

# In the Eye of the Beholder? Motivated Reasoning in Disputed Elections

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**Abstract** This study uses an experimental design to simulate the ballot counting process during a hand-recount after a disputed election. Applying psychological theories of motivated reasoning to the political process, we find that ballot counters' party identification conditionally influences their ballot counting decisions. Party identification's effect on motivated reasoning is greater when ballot counters are given ambiguous, versus specific, instructions for determining voter intent. This study's findings have major implications for ballot counting procedures throughout the United States and for the use of motivated reasoning in the political science literature.

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## Introduction

It is a foundational principle of American democracy that citizens' votes should be counted in accordance with their intended choice. Ballots are counted accurately in most cases. However, due to improperly marked ballots or a number of other discrepancies, conventional vote counting procedures occasionally fail to discern voter intent. When such occasions arise, election administrators are given responsibility for assessing a ballot's validity and the voter's intent. Reliance upon election administrators to determine the proper counting of ballots can introduce subjectivity into the vote counting process.

Despite election administrators' capacity to influence the outcome of closely contested elections, no previous study has examined the process by which individuals evaluate questions of voter intent. This study is the first to examine how a specific social-psychological process, motivated reasoning, affects the decisions of individuals responsible for determining voter intent for challenged ballots in a disputed election. Fundamentally, it seeks to answer the question: Do election officials' political predispositions guide how they evaluate voter intent when counting challenged ballots? This question is important because almost all elections involve some margin of error, with any number of mistakes possibly resulting in the miscounting or misreporting of votes. While many elections are decided by a vote margin larger than the margin of error, others are only decided by a small number of votes. In these elections, just a few errors could decide the outcome.

Elections decided by a small number of votes are likely to be subject to an official dispute in which election administrators, and sometimes courts, must resolve complaints raised by a losing candidate. Disputed elections have been a mainstay on the American political landscape since the time of the country's founding (e.g., Foley 2008). Between 1789 and 2002 there have been 733 contested elections in the US House of Representatives and the US Senate (Jenkins 2004, 2005).<sup>1</sup> Additionally, there were at least 35 gubernatorial elections between 1904 and 1994 that resulted in an official contest or recount (Foley 2009). In recent years, high-profile disputed elections and close elections have garnered public attention. The most famous of these, undoubtedly, is the 2000 presidential election between George W. Bush and Al Gore. Officially, Bush carried Florida by only 537 votes. Although Florida received the most attention because it provided Bush with enough electoral votes to secure a majority in the Electoral College, the vote total between Bush and Gore also was extraordinarily close in New Mexico, where Gore carried the state by a mere 366 votes. Particularly germane to this study, the 2008 Minnesota Senate election between Al Franken and Norm Coleman provides

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<sup>1</sup> The data reported by Jenkins (2004, 117) suggest that there were as many as 471 disputed election cases in the US House where election officials could have influenced the election's outcome. Similarly, there were 60 disputed elections in the US Senate during this period in which election administrators could have affected the outcome (Jenkins 2005, 59).

another high-profile, recent example of a disputed election. Over the course of a lengthy recount process, Coleman and Franken challenged 3,377 and 3,278 ballots, respectively (Minnesota Secretary of State 2008a). Ultimately, Franken won the election by 312 votes.

These two disputed elections only scratch the surface of a rich history replete with instances in which election administrators' personal biases *could* have influenced the election outcome.<sup>2</sup> As such, it is critical that scholars examine the potential for election administrators' personal biases to influence election outcomes, and to explore ways in which those biases' influence might be mitigated.

Election administrators are human beings subject, presumably, to the same biases affecting other individuals. If biases influence how an administrator evaluates voter intent, serious problems for the electoral process may result. Basic principles of fairness require that election administrators strive for accuracy and consistency when counting votes. But, in a disputed election featuring numerous ambiguous ballots, it might not be voter intent that determines the victor. Instead, election administrators' preferences might decide the outcome. Research in social psychology (Kunda 1990) has demonstrated that individuals' predispositions often influence their evaluations of ambiguous information. This study expands upon previous research into motivated reasoning to examine its effects in an electoral context.

This study uses an experimental design to test whether motivated reasoning influences the behavior of individuals charged with accepting or rejecting ballot challenges in a disputed election. Experimental participants were presented with a series of challenged ballots in which voter intent was ambiguous, and asked to judge whether each ballot challenge should be accepted or rejected. To maximize external validity, the ballots presented to participants emulated *actual* challenged ballots from the 2008 US Senate election in Minnesota.

This study's findings indicate that, while participants do not always accept ballot challenges from their political party's candidate, they are more likely to favor their party's candidate when they have a stake in the election outcome and when they are presented with ambiguous rules for determining voter intent. In light of these findings, policymakers should consider adopting measures to reduce the influence of partisan preferences in the ballot-counting process, by minimizing the stake election administrators might have in the election's outcome and providing election administrators with clear, unambiguous rules for determining voter intent.

## Motivated Reasoning

Motivated reasoning, or the psychological phenomenon by which individuals' biases and predispositions influence their subsequent attitude formation, has natural implications for political science (Fischle 2000; Redlawsk 2002). Inherent in the idea of motivated reasoning is that "wants and desires" may affect individuals'

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<sup>2</sup> Unfortunately, there does not appear to be systematic data available on state legislative and local disputed elections. However, given the frequency of contested congressional, gubernatorial, and other statewide elections, and the substantially larger number of state legislative and local elected offices, disputed elections across all levels of government are not uncommon occurrences.

decision-making processes (Bruner and Goodman 1947; Bruner and Mintern 1955). As Kunda (1990) summarizes, motivated reasoning is an amalgamation of both cognitive processes (reasoning towards a conclusion) and motivations (preferring one conclusion over another).

Motivations come in a variety of forms and can be both accuracy- and directionally-focused (Braman and Nelson 2007; Chen et al. 1996; Kunda 1990). An actor motivated by accuracy desires to be precise and correct in her assessments, while that same actor motivated by direction may hope for a certain outcome and will justify her attitudes and reasoning to reach that outcome. Directional motives may result in biased processing, an actuality found by many political studies (e.g. Taber and Lodge 2006). Scholars have further broken down these goals into three groups: accuracy-focused, defense-focused, and impression-focused (Agrawal and Maheswaran 2005). The latter two bear similarity to the “directional” motives of Kunda. Generally speaking, both defense- and impression-focused motives result in directional outcomes, where a desire *other* than accuracy affects processing.

Psychological experiments testing motivated reasoning have demonstrated that directional motives tend to dominate at the expense of accuracy motives in clear and predictable patterns. Balci et al. (2006) show that in order for directional motives to be activated over and above accuracy motives, individuals need to feel as though the outcome is important and relevant to their own lives. When individuals do not feel as though they have any “stake” in the outcome, there is no reason to suspect that directional motives will be activated.

When resolving disputed elections, one would hope that accuracy motives are the driving force behind ballot counters’ decisions. However, there are good reasons to question whether accuracy motives truly “win out” over directional motives in ballot-counting situations. Ballot counters, like any other group of individuals, have their own desires and motives. Certainly, their training and the seriousness of their task may help to encourage accuracy motives, but as Redlawsk (2002) argues, in circumstances where an individual’s desire to reach a favorable result is strong, accuracy motives alone are not always sufficient to overcome directional motives. In some cases, scholars have found a “confirmation bias,” whereby individuals will change their information search in order to find information more supportive of their original beliefs (Redlawsk 2002). In the case of election administrators, one might anticipate that those individuals who are motivated to throw a ballot away might “confirm” characteristics of the ballot that would make the ballot be discounted—and this may be the case even when ballot counters are well-trained and highly driven by accuracy motives. Indeed, Wells et al. (2009) found that certain political *beliefs* are influenced by political values, particularly in cases where individuals are politically sophisticated. “Disconfirmation bias,” in a similar vein, occurs when people cannot discount their original beliefs when evaluating policies. This has been found to occur across policy areas, and even when individuals are knowledgeable about the policies to begin with (Taber et al. 2009).

Examinations of election administrators suggest that such officials, who ostensibly should be motivated exclusively by accuracy, have engaged in behavior directed at reaching their preferred result. Stuart (2004) examined felon voting lists in Florida between 1998 and 2000 and found that Republican election officials were

more aggressive in using these lists to purge individuals from voter registration lists, compared to Democratic election administrators, presumably in fear that registered felons would be more likely to support Democratic candidates. Dyck and Seabrook (2009) recently examined the vote-by-mail system in Oregon, finding that Republican election administrators were more likely than their Democratic counterparts to classify Democratic voters as “inactive,” preventing the voter from automatically receiving a ballot by mail. If party affiliation influences an election administrator’s behavior before an election when the likely benefit of such behavior is difficult to gauge, there is good reason to suspect that partisan attachments would influence ballot counter behavior in a disputed election when the likely benefit of such behavior is clearly substantial.

Directional motives may take on any number of forms. Ballot-counters may want a particular candidate to win an election; they may want a long day to end so that they can be with their families; or they may want the entire electoral dispute simply to reach a conclusion. Any of these motivations may influence the attention and care they give each individual ballot. One might reasonably expect governments to anticipate these types of directional motives and to take measures to encourage accuracy motives over directional motives. Ballot-counting statutes are one potential solution designed to allow less “wobble room” for directional motives to bias processing. However, given the diversity in ballot-counting statutes across jurisdictions, these mechanisms might not hold in all circumstances.<sup>3</sup>

In the case of challenged ballots, individuals may be inclined to count ballots as favoring the candidate who shares their party identification (or, in simpler terms, as favoring the candidate who they wish to win the election). Party identification is one of the most important pieces of information about a candidate, one of the most stable individual traits, and one of the best understood political labels (Converse 1964; Green and Palmquist 1994). Party identification also is included on nearly every state- and federal-level ballot; in most cases, it is the only piece of candidate information provided on the ballot, other than the candidate’s name. Importantly, party identification is also the most significant predictor of vote choice (Campbell et al. 1960; Lewis-Beck et al. 2008). Taber and Lodge (2006) find that partisan goals, a broad term designed to encompass any goals based on a particularly desired outcome, anchor subsequent political processing—even when a person is processing new political information, he is influenced by his partisan attachment. They considered party identification as the source of these goals. As earlier examinations of election administrators indicate, if any variable is likely to influence the decisions of ballot counters, party identification is it.

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<sup>3</sup> For example, the state of Oregon allows a great degree of freedom in determining voter intent—“Any vote from which it is impossible to determine the elector’s choice for the office or measure may not be counted” (ORS 254 § 505). In New Hampshire, a majority vote by poll workers is enough to determine voter intent—“If a ballot is marked for any office in a way which does not readily admit of counting ... then the ballot shall be counted for that office in accordance with the majority vote of the election officials present and counting votes...” (RSA 63 § 659:64). In Michigan, even if voter intent can be discerned, a ballot could be rejected if a voter fails to make the proper “X” or check mark on the ballot—“Marks other than crosses or check marks used to designate the intention of the voter shall not be counted” (MCL 116 § 803.1(c)). Thus, there are many different standards for determining voter intent and counting ambiguous ballots.

## Hypotheses

Given the substantial evidence suggesting that party identification might act as a directional motive for ballot counters, and that these officials are likely to favor the candidate sharing their party identification, this study's first hypothesis states:

**H1:** As the strength of a participant's partisan attachment increases, the participant will become more likely to support challenges made by a co-partisan.

As much of the evidence for motivated reasoning suggests that having a "stake in the outcome" increases the influence of these directional motivations, the second hypothesis states:

**H2:** As the strength of a participant's partisan attachment increases and she perceives a personal stake in the election outcome, the participant will become more likely to support challenges made by a co-partisan.

Hypothesis 2 is particularly difficult to test, as it is nearly impossible to observe the ballot-counting process in real-time. However, even mild psychological benefits associated with aiding a favored candidate may be enough to assume that we have created a situation where participants will believe that they have a credible stake in the outcome. Many recent studies demonstrate that partisans often feel a strong sense of social identity in connection with their partisan groups (Green et al. 2002; Greene 2004). Thus, while seeing a co-partisan win an election rarely will lead to direct material benefits for a ballot counter, it is quite plausible that a co-partisan's victory will contribute positively to that individual's self-concept, simply because a member of the same partisan identity group has achieved success while a member, or members, of an opposing partisan identity group has (have) been defeated. A thorough explanation of how participants were given a "stake" in the outcome is provided below.

As indicated above, a variety of ballot-counting "rules" exist, and these rules vary considerably across states. Since highly specific rules leave little room for interpretation, and, by extension, little room for motivated reasoning, the third hypothesis states:

**H3:** As the strength of a participant's partisan attachment increases and the ballot counting rules are vague and ambiguous, the participant will become more likely to support challenges made by a co-partisan.

## Experimental Design

In order to test this study's hypotheses, 340 undergraduate students from The Ohio State University in Columbus, Ohio, were recruited to participate in a computer-administered experiment. In exchange for their participation, students were given extra credit in their political science course. Twenty percent of participants were racial or ethnic minorities (8% African-American, 5% Latino, and 7% Asian-American), 45% were female, and ages ranged from 18 to 45, with a median age of 20 years old.

Using a nonrandom undergraduate sample might be considered problematic for this study (Sears 1986). However, motivated reasoning is a general psychological phenomenon that should be operative in younger and older individuals, alike. In fact, previous studies have demonstrated that younger people are significantly *less* likely to engage in motivated reasoning than older people (Klaczynski and Robinson 2000). In addition, younger people tend to be less partisan than the rest of the adult population (Erikson and Tedin 2007, 153–154). If partisanship cues directional goals among the population subset least likely to hold strong partisan attachments, its effects should be even stronger in the general population. More importantly, many poll workers and election administrators are ordinary citizens.<sup>4</sup> Poll workers oversee the initial counting of ballots at the precinct-level and typically make an initial determination of voter intent. In Minnesota, for example, the secretary of state's office actively solicits members of the public to serve as "election judges" at the polls. The only requirements to hold this position are that the applicant must: (1) be eligible to vote in Minnesota; (2) be able to read, write, and speak English; (3) not be the spouse or relative of an election judge serving in the same precinct; (4) not be a candidate or relative of any candidate appearing on the ballot in that precinct. Because it is so difficult to obtain applicants to fill these poll worker positions, states have recruited high school students as young as 16 years old to serve in a trainee program (see Minnesota Secretary of State 2008b). The US Election Assistance Commission recently authorized \$750,000 in grant money for the purpose of recruiting college students to serve as poll workers and assistants (US Election Assistance Commission 2009).<sup>5</sup>

Certainly we expect actual ballot counters to have accuracy motives as well as the possible directional motives we examine below. We took several steps to make accuracy motives salient to participants. First, we, as experimental proctors, provided a verbal introduction of the experiment to participants upon their entering the experimental lab in which we explained that the objective of their participation was to determine, to the best of their ability, the actual intent of voters on a number

<sup>4</sup> Aside from polls workers, county/state boards of election are important players in disputed elections. If a candidate challenges the initial ballot-counting decision of poll workers, it is possible for a county/state board of election (or a court) to review these decisions. These individuals may or may not be political elites. For example, in Ohio, the county board of election is comprised of four individuals, selected and equally balanced among the major political parties (R.C. 3501.06–3501.07). In Pennsylvania, a county board of elections is comprised of the county commissioners, who are elected officials who represent the two major political parties (25 P.S. §§ 2641–2642). Additionally, membership on the state board of canvassers must be evenly divided between the major political parties in Michigan (MCL § 168.22), and nominees to the state canvassing board are submitted by the central committees of the major political parties (Ibid.). A similar law applies to the state board of elections in North Carolina (N.C.G.S. § 163-19), and the county boards of election in New York (New York Election Law § 3–204). Thus, in several states, members of boards of elections are either selected by or obtained their positions with significant support from the major political parties. As such, these individuals should be likely to support the interests of their political party when reviewing disputed ballots.

<sup>5</sup> The data reported in the 2008 Election Administration and Voting Survey sponsored by the US Election Assistance Commission shows that 10.5% of all poll workers surveyed nationally were under the age of 25 (US Election Assistance Commission 2008). These data are similar to another 2008 national survey of poll workers conducted by the Election Administration Research Center at the University of California, Berkeley and the Verified Voting Foundation. In this survey, 11.1% of poll workers surveyed were under the age of 29 (Election Administration Research Center 2008).

of contested ballots. Second, participants were provided with a sheet of paper instructing them on how to accurately determine voter intent. These ballot counting guidelines repeatedly emphasized *accurately* determining voter intent, and at no point did they describe any other motivation as valid. Third, before beginning the experiment, participants were presented with a series of on-screen instructions explaining that they were to act as “an election official charged with the responsibility of deciding” the validity and voter intent of each challenged ballot. Participants were instructed to “thoughtfully” consider each response, “take [their] time to examine the vote,” and to refer at any time to the hard copy instructions for determining voter intent. Each of these steps was specifically designed to repeatedly make salient to participants their overriding responsibility as ballot counters to accurately determine voter intent.

Experimental participants were presented with a series of sixteen contested ballots purportedly cast in a recent election for the US House of Representatives in which voter intent was ambiguous. To maximize external validity, each challenged ballot presented to participants was modeled carefully after actual challenged ballots cast in the 2008 US Senate election in Minnesota, between incumbent Republican Norm Coleman and Democratic challenger Al Franken.<sup>6</sup> For each challenged ballot, participants were told which candidate challenged the initial ballot ruling and the basis for the candidate’s challenge. Participants then were asked to accept or reject the challenge.<sup>7</sup>

The experiment contained three manipulations to which participants were assigned randomly. First, the candidates presented to participants varied in terms of their party identification. A control group of participants was presented with ballots not containing party labels. Without party labels, no partisan basis was available for participants to engage in motivated reasoning when deciding whether to accept or reject challenges.

A second group of participants was presented with ballots featuring fictitious candidates, including one Republican and one Democrat. Hypothesis 1 suggests that participants should be more likely to accept challenges made by the candidate representing the party with which the participant identified and more likely to reject challenges made by the candidate representing the party with which the participant did not identify.

A third group of participants was presented with ballots featuring real candidates. In accordance with Hypothesis 2, this manipulation was included in order to determine whether motivated reasoning was more likely to occur when participants had a personal stake in the election outcome. We selected candidates from the very competitive 2008 US House election in Ohio’s 15th District (which includes The Ohio State University). The candidates in that race included Republican Steve

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<sup>6</sup> Ballots were obtained from the Minnesota Public Radio website, July 12, 2010. [http://minnesota.publicradio.org/features/2008/11/19\\_challenged\\_ballots/round1/index.shtml](http://minnesota.publicradio.org/features/2008/11/19_challenged_ballots/round1/index.shtml).

<sup>7</sup> Challenges came from either of the two major party candidates on the ballot. Two other minor party candidates also appeared on the ballot. Participants cast only four of 6,816 total votes in favor of the two minor party candidates (we assume this to be a function of respondent error). Participants’ choices were therefore restricted to awarding challenged ballots to one of the two candidates involved in the challenges or discarding the ballot altogether.

Stivers, Democrat Mary Jo Kilroy, and two minor party candidates. Using candidates from the Kilroy/Stivers election best allowed the personal stake felt by participants to approximate the feelings of personal stake of actual ballot counters. The 15th District of Ohio is the home district of many of the participants.<sup>8</sup> Both the Kilroy and Stivers campaigns actively recruited on The Ohio State University campus and advertised heavily in the Columbus media market.<sup>9</sup> The experiment was completed within 3 months of Kilroy being declared the winner by the narrow margin of 2,312 votes, and only after considerable delay and talk of the possibility of an actual recount. As a result (and most importantly for the purposes of our experiment), in comparison with participants presented with ballots featuring fictitious candidates, participants presented with ballots featuring real candidates were more likely to feel they had a personal stake in the election outcome.<sup>10</sup> However, because we are unable to perfectly approximate the unique environment of contested elections, participants may be less likely to feel the same level of stake as actual ballot counters. Although a possible limitation, the distinction between experimental participants and actual ballot counters should work *against* finding support for Hypothesis 2. If Hypothesis 2 finds support, the results should be interpreted as a conservative estimate of the effect of personal stake on ballot counting.

A second manipulation concerned which candidates challenged each ballot's initial ruling. Since some ballot challenges were more credible than others, failure to vary the candidate challenging a particular ballot was likely to bias responses in favor of the candidate posing the more credible challenges. To address this concern, each participant was assigned randomly to one of two versions of each ballot, one in which the Republican candidate challenged the initial ruling on how to count the ballot and one in which the Democratic candidate challenged the initial ruling.

The third manipulation addresses Hypothesis 3 by randomly assigning the type of ballot counting rules presented to each participant. As noted earlier, the rules for counting ballots vary considerably by state; some rules are rather ambiguous and some are quite specific, leaving different amounts of room for interpretation. To capture this variation and to maximize both external validity and the participants' accuracy motives, we obtained two sets of rules provided to ballot counters in different states<sup>11</sup> and condensed each to be of reasonable length for the experimental setting. To represent clear, specific ballot counting rules, we used portions of the

<sup>8</sup> In Ohio, college students are permitted to list a school address when registering to vote (<http://www.sos.state.oh.us/SOS/elections/voterInformation/regToVote.aspx>), July 12, 2010.

<sup>9</sup> Kilroy and Stivers engaged in an expensive campaign, spending a combined \$5 million, making it the most expensive 2008 House race in Ohio. July 12, 2010. <http://www.fec.gov/DisclosureSearch/HSPProcessCandList.do?ull>.

<sup>10</sup> Participants were presented with a female candidate only in the real candidate condition. While presenting these participants with a female candidate might seem problematic because participants in the other candidate conditions were presented only with male candidates, Kilroy's inclusion was necessary to test Hypotheses 2. We control for the gender of participants in our statistical models. Models estimated without a gender control are not substantively different.

<sup>11</sup> These ballot guides are not assumed to be representative of all possible state ballot guidelines. They are simply examples of two different ways states choose to inform ballot counters and are intended to represent two points on a hypothetical "ambiguity" continuum of recount guides.

Minnesota Recount Guide, published by the Minnesota Secretary of State's office.<sup>12</sup> According to this office, the ballot counting rules provide aid "for election officials and their staff who may participate in an election recount" (3). Minnesota's ballot counting rules contain both text-based instructions and graphical representations of acceptable and unacceptable ballots. Presumably, these rules are relatively easy to comprehend. In addition, the graphical examples serve as particularly helpful guides to the participants.

Participants not receiving the Minnesota rules were instead provided with a condensed version of North Carolina's "Standards for Determining What Constitutes a Vote and What Will Be Counted as a Vote" and the accompanying relevant portions of North Carolina General Statutes, made publicly available by the North Carolina State Board of Elections Office.<sup>13</sup> According to the State Board of Elections, "...these standards and procedures ... define what is a vote and when that vote should be counted in circumstances in which voting systems are unable to determine the voter's intent with respect to a marked ballot" (2). North Carolina's ballot counting rules contain only a dense set of text instructions, mostly reiterating that "the ballot shall be counted according to the voter's indicated intent unless it is impossible to determine the voter's intent" (5). Presumably, these rules allow substantial leeway and discretion for the ballot counter, particularly in contrast to Minnesota's specific ballot counting rules.

In accordance with Hypothesis 3, we expect that motivated reasoning is more likely to occur when the rules for counting ballots are relatively ambiguous and open to interpretation. Thus, we assigned participants randomly to receive one of two ballot counting rules, either a modified version of Minnesota's relatively specific rules or a modified version of North Carolina's relatively ambiguous rules.<sup>14</sup>

After viewing all twenty ballots and choosing whether to accept or reject each ballot challenge, participants answered a series of questions relevant to their attitudes toward counting challenged ballots. First were questions relating to participants' political characteristics, including party identification, political knowledge, political interest, and political efficacy. Second were questions addressing cognitive processes, including participants' need for closure and need for cognition. Finally, participants were presented with a set of demographic measures, including age, gender, race/ethnicity, and education.

## Methodology and Measurement

From participants' rulings on the challenged ballots and responses to questionnaire items, we constructed a series of models appropriate for testing Hypotheses 1–3.

<sup>12</sup> The Minnesota 2008 Recount Guide, July 12, 2010: <http://www.sos.state.mn.us/Modules/ShowDocument.aspx?documentid=5236>. Specifically, we provided respondents with portions of section 13, entitled "Determining Voter Intent" (8–10). See the "Web Appendix" for more details.

<sup>13</sup> The North Carolina standards, July 12, 2010: <http://www.sboe.state.nc.us/getdocument.aspx?id=219>. See the "Web Appendix" for more details.

<sup>14</sup> Copies of the ballot counting rules and the ballots themselves are in the online "Web Appendix".

The dependent variable is coded as one if the participant accepted a candidate's challenge on a particular ballot and zero if the challenge was rejected. Two key independent variables also are included in our models. The first is a dummy variable representing the party identification of the candidate challenging a ballot, coded one if the candidate was a Republican and zero if the candidate was a Democrat (no minor party ballot challenges were presented to participants). The second key independent variable was a self-reported party identification measure, ranging from 0 (strong Democrat) to 6 (strong Republican), with a mean of 2.7. These two variables were used to create an interaction variable capable of directly testing Hypothesis 1. In accordance with Hypothesis 1, we expect the interaction term's coefficient to be positively signed, thereby indicating that participants become increasingly likely to accept a Republican candidate's ballot challenge as they self-identify more strongly with the Republican Party.

To test the effect of partisan motivations, our model also controls for several independent variables relevant to ballot counting. First, we control for political knowledge. Participants scoring relatively high on political knowledge are most likely to be familiar with disputed elections' norms and processes. Political knowledge was measured using nine factual knowledge questions about the United States government and its leaders.<sup>15</sup> Each knowledge question is scored one for a correct answer and zero for an incorrect answer, thus creating a political knowledge scale ranging from zero to nine (mean 5.6).

In addition to political knowledge, we also control for participants' level of trust in government. Participants who believe the government tends to be corrupt or inefficient (or both) could be particularly likely to doubt the integrity of the ballot counting process and accept challenges to initial ballot rulings. Trust in government was measured as a summary score ranging from 0 to 56 (mean 37.07), derived from participants' level of agreement on a seven-point Likert scale using eight standard American National Election Studies (ANES) with higher scores indicating higher levels of trust in government.

Also, our model controls for two relevant cognitive processing variables, need for closure and need for cognition. Need for closure is a psychological concept referring to individuals' willingness to quickly arrive at a firm conclusion or patiently consider the merits of multiple competing perspectives (Kruglanski and Webster 1996; Webster and Kruglanski 1994). Individuals' need for closure scores could be inversely related to the likelihood of accepting a ballot challenge because recognizing the ambiguity of voter intent is likely to make participants high in need for closure uncertain and uncomfortable. Need for cognition refers to individuals' willingness to engage in cognitively complex tasks (Cacioppo and Petty 1982). Need for cognition is included because it could influence the acceptance of ballot challenges, particularly if the least cognitively demanding approach is to ignore the merits of the challenger's claim and reject the challenge.

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<sup>15</sup> These nine questions included the five standard political knowledge questions advocated by Delli Carpini and Keeter (1997), as well as four additional and similar questions. We included the four extra questions in order to create more variation among participants.

Need for closure and need for cognition measures each were presented as a series of seven-point Likert scales, ranging from “strongly agree” to “strongly disagree.” Need for closure was measured as an index of five questions ranging in values from 0 to 35 (mean 21.56), with high scores representing high need for closure. Need for cognition was measured similarly as an index of six questions ranging in values from 0 to 42 (mean 26.57), with high scores representing high need for cognition.

Finally, our model controls for gender’s effect on ballot counting. Previous research indicates that men tend to be more assertive and women more agreeable, suggesting that female participants might be more likely than male participants to accept ballot challenges (see Schmitt et al. 2008).

## Results

Looking first at the effect of the ballot type on accepting ballot challenges, a one-way ANOVA reports that the levels of acceptance are not significantly different across the real and fictitious candidates ( $F = 1.67$ ,  $df = 1$ ,  $p < 0.197$ ). This result is consistent with expectations; we have no a priori reason to expect challenges from real candidates would be more convincing than identical challenges from fake ones, or vice versa. A one-way ANOVA of the acceptance rates across the rules condition, however, reveals significant differences ( $F = 187.32$ ,  $df = 1$ ,  $p < 0.001$ ). Regardless of the ballot type, individuals who were given the specific rules with illustrated examples of valid and invalid votes accepted a significantly higher proportion of challenges than those who were given the ambiguous rules (51.4–30.7%).

In order to assess how strength of partisanship affects the likelihood of accepting a ballot challenge, we turn to logistic regression. Table 1 presents a direct test of Hypotheses 1 and 2. Standing alone, Hypothesis 1 is not supported. The interaction between an individual’s party identification and the dummy indicating a Republican challenge is not statistically significant, indicating that participants’ party identification fails to predict whether a ballot challenge was accepted across both types of ballots.

Normatively, this finding is appealing; there does not appear to be any relationship between party identification and the decision of a participant to accept or reject a challenged ballot. However, while the motivated reasoning literature suggests participants should be more likely to accept a ballot challenge from a co-partisan, this may be true *only when the participant feels that she has a stake in the outcome*. To provide a full test of motivated reasoning in ballot counting, it is necessary that participants feel that they have a stake in the outcome, which is represented by the use of real candidates on the ballot, as opposed to fictitious ones.

The additional interaction adds this important distinction and the results confirm the importance of participants feeling they have a stake in the outcome to activate directional motives at the expense of accuracy motives. Here, the interaction is positive and statistically significant. The model predicts an otherwise typical strong Republican reviewing a Republican ballot challenge with fake candidates to accept that challenge with a 0.37 probability. However, that predicted probability of acceptance increases to 0.46 if the real candidate names appear on the ballot. There is a similar substantive effect for Democrats. The predicted probability of an

**Table 1** Predicting the likelihood of accepting a ballot challenge

	Coefficient	Standard Error
Republican challenger	0.451	0.336
Party ID	0.054	0.072
Ballot condition	0.272	0.172
Party ID × Republican challenger	−0.152	0.897
Party ID × Ballot condition	−0.069	0.049
Republican challenger × Ballot condition	−0.423	0.228
Party ID × Republican challenger × Ballot condition	0.153**	0.058
Political knowledge	0.088*	0.038
Trust in government	−0.007	0.013
Need for closure	−0.004	0.012
Need for cognition	0.004	0.014
Gender	0.013	0.102
Constant	−1.048	0.716
Observations	3,568	
Number of clusters	223	
Log-pseudolikelihood	−2,361.81	

Estimates are logistic regression coefficients. Robust standard errors in parentheses. Standard errors clustered by participant

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

otherwise typical strong Democrat accepting a Democratic challenge is 0.38 when fake names are on the ballot, but jumps to 0.45 with real names. This result, while less normatively appealing, is consistent with expectations derived from the motivated reasoning literature. The results also suggest that a feeling of personal stake in the outcome was activated in participants by using real candidates. If our experimental design failed to activate any feeling of stake, the results should be identical across both ballot types, but this is not the case.

Table 1’s results, while consistent with the tenets of motivated reasoning, tell only part of the story. A second consideration in the motivated reasoning literature surrounds the question of ambiguity. Hypothesis 3 proposes that motivated reasoning’s effects should be strongest when the rules for assessing ballot challenges are ambiguous. To test this hypothesis, participants were divided into two rules conditions: half of the participants received specific rules while the other half received ambiguous rules (the Minnesota and North Carolina ballot counting rules, respectively). We expect motivated reasoning’s effects to be stronger for participants in the ambiguous rules condition. The results presented in Table 2 support this hypothesis.

Consistent with the results presented in Table 1, there is no evidence of motivated reasoning when participants did not have a stake in the election outcome. The third and fourth columns of Table 2 test motivated reasoning’s effect across

**Table 2** Predicting the likelihood of accepting a ballot challenge by partisan condition and rules condition

	Fake partisan, specific rules	Fake partisan, ambiguous rules	Real partisan, specific rules	Real partisan, ambiguous rules
Republican challenger	0.216 (0.272)	-0.085 (0.169)	-0.231 (0.247)	-0.734** (0.256)
Party ID	0.001 (0.05)	-0.008 (0.036)	-0.068 (0.046)	-0.141** (0.049)
Party ID × Republican challenger	0.039 (0.067)	-0.048 (0.045)	0.101 (0.059)	0.269*** (0.066)
Political knowledge	0.073 (0.064)	0.03 (0.055)	0.084 (0.075)	0.017 (0.055)
Trust in government	-0.039 (0.026)	0.024 (0.02)	-0.015 (0.019)	-0.02 (0.021)
Need for closure	0.027 (0.025)	-0.01 (0.016)	0.01 (0.022)	-0.027 (0.022)
Need for cognition	0.013 (0.019)	-0.026 (0.022)	0.001 (0.027)	-0.01 (0.02)
Gender	0.066 (0.163)	-0.004 (0.165)	-0.145 (0.178)	-0.191 (0.205)
Constant	-0.114 (1.199)	-0.888 (1.052)	0.184 (1.385)	1.200 (1.113)
Observations	752	1264	768	784
Number of clusters	47	79	48	49
Log-pseudolikelihood	-515.5	-756.7	-528.7	-462.1
Chi-square	12.04	10.74	7.004	23.50
Prob > Chi-square	0.149	0.217	0.536	0.00278

Estimates are logistic regression coefficients. Robust standard errors in parentheses. Standard errors clustered by participant

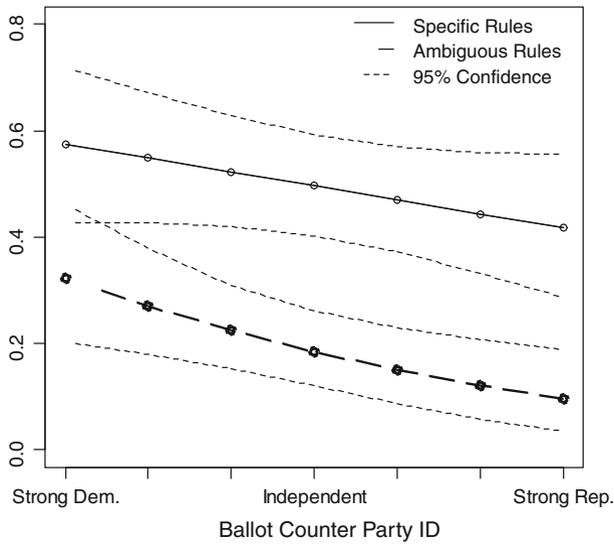
\*  $p < 0.05$ ; \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

rules conditions when participants had a stake in the outcome; that is, when real candidates were on the ballot. These results conform entirely to our expectations.

Turning first to the specific rules condition (Column 3), the interaction of candidate and participant party identification is correctly signed but insignificant. However, strong evidence for the hypothesized effect of rule specificity is found among those provided with the ambiguous rules condition's (Column 4). Here the interaction term is positive and statistically significant.<sup>16</sup> Taken together, Table 2 confirms that motivated reasoning is more likely to occur when participants had a “stake” in the election outcome and when presented with ambiguous ballot counting rules.

Figure 1 demonstrates that the results from Table 2 are not only statistically significant, but also substantively consequential. Figure 1 graphs the predicted probability of accepting a Democratic challenge when participants have a stake in the outcome, or when participants were presented with ballots featuring real candidates. Several points are worth noting. First, the predicted probability of accepting a ballot

<sup>16</sup> Pooling the data into a single model and using several interactions would provide the most efficient test of the equality (or lack thereof) of these coefficients. Unfortunately, due to severe multicollinearity between the necessary interaction and lower-order terms we cannot follow this approach. However, Allison (1999, 186) shows that properly specified interactive models and separate regressions are equivalent. Hoetker (2007) demonstrates that although problems of residual variation can occur when comparing logit and probit coefficients, “the researcher can—at a minimum—compare the statistical significance of the coefficients across groups” (338). This is the approach we follow here.



**Fig. 1** Probability of accepting a Democratic challenge

challenge is lower for participants presented with ambiguous, rather than the specific, rules. Only when participants identified as “Strong Democrats” is this effect statistically indistinguishable across rule conditions, although the substantive effect remains clear. This result is not surprising; it suggests that participants’ default position was to reject a ballot challenge unless there was a clear rationale for accepting it. Presumably, the specific rules provided in Minnesota afforded participants such a rationale. In contrast, the ambiguous North Carolina rules provided less assurance that some ballots indeed were spoiled and should not be counted.

Second, consistent with our expectations, participant party identification’s effect is stronger in the ambiguous rules condition than in the specific rules condition. When provided specific ballot counting rules, the probability of accepting a Democratic challenge decreases from 0.52 for a strong Democrat to 0.44 for a strong Republican. When presented with ambiguous ballot counting rules, however, the probability of accepting a Democratic challenge decreases from 0.36 for a strong Democrat to 0.20 for a strong Republican. This shift represents nearly a two-fold increase in the magnitude of the change in predicted probability across the rules conditions, indicating that the ambiguous rules facilitate the influence of directional motivations in the ballot counting process, seemingly at the expense of accuracy.

**Substantive Application of Findings**

The findings discussed in the previous section indicate that party identification, the participant’s stake in the election outcome, and the specificity of the ballot counting guidelines can affect ballot counters’ judgments during a hand-recount. However, since it is difficult to conceptualize the potential impact of these variables when they

**Table 3** Hypothetical recount effects

Participant party identification	Real candidates (both conditions)		Specific directions only		Ambiguous directions only	
	Democratic challenges	Republican challenges	Democratic challenges	Republican challenges	Democratic challenges	Republican challenges
Acceptance percentages						
Strong Democrat	42.3	29.6	51.3	45.7	33.7	19.6
Independent	35.7	33.9	46.2	48.0	25.0	26.4
Strong Republican	29.6	38.4	42.2	50.5	17.9	34.5
Recount benefit to the Democrat						
Strong Democrat	<b>387</b>		138		<b>443</b>	
Pure independent	25		-107		-72	
Strong Republican	-326		-355		-578	
Range of difference	713		493		1021	

Predicted probabilities are calculated with the logistic regression coefficients from the models that used the ballots with real candidates in Tables 2 and 3

Entries in bold indicate that the result would result in a Democratic victory, assuming a 215 vote deficit at the beginning of the recount and assuming 3,377 ballots challenged by the Republican, 3,278 by the Democrat

are couched in the language of logistic regression coefficients, this section applies the experimental findings to a hypothetical recount scenario. For the purposes of this analysis, we apply our findings to the 2008 Minnesota US Senate election, which yielded a statewide recount of 6,655 challenged ballots. The Republican candidate, Norm Coleman, challenged 3,377 ballots and the Democratic candidate, Al Franken, challenged 3,278 ballots. Using these figures as a framework for our hypothetical election scenario, we can calculate the substantive effects of our experimental findings.

Using the logistic regression coefficients from the models featuring ballots from the real candidates condition, we calculate the percentage of ballots that would be accepted by ballot counters while varying the party identification of the counter and the specificity of the ballot counting rules presented to them.<sup>17</sup> Assuming that the predicted probability of accepting a ballot challenge translates into that percentage of ballots being accepted in the aggregate, the top portion of Table 3 presents the expected percentages of accepted ballot challenges by rules condition and partisan identification.

These percentages are not much more helpful than regression coefficients in explaining the magnitude of motivated reasoning's impact. In order to make its effects more readily interpretable, we can use the acceptance rates to show how ballot counters' partisan preferences could affect the outcome of our hypothetical recount scenario. Going into the final recount, we assume that the Republican

<sup>17</sup> Ballot counters used in the analysis were coded as female with mean levels of knowledge, trust, cognition, and closure.

candidate led the Democratic candidate by 215 votes.<sup>18</sup> Using these figures, we can calculate the effects on the election outcome produced by ballot counters' party identification and the specificity of the ballot counting rules provided to them.

The bottom half of Table 3 shows the predicted net vote gain for the Democratic candidate, given our assumptions. Keep in mind that the purpose of this exercise is not to say that the specific values shown represent exact and quantifiable gains and losses. In fact, this certainly is not the case, because our experiment did not take into account the possibility that one candidate's challenges might have been more credible than those of other candidates. Instead, our purpose here is to show that the experimental effects uncovered in our analysis indeed can have a substantive impact on the outcome of an actual disputed election.

The bottom half of Table 3 shows the Democratic candidate's predicted net vote gain, using the acceptance rate from the real candidate experimental condition and, therefore, maximizing the participants' stake in the election outcome. If the ballot counters (or the median voter on a panel of ballot counters) are strong Democrats, our model predicts that the Democratic candidate would gain 387 votes. Comparatively, if the ballot counters are pure independents, the Democratic candidate would gain only 25 votes. Finally, if the ballot counters are strong Republicans, our model predicts that the recount would net the Republican candidate 326 votes. Our model suggests that the ballot counter's party identification will produce a difference in the number of challenged ballots awarded to the Democratic candidate as high as 713 votes. Given that the Republican candidate from our hypothetical election scenario entered the final canvass with a 215 vote lead, the effects produced by varying the ballot counter's party identification are substantial.

Table 3 further demonstrates how using specific ballot counting guidelines can reduce partisanship's effects on the results of the recount. It is clear that individuals' partisan motivations affect their decisions to accept or reject a ballot challenge, either knowingly or unknowingly, when presented with ambiguous ballot counting guidelines. The vote difference between strong Democrats and strong Republicans for those given the ambiguous directions is 1,021. However, the provision of specific ballot counting guidelines reduces this difference by more than half, to just 493 votes. This 598-vote swing in the specific rules condition would fail to put the Democratic candidate in the lead. However, the Democratic candidate would win by 228 votes if the ballot counters were provided with ambiguous criteria for evaluating challenged ballots. It is clear that the ambiguous directions give much greater leeway for personal attributes to affect the ballot decisions through motivated reasoning than when ballot counters are given specific guidelines.

## Conclusion

In addition to demonstrating the applicability of motivated reasoning to the study of political science, this study reinforces an important finding in the motivated

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<sup>18</sup> This figure was taken from the 2008 Minnesota US Senate race. After the recount, Franken held a 225 vote lead, although his lead was expanded to 312 votes after further legal action.

reasoning literature, that an individual's decisions are motivated by the knowledge that she has a stake in the outcome of the reasoning task. This study broadens the conceptualization of having stakes to include the outcome of a real and salient election.

This study's findings also have important methodological implications for political psychology experiments. While there are good reasons for using fictitious candidates in an experiment (e.g., minimizing potential participant bias against a candidate), the results presented here suggest that there might be situations that warrant using real candidates. At least in those instances where participants have a stake in the outcome of a political event, using real candidates in experimental conditions may help to achieve a higher level of external validity and to detect statistically significant effects. Undoubtedly, further research is required to expand upon this initial finding.

This study's findings should also be useful to policymakers responsible for state election laws. The results provide support for the claim that if ballot counters do not have a stake in an election outcome and are provided with clear ballot counting guidelines, their directional motives are minimized (i.e., ballot counters are less likely to see an ambiguous ballot as benefiting the candidate who shares their party identification).

Policymakers interested in activating accuracy motives should attempt to develop clear, unambiguous standards to be used when counting disputed ballots. Rather than providing ballot counters with dense language and an ambiguous definition of voter intent, ballot counting rules should clearly define what does and does not constitute voter intent. Additionally, pictorial examples of acceptable and unacceptable ballots, much like what was presented in the specific (Minnesota) rules, also should counter motivated reasoning's effects.

Minimizing a ballot counter's stake in an election outcome is particularly difficult, especially when political officials, such as a secretary of state, may decide the validity of a particular ballot or vote choice. There appears to be no obvious way to minimize a ballot counter's investment in an election outcome. As a preliminary suggestion, one potential way to minimize a ballot counter's stake in an election, particularly a non-statewide election, is to invite ballot counters from other jurisdictions to review challenged ballots. Presumably, ballot counters who reside outside of a local jurisdiction would have a diminished stake in a given election.

Regardless of the corrective measures that might be adopted to minimize motivated reasoning, this study provides evidence that cognitive biases among ballot counters can affect a close election's outcome. Ballot counters are most susceptible to motivated reasoning when they have a stake in an election's outcome and when they are given ambiguous ballot counting guidelines to discern voter intent. Judging by these results, it would appear that election administrators who Americans entrust with upholding the foundational ideal of free and fair elections may, in fact, often fall short of this ideal. In this sense, the winner of a disputed election is not readily apparent to the individuals responsible for its resolution; rather, the election's outcome lay in the eye of the beholder.

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