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Discrepancies in Voter Turnout: American Primary Election Types

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ABSTRACT

Voter turnout in the United States is low in comparison to other modern democracies. Turnout also varies significantly from state to state and from year to year. This study seeks to examine why these discrepancies in voter turnout exist on both the aggregate (state) and individual (voter) level. Many recent legislative attempts to reconcile low voter turnout have been unsuccessful. In learning *why* voter turnout is lower in some years and states compared to others, we might be able to implement relevant policies in order to increase turnout. In order to learn why voter turnout is low, I analyzed two different voter levels using two respective sets of data. I analyzed data from the United States Election Project, which provides aggregate turnout data for each state for the General (both in presidential and non-presidential years) and Primary (presidential years only) elections from 2000-2016. To examine data on an individual level I used the Cooperative Congressional Election Study Data and ran analyses comparing various potentially influential variables with turnout data for the year and state. As a result of completing these analyses, I concluded that there is a small but significant positive correlation between the type of primary election, in particular blanket versus non-blanket election states, and turnout.

Keywords: turnout, American politics, legislative elections, primary elections

INTRODUCTION

The purpose of this research is to examine the relationship between discrepancies in turnout from state to state and the type of primary election held in each state. The type of primary elections held during presidential election years vary from state to state, and can range from a non-partisan, top-two primary to a closed primary. I have attempted to determine if the types of primary elections held in different states affect turnout. I tested two possible causal relationships: competition, primary type, and turnout as well as the relationship between rationality (via the rational voter model) and turnout. I expected that the more competition there is (whether between two especially close candidates or because of a specific competition-inducing election system), the higher the motivation for citizens to turnout and vote. Within this competition variable, I hoped to answer more specifically if the less restrictive types of primaries (blanket primaries for example) increase the competitive aspect and therefore turnout. I also expected that the more someone "feels their vote counts", the more they will vote.

This question is important because it could give us insight as to why the United States, compared to other democracies, fails to motivate its citizens to go to the polls. Our national polling rates are low to begin with, but when it comes to state-wide elections, turnout turns dismal. Perhaps in understanding why this is the case, we can gain insight into how to change it. In recent times the United States has passed laws such as the National Voter Registration Act, or "Motor Voter Act" to push people towards the polls, but research suggests that these measures have been largely ineffective (except for Fitzgerald's positive correlation between turnout and specific certainties of the Motor Voter Act). If turnout is reasonably and significantly affected by

the different restrictions of a state's type of primary, states may be encouraged to adopt less restrictive practices in order to turn out the vote.

There have been many studies of American voter turnout, although many of the tested hypotheses have been proven moot. In looking at structural legal theory and the impact election laws have on turnout, studies have shown that the majority of laws that currently or previously affected voting have minimal to no statistically significant impact on turnout. These laws include unrestricted absentee voting, in-person early voting, vote by mail, and election-day registration and vary distinctly from state to state (Fitzgerald, 2005). This research is interesting because most of these structures were enacted in order to increase turnout, but did nothing of the sort. A more in-depth analysis of the current literature will be provided below.

The research I was most interested in building on regarding my "competitive" variable idea is the work of Brockington et. al. regarding minority representation under cumulative and limited voting. Although I will not be exploring all of these alternative election types, this research has inspired me to pinpoint where, and if, competitiveness (promoted by election type) in elections encourages turnout. My thesis examines the terms and the outcome of the rational voter model, in which $R = (B \cdot P) - C + D$. In this model B is the utility gained from getting the preferred outcome, P is the probability that the individual's vote will yield the preferred outcome (the probability that the individual's vote is pivotal), C is the (non-negative) cost of voting, and D is the positive benefit of the act of voting (Farber, 2009). There is quite a bit of research examining the rational voter model, but what I have examined (the relationship between the P and B terms) is often been overlooked, or has not been used in exactly this context (Quattrone, 1998).

My dependent variable is the percentage of the voting age population (VAP) or in some cases the VEP, or voting eligible population, that votes in state congressional and senatorial primary elections. The Census Bureau defines the voting age population as "everyone residing in the United State, age 18 and older." Before 1971, the voting age population was ages 21 and over for most states. I will be using the Voting Age Population instead of the Voting Eligible Population (excluding those who are disenfranchised for one reason or another) in order to exclude confounding variables in measuring turnout. Fluctuations in turnout may be explained simply by changes in the eligible population, which is why I am avoiding using the VEP. Using the Voting Age Population will help determine not only why people may not turn out to vote on election day, but also why they are not registered or do not participate in other civic duties. In cases where the VAP statistics are unavailable I have used the VEP data.

The independent variables that I have tested are competitiveness, primary election type, and voter sentiments (on a scale of 1-10, how much the voter feels his or her vote will "count".) I gathered data for my dependent variable from the United States Election Project and the Cooperative Congressional Election Study. My empirical indicators relate to measured voter turnout and statistically significant changes from election year to election year on the individual level. Of course in measuring data from year to year, there are unrelated factors that can contribute to changes such as political events and phenomena, polling errors, demographic factors, etc. Although I do my best to find and detail such events, there is no certainty. I have run analyses to account for as many confounding variables as possible. I looked for trends across multiple years in an attempt to control for outstanding and unrelated causes.

Through this research I hoped to discover a cause for relatively low state voter turnout levels throughout the US and comparatively between states.

LITERATURE REVIEW

The literature analyzed in this section covers topics including turnout, different types of primaries and their affects, voter psychology, the rational voter system, and other relevant subjects. This review attempted to piece together these articles and show their relevancy to my thesis topic and hypothesis. The five main articles that influenced my decisions in researching and outlining my paper are Patrick Kenney's "Explaining Primary Turnout: The Senatorial Case" (1986), Mary Fitzgerald's "Greater Convenience but not Greater Turnout: The Impact of Alternative Voting Methods on Electoral Participation in the United States" (2005), Carlsson and Johansson-Stenman's "Why Do You Vote and Vote as You Do?" (2005), David Sears' "Self-Interest vs. Symbolic Politics in Policy Attitudes and Presidential Voting" (1980), and Acevedo and Krueger's "Two Egocentric Sources of the Decision to Vote: The Voter's Illusion and the Belief in Personal Relevance" (2004).

One of the most holistically relevant pieces to my research is Kenney's Explaining Primary Turnout: The Senatorial Case. This paper reexamines findings from aggregate voter turnout data, specifically focusing on the Senate, in order to determine what can and does affect turnout. Four general conclusions emerge from research previous to Kenney's, and he, in turn, reexamines them with regard to the Senatorial Primary. The general conclusion I used most from his examination is the primary system variable. A blanket primary, or top-two, is an election in which the candidates do not provide their political party affiliations on the ballot. All candidates are listed, and the two candidates with the most votes move on to the general election. The two candidates may in fact be affiliated with the same or different parties or ideologies, but that information is not listed on the ballot. Other lenient primary systems include open primaries, in which the political party of the candidates is listed, but any registered voter, regardless of party, may vote. In a closed primary system, only the registered voters of a particular party may participate in the primary. Each party has a separate primary and/or ballot and a voter must be registered with the participating party in order to vote.

Kenney asserts that "states employing more lenient primary systems (for example, open [and blanket] primaries) consistently manifest higher rates of turnout than states using restrictive systems (for example, closed primaries)" (Kenney, 1986). Kenney follows by reminding us "most of the studies are unable to substantiate a direct relationship between primary laws and turnout." I have closely examining both of the aforementioned relationships. Furthermore, Kenney turns to the idea of competition affecting turnout. It is the combined relationship between competition and primary type that is noted in this article, and is something I focus on.

Not only is the qualitative information in this article relevant, but also so are the quantitative methods. Kenney explains:

"a variable is needed to measure the effect of close and highly competitive primaries on levels of turnout. To capture closeness, I use an interval-level variable, coding 1 if neither primary is competitive, 2 if one primary is competitive, and 3 if both primaries are competitive. The primary is considered competitive if there are two candidates in the primary and the winner receives less than 55% of the votes or if there are more than two candidates in the primary and the top vote recipients are within 10 percentage points of one another . . . . A variable tapping the normal level of general election turnout is included in the study."

I have decided to use a competitiveness index that has already been created and code a nominal rank-order rather than a binary dummy variable. I have also used a larger-scale model similar to the one featured in Kenney's analysis. The variables I have assembled will vary based on my specific analysis, but the idea used by Kenney follows. Since this study (1986) there have been significant improvements in data collection and assembly. There is now the ability to study turnout data at the micro (individual) level, as well as the aggregate, macro level. I further examine the results of Kenney's study with the individual-level data available from the Cooperative Congressional Election Study. Although this is one of the only pieces I have found that relates to both turnout and blanket primaries, there is other literature that relates to one of those two pieces and the underlying factors. One such piece is Fitzgerald's.

Findings

When all of these variables are combined, a model of senatorial primary turnout emerges. This model, formalized, is

$$\begin{aligned}\text{Turnout} = {} & a_0 + b_1(x_1) + b_2(x_2) + b_3(x_3) + b_4(x_4) + b_5(x_5) \\ & - b_6(x_6) + b_7(x_7) + b_8(x_8) + b_9(x_9) + b_{10}(x_{10}) \\ & + b_{11}(x_{11}) - b_{12}(x_{12}) + e_t\end{aligned}$$

where x_1 = open primary system with party selection required,
x_2 = open primary system,
x_3 = blanket or nonpartisan primary system,
x_4 = intraparty competition,
x_5 = interparty competition,
x_6 = incumbency,
x_7 = closeness,
x_8 = presidential primary,
x_9 = on-year/off-year elections,
x_{10} = education,
x_{11} = normal turnout,
x_{12} = year, and
e_t = error term.

Fitzgerald's (2005) article provides preliminary, yet useful information regarding what may influence turnout. It addresses voting laws in particular, which have been found to have little or no impact on turnout despite the fact that laws attempt to remedy "the most popular reason given for not voting among registered voters [which] is 'no time off/too busy.'" The policies discussed are: unrestricted absentee voting, in-person early voting, vote by mail, and election-day registration. Evaluation in this paper is based both on the rational choice model, and the structural-legal theory of voter participation. It examines such legislation as the Moter Voter Act as well as the Help America Vote Act (HAVA). Alternative voting methods are examined in each state based on year of implementation. The study started using data from 1972 to avoid the election law changes of the 1960s, a method I used as well for my aggregate examination. I also have slightly different dependent variables (including a difference in scale – national vs. statewide/local). Fitzgerald's choice to use the VAP is due to "historical registration data tend[ing] to be unreliable, outdated, and inflated," something I also kept in mind in choosing to use VAP. I also qualitatively (and ultimately quantitatively) examine different primary election types in a similar fashion as Fitzgerald examines alternative voting practices. Alternative voting methods or practice refer to physical ways of voting that are different from simply registering in advance and arriving at the polls. They can include mail-in ballots, same-day registration, etc. I examined these as control variables, eliminating the possibility that *they* could have affected turnout rather than the competitiveness or election type.

One point Fitzgerald makes that I have examined in greater detail is that it doesn't only matter how many people vote, but also where those people who may vote or abstain are. The demographic groups represented at the polls vary significantly less than the makeup of our population. Furthermore, Fitzgerald borrows from Kleppner (1982): "increased abstention concentrated at the lower ends of the socioeconomic scale distorts the character of the 'messages' that are conveyed through the electoral process, so that elections present incomplete pictures of the structure of popular opinion." Furthermore, Fitzgerald finds that "ultimately low and declining voter turnout erode the link between elites and citizens and has an adverse effect on the type of democracy the United States is today and will become in the future." It is for exactly this reason that I have decided to separate my analysis by state and on the individual level in order to determine changes in voter turnout and attempt to make any progress as to reasons why our turnout is low and only declining.

Fitzgerald expected a positive correlation between alternative voting methods and turnout. Other factors such as high education and income, age, non-minority status, employment status, region, high electoral competition, strong partisanship, political contact, and mobilization, were all considered and a pooled, cross-sectional, time-series model is used to explore the data. She did note as well that "alternative voting methods are most likely to exist in states that experience high rates of voter turnout regardless of the reforms," and it will be interesting to see whether this is of note regarding different types of primary elections as well. The findings showed, as I expected and had found in my own prior research, that most voting reforms do not stimulate turnout besides election-day registration. Fitzgerald's use of the cost-benefit analysis (determining whether the benefits of voting outweigh the costs and are therefore rational) with regard to alternative voting methods is one I use myself, specifically in relation to the rational voter model. Because my study encompasses an individual level of analysis in addition to an aggregate one, I believe I have more leverage in finding a correlation between a lower "cost" of voting with increased turnout (or increased desire to turnout) than M.F. did. While this article focuses more on whether specific legislation affects turnout, the rest of the literature I present focuses on psychological aspects contributing to voter behavior and turnout.

Carlsson and Johansson-Stenman's research focuses on why individuals do or do not vote, and why they vote how they do. Although this paper features another country—which is outside of the scope of my research—the applied concepts are relevant. The authors explore possible alternative and cohesive explanations on the individual level of analysis for why people do or do not vote. The explanations explored try to make clear why people vote despite the high cost benefit discrepancy. This cost benefit analysis is highlighted by the rational voter theorem, as the definition of a rational actor is one that acts only when the benefits outweigh the costs. Obviously without alterations the theorem does not explain why people would vote in our modern political system, especially in the U.S. where we have the Electoral College—an added complexity that makes it even less likely that the theorem could be explained. Perhaps our low voter turnout is in fact explained by the rational voter theorem, but that will be explored later on. More relevantly, this paper explores other psychological explanations for voting.

The authors explore three possibilities: the rational voter theorem and self-interested voter hypothesis (an instrumental reason – vote to affect the outcome), the theory of expressive voting (to be able to express one's view), and a theory based upon social norms (to conform to norm saying that it is a democratic obligation to vote). The authors hope to achieve similar goals as I do via these possible explanations: to understand people's perceptions of why they vote, and why they and others vote as they do and to contribute to understanding why people actually vote

and vote as they do. The authors clarify that "we cannot simply assume that people's actual motives coincide with their perceived motives [because] people prefer to have a positive self image and therefore systematically bias their own perception of themselves. It is likely that people vote for less altruistic reasons than they perceive they do, and that expressed voting motives may in part be rationalizations" (497). These two distinctive goals and motives and the reasoning behind the distinction is important for me to remember, especially on my individual level of analysis. The actual survey conducted and the methods by which the data was both collected and utilized are both important for assisting in my analysis. Although the actual data does not parallel data from the United States, the parameters used and organizational methods for clearly showcasing data are relevant and helpful.

Every demographic measure and parameter used in the two collected surveys is measured up to 1; 1 being either the most or least likely to do or feel the parameter. For example, where the variable is "would not vote," 1 means "would not vote at all." The survey results presented a mean of 0.046, which means that when asked this question 4.6% of respondents said they would not vote at all (this is congruent with the high turnout rates of 70-80% in Sweden). I have decided to use (mostly) binary variable analyses to present my more qualitative or demographic data in this manner. I describe both the independent and dependent variables in the same manner using this aforementioned system.

The question answered why people vote as they do (i.e. for which party, etc.) is less relevant to my analysis but the way the hypotheses is presented and subsequent analyses do relate. The two main hypotheses examined are "the self-interested (or pocketbook) voting hypothesis, suggesting that people mainly vote in their own self-interest and the sociotropic voting hypothesis, suggesting that people, out of conviction, vote in the interest of the society as a whole" (504). One interesting conclusion drawn from the former hypothesis is that "females are more likely to state that they vote for a particular party because of self-interest, [yet] women are more likely to choose to vote because it is a democratic obligation" (506). This may be explained because "some women experience that they are discriminated against, and hence feel it is morally acceptable for them to vote for selfish reasons, but not in general" (509). Other similar conclusions are made for various demographic groups. Overall Carlsson's paper provides an excellent example of an individual level of analysis and provides a more general analysis using reliable data analysis methods that I have been inspired by.

Sears et. al.'s article's main point is to attempt to empirically track and analyze self-interest within voters. They define a self-interested attitude as one that is "instrumental to the individual's attainment of goals which bear directly on the material well-being on individuals' private lives, concerning their financial status, health, domicile, family's well-being, etc." (671). The alternative point of view they wish to express is "symbolic politics" via which decisions are made by subconscious conditioning throughout life, and in which the personal and political decisions and lives of individuals are rather disconnected. Independent variables included self-interest, symbolic attitudes, and relevant demographic variables. Three symbolic attitudes in particular were considered: party identification, ideology (liberal or conservative), and racial prejudice. The five demographic characteristics marked were age, education, family, income, sex and race. In each policy area the indices of self-interest changed slightly depending on the question, but they all had to do with direct financial and otherwise measurable benefits and disadvantages.

These indices were interesting parameters by which to measure self-interest. The thoroughness with which the policy or self-interest area was captured is very helpful and

provides some guidance on how I construct "sub-variables." In each case, a single policy attitude dependent variable was used to measure self-interest. Varying scales were used to code the weight of the respondent's answer. Furthermore, the analysis of these variables exposed that self-interest had relatively little statistical significance if any in most areas, while all symbolic attitude variables proved significant. This conclusion is foreseen, with factors such as ideology and party identification consistently outweighing self-interest and other variables in many, if not most, voting scenarios. The simple total contribution to R^2 of self-interest ranged from 3.1%-4% across the four policy areas, whereas the simple contribution of symbolic attitudes to R^2 ranged from 17.1%-10.1%. No matter the policy area, the authors found that "symbolic attitudes are always at least four time as powerful" (673). Following this more aggregate analysis is a look at the combined affects of all three categories: self-interest, symbolic attitudes, and demographic factors. The authors produced a "stagewise regression using the three categories as the three steps, and var[ied] the order of entry to asses the unique contribution of each category" (673). The method by which they are studying multiple effects at once is one that I considered using in my analysis as well. Although I decided to compare my state and individual level analysis separately I did assess different variables against or in conjunction with one another.

This type of analysis can also factor in a dummy variable or any confounding issues, demographic or otherwise. The authors in this case did so in their analysis, even accounting for special circumstances under which self-interest would be more influential than otherwise. They tested the interaction between their pre-existing and pre-tested variables against five predispositions: political sophistication, private regarding values, perceived government responsiveness, sense of political efficacy, and perceiving the issue as a very important problem (weight of issue). They found these variables made little difference when compared with the original regression analysis. Within these variables, the authors note that sophistication is of special interest because the rational choice model depends upon adequate information. Another interesting note is that "voters' self interest may affect their policy preferences only when they make the right attributions about the origins of the policy problem and locus of responsibility for its solution. Self-interest should influence preferences about government policy only when voters attribute their problems to causes external to themselves…" (676). This is interesting because it reminds us that who voters deem as responsible for matters of self-interest could greatly affect whether or not they vote, or if they do vote, for whom they vote for.

Although this analysis is slightly outdated, it does come after the prominent election reforms of the 1970s and should not differ immensely from data today. My analysis, however, will be of primary elections, not the final presidential contest, and so I have different motivations and outcomes. This article does not address turnout so much as it focuses on voters' attitudes and reasons for voting for one candidate over the other. The methods use to annunciate all of the variables and the psychological analysis on the voting population in this country are what interest me most and are what is more most relevant to my project.

Acevedo and Krueger discuss two possible psychological explanations relating to the egocentrism natural in humans for fluctuations in voter turnout. According to principles of rationality, voting in our (the United States) national elections makes little to no sense. Voting is costly (time, energy) and provides no detectable benefits, especially benefits that outweigh the cost of voting. The authors seek to answer why someone would vote despite these facts. This unique situation poses a public goods or more broadly, social dilemma. The individual has no tangible benefit in voting, but there is the collective preservation of democracy. This dilemma plays into the authors' two theories: the voter's illusion and the belief in personal relevance.

Broadly defined the voter's illusion "occurs when people project their own intentions, either to vote or to abstain, more strongly to similar others (i.e. supporters of the same party) than to dissimilar others. Because this projection differential inspires greater optimism regarding the election outcome when voting rather than abstention is being considered, many people may choose to vote" (117). This relates to my research in that I examined states as a whole. The voter's illusion has the opportunity to spread throughout a state, especially if that state is particularly liberal or conservative. Although I did not measure this in particular, it adds to the holistic picture. This sort of in-group mentality could be central to our election system, namely because we only have two main parties that bolster widespread support. The belief in personal relevance theory proposes that "individual votes mater regardless of their predictive value for the behavior of others." This theory takes into account the possibility of four events: a person voting or abstaining, and their favored candidate winning or losing. Furthermore, the voter's reaction after the results of the election based on whether they voted or abstained is telling and allows the perception that one's vote might matter despite what statistics says.

More specifically, the voter's illusion occurs when "the person expects victory and may be tempted to conclude that his or her individual vote is not needed. If the person then decides to abstain, this change of mind may *also* be projected to like-minded others, resulting in the expectation of defeat" (118). This "loop" is a game-theoretic paradox, a central idea to the presented theories. Quattrone and Tversky (1984) who did significant original research on this topic (utilized in this literature review) attributed this illusion to the belief that the decision to vote might induce others to do likewise, even though such a belief is unfounded. More realistically (although less commonly), people believe that their own actions are simply diagnostic of collective behavior, and therefore their own voting is a sign that like-minded others voted or will vote as well. The authors expect that *if* people believe that their own vote matters, they will have confidence in future voting and be reinstated in their belief that their vote matters under two circumstances. If the outcome is positive (the candidate they chose won) and the person voted, he or she might think the outcome would have been negative or unfavorable if she or he had abstained. Conversely, if the outcome is negative and the person abstained, he or she might wonder if the outcome would have been negative if they had voted.

The authors of the paper conducted two different studies in order to prove their hypothesis. Although I did not conduct my own studies and generate my own data, the manner in which they conducted the study and the results are relevant. I disagree with the sample (two small groups of university students) they used in order to conduct their study, and I do wonder if they used a more diverse and all-encompassing population or random sample if the results would have changed. Nonetheless the analysis of the data collected during the study is insightful. The manner in which Acevedo and Krueger pose their questions is psychologically insightful. They use key words like *regret, satisfaction, waste,* and *confident* rather than asking outright if participants felt their vote counted. In analyzing the data and examining the correlation among the four response measures, the authors "computed the composite scores by multiplying each rating with its theoretical scenario weight and summing the products across scenarios for each participant" (123). This method is similar to Sears' for analyzing multiple affects at once, but in this case each scenario is assigned weight. In conclusion the authors find that while these two egocentric phenomena do occur, they are less influential or significant than expected.

The existing literature offers many aggregate-level and individual sociological and psychological explanations or possibilities for why voter turnout is so low and why voters act the way they do. I have built off of the methods, data, and explanations offered in these texts in order

to form a more comprehensive explanation involving primary elections, more specifically blanket vs. traditional primaries, and why voter turnout is so low nationally and faces so many discrepancies within the country.

HYPOTHESIS

In evaluating the previous literature and research on the topic of voter turnout in the United States, I am attempting to determine if the types of primary elections held in different states affect turnout. I believe that the State Primary Elections (for Congress and State Legislature) will predict turnout behavior for other electoral contests, including Presidential contests. I expect two possible causal relationships. The first is the more competitive an electoral race is, the higher the turnout will be. The competitiveness between the candidates may be due to equally desirable and qualified candidates or a specific type of primary election system that propels higher competition. Within this competition variable, I hope to answer more specifically if the less restrictive types of primaries (blanket primaries for example,) increase the competitive aspect by eliminating party-based ballots, and therefore increase turnout. I specifically expect that the top-two, or blanket-style primary election – in which two candidates with the same party affiliation may run against each other – will foster competitiveness and also and increase in turnout. I also expect there to be a relationship between rationality (via the rational voter model) and turnout. More specifically explaining correlations between competitiveness and voting using the B term and the relationship between expected and actual utility of an individual vote. I expect the more someone "feels" their vote will count influences them to vote more than the actual utility. In testing both of these hypotheses I will be examining state-level aggregate data and individual voter data in the hopes of determining the significance of primary election type and the expected benefit versus cost of voting, respectively.

DATA AND METHODS

The analyses I will perform use aggregate and individual level data to compare state turnout in states with and without top two primaries, and turnout in states in the years before and after they enacted top-two primaries. I will be examining California, Washington, and Louisiana as the three states with a "blanket," "top-two," or "Louisiana" primary system in which parties are not listed on the ballot and the top two candidates advance. In order to compare the affects of this primary system against more constrictive systems, I have randomly selected three states with non-top-two primary systems. The other primary systems available include open, semi-open, semi-closed, and closed. I selected these states: New York (closed), Oregon (closed), and Mississippi (open) because they most closely mirror the blanket states. I will examine three election cycles in order to eliminate any potential confounding variables relating to the political climate and voter sentiment at the time. I will then run regressions to determine if there is any significant correlation or causation between state turnout and state primary type. The United States Election Project provides data for both general and primary elections. Its parameters include the date, state, election type, VEP total ballots cast, VAP total ballots cast, votes cast in party contest for Republicans and Democrats, and Total Ballots cast. Some years (non-presidential, mainly) the parameters for measuring ballots vary depending on the highest office available on the ballot. Some parameters are also measured as percentages rather than whole numbers.

In further examining the affects of the blanket primary I will examine California, Washington, and Louisiana individually over time. In comparing turnout in the election cycle directly before the blanket primary was enacted, the election cycle it was first implemented for, and the election cycle immediately following, I hope to isolate any changes in turnout due to the type of primary. I will also generate an analysis to determine not only whether or not there is a correlation between primary type and turnout (by examining differences in turnout for blanket versus non-blanket years), but also if this difference is significant.

In order to perform these functions it was necessary to organize the states in a manner that was isolating of top-two primaries.. In my analysis each state was distinguished using its unique FIPS code. This FIPS number (which simply organizes the states and territories in alphabetical order) allowed me to place each state with a non-ranking numerical value. The variables analyzed using the CCES guidebooks and data were as follows:

2008 VARIABLES:

Independent Variables:

- Prime – this variable categorizes each state depending on its type of primary election. The states were put into categories from most open to least open as follows using the V251 (statefips):
  - Prime=0 if the state has a closed primary
  - Prime=1 if the state has a semi-closed primary
  - Prime=2 if the state has a semi-open primary
  - Prime=3 if the state has an open primary
  - Prime=4 if the state has a top-two or blanket primary
- Blanket – this variable categorizes the blanket primary states and the three random states that were selected as controls – also coded using V251.
  - Blanket=0 if the state has a non-blanket primary (New York, Mississippi, and Oregon)
  - Blanket=1 if the state has a blanket primary (California, Louisiana, and Washington)

I used parallel states in this variable. I chose the non-blanket states that mirrored the blanket states the best in size, population demographics, geographical location, and eneral ideology. Mirroring states are listed above respectively.

- Vote – this variable simply indicates whether the survey participant voted or not. The answers are based on CC403, which asks:

Which of the following statements best describes you?

CC403 Vote
Which of the following statements best describes you?

1800	<1>	I did not vote in the election this November
469	<2>	I thought about voting this time - but didn't
277	<3>	I usually vote, but didn't this time
386	<4>	I attempted to vote but did not or could not
24045	<5>	I definitely voted in the November General Election
44	<8>	Skipped

0 <9> Not Asked

- Answer choices <1><2><3> and <4> create the variable vote=0
- Answer choice <5> creates the variable vote=1
- Answer choices <8> and <9> were listed as missing answers.

- Reason – this variable isolates individual responses as to why (if the respondent answered vote=0) they chose or were kept from voting. I isolated two responses I deemed relevant to my research.

Control Variables:

These are the variables I selected in order to eliminate confounding interests or motivations for choosing to vote or not to vote.

CC404 Reason for not voting

What was the main reason you did not vote? (check one)

21	<1>	I forgot
203	<2>	I'm not interested
113	<3>	Too busy
471	<4>	Did not like the candidates
756	<5>	I am not registered
32	<6>	I did not have the correct form of identification
156	<7>	Out of town
234	<8>	Sick or disabled
54	<9>	Transportation
8	<10>	Bad weather
59	<11>	The line at the polls was too long
55	<12>	I was not allowed to vote at the polls, even though I tried
75	<13>	I requested but did not receive an absentee ballot
38	<14>	I did not know where to vote
131	<15>	I did not feel that I knew enough about the choices
451	<16>	Other
48	<55>	Don't Know
31	<98>	Skipped
24085	<99>	Not Asked

- All others answers besides <16><55><98> and <99> (missing values) create the variable reason=0
- Answers <14> and <15> create the variable reason=1

- Interest

V244 Interest in news and public affairs

Some people seem to follow what's going on in government and public affairs most of the time, whether there's an election going on or not. Others aren't that interested. Would you say you follow what's going on in government and public affairs…?

20962 <1> Most of the time

7555 <2> Some of the time
2794 <3> Only now and then
1059 <4> Hardly at all
430 <5> Don't know
0 <8> Skipped
0 <9> Not Asked

V245 Level of interest in politics/current events
How interested are you in politics and current affairs?

21400 <1> Very much interested
8785 <2> Somewhat interested
2303 <3> Not much interested
260 <4> Not sure
52 <8> Skipped
0 <9> Not Asked
For these two variables, I created a dichotomous dummy variable in which:

- Responses <4> and <3> in V244 create interest=0
- Responses <2> and <1> in V244 create interest=1
- Response <3> in V245 creates interest=0
- Response <2> and <1> in V245 create interest=1

I chose this control variable because interest and involvement tend to predict turnout.

CC405 Mode of voting
Did you vote in person on Election Day at a precinct, in person before Election Day, or by mail (that is, absentee or vote by mail)?
23650 <1> In person on election day (at polling booth or precinct)
5908 <2> In person before election day (early)
8301 <3> Voted by mail (or absentee)
431 <4> Don't Know
196 <8> Skipped
8198 <9> Not Asked

The coding and categories created by CCES for use with the variable were left put. I did not feel it was necessary to re-arrange these responses into different categories than the ones given.

I used these two variables because much of the previous literature relating to voter turnout suggests a positive correlation between the possibility for same day registration and an increase in turnout (Fitzgerald, 2005). Furthermore, following the Motor Voter Act, there has been a lot of studies and data relating to the mode of voting used, and whether increased access or potential to access voting increases turnout.

2010 VARIABLES:

The variables from year to year are created in much the same manner; there are only slight changes in variable names coming from the CCES study that should be distinguished. If a

variable is used one year and not the following or previous year, then that variable was not recorded in the year of study it is omitted from.

Independent Variables:

- V302 (statefips) – used to assign states FIPS codes in order to be organized.
- CC325a/b – identifies whether or not the respondent voted in the "state primary election to nominate candidates for Congress or state office between January and September of this year." This variable was not included in the previous study. I created the voteprime variable to consolidate the answers.

CC352a Primary Vote (non-presidential)

Did you vote in your state's primary election to nominate candidates for Congress or state office between January and September of this year?

18989 <1> I did not vote in the Primary Elections this year (2010).
14382 <2> Yes, I voted in the Democratic Party primary.
16339 <3> Yes, I voted in the Republican Party primary.
804 <4> Yes, I voted in another party's primary.
2709 <5> Do not recall.
150 <8> Skipped
2027 <9> Not Asked

- Response <1> creates voteprime=0
- Responses <2> and <3> and <4> generate voteprime=1
- Other responses generated as missing data

Furthermore this CCES data included specific primary turnout data for unaffiliated primaries, particularly for respondents in Washington and California.

CC352b Primary Vote, Nonpartisan *[show if inputstate=53 or inputstate=22]*

Did you vote in your state's primary election to nominate candidates for Congress or state office between January and September of this year?

434 <1> I did not vote in the Primary Elections this year (2010).
1509 <2> Yes, I voted in the primary election.
81 <3> Do not recall.
3 <8> Skipped
53373 <9> Not Asked

- This generated the variable voteunprime.
- Voteunprime=0 for response <1>
- Voteunprime=1 for response <2>
- Responses <3> <8> and <9> are missing response data.

- CC401 – creates the same "vote" variable

Control Variables:

- Interest – V244

- Reason – CC402a/b
- Method – CC403
- Election Day Registration

CC404 Same Day Registration
Did you register to vote at the polls or city office on Election Day this year?
475 <1> Yes
3278 <2> No
12 <8> Skipped
42919 <9> Not Asked

2012 VARIABLES:

Independent Variables:
- Vote – CC401

Control Variables:
- Interest - newsint
- Reason – CC402a
- Method – CC403/b
- Same-Day registration – CC405

In my analyses I also examine the *why.* I focus on a qualitative analysis of the Rational Voter Model's P and B terms, where B is the utility gained from getting the preferred outcome, and P is the probability that the individual's vote will yield the preferred outcome (the probability that the individual's vote is pivotal).

ANALYSIS

In examining and analyzing the above listed variables and whether the survey respondent did or did not vote, I expect to find a correlation. I have run data analysis examining both the respondents' individual answers, and cumulative responses from within certain states in order to potentially create another level of aggregate analysis relating to primary system types, voter sentiment, and turnout.

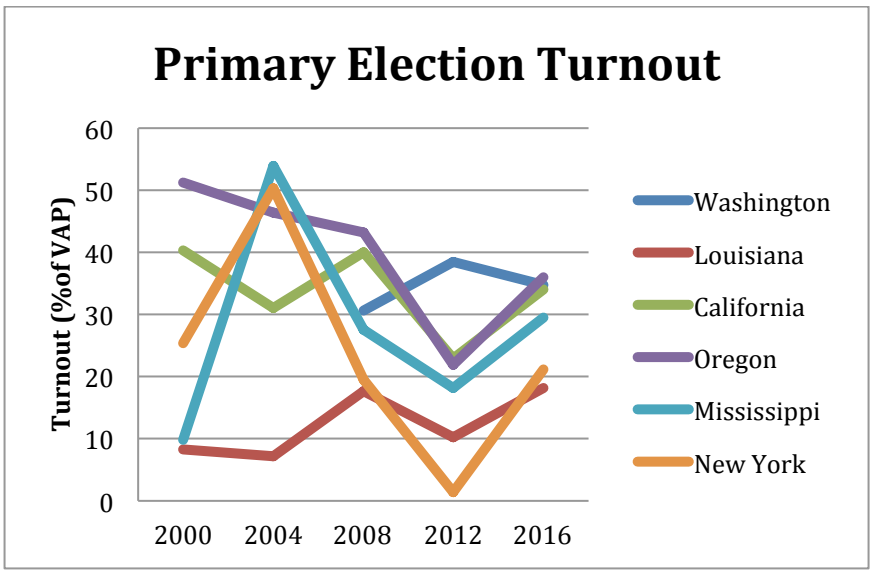


Figure 1

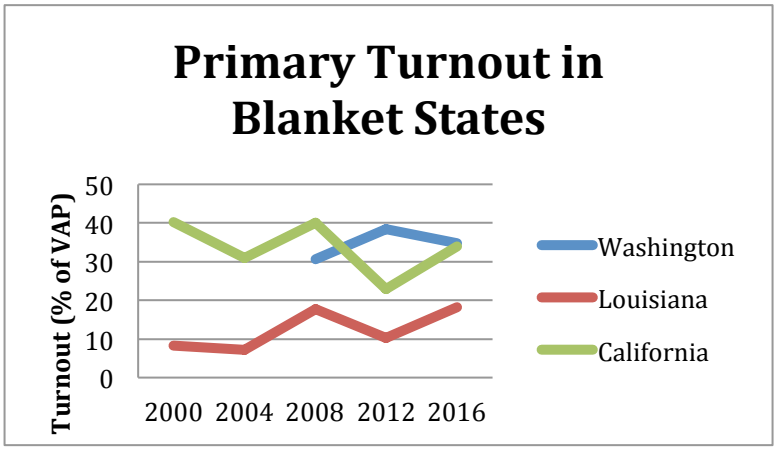


Figure 2

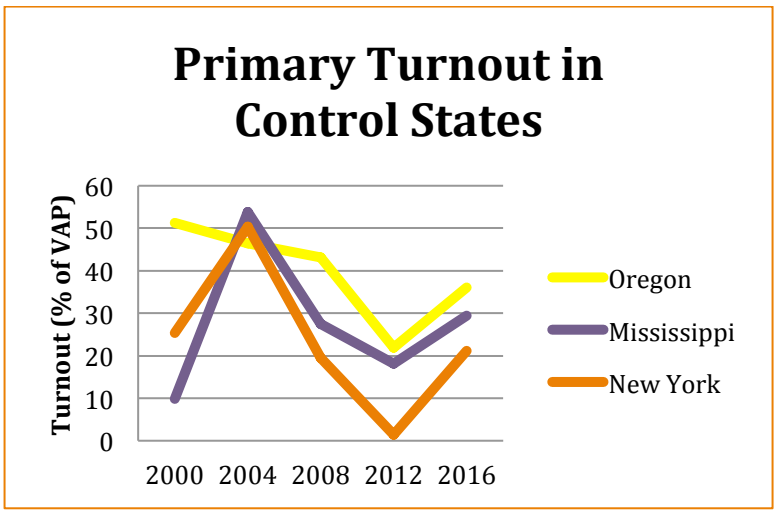


Figure 3

Pictured above is the primary election turnout in the three top-two states along with the three control states that I have randomly selected. While the data for Washington is incomplete, the complete data shows a trend among all states rather than separating trends between blanket and non-blanket states. Clear visual changes in turnout are more so apparent in years where the political climate causes an increase in turnout. People tend to be less inclined to vote in an incumbent year, and so we see a spike in turnout following incumbent years (2008 & 2016). The two electoral years in which we see an increase in turnout also feature interesting or unconventional candidates.

In 2008 Barack Obama was the first African American candidate in the general election, and in this he increased turnout as seen in figures 1-3. 2016's election featured not only former First Lady and Secretary of State Hillary Clinton, the potential first female president, but also the unconventional business and television personality Donald Trump. Many times the presidential election and its candidates affect how voters feel about unrelated elections as well. Excitement and increased interest in a presidential election has the potential to effect gubernatorial, legislative, and other elections. In so far as we can tell, these spikes are not related to changes in electoral policy or differences in voting, but rather the political climate at the time.

While the aggregate data may not portray any fundamental causality between primary election types and turnout, we nevertheless explore this on an individual and state level.

Is aggregate turnout dependent upon individual state circumstances?

In order to determine the effects of the competiveness created by top-two primary elections I isolated the three main states that use a top-two primary system from the rest of the states. I then selected randomly three states from the non-top-two subset to create an even comparative analysis. The six states I have selected are California, Louisiana, Washington, Oregon, New York, and Mississippi. The first comparative regression simply cross-examined turnout and which state it came from. Using FIPS codes to create a numeric correspondence with each state and the aggregate turnout data from the United States Election Project (USEP) and the Cooperative Congressional Election Study (CCES) I determined that there is a positive correlation between turnout and blanket election states.

Pictured below are the data that emerged from analyses of the vote variable (whether a person voted or not,) and the blanket variable (separating states with top-two elections from those without). I have also analyzed the prime variable and the blanket variable so that there may be a more holistic view of the possible causal relationship that includes an analysis of every state and their primary electoral system.

2008:

vote	blanket 0	blanket 1	Total
0	47.49	52.51	100.00
1	34.08	65.92	100.00
Total	38.83	61.17	100.00

Pearson chi2(1) = 116.7853 Pr = 0.000

Table 1

Table 1 (shown above) demonstrates that if you did not vote there is a higher likelihood that you are registered to vote in a non-blanket state. If you did not vote, the likelihood that you are in a blanket state is 47.49%, whereas the likelihood that you are in a non-blanket state is 52.51%. Similarly if you *did* vote there is a 34.08% likelihood that you were registered in a non-blanket state, and a 61.17% likelihood that you were registered in a blanket state. The Pearson Chi Squared value is relatively high in this instance (116.7853). The degrees of freedom in this instance is 1, and the critical value is 3.84, using a 0.05 probability level. Because 116.78 > 3.84 we reject the null hypothesis that the probability of voting is the same in blanket and non-blanket states confidently. This remains true for the two other years that follow.

2010:

vote	blanket 0	blanket 1	Total
0	45.99	54.01	100.00
1	33.84	66.16	100.00
Total	35.44	64.56	100.00

Pearson chi2(1) = 69.9249 Pr = 0.000

Table 2

This table shows that if you did vote there is a 33.84% likelihood that you live in a non-blanket state and a 66.16% likelihood you live in a blanket state.
The results shown in table 2 are consistent with those in table 1. There is an 8.02% higher chance that you live in a blanket state you *did not* vote, but more significant is the 32.32% higher likelihood that you voted if you live in a blanket versus non-blanket state.

2012:

vote	blanket 0	blanket 1	Total
0	46.65	53.35	100.00
1	37.94	62.06	100.00
Total	38.49	61.51	100.00

Pearson chi2(1) = 16.6213 Pr = 0.000

Table 3

This table shows that if you voted there is a 62.06% likelihood you live in a blanket state and a 37.94% likelihood that you live in a non-blanket state.

Vote Prime Analysis

2008:

```
. logit vote prime

Iteration 0:   log likelihood = -21886.801
Iteration 1:   log likelihood =   -21856.3
Iteration 2:   log likelihood = -21856.297
Iteration 3:   log likelihood = -21856.297

Logistic regression                               Number of obs     =     32,800
                                                  LR chi2(1)        =      61.01
                                                  Prob > chi2       =     0.0000
Log likelihood = -21856.297                       Pseudo R2         =     0.0014
```

vote	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
prime	-.0644241	.0082497	-7.81	0.000	-.0805932	-.0482549
_cons	.5929733	.0204573	28.99	0.000	.5528777	.6330689

Table 4

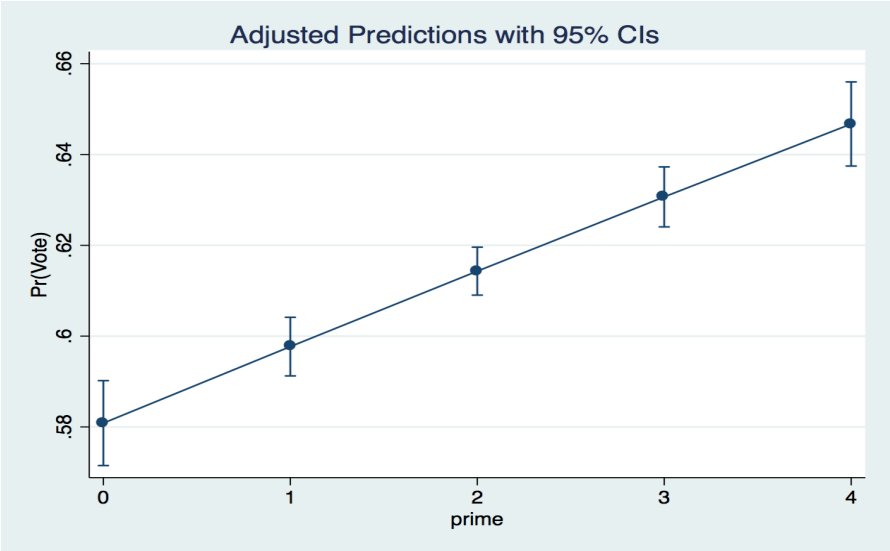


Figure 4

2010:

```
. logit vote prime

Iteration 0:   log likelihood =  -19586.08
Iteration 1:   log likelihood = -19581.423
Iteration 2:   log likelihood = -19581.422

Logistic regression                               Number of obs     =     44,648
                                                  LR chi2(1)        =       9.32
                                                  Prob > chi2       =     0.0023
Log likelihood = -19581.422                       Pseudo R2         =     0.0002
```

vote	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
prime	.0285864	.0093589	3.05	0.002	.0102434	.0469295
_cons	1.60687	.0222429	72.24	0.000	1.563275	1.650465

Table 5

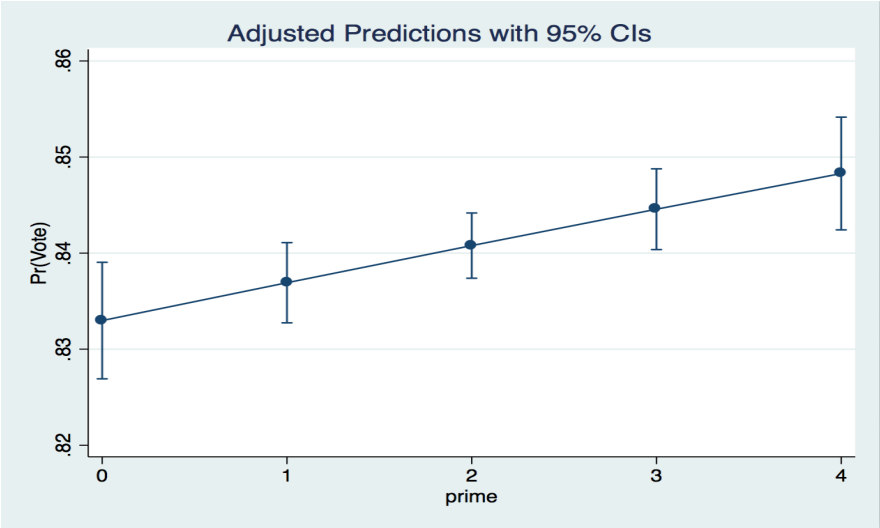


Figure 5

2012:

```
. logit vote prime

Iteration 0:   log likelihood = -10515.066
Iteration 1:   log likelihood = -10512.128
Iteration 2:   log likelihood = -10512.126
Iteration 3:   log likelihood = -10512.126

Logistic regression                               Number of obs     =     42,479
                                                  LR chi2(1)        =       5.88
                                                  Prob > chi2       =     0.0153
Log likelihood = -10512.126                       Pseudo R2         =     0.0003
```

vote	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
prime	.0344609	.0141956	2.43	0.015	.0066379	.0622839
_cons	2.556121	.033414	76.50	0.000	2.490631	2.621612

Table 6

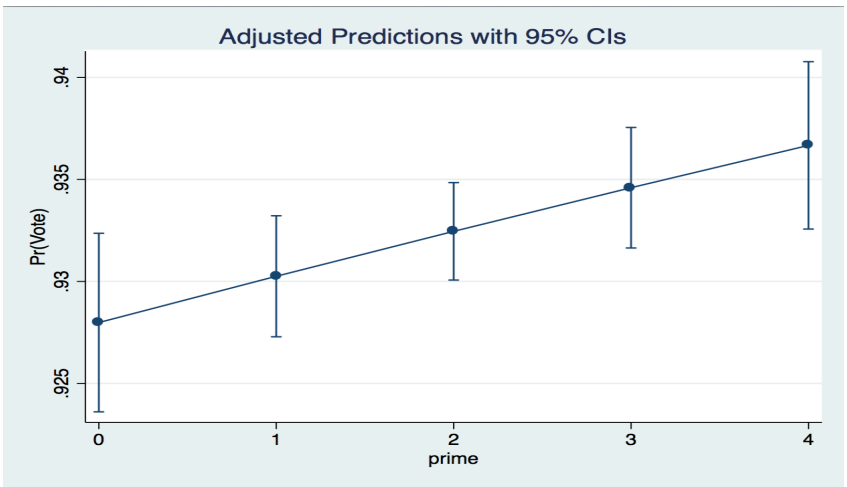
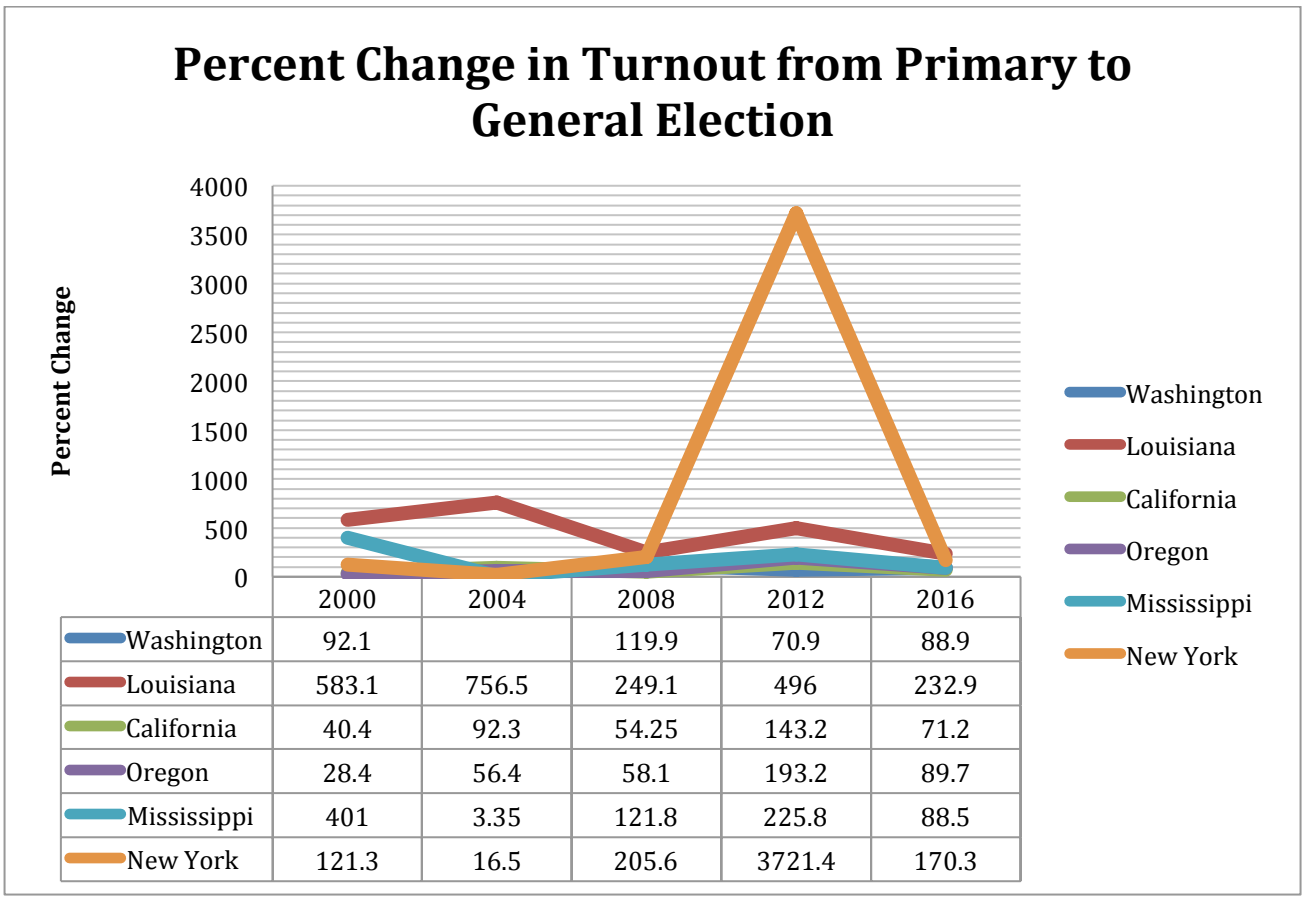


Figure 6

The R-Squared values were higher across the board in the blanket regression rather than the prime regression. This shows a stronger correlation between the blanket/non-blanket binary variable and the vote variable, rather than the ranked (from most open to least open) prime variable and vote variables. The difference is significant in that it holds true for all years, and for Adjusted R-Squared values as well. The only year with an apparent correlation between the prime and vote variables is 2008. Note here that prime is an ordinal variable, but that it does operate on a scale.

Cross-time Models and Analysis

The following graph and chart showcases the percent change in turnout from the primary election (which in Washington, Louisiana, and California is a top-two election) to the general election. I foresaw less of a percent change in those aforementioned states due to higher turnout in the primary than in other states because of the blanket system.



	2000	2004	2008	2012	2016
Washington	92.1		119.9	70.9	88.9
Louisiana	583.1	756.5	249.1	496	232.9
California	40.4	92.3	54.25	143.2	71.2
Oregon	28.4	56.4	58.1	193.2	89.7
Mississippi	401	3.35	121.8	225.8	88.5
New York	121.3	16.5	205.6	3721.4	170.3

Figure 7

Louisiana has consistently low turnout in its primary elections, thus accounting for the large percent change every year between its average (in comparison with national statistics) general turnout and low primary turnout. New York has historically low turnout in the primary election of 2012 (1.4%), thus accounting for the spike in percent change. Data was unavailable for the turnout of the Washington Primary election in 2004.

I generated a new "percent" variable denoting the percent change between the primary and general elections in the six studied states. I applied these variables to the CCES data from 2008 and 2012, and then compared it to my previously generated blanket variable. In this case Washington, Lousiana, and California are the blanket states and Oregon, Mississippi, and New York are the non-blanket states. In comparing these two variables I was able to determine how significant the differences in turnout were depending on the type of primary election. I used regression analysis here because the percent variables consist of real numerical values.

2008:

```
. regress percent blanket

      Source |       SS           df       MS      Number of obs   =     6,747
-------------+----------------------------------   F(1, 6745)      =   2675.71
       Model |  9634666.6         1  9634666.6    Prob > F        =    0.0000
    Residual |  24287318.4     6,745  3600.78849   R-squared       =    0.2840
-------------+----------------------------------   Adj R-squared   =    0.2839
       Total |   33921985     6,746  5028.45909   Root MSE        =    60.007

------------------------------------------------------------------------------
     percent |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     blanket |  -77.53643   1.498947   -51.73   0.000    -80.47484   -74.59802
       _cons |   164.0556   1.172325   139.94   0.000     161.7574    166.3537
------------------------------------------------------------------------------
```

Table 7

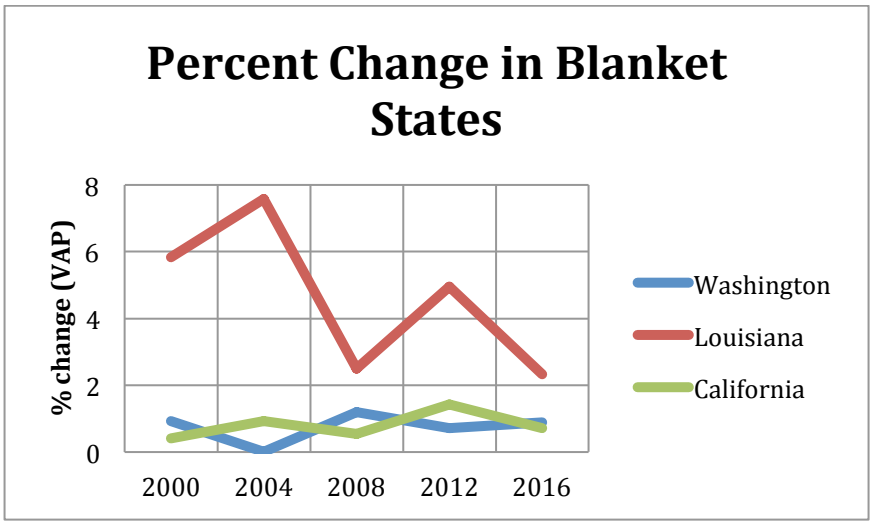
2012:

```
. regress percent blanket

      Source |       SS           df       MS      Number of obs   =    11,561
-------------+----------------------------------   F(1, 11559)     =  13595.21
       Model |  1.4636e+10         1  1.4636e+10   Prob > F        =    0.0000
    Residual |  1.2444e+10    11,559  1076557.92   R-squared       =    0.5405
-------------+----------------------------------   Adj R-squared   =    0.5404
       Total |  2.7080e+10    11,560  2342557.65   Root MSE        =    1037.6

------------------------------------------------------------------------------
     percent |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     blanket |  -2320.148    19.8986  -116.60   0.000    -2359.152   -2281.143
       _cons |   2482.858   15.69022   158.24   0.000     2452.103    2513.614
------------------------------------------------------------------------------
```

Table 7

Although the Root MSE values predict large standard deviations, the R-Squared and Adjusted R-Squared values show that there is a correlation between the type of primary election (blanket or non-blanket) and the percent change of turnout between the primary and general election. The large variation in turnout across states explains the large predicted standard deviations, but does not discredit the correlation. 2010 is omitted here because percent-change cacluations were only done in presidential-election years.

Cross-time Analysis of Blanket States



In this graph I isolated the states with top-two elections. In examining only the states with top-two elections I hoped to be able to pinpoint differences in turnout from when the election system changes from non-top-two to top-two. Louisiana's primary system is an exception to this investigation because the data from when the system changed in 1977 is unavailable. Washington's "before blanket" year is 2004 and "post-blanket" year is 2008, whereas California's are 2008 and 2012. There is no distinct change between before and after the primary election type was changed in each state on the aggregate level.

Competition and Turnout

Furthermore, in examining the states with top-two primaries: Washington, Louisiana, and California, an exploration of competitiveness is necessary. Due to the nature of the top-two primary, where the candidate's party affiliation is omitted, competitiveness has the potential to increase if the two remaining candidates are of the same party. A hypothetical example in California would include a ballot of five candidates initially – three democrats and two republicans. Although the candidate's party affiliation is not listed on the ballot, it does exist. If in this election the two final candidates are both democratic – which is likely due to the overwhelming majority of democratic voters in the state – the competitive aspect is higher than if the two candidates were affiliated with different parties.

Thus, here I will examine competiveness in primaries and the affect it may have on turnout. The most accurate competitiveness index measurements are done in conjunction with State Legislative Elections, and so I will be using turnout data from those elections for this analysis.

In the case of Louisiana I will examine turnout data to determine whether there has been an aggregate increase in turnout over time. The tenure of the top-two or, "jungle" primary has the

potential to display whether there are any long-lasting effects of a top-two versus a conventional primary system.

The index I used in order to quantitatively judge competition follows below (Beran, et. al. 2012). Judgments of competition are primarily based on factors outside of the scope of top-two primaries, with focuses on partisan elections. The questions regarding a primary challenger and other major party competition do not apply to top-two races because the nature of the race is based upon a lack of partisan identification or consideration. Therefore in this analysis I will not focus on top-two primaries, but rather the four other types of primary elections that are used in the United States.

The index uses three factors to judging the competitiveness of a race: whether or not there is a primary challenger, if there is or is not major party competition, and if the incumbent is running or retiring. The primary challenger factor considers if the incumbent is running for re-election, then does he or she face a primary challenger? A state where relatively more incumbents face a primary challenge is clearly a more competitive electoral environment than those states with very few (and some with no) primary challenges to incumbents. This is an important factor to consider because in 2010 77.3% of incumbents faced no primary opposition (Beran, 2012). Competitiveness is then measured by tallying how many incumbents running for re-election had no opponent in either the primary or the general election in each state. The next factor to consider is whether there were two major party candidates running in the general election. According to Beran's index a state in which there are many legislative candidates without major party competition has a much less competitive electoral environment – as if there is no competition between parties at the general election, there is a 98% chance of a guaranteed win for the major party candidate. In order to Measure this Beran and his colleagues counted how many Republicans have a Democratic opponent in the general election and vice versa. For this factor there are very few cases in which a third party candidate could skew results. The final factor is simply whether or not the incumbent retires. If the incumbent decides to run for re-election, they have more than a 90% chance of defeating their opponent and so a non-incumbent election is inherently more competitive (Beran, 2012).

Based on the parameters laid out in this index I have determined that there is a small but significant correlation between the competitiveness in an election and the election type, determined by "openeness". In order to measure this competition index I created the variable "compet." I rank-ordered the states from least to most competitive and assigned each state a value from 1 being the least competitive, to 50 being the most. I examined both the 2010 and 2012 State Legislative elections across all fifty states. This ordinal variable is then compared against "prime," using Pearson's correlation.

2010:

```
. pwcorr compet prime, obs sig

             |   compet    prime
-------------+------------------
      compet |   1.0000
             |
             |    51373
             |
       prime |   0.0391   1.0000
             |   0.0000
             |    51373    55246
```

Table 8

The Pearson correlation coefficient shows in both years a positive relationship between the openness of the election (0 representing blanket elections, 1 representing open elections, 4 representing closed elections, etc.) and the competitiveness

within the state. In 2010 the R-value is 0.0391, yielding an R-Squared value of .0015, or 1.5%.

2012:

```
. pwcorr compet prime, obs sig
```

	compet	prime
compet	1.0000	
	49212	
prime	0.2835	1.0000
	0.0000	
	49212	54426

In 2012 the correlation coefficient is 0.2835, which yields an R-Squared value of 0.08, or 8%. The low P-Value, and large sample size confirm that the analysis is reliable.

Table 9

CONFOUNDS

Interest Blanket

The Interest variable captures the voter or survey participants' interest in news, government, and public affairs. In practice if someone is more interested in their government and the news relating to it, they will be more likely to participate in politics and vote. This variable is designed to measure how influential blanket election states are in motivating interest and whether the two have a significant correlation.

2008:

```
. logit interest blanket

Iteration 0:   log likelihood = -1671.6365
Iteration 1:   log likelihood = -1669.0587
Iteration 2:   log likelihood = -1669.0517
Iteration 3:   log likelihood = -1669.0517

Logistic regression                               Number of obs     =      6,712
                                                  LR chi2(1)        =       5.17
                                                  Prob > chi2       =     0.0230
Log likelihood = -1669.0517                       Pseudo R2         =     0.0015
```

interest	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
blanket	.2231413	.097681	2.28	0.022	.0316901	.4145925
_cons	2.482832	.0734206	33.82	0.000	2.33893	2.626733

With Pearson correlation coefficient 0.0279 (R-Squared .00078)

Table 10

2010:

```
. logit interest blanket

Iteration 0:   log likelihood = -4360.1291
Iteration 1:   log likelihood = -4360.1144
Iteration 2:   log likelihood = -4360.1144

Logistic regression                               Number of obs     =     11,595
                                                  LR chi2(1)        =       0.03
                                                  Prob > chi2       =     0.8640
Log likelihood = -4360.1144                       Pseudo R2         =     0.0000
```

interest	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
blanket	.0100883	.0588736	0.17	0.864	-.1053019	.1254785
_cons	1.942818	.0473938	40.99	0.000	1.849928	2.035708

With Pearson correlation coefficient 0.0016 (R-Squared 0.)

Table 11

2012:

```
. logit interest blanket

Iteration 0:   log likelihood = -2389.4913
Iteration 1:   log likelihood = -2389.4832
Iteration 2:   log likelihood = -2389.4832

Logistic regression                               Number of obs     =      9,848
                                                  LR chi2(1)        =       0.02
                                                  Prob > chi2       =     0.8990
Log likelihood = -2389.4832                       Pseudo R2         =     0.0000
```

interest	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
blanket	-.0106526	.0839459	-0.13	0.899	-.1751834	.1538783
_cons	2.659713	.0663563	40.08	0.000	2.529657	2.789769

With Pearson correlation coefficient -0.0013 (R-Squared 0.)

Table 13

Interest Prime

This analysis seeks to determine whether there is a significant relationship between interest and the openness of a primary election type.

2008:

```
. logit interest prime

Iteration 0:   log likelihood = -8588.4149
Iteration 1:   log likelihood = -8587.2691
Iteration 2:   log likelihood = -8587.2688

Logistic regression                               Number of obs     =     32,667
                                                  LR chi2(1)        =       2.29
                                                  Prob > chi2       =     0.1300
Log likelihood = -8587.2688                       Pseudo R2         =     0.0001
```

interest	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
prime	.0234983	.0155089	1.52	0.130	-.0068986	.0538952
_cons	2.486991	.0364359	68.26	0.000	2.415578	2.558404

With Pearson correlation coefficient 0.0084 (R-Squared 0.00007)

Table 14

2010:

```
. logit interest prime

Iteration 0:   log likelihood = -20525.558
Iteration 1:   log likelihood = -20524.415
Iteration 2:   log likelihood = -20524.415

Logistic regression                               Number of obs     =     54,184
                                                  LR chi2(1)        =       2.29
                                                  Prob > chi2       =     0.1305
Log likelihood = -20524.415                       Pseudo R2         =     0.0001

------------------------------------------------------------------------------
    interest |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       prime |  -.0141876   .0093876    -1.51   0.131     -.032587    .0042118
       _cons |   1.964469   .0227557    86.33   0.000     1.919868    2.009069
------------------------------------------------------------------------------
```

With Pearson correlation coefficient -0.0065 (R-Squared 0.00004)

Table 15

2012:

```
. logit interest prime

Iteration 0:   log likelihood =  -11566.45
Iteration 1:   log likelihood = -11566.394
Iteration 2:   log likelihood = -11566.394

Logistic regression                               Number of obs     =     46,628
                                                  LR chi2(1)        =       0.11
                                                  Prob > chi2       =     0.7379
Log likelihood = -11566.394                       Pseudo R2         =     0.0000

------------------------------------------------------------------------------
    interest |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       prime |  -.0045312    .013544    -0.33   0.738     -.031077    .0220146
       _cons |   2.629111   .0326769    80.46   0.000     2.565065    2.693156
------------------------------------------------------------------------------
```

With Pearson correlation coefficient -0.0015 (R-Squared 0.)

Table 16

Reason Blanket

These sets of regressions utilize the confounding variable "reason," which separates voters' reasons for not voting according to CCES into two categories. The two isolated nominal answers are "I did not know where to vote," and "I did not feel that I knew enough about the choices." I isolated these responses from the others because they were not coincidental or accidental and could be rectified. Even though answer choices <11>, <12>, and <13> also involve failure on the part of someone besides the participant, they did not capture ignorance in the same way and could easily vary from participant to participant and year to year.

2008:

```
. logit reason blanket

Iteration 0:   log likelihood =  -126.0252
Iteration 1:   log likelihood = -126.01878
Iteration 2:   log likelihood = -126.01878

Logistic regression                               Number of obs     =        457
                                                  LR chi2(1)        =       0.01
                                                  Prob > chi2       =     0.9098
Log likelihood = -126.01878                       Pseudo R2         =     0.0001

------------------------------------------------------------------------------
      reason |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     blanket |   -.039641   .3495228    -0.11   0.910     -.724693     .645411
       _cons |  -2.436897      .2607    -9.35   0.000     -2.94786   -1.925935
------------------------------------------------------------------------------
```

With Pearson correlation coefficient -0.0053 (R-Squared .00003)

Table 17

2010:

```
. logit reason blanket

Iteration 0:   log likelihood = -196.45933
Iteration 1:   log likelihood = -196.44607
Iteration 2:   log likelihood = -196.44606

Logistic regression                               Number of obs     =      1,429
                                                  LR chi2(1)        =       0.03
                                                  Prob > chi2       =     0.8706
Log likelihood = -196.44606                       Pseudo R2         =     0.0001

------------------------------------------------------------------------------
      reason |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     blanket |  -.0504117   .3091869    -0.16   0.870    -.6564069    .5555834
       _cons |  -3.420312   .2331368   -14.67   0.000    -3.877251   -2.963372
------------------------------------------------------------------------------
```

With Pearson correlation coefficient -0.0043 (R-Squared 0.0000.

Table 18

2012:

```
. logit reason blanket

Iteration 0:   log likelihood =  -264.3466
Iteration 1:   log likelihood = -264.34147
Iteration 2:   log likelihood = -264.34147

Logistic regression                               Number of obs     =        865
                                                  LR chi2(1)        =       0.01
                                                  Prob > chi2       =     0.9193
Log likelihood = -264.34147                       Pseudo R2         =     0.0000

------------------------------------------------------------------------------
      reason |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     blanket |    .024337   .2403797     0.10   0.919    -.4467986    .4954725
       _cons |  -2.311916   .1853267   -12.47   0.000     -2.67515   -1.948683
------------------------------------------------------------------------------
```

With Pearson correlation coefficient 0.0034 (R-Squared 0.00001.)

Table 19

Reason Prime

The reason variable determines why a participant did not vote, whether they decided not to or could not. The reasons have been separated into two categories (marked by a dichotomous dummy variable). Category one (0) means the person did not vote because of circumstances that forced them not to participate, or did not want to participate. Category two (1) means the participant did not vote because they did not have enough information or know where to vote. I decided to analyze these two variables together so that I could determine if the type of primary election in a state affects the ability of a person to vote, and/or the reason they did not vote.

2008:

```
. logit reason prime

Iteration 0:   log likelihood = -611.75451
Iteration 1:   log likelihood = -611.27633
Iteration 2:   log likelihood = -611.27577
Iteration 3:   log likelihood = -611.27577

Logistic regression                               Number of obs     =      2,406
                                                  LR chi2(1)        =       0.96
                                                  Prob > chi2       =     0.3278
Log likelihood = -611.27577                       Pseudo R2         =     0.0008

------------------------------------------------------------------------------
      reason |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       prime |   .0590997    .060615     0.98   0.330    -.0597035    .1779028
       _cons |  -2.700244   .1465719   -18.42   0.000     -2.98752   -2.412969
------------------------------------------------------------------------------
```

With Pearson correlation coefficient 0.0199 (R-Squared 0.0004)

Table 20

2010:

```
. logit reason prime

Iteration 0:   log likelihood =  -948.6773
Iteration 1:   log likelihood = -948.49242
Iteration 2:   log likelihood = -948.49234

Logistic regression                               Number of obs     =      7,682
                                                  LR chi2(1)        =       0.37
                                                  Prob > chi2       =     0.5430
Log likelihood = -948.49234                       Pseudo R2         =     0.0002

------------------------------------------------------------------------------
      reason |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       prime |  -.0318662   .0523238    -0.61   0.543     -.134419    .0706866
       _cons |  -3.530789    .121107   -29.15   0.000    -3.768154   -3.293424
------------------------------------------------------------------------------
```

With Pearson correlation coefficient -0.0069 (R-Squared 0.0004)

Table 21

2012:

```
. logit reason prime

Iteration 0:   log likelihood = -1318.8922
Iteration 1:   log likelihood = -1318.0585
Iteration 2:   log likelihood = -1318.0578
Iteration 3:   log likelihood = -1318.0578

Logistic regression                               Number of obs     =      4,368
                                                  LR chi2(1)        =       1.67
                                                  Prob > chi2       =     0.1964
Log likelihood = -1318.0578                       Pseudo R2         =     0.0006

------------------------------------------------------------------------------
      reason |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       prime |   .0503312   .0390603     1.29   0.198    -.0262255    .1268879
       _cons |  -2.415352   .0942721   -25.62   0.000    -2.600121   -2.230582
------------------------------------------------------------------------------
```

With Pearson correlation coefficient 0.0195 (R-Squared 0.0004.)

Table 22

Vote Interest

Here I attempt to determine whether interest in public affairs and government propel citizens to vote – thus possibly confounding whether the type of primary in their state pushes the same person to vote.

2008:

```
. logit vote interest

Iteration 0:   log likelihood = -21768.496
Iteration 1:   log likelihood = -20792.751
Iteration 2:   log likelihood = -20790.012
Iteration 3:   log likelihood = -20790.008
Iteration 4:   log likelihood = -20790.008

Logistic regression                               Number of obs     =     32,667
                                                  LR chi2(1)        =    1956.98
                                                  Prob > chi2       =     0.0000
Log likelihood = -20790.008                       Pseudo R2         =     0.0449

------------------------------------------------------------------------------
        vote |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    interest |   2.053021   .0531849    38.60   0.000      1.94878    2.157261
       _cons |  -1.439105   .0518035   -27.78   0.000    -1.540638   -1.337572
------------------------------------------------------------------------------
```

With Pearson correlation coefficient 0.245 (R-Squared 0.06)

Table 23

2010:

```
. logit vote interest

Iteration 0:   log likelihood = -18953.273
Iteration 1:   log likelihood = -17122.802
Iteration 2:   log likelihood = -16448.541
Iteration 3:   log likelihood = -16338.578
Iteration 4:   log likelihood = -16338.578

Logistic regression                               Number of obs     =     44,186
                                                  LR chi2(1)        =    5229.39
                                                  Prob > chi2       =     0.0000
Log likelihood = -16338.578                       Pseudo R2         =     0.1380
```

vote	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
interest	2.441045	.0334882	72.89	0.000	2.375409	2.50668
_cons	-.2753407	.02909	-9.47	0.000	-.3323561	-.2183253

With Pearson correlation coefficient 0.402 (R-Squared 0.16)

Table 24

2012:

```
. logit vote interest

Iteration 0:   log likelihood = -7808.9401
Iteration 1:   log likelihood = -7303.9502
Iteration 2:   log likelihood =  -7266.117
Iteration 3:   log likelihood = -7265.9963
Iteration 4:   log likelihood = -7265.9963

Logistic regression                               Number of obs     =     37,621
                                                  LR chi2(1)        =    1085.89
                                                  Prob > chi2       =     0.0000
Log likelihood = -7265.9963                       Pseudo R2         =     0.0695
```

vote	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
interest	2.221525	.0590213	37.64	0.000	2.105846	2.337205
_cons	.9135035	.052778	17.31	0.000	.8100605	1.016947

With Pearson correlation coefficient 0.2301 (R-Squared 0.053)

Table 25

Through this analysis it is clear that most of the potential confounding variables are not significant enough to affect my results. The most significant and in turn interesting analysis is of the interest and vote variables. The R-squared values range from 5.3-16%, which determines that whether or not someone voted can potentially be determined by their interest in government and public affairs.

Does My Vote Count?

In examining the data, my hypothesis is that individuals will be more inclined to vote in elections they view are more competitive. Citizens are more inclined to vote in these circumstances because they feel like their vote "counts" more towards the outcome than in non-competitive elections. I have cross-examined are whether or not the individual voted, the reason(s) they had for not voting, if they indeed did not vote, and the level of interest the individual has in political affairs. I also incorporated a competitiveness index in order to attempt to gauge the competitiveness of the election at hand. Although the competiveness index is difficult to apply to blanket states because there will be inherently two candidates from two different parties, rather than the potential of having two candidates from the same party, the principle carries over.

I believe the correlation between primary type and turnout can be explained by the rational voter model where:

$R = (B \cdot P) - C + D$, and

- B is the utility gain from getting the preferred outcome
- P is the probability that the individual's vote will yield the preferred outcome (the probability that the individual is pivotal)
- C is the (non-negative) cost of voting, and
- D is the positive benefit of the act of voting.

To reiterate, the terms that are of particular interest in this study are the B and P terms. While the P term in particular is moot – there is a comically low probability that the individual's vote will be pivotal – the possibility of being pivotal in the voter's eyes should not be overlooked. This is explained by the voter's illusion phenomenon—as discussed by Acevedo and Kruger.

The voter's illusion occurs when "the person expects victory and may be tempted to conclude that his or her individual vote is not needed. If the person then decides to abstain, this change of mind may *also* be projected to like-minded others, resulting in the expectation of defeat" (118). This "loop" is a game-theoretic paradox. Thus, in a blanket state the division between parties is not (always) clear. In the case of two candidates with the same party affiliation being on the ballot, the voter feels they are especially influential in voting because it is not a clear-cut party competition. This is especially true in a state like California, where there is a large Democrat majority. If there were a different primary system a Democrat voter may abstain from voting because their preferred candidate would win anyway. In the case of a blanket-system this is no longer true, propelling the citizen to vote. In the case of two candidates of different party affiliations this may still remain true because the party is not listed on the ballot, thus freeing the voter from any pre-conceived notion of the candidates and who will win.

This principle remains true less so in the case of other elections, no matter how open—which is why there is a lower correlation between "prime" and "vote" than between "blanket" and "vote."

DISCUSSION

I set out to determine if the types of primary elections held in different states affect turnout. I believe that the State Primary Elections (for Congress and State Legislature) will predict turnout behavior for other electoral contests, including Presidential contests. Primarily I expected that the more open a primary race the higher the turnout will be – especially in the case of blanket elections in which two candidates with the same party affiliation may run against each other. I also expected that the more competitive an electoral race is, the higher the turnout will be. The competitiveness between the candidates may be due to equally desirable and qualified candidates or a specific type of primary election system that propels higher competition. I also anticipated there to be a relationship between rationality (via the rational voter model) and turnout. More specifically in measuring the B term, and the relationship between expected and actual utility of an individual vote, I expected the more someone "feels" their vote will count influences them to vote more than the actual utility. In testing both of these hypotheses I have examined state-level aggregate data and individual voter data in the hopes of determining the significance of primary election type and the expected benefit versus cost of voting, respectively.

In my aggregate analysis of turnout in both primary and general elections throughout the United States I found that there is a positive relationship between the type of primary election held and the amount of people who turn out to vote. The more open the type of primary election is (on an ordinal scale where 0 = blanket, 1 = open, 2 = semi-open, 3 = semi-closed, and 4 = closed) the higher the voter turnout both in the primary and general election. In my analysis of blanket states I focused on six states: the three blanket states (Washington, Louisiana, and California) and their non-blanket counterparts (Oregon, Mississippi, and New York,) respectively. I choose these three mirror states because they are the closest matches to the blanket states with regards to location (coastal, inland, etc.) population size and demographic characteristics, and voting trends including ideology.

In aggregate terms there is no clear trend among turnout for primary elections in the blanket states, or control non-blanket states as shown by Figures 1-3. This initial lack of findings caused me to further explore the relationship on both the aggregate and individual level. Figure 7 depicts the percent change in statewide turnout from the primary election to the general election. Low overall primary turnout statistics caused very large percent changes in most years and across all states measured. I then used this aggregate percent change and applied it to the CCES data depending on the year and state in order to get a more focused picture of the relationship.

The percent variable I created stems from the aforementioned percent change between the primary and general elections in the six focus states. Because the percent is ratio variable I did a regression analysis and concluded that with Adjusted R-Squared values of 0.2839 (2008) and 0.5404 (2012) that there is a causal relationship, although only of small to medium size. This means that there is a likelihood of higher percent change between the primary and general elections if the blanket state condition is turned on.

Tables 1, 2, and 3 depict the correlation between whether the respondent did or did not vote and whether or not they reside and vote in a blanket primary state for 2008, 2010, and 2012, respectively. There is a significantly higher likelihood that if you voted, you did so in a blanket state rather than a non-blanket state. Out of those that voted, there was a 27.09% *greater* chance that they lived in a blanket state in 2008, 32.02% in 2010, and 24.12% in 2012. Because of the limited number of blanket states, I also categorized all fifty states into categories based on their

primary election type. I generated a scale of openness and compared these degrees of openness with various dependent variables.

In comparing whether someone voted or not against the level of openness in the primary elections in their state I conclude that there is a small relationship. As visible in tables and figures 4-6, there is a positive correlation between the type of primary election in a state and the likelihood that someone from that state will vote. This causality is consistently less than 5%, but is positive and significant nonetheless.

The final variable I examined in order to gauge whether or not the openness of an election has an effect on voter turnout is "competiveness." I used a competitiveness index (Baren**)** in which states were rank-ordered by competitiveness of their State Legislative elections in 2010 and 2012. I found that for these two years there is a very small but reliable, positive relationship between the competitiveness of a state's elections and the likelihood that someone in that state will vote.

Confounds:

In my confounding variable analysis I tested the relationship between five different sets of variables: Interest and Blanket, Interest and Prime, Reason and Blanket, Reason and Prime, and Vote and Interest. Interest refers to the individuals' interest in public affairs, news, and government, and Reason refers to their dichotomous reason for not voting. I tested these variables because I felt they had the highest chance of proving significant and thus offering an alternative explanation to my hypothesis.

In this case only one of the relationships proved significant, and that was the correlation between whether or not someone voted and their interest in public affairs and government as a predictor (see tables 23-25). I expected these to be the most strongly correlated variables, with R-Squared values ranging from 6-16%.

CONCLUSION:

In this study I attempted to determine if (and if so, why?) the type of primary election in a state affects voter turnout as opposed to any other possibilities. I hypothesized that the more open an election, in particular the blanket election, the more likely people are to vote. I did, in fact, discover that there is a positive and causal relationship between the election type and whether someone will vote or not, eliminating multiple potential confounding variables. Blanket primary systems increase the likelihood of a competitive election due to the lack of overt party affiliation. Furthermore, the more open the primary election system, the higher the turnout is likely to be.

I found that there is a positive relationship between the type of primary election held and the amount of people who turn out to vote. The more open the type of primary election is the higher the voter turnout both in the primary and general election. In aggregate terms there is no clear trend among turnout for primary elections in the blanket states, but when applied to CCES data there is a likelihood of higher percent change between the primary and general elections if the blanket state condition is turned on. There is a significantly higher likelihood that if you voted, you did so in a blanket state rather than a non-blanket state. There is a positive correlation between the type of primary election in a state and the likelihood that someone from that state will vote. This causality is consistently less than 5%, but is positive and significant nonetheless. I

also found a positive relationship between the competitiveness of a state's elections and the likelihood that someone in that state will vote.

While the results were significant, they were not quite as strong as I would have liked them to be.

In using two pre-existing data sets I was limited by the variables that could be created and measured. For example, the CCES survey did not feature any questions that focused on the rational voter model or how much a voter felt their vote "counted." In future research I would design my own survey, including questions focused on the rational voter model's P and B terms. In designing my own survey I could more carefully and precisely separate blanket and non-blanket states and their respondents as well as design questions that focus on the motivation to vote or lack thereof.

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