about voting (and often to take new and more costly actions, such as reregistering and locating one’s new voting place to implement the decision).

Variables Shaping Turnout and Habit: Repeated Behavior

Campbell et al. included one other individual variable in their account of political participation in addition to those mentioned above. In fact, it was the first one they considered: regularity of voting in prior elections (1960, Table 5-2, p. 93). “It is plausible to think of voting as a type of conduct that is somewhat habitual,” they wrote, “and to suppose that as the individual develops a general orientation towards politics he comes to incorporate either voting or non-voting as part of his normal behavior” (Campbell et al. 1960, p. 92). While most scholars know, as a sort of folk wisdom, that those who reported voting regularly in the past are much more likely than others to vote in the future, it wasn’t until the work of Green and his colleagues (discussed below) that *repeated behavior*, and the consideration of habit, became objects of study once again. Previous scholars had based their thinking on the syllogism that “similar causes produce similar effects.” For example, Campbell et al. (1960, p. 94) wrote “From this viewpoint our inquiry into the determinants of voting turnout is less a search for psychological forces that determine a decision made anew in each campaign than it is a search for the attitude correlates of voting and non-voting from which these modes of behavior emerged and by which they are presently supported.” Similarly, Campbell (2006) has argued that one can be “socialized into acting out of a sense of duty” during early adolescence (p. 5), and it is the persistence of one’s sense of duty that explains repetition in turn out.

In recent years, however, there has been renewed attention to the role that repeated voting itself may influence behavior. Green and Shachar (2000) found a powerful effect of lagged turnout on current turnout. Gerber et al. (2003) extended this by finding that voters who were experimentally stimulated to cast their vote in one election were significantly more likely to vote in the next election. Plutzer (2002) used panel data to show an effect of past behavior on future performance independent of political resources, psychological engagement in politics, and the costs of voting. Using latent growth model techniques, he showed that the act of voting itself seems to build inertia towards voting in future elections. Finally, Denny and Doyle (2009) used a two-step estimation model with panel data to control for both observed and unobserved individual heterogeneity and found that voting in one election increased the likelihood of future turnout by approximately 13%. Thus, a variety of studies and methods indicate that there is something to the fact of repetition itself that increases the likelihood of subsequent turnout.

As Green and his colleagues noted, these advances are valuable but incomplete. Citizens might repeatedly vote for a variety of reasons, including those not relevant to habit. Green and Shachar (2000) felt sufficiently concerned about this point that they called the pattern “consuetude,” a synonym for habit. Finding a strong effect for a lagged variable, for example, might incorporate a range of quite dissimilar decision processes. They posit that such correlations across time may have at least five different potential causes: (i) increased campaign activity focused on previous voters, (ii) alterations in individuals’ broad political orientations, (iii) increased positive attitudes towards the act of voting, (iv) lowering informational barriers to the act of voting, and (v) alterations in individual self-conceptualizations to encompass regular voting as part of self-image. Other scholarly work on this question has primarily placed the development of regular voting patterns as a result of one or all of these related factors (see also Fowler 2006; Kanazawa 2000; Valentino et al. 2009). Despite this movement toward empirical demonstrations of habit, the inability to settle on the reason for repeated behavior has left the theory of habitual turnout undeveloped.

Variables Shaping Turnout and Habit: Repeated Behavior in a Similar Context

Theories of automaticity developed in social psychology provide a sophisticated theoretical grounding to understand turnout as a habit. Responses given automatically are activated quickly in memory by associated cues, often without intention or deliberation. Some forms of automatic responding require that people hold supporting goals—that they vote automatically only when they wish to vote (see Bargh and Chartrand’s 1999 auto-motive model). This sense of automatic, habitual voting was developed by Marcus et al. (2000) in their “affective intelligence theory” (see also Marcus 2002). In this view, habit in politics depends on anxiety. For Marcus et al., “The notion of habitual behavior is captured in the concept of the ‘normal,’ vote which posits a standing decision based on party affiliation and a dynamic process of possible party defection and rational calculation based on the short-term forces of candidate qualities and the current issue agenda” (p. 21). In brief, they argued that habits are sets of automatic scripts executed in response to

specific circumstances that are monitored by unconscious emotional subsystems for compatibility with goals. Habits are broken when a behavioral script no longer achieves desired goals, resulting in negative emotions.

Yet the meaning of habit and automaticity in psychology is broad, and some forms of automaticity do not depend on goals and emotions (Bargh 1994; Moors and De Houwer 2006). In fact, the classic definition of habit in social psychology involves responding based on learned associations between contexts and responses without necessarily holding supporting intentions and attitudes (Triandis 1977; Neal et al. 2006; Wood and Neal 2009). In this view, people can turn out to vote habitually even when they do not strongly value voting in this election (although they may have in the past) or no longer believe that it is the right thing to do. For people with habits, the responses involved in voting (e.g., driving to the polling place) are activated in memory when they perceive simple context cues (e.g., political signs posted in the neighborhood, election day headlines in news reports, a coworker wearing an “I voted” sticker).

Thus, while recognizing that some kinds of automatic political behaviors depend on emotions and goals, in the present research we test whether voting can be habitual in this more restrictive sense. That is, we tested whether people respond directly to the cues in the context in which behavior is set and are not strongly influenced by whether they hold appropriate motivations or emotional states. Turnout habits would then refer to an automatized behavior that is divorced from the goals that helped generate the habit in the first place.¹ Thus, our research does not represent a “critical test” between two theories of automaticity, because we recognize that automaticity in politics may often depend on goals. Instead, our research tests whether turnout can *also* be habitual in the sense that it continues despite the reduced effect of motivational variables among those with strong habits (as in hypothesis 4, below).

To apply the theory of habit to turnout, the core concept of habit needs to be measured in a way that is faithful to the theory. Strength of habit derives from repetition of the behavior in a similar context of choice. Scholars have long argued that one of the strongest variables shaping turnout is having voted in the past. Similarly, they have found that moving is one of the major disruptions in life, revealed politically by a substantial decline in electoral participation. The theory of habit requires that these are interactive. Repetition of voting does not indicate that a strong habit has been formed unless it has been done in a very similar context. Moving might have many effects on political considerations. Chief among these is the disruption in political context, but that holds largely for those who are regular voters. Thus, the theory as operationalized by these two measures implies that only

¹ There is a subtle point here regarding the role of goals and motivations in the affective intelligence theory. This theory states that once habits form, the behavior may continue independent of the presence of the original motivations that encouraged habit formation. However, the emotional surveillance system constantly checks the degree to which automatic behavioral scripts are facilitating the achievement of desired goals. It is when behaviors no longer lead to expected outcomes that anxiety increases and habits are broken. Thus, unlike our theory, goals and motivations are still crucial in the affective intelligence theory, albeit one step removed from the kinds of direct cognitive reasoning in standard behavioral and rational-choice models of turnout.

those citizens who vote often and have not moved recently will have developed a strong habit for turnout to vote. To see how we get to this point, we need now to turn to the social psychological theory of habit as context–response associations and derive the testable hypotheses that form the core contribution of this paper.

The Theory of Habit and Testable Hypotheses Derived from It

Our habit theory of voting is built on the idea that people learn context–response associations and these are then available in memory to guide subsequent responses. Our application of habit to turnout begins with the voter initially going through a series of careful calculations and eventually voting. If those calculations are embedded in a consistent context and if the result of those calculations consistently points the individual to choose to vote, then she will apply less and less careful consideration and deliberation to the task. Thus, by the time she has a strong habit, she performs significantly fewer conscious calculations in deciding to turnout in the current election.

Repetition, or the “Practice Makes Perfect” Hypothesis

When habitual voters perceive the contexts in which they have voted in the past, the response of voting is likely to be activated in memory. Also, alternative responses may be deactivated in memory when one choice is made repeatedly (McCulloch et al. 2008). Through ideomotor processes that connect thinking to doing, people then may act on the response that they have in mind (Bargh and Chartrand 1999). Of course, people do not reflexively perform every idea that comes into their mind. They may consciously decide to override a habitual response and choose to do something new. But such decisions take effort in order to override established patterns of response and choose novel actions (Neal et al. 2010; Quinn et al. 2010). Given the demands of everyday life, people (perhaps quite “rationally”) do not always engage in effortful control of habits. Thus, they may repeat habits in part because acting on the readily available response in memory is easier than deliberately choosing to perform an alternative. This theory of the psychological processes behind habits is clearly relevant for understanding turnout, and thus provides a theoretical basis for such findings as those from Campbell et al. through Green and colleagues of the strong effects of prior voting on current turnout decisions. Hence:

Hypothesis 1 The more often and more regularly one voted in the past, the more likely a strong habit for voting has formed. As a result, past voting should be strongly related to current voting.

Influence of Context: The Mobility Hypothesis

Scholars have long understood that turnout also is a product of the context in which people vote. In particular, residential mobility has a strong negative correlation with

likelihood of turnout (e.g. Verba and Nie 1972; Highton 2000). Psychological studies of people's everyday behavior, based on the theory of habit automaticity, find that contextual features have a causal role in triggering habit performance. In particular, habit performance is readily disrupted by changes in everyday performance contexts (Wood et al. 2005). In this theory, "context" is defined as the set of preceding actions, cues, events, and people that are associated with regular repetition of the action. Cues may be "triggering" events that initiate action such as a neighbor who posts yard signs as elections approach, co-workers who arrive with an "I voted" sticker or regularly chosen radio programs that remind listeners that Election Day is here. Cues may also be intermediate, such as familiar street layouts that tell an individual where to turn the car en route to a polling location or where to park.

With respect to voting, the performance context is particularly deeply disrupted when people move to a new location. As with all context disruptions, the features of context that cued habitual voting in the old location are broken and need to be reestablished in the new location before a strong habit for turnout can be reestablished. But the legal environment imposes even higher degrees of conscious consideration for turnout for movers. Movers must process information and make decisions such as to reregister and find the location of their new polling place. We therefore predict that people who move (or otherwise experience a change in the context of voting) will turnout less often than non-movers, even with the same attitudes and beliefs, even when the movers are highly motivated to vote, and even when they have qualified for and actually registered to vote. Hence:

Hypothesis 2 Stability in the decision-making context is also a necessary condition for a strong voting habit to form. Equally, disruptions in context (e.g., changing voting places, such as by moving) disrupt turnout, regardless of how much one would like to or feel obligated to vote. Thus, the consistency of the context of voting should be strongly related to turnout.

The Combination of Repetition in a Common Context: The Interaction Hypothesis

Because habits in our definition develop from learning of associations between responses and features of performance environments, the best indicator of strong habits is the conjunction of repeated responses and stable performance cues. Although researchers have sometimes estimated habit strength solely from past performance frequency, this measure reliably indicates habit strength only for behaviors that are always performed in the same context (e.g., wearing seatbelts). Thus, for responses that can be performed in a variety of contexts, like snacking, exercising, and drinking milk, past behavior frequency did not directly predict future performance, but only did so when people had performed the behaviors in stable contexts (Danner et al. 2008). Of course, turnout is precisely the sort of behavior for which frequency of past performance and consistency of performance context might vary independently. In short, both need to be measured to assess strength of voting habits. Thus, we reach a third testable hypothesis:

Hypothesis 3 Frequency of past turnout and a stable performance context are individually necessary and jointly sufficient for forming a strong habit to vote. Therefore, a strong habit to vote will be concentrated among those who have voted regularly in the past while doing so in the same context. At the same time, those who have either not voted regularly or who have moved (or otherwise had a disruption in the voting context) or both will not have a strong habit to vote.

Although the conjunction of repeated behavior within a stable context is a reliable indicator of habit strength, it should not be conflated with habit itself. As we have previously stated, habits are cognitive associations that link specific context cues to specific behavioral scripts. Repeated behavior and a stable context are merely the conditions under which such strong associations are likely to be formed and are thus the best available observable indicator of these mental associations.

A Decreased Role for Motivated Decision Making: The Dual Decision-Making Model Hypothesis

Triandis (1977) was the first to argue that, once habits have developed to guide behavior, behavioral intentions and motivated decisions such as caring about the outcome of an election are less predictive and less helpful for understanding behavior. This reduced role for beliefs and motives in guiding habits reflects that habit performance, as we are defining habit here, is cued directly by recurring contexts and thereby depends less on decision making and goals.

Empirical support is accumulating for the reduced influence of motivated decision-making as habits develop. For example, in Ferguson and Bibby's (2002) study of blood donation, people who were habitual donors and had given at least five times in the past tended to continue to donate regardless of their current intentions. In contrast, occasional donors were guided by their intentions to donate. Similar results have been found with a variety of behaviors, including purchasing of fast food and watching TV news (e.g., Webb and Sheeran 2006; Ji and Wood 2007). Thus:

Hypothesis 4 Motivations to turnout (e.g., high sense of citizen duty, intensity of partisan choice, caring about the outcome, etc.) should be strongly related to turnout among those without a strong habit for the vote. Those same motivations should be less strongly related to turnout among those with a strong habit.

Note that this hypothesis posits the existence of *at least two distinct data generating processes* within the general population. On the one hand, individuals lacking strong voting habits will be more likely to vote when they are more highly motivated to do so by the particular election, its candidates, parties, and issues at hand or by a more general normative commitment to voting and democracy. On the other hand, individuals with strong voting habits will turnout regardless of the particular candidates, issues, or parties in the election and regardless of their generalized attitudes towards voting and democracy. This implies that estimating distinct models for each group will better fit the data.

Summary and Discussion

The psychological theory of habit leads to several testable hypotheses. People have strong habits only with the combination of frequently performed behavior in similar performance contexts. As outlined in our first two hypotheses, both repetition of behavior and stability of context may themselves be associated with turnout. Both of these hypotheses have received support in the literature. However, the theory of habit formation yields two additional hypotheses, both of which are, we believe, novel and both of which generate non-obvious and thus more powerful and informative tests.

Our third hypothesis is that it is the combination of prior repetition in a stable setting that comprises habit. We test whether this interaction adds explanatory power above and beyond that which can be explained by the best current account of turnout in literature positing turnout as a deliberative choice—which is to say within the strongest extant explanation. We seek to show that the interaction adds explanatory power above and beyond that of the repetition and mobility included additively. Our fourth hypothesis is that citizens with a strong voting habit differ from those without such a habit, and that these group behaviors can best be explained using two separate models. In particular, the deliberative and information processing variables, such as evaluations of the candidates, issues, and parties, or the concern about the election outcome, should play a smaller role among the voter with a strong habit than among those who do not have as strong a habit. Even though those with a strong habit might well care about the outcome of the election just as much as those who have a weak voting habit, that concern will not shape their behavior, or at least not as much as it does those without a strong habit. Support for this hypothesis will lend strong support for our restrictive definition of habit and turnout that, unlike the emotion-based affective intelligence type of automaticity, does not depend on supporting motivations, goals, and emotional states.

Finally, *we do not make any claims about individuals who regularly fail to vote*. That is, our argument does not imply that some individuals may be habitual non-voters. In fact, habitual voting theory has very little to say about repeat nonvoters. People do not readily form links between a context and a non-response simply because an infinite number of nonresponses is associated with any one context.² Indeed, it is not clear that habitual non-voting is even a sensible concept in any automaticity-based theory of habits. With these clarifications and caveats in mind, we can now turn to our empirical strategy.

² It might be possible to hypothesize the existence of two kinds of non-voters. First, there may be individuals who make a conscious and deliberate decision every Election Day to abstain. It could be argued that such individuals could develop a habit of abstention. But there are also the second type of non-voters who are simply unaware and inattentive. These individuals would be only vaguely aware of the election, and their non-voting behavior would not be the result of any intentional decision. However, our current theoretical presentation and empirical analysis remains silent about the role of habitual non-voting because our measures do not allow us to discriminate between these two types of individuals. In any case, there is little, if any, evidence to suggest that a large amount of non-voting is a result of *intentional* abstention rather than passive inaction.

Data and Measures

We test our hypotheses using data from ANES surveys. We do so because they are the highest quality election surveys, because they cover many different elections, because they offer the largest number of surveys with turnout having been validated against election records, and because they are the data on which most other theories of turnout have been tested. These tests, like ours, took advantage of the presence of variables measured in close-to-identical form over this very large number of elections. We next describe the measurement of variables involved in the testing of our hypotheses. A more detailed discussion of several measures (especially the components of habit) may be found in the online Appendix.

Dependent Variable and Election Years

The dependent variable is, of course, turnout. We use only the validated vote for surveys conducted during presidential election years.³ That means we look at the ANES surveys of 1964, 1972, 1976, and 1980. We also use the only congressional election year survey with validated vote, 1974, but also look at 1958, 1966, and 1994.⁴ These collectively provide a reasonable diversity of congressional election settings for estimating our models. We also chose these surveys because of the availability of measures of relevant independent variables.

Repeated Turnout

We consider those individuals who reported that they always vote or who reported voting in the previous two elections as repeated voters. This is a conservative criterion because not everyone who responds affirmatively to these questions will actually have voted sufficiently often to generate a strong habit (let alone doing so in a stable context). Nonetheless, the respondents who indicated that they did not vote in the two past elections or that they did not always vote can confidently be classified as having a low level of repetition.

Stable Context

A stable performance context is the second necessary condition for forming a strong habit to vote. Many possible aspects of the context could become associated with responses and then guide habit performance. Unfortunately, ANES surveys include few measures to tap the concept. One aspect that is regularly available is whether the individual lived in the same place. Obviously, the mere fact that one has long lived in the same location is not a direct measure of the full set of contextual stimuli

³ We have run our model on all available presidential election years, but only report the years with validated turnout. The results for other years are available on request.

⁴ Because of a concern for consistency in coding, we did not use the ANES cumulative file.

that might evoke the habit-induced behavior. We do know that those who have recently moved cannot have a strong habit until they are living in a sufficiently stable context long enough to form or reinvigorate one. We consider those respondents who indicated having lived in the same location for at least five elections (and hence 10 years) as having maintained a stable context sufficiently for a habit to have formed.

Habit: The Combination

The above two necessary conditions are, according to the theory, jointly sufficient for the individual to develop a strong habit. Given that alternative variables were only inconsistently included in the data base, we calculated habit as a dichotomous measure.⁵ Individuals who reported high past performance frequency and high context stability on the proxy measures were coded as 1 (strong habits), and those who did not meet both criteria were coded as 0 (weak habits). As before, we note that, due to over-reporting of voting, those who reported not voting regularly almost certainly did not do so. Also, those who reported moving recently almost certainly did not have a stable context for voting. Thus, those scored as zero on each measure are quite unlikely to have met the conditions necessary for forming a strong habit to vote, whereas all those with a strong habit are concentrated among those scoring 1 on this measure. These two variables and their combination are appropriate for examination of our first three hypotheses.

Motivations for Voting (Plus Control Variables)

The final set of variables concerns motivations for voting. We have chosen to replicate the comprehensive model of turnout presented by Rosenstone and Hansen (1993; see especially their chapter 5). One of its major advantages is that it is estimated using the ANES, so that we can use the same form of each variable on the same data that they did.⁶ The Rosenstone and Hansen model also includes control variables generally employed in estimation of turnout models, such as education, income, and the like. Hence their model is, for us, divided into two parts, the set of variables for assessing motivational and goal-directed models of turnout and hence for testing hypothesis 4, and the controls as typically used in the literature for ensuring reasonable specification. Their list of attitudinal variables, those implicated in the social psychological and rational choice theoretic assumption of conscious deliberation, includes internal and external political efficacy, strength of party identification, affect for the parties, affect for the presidential candidates, concern about the election outcome, and perceived closeness of the election. We focus our analysis on these variables. Full description of each of these variables is available in the Survey Question Appendix.

⁵ See Aldrich et al. (2007) for further analyses of some of these alternatives. Note that the choice among these various measures does not affect the results of the tests of our hypotheses.

⁶ See the online Appendix for a lengthier discussion of these issues.

Preliminary Empirics of Habit and Turnout

In this section we examine some empirical aspects of habit and its relationship to turnout before turning to the test of our hypotheses in the next section. In particular, we want to show that the two components of our habit measure are not strongly correlated and that each is distinctly related to turnout. That is, each component of habit contributes its own explanatory power. Finally we look at the relationship between habit and our motivational variables. Some might argue that those high on the habit variables, perhaps because they are both regular participants and have been embedded in their community for a decade, are simply surrogates for those with high interest in politics, sophistication, interest, and thus involvement. Others might suspect that, were we to find a reduced effect of these motivational variables on turnout among those measured as having a habit to vote, this pattern reflects that those with a voting habit have very little variance across the motivational variables, and thus those variables cannot affect turnout among that set, due simply to lack of variation. As we will see, none of those concerns are present in the data.

Table 1 presents a simple cross tabulation between the two components of our habit measure. The two measures correlate only at a modest 0.10. Furthermore, these two variables are neither overwhelmingly common nor uncommon in the electorate. Thus, both are consequential contributors to the incidence of strong habits.

In Table 2 is a cross tabulation of the two components of habit as well as the habit interaction variable with turnout. Note that many vote without a strong habit, a substantial number abstain even though scored as having a strong habit, and both stable context and repeated behavior are independently as well as jointly related to turnout. There is, in other words, variation to explain.

In Table 3, we consider whether those who have a strong habit are very different from those without a strong habit for voting on our motivational measures. As Table 3 demonstrates, while there are small differences on these measures between the strong and not-strong habit respondents, the differences in mean scores are surprisingly small, and there is virtually identical variation on these measures among those with and those without a strong habit to vote.

Table 1 Cross tabulation of individual components of habit indicator

	Repeated behavior		Total
	0	1	
Stable context = 0	2,731 (38.35)	4,390 (61.65)	7,121 (100.00)
Stable context = 1	2,625 (29.30)	6,334 (70.70)	8,959 (100.00)
Total	5,356 (33.31)	10,724 (66.69)	16,080 (100.00)

Row percentages are in parentheses

Table 2 Turnout, habit, and indicators of habit strength

	Habit		Turnout		Total
	Weak habit	Strong habit	No vote	Vote	
Turnout					
No vote	4,584 (81.05)	1,072 (18.95)	5,656 (100.00)		
Vote	4,542 (47.95)	4,931 (52.05)		9,473 (100.00)	
Consistent voter					
Inconsistent	5,356 (100.00)	–	5,356 (100.00)	3,448 (69.52)	4,960 (100.00)
Consistent	4,390 (40.94)	6,334 (59.06)	10,724 (100.00)	2,255 (21.93)	10,281 (100.00)
Stable context					
Not stable	7,121 (100.00)	–	7,121 (100.00)	3,353 (45.45)	7,378 (100.00)
Stable	2,625 (29.30)	6,334 (70.70)	8,959 (100.00)	3,022 (34.14)	8,851 (100.00)

Row percentages are in parentheses

Table 3 Means and variance of cognitive predictors by habit

Variable name	Within group means and variances	
	Habit	No habit
Close	0.557 (0.247)	0.526 (0.249)
Candidate affect	0.282 (0.067)	0.273 (0.064)
Party affect	0.185 (0.050)	0.158 (0.045)
Duty	0.696 (0.278)	0.596 (0.333)
Contacted	0.371 (0.234)	0.248 (0.186)
Care	0.710 (0.206)	0.577 (0.244)
Internal efficacy	0.308 (0.213)	0.293 (0.207)
External efficacy	0.583 (0.170)	0.537 (0.176)
Party ID	0.675 (0.097)	0.590 (0.111)
Interest	0.403 (0.241)	0.287 (0.205)
Differences	0.370 (0.233)	0.315 (0.216)

Variance in parentheses

Analysis and Results

Testing Hypotheses 1–3

In Fig. 1 we report the result of estimating the model that consists of the Rosenstone and Hansen predictors to which is added the three measures of repeated behavior, stable context, and their interaction or habit variable, for each of the ten ANES surveys. Reported in that figure are the point estimates and confidence intervals for our three variables. Our three research questions are, first, is the repeated behavior measure substantively and statistically significant? Second, is the same true for the context stability variable? Finally, is that also true for the habit strength variable? In the initial analysis, we add each variable separately (we fit the full interactive models below).⁷

Each of the three variables is correctly signed and statistically significant in every election, except for the context stability measure in the 1972 survey. In this one case, the variable is significant at the more generous 0.10 level. In other words, in 29 of 30 cases, the variable is statistically significant at conventional levels, and nearly so in the other remaining case.

With our theory implying an interactive formulation, the best way to assess substantive significance is to report first differences (Brambor et al. 2006). We report them for each of the three variables under consideration in Fig. 2. For example, the bottom panel of Fig. 2 presents point estimates and 95% confidence intervals for the change in predicted probability associated with moving both components of the habit measure from zero to one.⁸ These can be roughly

⁷ Full model specifications for all years are available upon request. We note that this is not quite the exact hypothesis test for interactive hypotheses, but we will demonstrate that below.

⁸ Estimates were made using the Zelig program in R v2.9. All control variables were set at their actual data points, and the 95% CI represent the estimate of first differences averaged across all respondents in a given year. This method of examining an interactive model follows the suggestion of Brambor et al. (2006).

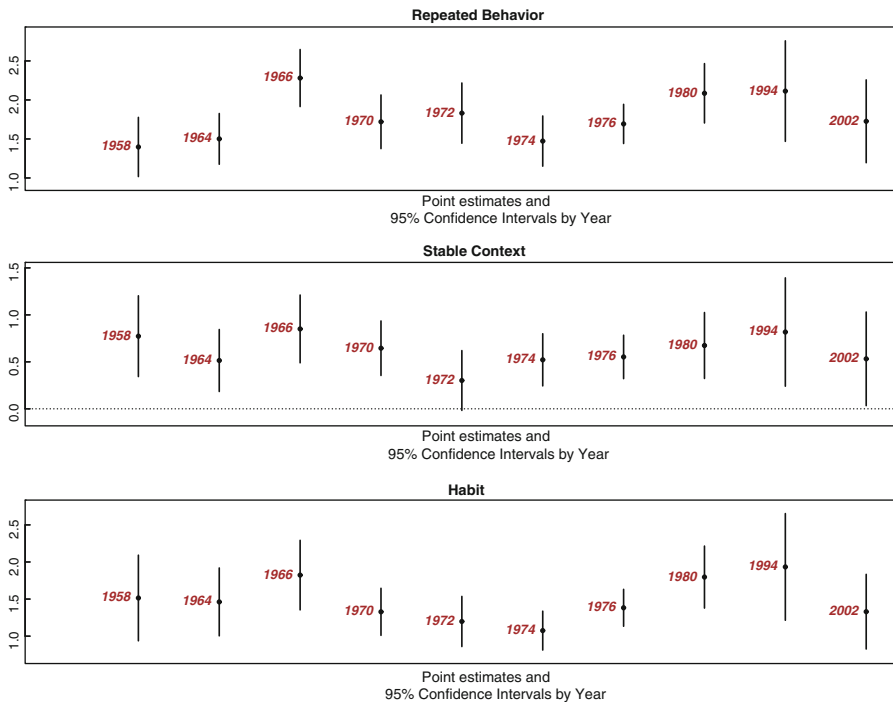


Fig. 1 Coefficient estimates and 95% CI for main variables considered separately by year. *Note:* Full model specifications for each year are available upon request

understood as the average difference in expected probability of voting between individuals with and without habits. Each of the three variables can be seen to add a substantial increment to the probability of voting. Context stability adds about 0.10 or more in each year, while having voted regularly in the past adds substantially more, anywhere from a bit more than 0.20 to as much as 0.50 in 1966. Finally, the marginal effect of the addition of the habit combination is typically larger than the sum of the two separate components, thus increasing the likelihood of turnout by anywhere from as “little” as 0.30 to as much as 0.50.

Are these large effects? The answer is relative. First, the habit variable has the largest effect of any single variable in every estimation, and, second, the effect of these three variables is far larger than the effects of any other variables in the Rosenstone–Hansen model (data available on request). In any case, the estimations imply that each of the first three hypotheses is strongly and consistently supported—the indicated variable is statistically significant and adds substantial explanatory power even controlling for all other variables that are used to explain turnout in ANES data. It thus appears that habit, as the interaction of repeated behavior and stable context, is necessary for correctly understanding turnout. We provide a second test of this conclusion below.

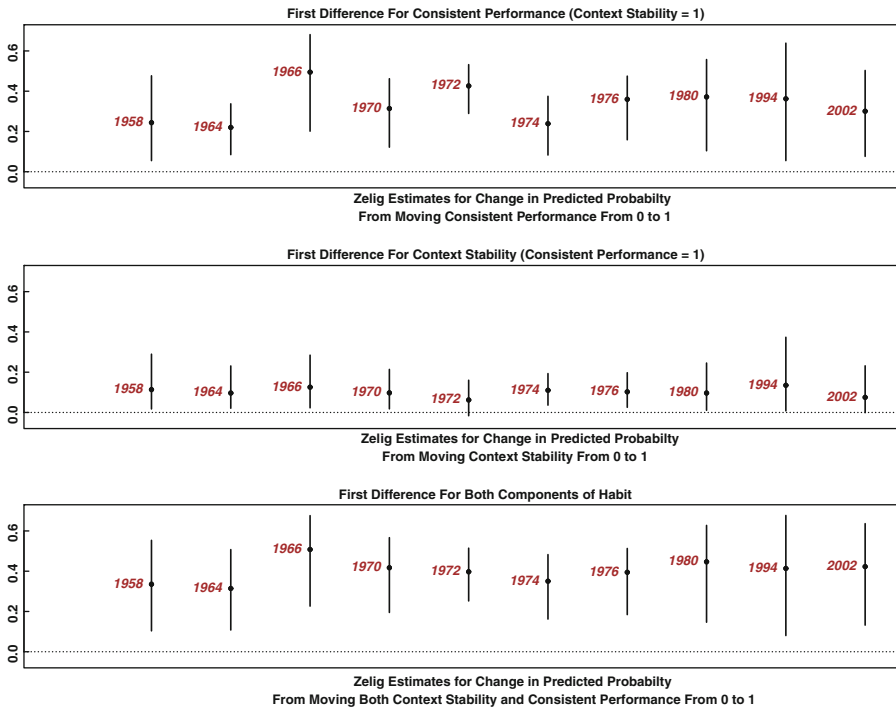


Fig. 2 Estimates of first-differences for indicator of habit (by year). Full model specifications for each year are available upon request

Testing Hypothesis 4

Our fourth hypothesis is that motivational variables, such as caring about the election outcome, long studied as the causes of participation, are of central importance for explaining turnout among those without a strong habit. These variables will, however, be substantially less strongly related to turnout among those with a strong habit for voting. This is, perhaps, the most crucial hypothesis as it is a straightforward implication of our theory of habit and yet is very different from what the best prior research on turnout has studied.

We test this through use of structural equations (SEM) modeling (Asparouhov and Muthén 2006). This is an appropriate approach because the hypothesis states that the explanatory power of the full set of motivational variables will be high for those without a habit and low for those with a habit, which in turn implies that the covariance between the dependent (or left-hand-side) variable and this set of explanatory (right-hand-side) variables will be significantly (and substantially) lower among those with than those without a strong habit. But that hypothesis is just what a multi-group (here, two-group) SEM is designed to evaluate—are the full set of motivational variables substantially less influential among those with a strong habit than among those without a strong habit? We conducted a multiple-group

analysis, using our habit indicator to divide the sample into two groups, those with and those without a strong habit to vote.⁹

We focus initially on the five decision variables from the Rosenstone–Hansen model. *Care about the Outcome*, *Strength of Party Identification*, *Internal Efficacy*, *External Efficacy*, and having reported being *Contacted* by a candidate or party are key measures in the Rosenstone–Hansen model and are available for all of the years in our time-series (except 1958 and 1970).¹⁰

First, as hypothesized, the relationship between these variables and turnout is lower for citizens with strong voting habits. The first three columns of Table 4 present the relevant evidence for testing this claim (see also the full estimation results in the online Appendix). The first two columns show the regression estimates for the five basic motivation variables if they are estimated separately for individuals with strong and weak habits. As can be seen, the relationships between the independent variables and the probability of turning out are smaller (and less likely to be statistically significant) in the strong habit group in every instance. Second, allowing the coefficients to be estimated separately for each group significantly improves the fit of the model compared with one in which the coefficients on the decision variables are constrained to be equal for those with and those without a strong voting habit ($p < 0.001$ in all cases).

We repeated the SEM-based test of hypothesis 4 with additional decision-relevant variables that were available on only some of the election years: affect towards the parties (*Party Affect*), affect towards the candidates (*Candidate Affect*), perceived *Closeness* of the election, and *Interest* in the campaign. We also include the perception of major *Differences* between the parties as it is available for all of these years, although it was not included in the Rosenstone–Hansen model. These variables could be tested only in the surveys in 1964, 1972, 1976, and 1980. Fortunately, validated votes were collected in all of these surveys rather than having to rely on self-reported voter turnout. Again, the SEM model results (presented in the online Appendix) show that we can reject the null hypothesis that the coefficients for these decision variables should be constrained to be the same across the habit and non-habit group. Similarly, the coefficient estimates (see middle column, Table 4) show that the coefficients are substantially smaller among respondents with strong habits than among those without.

Finally, we replicate these results but now also include the full battery of control variables in the Rosenstone–Hansen model. These variables, like the year dummies, are held constant across all models. We focus here on the six decision-relevant variables available in the maximum possible number of years (*Care*, *Party ID*, *Internal Efficacy*, *External Efficacy*, *Contacted*, and *Differences*). Using these six

⁹ All results were conducted in MPLUS v4.2 using a WLSMV estimator and a probit link function. A full discussion of the SEM analysis used here is presented in the online Appendix.

¹⁰ We estimate a fixed effects model, that is, we include dummy variables to control for year effects. These results do not include the additional control variables in the Rosenstone–Hansen model. Those are included below.

Table 4 Coefficient estimates from multiple group analysis from both the constrained and unconstrained models^a

	Five variables		Ten variables		Full model with controls ^b				
	Estimated separately by group		Estimated separately by group		Estimated separately by group				
	Habit	No habit	Habit	No habit	Habit	No habit			
Care	0.358 (0.051)	0.467 (0.036)	0.431 (0.029)	0.177 (0.076)	0.207 (0.051)	0.198 (0.042)	0.349 (0.058)	0.428 (0.041)	0.402 (0.033)
Internal efficacy	0.08 (0.055)	0.165 (0.039)	0.137 (0.032)	0.068 (0.079)	0.122 (0.053)	0.106 (0.044)	0.051 (0.067)	0.023 (0.045)	0.032 (0.037)
Party ID	0.103 (0.076)	0.378 (0.054)	0.286 (0.044)	-0.044 (0.117)	0.304 (0.076)	0.2 (0.064)	0.089 (0.089)	0.35 (0.063)	0.262 (0.051)
External efficacy	0.23 (0.058)	0.384 (0.043)	0.329 (0.035)	0.266 (0.081)	0.401 (0.057)	0.356 (0.047)	0.112 (0.068)	0.154 (0.050)	0.14 (0.040)
Contacted	0.276 (0.051)	0.524 (0.040)	0.431 (0.031)	0.139 (0.072)	0.449 (0.054)	0.405 (0.051)	0.244 (0.058)	0.393 (0.045)	0.338 (0.035)
Differences				-0.047 (0.071)	0.172 (0.048)	0.172 (0.048)	-0.002 (0.057)	0.147 (0.042)	0.096 (0.034)
Party affect				-0.005 (0.165)	0.164 (0.123)	0.078 (0.096)			
Candidate affect				-0.049 (0.151)	-0.023 (0.104)	-0.024 (0.062)			
Closeness				-0.026 (0.077)	0.027 (0.049)	0.099 (0.041)			
Interest				0.263 (0.074)	0.234 (0.053)	0.135 (0.042)			

^a Year dummies are suppressed for the sake of clarity. Comparative model fit statistics and *n*-sizes for the constrained and unconstrained models are shown in the online appendix

^b Additional control variables are available upon request

variables, we again follow the analytic procedure described above. The online Appendix presents the information about the fit indices as extra constraints are added. The final three columns of Table 4 present the relevant estimates of the effect of these decision-variables once this larger battery of controls is included. All of our previous findings hold.

In sum, we have strong evidence that the three measures pertinent to habit are individually and collectively statistically significant, and, indeed, provide the largest explanatory power for turnout in ANES data, compared with all other variables in the Rosenstone–Hansen complex. Thus, hypotheses 1 through 3 are each strongly supported. Furthermore, we have examined carefully the effect of the motivational variables, standard to social psychological and rational choice theoretic explanations of turnout, and discovered that their effects are significant and substantively important—but only among those who do not have a strong habit for voting. Among those who do have a strong habit, the effects of the motivational variables are significantly different and much smaller substantively. Before concluding, we return to hypothesis three, that repetition and stability of context are interactive.

The Importance of Repetition and Stable Context Further Examined

With full SEM estimates now introduced, we can return to provide another set of tests of hypothesis 3. The unique triggers to habit performance require an interaction between a stable context and consistent behavioral performance—only by repeatedly voting in the past in stable contexts can voters form strong habits to vote in the future. Habitual voting is not identical to repeatedly voting due to strongly held, consistently made decisions involving, for example, one's duty to vote or perceived large differences between candidates.

How else might we seek to demonstrate that the strength of repetition and stability in context explain turnout because they interact, as our theory of turnout as habit predicts? Like hypothesis 4, this third hypothesis is particularly important to our theory, in this case for demonstrating that repetition matters because it helps establish a habit, and that context stability matters in large part because it works along with repetition to form a strong habit for voting. Here, we consider what happens to the fit of our models if we estimate our full equation but eliminate first one and then the other component of the habit interaction terms.

We fit logistic models predicting turnout using the same Rosenstone–Hansen predictors as the models reported in Table 4. The only change we made was to include our dichotomous indicators of consistent behavior, stable context, and their interaction, which is our measure of habit. The full model results for these analyses are presented in Table 5. Figure 3 shows the point estimate and 95% confidence interval for the change in predicted probability associated in moving each component from zero to one separately while the other is held constant (either at zero or at one). As can be seen, the estimated first difference is consistently smaller and less likely to be statistically distinguishable from zero when the other component of habit is absent (i.e., set equal to zero). That is, stable context is less likely to change a person's odds of voting in the absence of repetition. Similarly, the

Table 5 Simple logistic models with interactions^a

	Five variable model	Ten variable model	Model with controls ^b
Intercept	-2.229 (0.111)	-2.028 (0.138)	-3.181 (0.149)
Care	0.652 (0.051)	0.311 (0.074)	0.613 (0.057)
Internal efficacy	0.054 (0.056)	0.013 (0.078)	-0.034 (0.064)
Party ID	0.357 (0.077)	0.262 (0.110)	0.282 (0.088)
External efficacy	0.374 (0.062)	0.427 (0.083)	0.158 (0.069)
Contacted	0.645 (0.057)	0.488 (0.078)	0.571 (0.062)
Strong habit	1.646 (0.072)	1.532 (0.095)	0.526 (0.111)
Stable context	0.142 (0.081)	0.055 (0.103)	0.054 (0.092)
Consistent behavior	0.565 (0.100)	0.632 (0.132)	1.416 (0.081)
Differences		0.156 (0.070)	0.280 (0.056)
Party affect		0.252 (0.179)	
Candidate affect		-0.064 (0.149)	
Closeness		0.001 (0.072)	
Interest		0.313 (0.075)	
<i>N</i>	10,551	5,758	8,907

SE in parentheses

^a Year dummies suppressed for clarity

^b Additional control variables available upon request

estimated effect of previous voting on future voting is moderated by the presence or absence of a stable context.

Perhaps an even stronger test is to repeat the SEM models, as analyzed above, but this time to consider how the two components of habit individually affect the decision-relevant coefficients in the Rosenstone–Hansen model. That is, is there a significant difference in the effect of, say, concern about the outcome, among those who vote regularly and those who do not, ignoring the stability of context (and vice versa for context stability)?¹¹

The results (presented in the online Appendix) show that treating both individuals with and without strong voting habits as identical does not significantly affect the model fit ($p = 0.6$) when respondents are grouped solely based on constituent behavior performance (i.e., regular past voting or not). And, of course, the magnitudes of change for the model fit indices are not as large. If we consider only stability of context, that is, whether or not respondents lived in the same community for at least 10 years, we also find no significant differences in coefficients ($p = 0.73$). Together, these results illustrate that simple measures of just past performance or just stable context alone are not a sufficient measurement of habit

¹¹ It might be possible to take this idea even further and divide the population into four groups based on the two dichotomous indicators of context stability and repeated behavior. However, it is unclear what patterns we would expect to see amongst the intermediate categories (stable context but inconsistent voters versus unstable context and consistent voters). As a robustness check, this would seem to add more confusion than clarity. Moreover, the differences between coefficient estimates become increasingly difficult to discriminate as sample sizes in each group shrink and confidence intervals increase.

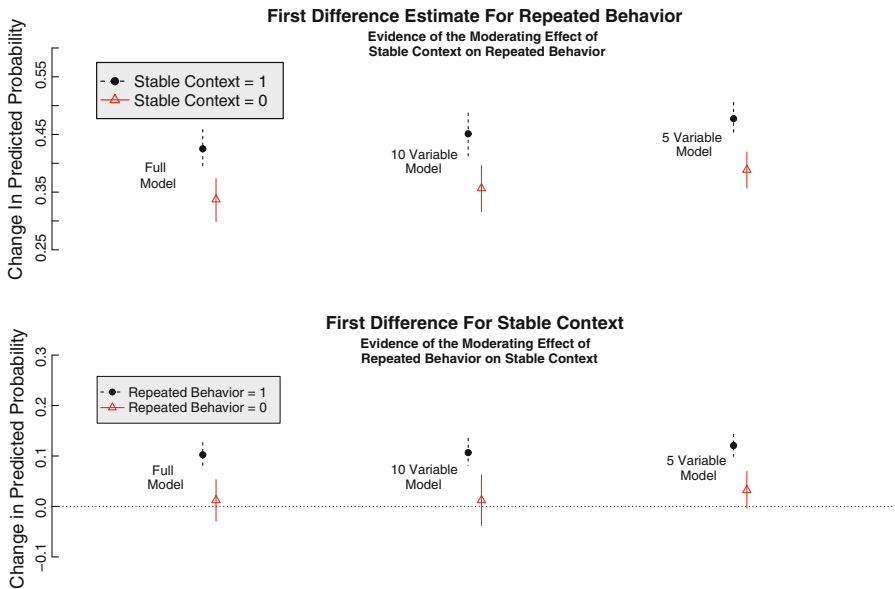


Fig. 3 Using first difference estimates to explore the moderating effect of stable context and consistent behavior on each other. The dependent variable in all models is turnout. These results are simulated using simple logistic regressions with interactions presented in Table 5. First-difference estimates were generated using the Zelig package in R

strength. Rather, it is precisely the interaction between repetition and context that provides the strong statistical and substantive power we reported above.

A Note on Affective Intelligence

Because strong habit voters repeated past behavior without relying on their motivations and decision making, turnout to vote appears to be a type of automaticity that is not dependent on goals. In contrast to the automaticity that may characterize other political behaviors (see Marcus et al. 2000), habitual turnout is disrupted by changes in context because, in new contexts, the practiced response is not activated in memory. In our account, the disruption with change in context does not occur because of increases in voters' anxiety or other emotion-inducing aspects of a changed social context. To secure our interpretation, in addition to our primary demonstration above that motivations and decision-making are relatively unimportant in influencing turnout among habitual voters, we conducted another, more focused test by evaluating whether negative emotions induced by changes in context are responsible for disrupting turnout. We focused these analyses on the ANES data from the 1980 election because this was the only year in our dataset that included an extensive battery of questions measuring respondents' affective response to their political environment. The details of the analyses are reported in the online Appendix, but the results provide no evidence indicating that the effect of habit strength on turnout is moderated by social context or anxiety.

Conclusion

In this paper, we developed and tested a model of habit strength applied to voter turnout. Just as our psychological theory suggested, the empirical estimates we provided allowed us to infer that “habit” requires an interaction between repetition of behavior and stability of performance context. Not only was this interactive habit strength measure both statistically significant and substantively very large, it helped to define two distinct groups of individuals who approach turnout very differently. Unlike casual voters, the behavior of those with a strong habit was not as well predicted by the standard decision-making variables, such as strength of preference, care about the election, etc. The effect of these decision-making variables, individually and collectively, was far weaker among those with a strong voting habit than those without one. For these individuals, voting is likely to be triggered by stable cues in the performance context, regardless of their decisions concerning turnout. These results are not a statistical artifact of reduced variation among those with a strong voting habit because the variation on decision-making variables was just as great among the 40% with a strong habit as among those without a strong voting habit.

Before concluding, it is worth considering what these results imply for researchers, campaigns, and civic groups who are seeking effective strategies to promote political participation. Do these results imply that efforts to increase participation are not worthwhile amongst individuals with strong habits? The answer appears to be that individuals with a strong habit respond to a different set of influences than non-habitual behaviors. Indeed, this intuition is supported by the notion that campaigns themselves often target voters with differing turnout messages depending on the frequency of their own past turnout behavior. Performance of strong habits does not emerge, or emerges far less strongly, from beliefs and goal-directed motivations, but instead is triggered by such context cues as political candidate signs, stable polling places, and evidence that others have voted. The present research does not, indeed cannot, document exactly what aspects of stable living environments trigger voting. Subsequent research would profitably address the specific context cues that promote and maintain voting habits.

In research on habits outside of the voting domain, context cues that triggered performance included physical location (as in the present analysis of stable domicile) and social cues such as the behavior of others (Danner et al. 2008; Ji and Wood 2007). Research has demonstrated that everyday lifestyle habits are dependent on such cues (Wood et al. 2005). When these cues did not change, the habits maintained. With respect to voting, we expect that the cues stimulating turnout among voters with strong habits would not necessarily provide information about the election and citizens’ roles in it. Instead, habit cues might be simpler stimuli such as candidate signs and “I voted” stickers. More finely-grained research on cues to voting is clearly needed to understand the mechanisms that promote and maintain strong habits to turnout.

We understand our results using the ANES, that is using the best available observational data, as establishing a strong case for the theory of habit and voting. It is, of course, limited in the way that even the highest quality survey data are always

limited. Thus, future research should begin to supplement survey analysis by developing experimental designs to study more precisely the causal effects of the roles of past performance, stable contexts, and their conjunction in order to more directly eliminate individual heterogeneity as a confounding variable in the study of habits. Gerber et al.'s (2003) study of the downstream effect of experimental treatments on future behavior provides a baseline for using experiments to study habit formation. Future work might build on this finding by focusing on interventions that specifically facilitate the linkage of contextual cues with desired behavioral responses and to clarify the specific mechanisms that help citizens build strong voting habits.

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Survey Question Appendix

Income

Question wording varied from year to year, but this variable is always coded as family income. In the early years of the time-series (1958–1966) the question focused on the family's expected income for this year. Afterwards the question focused on the family income in the previous year. *Coding*: 0 if 1–16th percentile, 0.25 if 17th–33rd percentile, 0.50 if 34th–67th percentile, 0.75 if 68th–95th percentile, 1 if 96th–100th percentile.

Coded using variables v580501, v640269, v660235, v720420, v742549, v763507, v800686, v700388, v941404, P023149.

Education

Question wording has varied from year to year, but for most of the time series it is possible to construct stable categories. *Coding*: 0 if 8 grades or less, 0.25 if 9–12 grades with no diploma or equivalency, 0.50 if 12 grades, diploma, or equivalency, 0.75 if some college, 1 if college degree or higher.

For 1994, the 1992 panel data was used. For the 2002 year, the 2000 response was used. Individuals who reported having community college or junior college degrees were coded as 0.75.

Coded using variables v580478, v640196, v660197, v720300, v700269, v742423, v763398, v800445, v941209, P023131.

Unemployed

Questions that asked about employment status of respondent wording changed somewhat from year to year. From 1958 to 1966 this data was only collected about

the head of the household rather than the respondent. *Coding*: 1 if unemployed, 0 otherwise.

Coded using variables v580479, v640202, v660199, v700275, v720306, v742443, v763409, v800515, v941216, P025183.

Age

Coding: Age in years.

Age Squared

Coding: The square of the above response.

External Efficacy

Question wording: “Now I’d like to read some of the kinds of things people tell us when we interview them. Please tell me whether you agree or disagree with these statements.” “I don’t think public officials care much what people like me think.” “People like me don’t have any say about what the government does.” *Coding*: for each item, coded 0 if agree, 1 if disagree, then summed and rescaled to zero–one interval.

Internal Efficacy

Question wording: “Sometimes politics and government seem so complicated that a person like me can’t really understand what’s going on.” *Coding*: 0 if agree, 1 if disagree.

Duty

Question wording: “If a person doesn’t care how an election comes out then that person shouldn’t vote in it.” *Coding*: 0 if agree, 1 if disagree. We note here that this variable does not appear in the final Rosenstone–Hansen mode, but we wished to include it in this analysis. In future versions of this paper this variable may not be included.

Strength of Party Identification

Question wording: “Generally speaking, do you usually think of yourself as a Republican, a Democrat, and Independent, or what?” (If Republican or Democrat) “Would you call yourself a strong (Republican/Democrat) or not very strong?” (If independent, other, or no preference) “Do you think of yourself as closer to the Republican or Democratic party?” *Coding*: 0 if independent or apolitical, 0.33 if independent leaning toward a party, 0.67 if a weak partisan, 1 if a strong partisan.

Affect for Party

Question wording: “Is there anything in particular you like about the Republican party?” “Is there anything in particular you dislike about the Republican party?” “Is there anything in particular you like about the Democratic party?” “Is there anything in particular you dislike about the Democratic party?” *Coding:* the absolute value of the difference between two sums, coded to the zero–one interval: the sum of Democratic party “likes” and Republican party “dislikes” minus the sum of Democratic party “dislikes” and Republican party “likes.” For the 2002 respondents, their responses from 2000 were used. For 1974 respondents, their responses from the 1972 surveys were used.

Care

Question wording (Presidential year): “Generally, speaking, would you say that you personally care a good deal which party wins the presidential election this fall, or don’t you care very much which party wins?” *Question wording* (Mid-term): “Now I’d like to talk with you a bit about the elections which took place this fall. As you know, representatives to the Congress in Washington were chosen in this election from congressional districts all around the country. How much would you say that you personally cared about the way the elections to congress came out: very much, pretty much, not very much, or not at all?” *Coding:* 1 if care a good deal, pretty much, or very much. 0 otherwise (including non-response).

Wording does change somewhat from year to year. This variable was coded using variables v580312, v640020, v660063, v700164, v720029, v742026, v763030, v800061, v940209, P023007.

Affect for Candidate

Question wording: “Is there anything in particular you like about [the appropriate Republican candidate]?” “Is there anything in particular you dislike about [the appropriate Republican candidate]?” “Is there anything in particular you like about [the appropriate Democratic candidate]?” “Is there anything in particular you dislike about [the appropriate Democratic candidate]?” *Coding:* the absolute value of the difference between two sums, coded to the zero–one interval: the sum of Democratic candidate “likes” and Republican candidate “dislikes” minus the sum of Democratic candidate “dislikes” and Republican candidate “likes.”

Church

Question wording (1952–1968): “Would you say you go to church regularly, often seldom, or never?” *Coding:* 0 if never, 0.33 if seldom, 0.67 if often, 1 if regularly.

Question wording (1970–2002): “Would you say you go to (church/synagogue) every week, almost every week, once or twice a month, a few times a year, or never?” *Coding:* 0 if never, 0.33 if a few times a year, 0.67 if once or twice a month,

1 if every week or almost every week. In 1994 an experimental version of this question appeared, so 1992 responses were used instead.

Years in Community

Question wording: “How long have you lived here in your present (city/town)?”

Coding: actual number of years. When respondent chose “all of my life” their age was imputed here. When this variable was used on the right hand side, it is transformed using a natural logarithm to induce normality.

Contacted

Question wording: “The political parties try to talk to as many people as they can to get them to vote for their candidates. Did anyone from one of the political parties call you up or come around and talk to you about the campaign? Which party was that?” *Coding:* 0 if not contacted, 1 if contacted.

South

Observed by interviewer. *Coding:* 1 if lives in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, or Virginia, 0 otherwise.

Border

Observed by interviewer. *Coding:* 1 if lives in Missouri, Kentucky, Maryland, Oklahoma, or West Virginia, 0 otherwise.

Black

The question wording on race and ethnicity have probably changed more throughout the ANES time-series than any other variable here. Throughout most of the time-series blacks, “negro”, or African-American is presented as one option. *Coding:* 1 if black, 0 otherwise. In the 2002 survey respondents were allowed to mark multiple racial and ethnic categories. All respondents who marked more than three categories were coded as missing and otherwise were coded as 1 if any of their choices included black or African-American.

Hispanic

This variable is missing for 1958. In the early years of the time series (1964) the best we were able to do was include the “other” category (*coding:* 1 if other, 0 otherwise) as this seemed to be the category that shifted most when Hispanic options were added in 1966. From 1966 until 1976 respondents were given the option to identify themselves as Mexican–American or Puerto Rican (*coding:* 1 if Mexican or Puerto Rican and 0 otherwise). For 1980 and 1994 ethnicity was coded

separately and all those of Hispanic origin are coded as 1, and respondents were coded as 0 otherwise. In 2002 multiple choices were allowed, and we followed the analogous scheme as described in the “black” variable above.

Race and ethnicity variables were coded using variables, v580469, v640183, v660237, v720425, v742554, v763513, v800721, v800722, v700391, v941435, v941419, P023150.

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