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## Author

Burnett, Craig Michael
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## UNIVERSITY OF CALIFORNIA, SAN DIEGO

Voter Competency, Information, and Campaign Effects in Representative and Direct Democracy

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy
in

Political Science
by

Craig Michael Burnett

Committee in charge:
Professor Gary C. Jacobson, Chair
Professor Mathew D. McCubbins, Co-Chair
Professor Marisa A. Abrajano
Professor Daniel C. Hallin
Professor Isaac W. Martin
Professor Keith T. Poole

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$\qquad$
$\qquad$
Co-Chair

Chair

University of California, San Diego
2010

## DEDICATION

For Jacklyn, Corinne, Alan, David, Mia, and Bonkers.

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## VITA

Bachelor of Arts, University of California, Santa Barbara
2006 Master of Arts, University of California, San Diego
2004-2010 Research/Teaching Assistant, University of California, San Diego
2010 Doctor of Philosophy, University of California, San Diego

## FIELDS OF STUDY

Major Field: Political Science
Studies in American and Comparative Politics
Exam Committee: Professors Scott W. Desposato, Steven P. Erie, Gary C.
Jacobson, and Susan Shirk

# ABSTRACT OF THE DISSERTATION 

Voter Competency, Information, and Campaign Effects in Representative and Direct Democracy

## by

Craig Michael Burnett

Doctor of Philosophy in Political Science

University of California, San Diego, 2010

Professor Gary C. Jacobson, Chair
Professor Mathew D. McCubbins, Co-Chair

Are voters competent citizens? Existing evidence suggests that voters are both hopeless and surprisingly efficient. Some scholars find that the average voter does not possess the requisite knowledge to cast a competent vote. Others, still, have shown that individuals can capitalize on information shortcuts to arrive at a choice that approximates an informed decision. Our understanding of the depth (or shallowness) of voter knowledge and competence is, however, underdeveloped.

In my dissertation, I ask three fundamental questions about the American voter. First, how does voter knowledge of politics compare to subjects that have a far more frequent, immediate, and intimate impact? Second, do voters employ information shortcuts to make reasoned choices as often as scholars have commonly assumed? Third, can voters learn from noisy and sometimes confusing campaigns?

To answer these questions, I designed and conducted two election surveys in San Diego, California. For the first question, I conclude that voters knew more about politics when compared to everyday consumer and investment products. This result leads to two conclusions: first, scholars need to rethink how we measure knowledge, and second, voters may be better equipped to make political decisions than they are to make decisions at the grocery store. For the second question, I find that voters use information shortcuts much less often than scholars commonly assume. I also discovered, however, that most voters make reasoned choices regardless of how much they know about a policy. Moreover, simple policy changes can improve the usage rate of information shortcuts, which may lead to better decisions. For the third question, I discover that voters learned more about a ballot measure that had an active campaign when compared to an orphaned ballot measure that had no campaign. This result implies that campaigns, no matter how viral or convoluted, do help voters learn what they need to know.

## Introduction

In 1748, Montesquieu wrote, "The tyranny of a principal in an oligarchy is not so dangerous to the public welfare as the apathy of a citizen in a democracy." A fundamental question in political science has been whether citizens have the knowledge required to be active and competent democratic participants. The original survey research on the subject suggested, quite alarmingly, that voters are uninformed and incapable of making reasoned choices. By extension, these researchers questioned the viability of democracy.

This is a study of what voters learn and how they use what they know to make democratic decisions. At their core, the following chapters address and explore issues of voter competency. In general, I argue that the pioneering research misjudged voters. By taking a more nuanced approach to studying voting behavior, I find that citizens are capable and competent. Yet, we need more research to understand the complex process that voters engage in order to translate their preferences into votes. In essence, my research adds to the evidence that suggests voters are capable citizens and that democracy does, indeed, "work."

Each of the three chapters is a stand-alone project. That is, every chapter asks a unique research question and provides a (sometimes quite tentative) answer. Each chapter makes a significant contribution to a different literature and marks the beginning of a larger research agenda. All three chapters rely on survey research that I conducted in San Diego, California, during the presidential primary in February and the general election in November of 2008.

The first chapter concerns how much voters know about politics. Over four decades of research has shown that voters know very little about the national government, prominent political figures, and policy. In this chapter, I argue that these studies have not added the proper context to political knowledge. In particular, I explore how much voters know about consumer products and compare it to their general political knowledge. My goal is to place consumer and political knowledge on the same scale. I find that voters know at least as much about politics as they know about everyday consumer and investment products. This finding is surprising given that voters have a stronger incentive to learn more about consumer products, as individuals make consumer choices frequently, and they have an immediate and intimate impact. This result suggests, in part, that voters may be better equipped to make democratic decisions than previous research has commonly acknowledged.

The second chapter revisits the question of how much voters can and do use information shortcuts in direct democracy. I challenge the assumption that voters routinely use the endorsements of prominent proponents and opponents to make reasoned decisions. In this chapter, I argue that voters do not use information shortcuts to make decisions often. Instead, voters appear to make reasoned choices based on their policy preferences, regardless of how much they know about a particular ballot measure. This finding runs counter to the accepted literature. The positive finding of this chapter is that voters do in fact appear to make reasoned and competent decisions. The negative result, however, is that-if voters are not using their knowledge of a ballot measure to decidescholars have not learned enough about how voters are able to translate their policy preferences into votes. I conclude that, while endorsements from prominent proponents
and opponents can provide voters with an excellent information shortcut, these cues must be made available on the actual ballot in order to be useful.

In the third chapter, I examine whether voters learn from campaigns in direct democracy. I begin my research by rejecting the notion that campaigns have a "minimal effect" on voters. Instead, I assume that campaigns can and do influence voters. Research on campaign effects, however, has focused disproportionately on national elections, especially presidential elections. This chapter represents one of the few studies of how much voters learn about ballot measures from a campaign. I capitalize on California's Proposition 91, which was an initiative that did not have an active campaign because its authors abandoned the measure months before the election. Using similar survey questions, I then compare what voters learned about Proposition 91 to Proposition 93, a more typical ballot measure that had an active campaign on both sides of the issue. My results show that voters learned more about Proposition 93. This finding suggests that voters do in fact learn from campaigns, even if they are convoluted and negative. I conclude that campaigns are the best method available to inform voters about the democratic decisions they must make.

All three chapters make a significant contribution to the literature that they address. Moreover, each chapter concludes that democracy is not "broken," and perhaps scholars have not given voters enough credit. Absent from my analysis, however, is the assertion that voters, and democracy in general, functions at some optimal level. In fact, my conclusions suggest the opposite is true.

In general, I make three conclusions. First, we need to adjust our expectations of what makes a voter competent. Second, students of voting behavior need new and more
precise measures of how voters learn and make decisions in representative and direct democracy. Finally, simple policy changes may help voters utilize information from campaigns, which, in turn, can help them make reasoned decisions.

## Chapter 1 - What Do You Know? Comparing Political and Consumer Knowledge

### 1.1. Abstract

Survey research shows that voters know embarrassingly little about politics. Some scholars believe this finding demonstrates that democracy does not work. Others argue that voters do not need much information to make political decisions. Neither strand of research places political knowledge into comparative context. I begin to remedy this oversight by asking the following: How does voters' knowledge about politics compare to their knowledge about things with which they have far more immediate, frequent, and intimate encounters? Using a unique survey, I provide a preliminary answer to my research question by comparing political knowledge to something I think voters should know more about: everyday consumer and investment products. Surprisingly, my survey shows that voters knew at least as much about politics as they knew about consumer products.

### 1.2. Introduction

Public opinion research has been unkind to the American voter. Surveys have verified the electorate's ignorance about politics, oftentimes in embarrassing ways. Many scholars and political pundits interpret this to mean that voters do not possess the requisite knowledge to make reasoned democratic decisions (Campbell et al. 1960; Converse 1964; 1970; 1975; 1990; Lippmann 1922). For some, voter ineptitude proves democracy does not work (e.g., Bennett 1988; Converse 1964; Entman 1989; Schumpeter 1950; Somin 1998; 2004).

In response to these findings, other scholars argue that voters require only a small amount of information to make reasoned choices. Their research demonstrates that voters can make competent decisions by using information shortcuts. Moreover, these low-information decisions are indistinguishable from the decisions of "encyclopedic" voters with high levels of information (Arceneaux 2008; Lupia 1992; 1994a; 1994b; Lupia and McCubbins 1998; McKelvey and Ordeshook 1985; 1986; Popkin 1994). In short, they conclude that democracy can work in a world of incomplete and asymmetric information.

A recent strand of research, however, has questioned whether standard survey measures of political knowledge can assess voter competency (see, e.g., Delli Carpini 2009; Jerit, Barabas, and Bolsen 2006; Johnson 2009; Lupia 2006; Prior and Lupia 2008). Lupia (2006), for example, notes that most surveys, such as the American National Election Studies, are not measuring useful political knowledge; instead, standard knowledge questions measure an individual's proficiency in civics. It is hard to judge, he
argues, whether knowledge of basic civics helps voters make competent decisions on the ballot. ${ }^{1}$

While I agree that voters may require only a small amount of information to arrive at a reasoned decision, I acknowledge the abundance of empirical evidence documenting that voters know little about politics. I also share the concerns of scholars who question how previous research has defined and measured political knowledge. Following the lead of Lupia (2006), this chapter focuses on a fundamental question that scholars must ask about political knowledge: What do we expect voters to know about politics?

I find that the existing research fails to put political knowledge into proper context. That is, research in voting behavior has not yet defined a baseline to which we could-and perhaps should-compare political knowledge. Accordingly, the question I investigate is a simple one: How does voters' knowledge about politics compare to their knowledge about things with which they have far more immediate, frequent, and intimate encounters? In this chapter, I take a small step toward answering this question by presenting results from an election survey that asked respondents questions about politics and everyday consumer products.

I show that voters are more adept at answering political knowledge questions than consumer knowledge questions of similar, or even lesser, difficulty. This finding, however, does not absolve the electorate of its informational deficiencies. Instead, my results could imply any or all of the following: 1) individuals are just as woefully uninformed about consumer products as they are about politics; 2 ) voters are more

[^0]equipped to make political choices than scholars acknowledge; or 3) scholars must continue to reconsider how to measure knowledge.

### 1.3. Background

What does the public know about politics? The pioneering research on political knowledge by Berelson, Lazarsfeld, and McPhee (1954) and Campbell et al. (1960) found that the average voter knew very little about the topics of the day, political institutions, or their own representatives. In fact, the inability of the public to answer simple questions about politics remains one of the most consistent findings of public opinion research (for a summary see Delli Carpini and Keeter 1996; for an update see Pew Research Center for People and the Press 2007). Stimson (1991, 1) summarized decades of research on political knowledge as follows: "[Ordinary people] told us they didn't know very much [about politics]. And they didn't seem to mind not knowing. The topic didn't seem to be worth mastery."

For some, the electorate's lack of political knowledge calls into question whether voters can make meaningful democratic decisions (Bartels 1996; 2005; Bennett 1988; Converse 1964; Entman 1989; Somin 1998; 2004). ${ }^{2}$ In essence, these scholars question the competence of the voter. They argue that voters in a democracy must make informed choices that reflect their preferences. ${ }^{3}$ To them it is natural to ask, if voters do not

[^1]possess much political information, how can we expect them to make competent democratic decisions?

The preponderance of the empirical evidence supports our worst fears about democracy. Converse's (1964) seminal work, in particular, continues to have a lasting impact. Converse worries that 90 to 95 percent of the public does not understand the political world in a meaningful way (e.g., the differences between ideologies). To be sure, most respondents can and do provide answers to survey questions. Converse argues, however, that when individuals face something they are unfamiliar with they provide an ad hoc answer-a response he calls a "nonattitude"-that does not represent a real opinion. While some scholars question whether these nonattitudes are in fact off-thecuff comments (e.g., Achen 1975; Ansolabehere, Rodden, and Snyder 2008; Kinder 2006; Zaller 1992; Zaller and Feldman 1992), any evidence that suggests the electorate lacks a meaningful understanding of the political world is troubling for a representative democracy.

Perhaps more concerning is that voters do not know simple political facts. Survey respondents struggle to identify the current Vice President, Chief Justice of the Supreme Court, and other prominent national political figures (e.g., Campbell 1960; Delli Carpini and Keeter 1996; Pew Research Center for the People and the Press 2007; Somin 1998). Moreover, a striking number of individuals fail to name their own governors (Delli Carpini and Keeter 1996; Pew Research Center for the People and the Press 2007) and congressional representatives (see Jacobson 2008). Still, the electorate's knowledge
scholars base their argument on the premise that democratic decisions improve with more information.
shortcomings expand beyond stable political figures; a startling number of respondents admit they are unaware of salient current events and policy debates that saturate the news (e.g., Bartels 2005; Delli Carpini and Keeter 1996; Kinder 2006). Overall, the empirical evidence supports Converse's belief that, "levels of information about public affairs are, from the view of the informed observer, astonishingly low" $(1975,79)$.

In contrast to Converse (1964), other scholars argue that the electorate's political knowledge deficiency is rational: in a world where scarcity exists, the average voter does not have a strong incentive to gather much political information. Most notably, Downs (1957) argues that the probability of an individual being the pivotal vote in an election approaches zero. As such, the average person should not invest much time into gathering information about an inconsequential decision (Downs 1957; Riker and Ordeshook 1968; see also Hardin 2006).

Downs and ensuing research has shown that voters can compensate for their lack of knowledge by relying on information shortcuts-such as party labels-as a proxy for full information (Arceneaux 2008; McKelvey and Ordeshook 1985; 1986; Lupia 1992; 1994a; 1994b; Lupia and McCubbins 1998; Popkin 1994; Sniderman, Brody, and Tetlock 1991). If voters can use information shortcuts then, they argue, Converse's fear of a coin-flipping electorate is exaggerated.

Recent studies have begun to question the validity of how surveys measure political knowledge. These critiques have highlighted problems with measurement and construct validity. In regards to measurement error, simple survey questions about political knowledge are, at best, flawed (see, e.g., Achen 1975; Ansolabehere, Rodden,
and Snyder 2008; Mondak and Davis 2001). ${ }^{4}$ Complicating matters, Gibson and Caldeira (2009) have shown that interviewers in many of the American National Election Studies were biased toward scoring respondents as having given incorrect answers to questions about the Supreme Court. Gibson and Caldeira argue that having overly strict guidelines for determining correct answers will not take an accurate snapshot of the electorate's basic political knowledge.

Inquiries into voter knowledge have begun to focus more on what makes a voter competent. In particular, new research investigates the construct validity of survey measures used to assess political knowledge. Most notably, Lupia (2006) argues that the common questions we use to measure political knowledge (e.g., identifying the Vice President) suffer from an academic bias: we tend to ask questions that have little or no relevance to the voter's ability to make a competent choice, and we focus disproportionately on national institutions. As Lupia notes, we should not expect to measure informed opinions from the electorate if we ask them questions that have little to no impact on their daily lives. In a related theoretical piece, Johnson (2009) adopts the position that humans gather information in order to achieve a goal (see Anderson 1993; but for a discussion of what incentives promote learning see Lupia and McCubbins 1998). Similar to Lupia (2006), Johnson argues that research should not focus on assessing academic knowledge. Instead, he suggests that scholars need to define and

[^2]estimate "operative knowledge," defined as information that helps voters make competent decisions. ${ }^{5}$ Finally, Prior and Lupia (2008) present experimental data that suggest voters with proper motivation (the incentives in their study were monetary) or sufficient time (they allotted some treatment groups 24 hours to research the answer) can outperform the baseline measurement. ${ }^{6}$ Prior and Lupia offer two conclusions: First, most individuals have no incentive to learn political facts, and they do not give their best effort to recall the correct answer when asked. When incentivized, the opposite is true. Second, they find that a significant amount of voters do in fact have the requisite skills to research political information if they have sufficient time. In other words, respondents are "surprised" when surveys ask them to recall political information. On balance, these studies suggest that current survey methods may be unable to assess relevant political knowledge.

The goal of this chapter is similar to the objectives of Lupia (2006), Prior and Lupia (2008), and Johnson (2009) in that I focus on construct validity. In particular, I aim to add context to standard survey measures of political knowledge by comparing voters' knowledge of politics to other subjects. By comparing types of knowledge, scholars can begin to assess just how well voters "perform" in regards to their knowledge about basic political facts. The data I present below begin to construct one such benchmark by comparing political and consumer knowledge. In the next section, I outline my research design and data collection efforts to answer this question. The

[^3]second section presents the results of my survey. The final section offers a brief discussion of my findings.

### 1.4. Research Design and Data

Over six decades of survey research shows that voters know very little about government and public affairs. Accordingly, I begin with the premise that voters are busy individuals who have little reason to learn political facts, because 1) the effects of their decisions in the voting booth are obfuscated, 2) they vote infrequently, and 3) political decisions have expansive-not individualistic-effects. From this reasoning, I form my research question: Is the deficit in voters' political knowledge greater or smaller than their deficit in knowledge about things with which they have far more immediate, frequent, and intimate encounters?

To answer this question, I use data from an election survey I designed and administered to voters in San Diego as they left the polling booth during the 2008 general election. The survey included five common political knowledge questions and four consumer knowledge questions. While I have a limited number of questions, my survey provides a strong initial inquiry from which I can make a tentative conclusion and chart out a course for further research.

Instead of asking voters about tabloid headlines or celebrities (see Pew Research Center for the People and the Press 2007), I chose to focus on a more comparable subject: consumer products. I chose consumer knowledge because, unlike tabloids and celebrity news, most people will not find consumer knowledge entertaining. As Downs (1957)
notes, individuals choose to learn more about a subject when they find it enjoyable. I expect that the average voter will not find consumer knowledge amusing.

Moreover, I selected consumer knowledge as my comparison subject because individuals would seem to have at least as great of an incentive to learn about consumer products than they do for politics. While not essential, both knowledge of consumer products and civics can help individuals make better decisions. I anticipate, however, that voters will know more about consumer products. I make this assumption based on three factors: immediacy, frequency, and intimacy.

First, individuals experience immediate impacts from consumer choices, where the effects from political decisions can take decades. For example, when an individual purchases a meal from McDonald's she sees an immediate consequence: she must give the correct amount of money to the person operating the register to receive the items she ordered. Moreover, the food affects her taste buds and hunger once she consumes the product.

Political choices are the opposite. A vote on Election Day may take months, years, or decades to bring about an effect. Indeed, for presidential and congressional elections, there is a two-month transition period before newly elected officials assume their posts. Most quantifiable political outcomes take even longer. The American Recovery and Reinvestment Act (ARRA) of 2009 (commonly referred to as the stimulus package) is an example that illustrates this point. Although Congress approved ARRA soon after Obama's first term began, the $\$ 787$ billion in spending that the bill appropriated will take years to deploy. Furthermore, the future impacts of the bill are unclear, and it is difficult to know when those potential impacts will come to fruition.

Will someone who voted for Barack Obama on November 4, 2008, be able to discern a direct impact from their vote choice? Thus, in a world where consumer choices have an immediate impact and political choices do not, individuals have an incentive to learn more about the products they consume.

Second, individuals make consumer choices frequently, while years may pass between political choices. In fact, consumers make many product purchases every day. Consider two anecdotes. First, as of 2007, McDonald's alone proclaims that they serve 27 million Americans a day, a number that increases by one million each year (BusinessWeek 2007). Second, Experian reports that the average credit card user has 3.58 open accounts and uses 34.8 percent of their available credit (Experian 2009). These facts imply that most individuals make consumer choices daily.

In contrast to consumer choices, political choices are infrequent. Even the highest turnout elections-congressional midterm elections (about 40 percent VEP in 2006) and presidential elections (about 62 percent VEP in 2008) -are two years apart (McDonald 2009). Western states often hold additional off-year elections, but these contests see a significant drop in turnout and are at least months apart. This means that most individuals make infrequent political decisions. Thus, individuals have a greater incentive to learn about consumer products than they do about politics because they must make consumer choices often and political choices infrequently.

Third, the effects of consumer decisions are isolated-that is, they are intimateto the individual making the choice, whereas the consequences of political decisions are widespread. For example, someone who purchases a candy bar has purchased a private good. She can consume or dispense the good in whatever manner she sees fit.

Individuals who do not purchase a candy bar do not experience the rights of ownership. The main consequences of ownership, then, are isolated and therefore intimate.

By contrast, political decisions do not have intimate impacts. Most people will never meet their elected representatives. ${ }^{7}$ Moreover, most policies enacted by political representatives will have a minor effect on a diffuse population, if they have an effect at all (e.g., slight changes in tax law).

Furthermore, policy outcomes are difficult to trace to a specific political choice. Take Tennessee Valley Authority v. Hill et al. (1978) as an example. Ultimately, the Supreme Court decided the Tennessee Valley Authority (TVA) must stop construction on the Tellico Dam to comply with the Endangered Species Act (ESA) (1973). The political choice responsible for the policy outcome is unclear: was it the election of Franklin Delano Roosevelt (who created the TVA), every president who appointed a justice that resided on the Supreme Court in 1978, Richard Nixon who signed the ESA, or something else? Political choices, by construction, are not intimate. Thus, individuals have an incentive to learn more about consumer products because the effects of consumer choices are intimate.

In my survey, I asked respondents to answer five political knowledge questions. Every respondent had the option to respond "unsure" or refuse to answer any question. The political knowledge questions I asked are:
(1) Do you happen to know what job or political office is held by Dick Cheney?
(The correct answer is "Vice President")

[^4](2) Do you happen to know what job or political office is held by John Roberts? (The correct answer is "Chief Justice of the Supreme Court")
(3) Do you happen to know the vote percent required by the Constitution for the US Senate and House to override a presidential veto? (The correct answer is "two-thirds")
(4) Do you happen to know which party has the most members in the House of Representatives in Washington today? (The correct answer is "Democrats") (5) Whose responsibility is it to determine if a law is constitutional or not: is it the Supreme Court, Congress, or the President? (The correct answer is "Supreme Court")

I also asked my respondents to answer four true or false comparative consumer knowledge questions. Again, respondents could say "unsure" or refuse to answer any question. The consumer knowledge questions I asked are:
(1) True or False: Credit card companies charge a higher interest rate for cash advances than for purchases. (The correct answer is "true")
(2) True or False: A Toyota Tacoma has a higher EPA estimated mile per gallon rating than a Ford Focus. (The correct answer is "false")
(3) True or False: A cup of cashews has more calories than a medium serving of McDonald's french fries. (The correct answer is "true")
(4) True or False: An apple has more calories than a banana. (The correct answer is "false")

Ideally, I would have asked more than five political knowledge questions and four consumer knowledge questions. With exit polls and any survey, however, variables such
as time, space, and the attention span of my respondents place stringent limits on what and how much I can ask. Thus, I chose five political knowledge questions that previous research found to vary from well known (e.g., identifying the Vice President) to not well known (e.g., identifying the Chief Justice of the Supreme Court) (see Delli Carpini and Keeter 1996).

I also created four consumer knowledge questions that vary in difficulty. The first consumer knowledge question asked respondents to report that credit card companies charge more for cash advances than for regular purchases. This question should have been easy for individuals to answer, since credit cards have become commonplace for American consumers. Moreover, information about credit card rates is readily available to every person who owns or applies for a credit card: credit card companies publish their rates on every credit card bill and application.

My second consumer knowledge question asked my respondents to determine that the Ford Focus ( 24 mpg city, 35 mpg highway) had a higher Environmental Protection Agency (EPA) estimated mile per gallon rating than the Toyota Tacoma (20 mpg city, 25 mpg highway) (Department of Energy 2009). ${ }^{8}$ I anticipated that this would be an easy comparison for my respondents because EPA miles per gallon ratings are available to consumers via a mandatory sticker on all cars. Moreover, car manufacturers often state EPA ratings for many popular models in advertisements. Furthermore, in lieu of the EPA

[^5]estimates, a respondent could have identified the correct answer by recognizing that one vehicle was a compact car (the Focus) and the other was a pickup truck (the Tacoma).

The third consumer knowledge question asked respondents to determine that a cup of cashew nuts (about 1,280 calories, according to Planters) had more calories than a medium serving of McDonald's french fries (about 380 calories, according to McDonald's). The Food and Drug Administration mandates that cashew nut manufacturers must print nutritional facts on the packaging. McDonald's makes information about their french fries available on the company's website, any McDonald's store (in a large number of places), and, more recently, on the packaging that they use serve the french fries. Thus, information about both products is widely available.

While the difference in calories above is large, some respondents may find the question difficult because I used french fries as one of the comparison foods. Indeed, a concerted public service campaign has highlighted how french fries are a particularly fatty and unhealthy food. Indeed, I expect that many voters will indicate, incorrectly, that french fries are the more caloric food. As a result, this question should be somewhat more difficult than the previous two questions.

The final consumer knowledge question had my interviewees compare the caloric content of a banana and an apple. This question was the most difficult out of the four consumer knowledge questions I asked for two reasons. First, being able to recognize that a banana (where 100 grams of a banana has 89 calories) is more caloric than an apple (where 100 grams of an apple has 52 calories) is difficult because both are fruits (United States Department of Agriculture 2009). Second, nutritional information about fruit is
harder to find since growers do not label individual pieces of fruit with nutritional facts. As a result, I expected that respondents would find this comparison very difficult.

It is regrettable that I could not ask a larger battery of questions about both politics and consumer products. I attempted, however, to choose questions that differ in degree of difficulty for both subjects. I also chose political and consumer knowledge questions that were not "active search" questions. That is, most voters will not have been searching for answers to the questions we asked before arriving at the polling location. ${ }^{9}$

The question format I used may bias my results. Because I used the true or false question format for my consumer knowledge questions, they are, in theory, easier to answer: there is a 50 percent chance of guessing the correct answer. Conversely, four out of the five political knowledge questions are open-ended. The fifth question has a 33 percent chance of respondents guessing the correct answer at random. Thus, I am cognizant of the possibility that my results will show that voters know more about consumer products because the consumer knowledge questions are simple binary choices.

I selected thirteen locations ${ }^{10}$ within the city of San Diego to interview voters as they left the polling booth during the 2008 general election (November 4, 2008). ${ }^{11}$ I collected surveys from the opening (7:00 am) to the closing (8:00 pm) of the polls. I recruited over 100 student volunteers to collect my data. I gave my pollsters instructions on how to ask the survey questions and record responses one week before the election.

[^6]To randomize my sample and reduce selection bias, I instructed my volunteers to ask every other departing voter for an interview.

I collected 1,002 interviews from voters, of which 939 received answers for all nine knowledge questions. An additional 1,051 voters refused to give an interview, yielding an overall cooperation rate of about 49 percent. While this sample is not representative of the entire United States, this is not a problem for my research question. Since I seek a comparison in a within subjects design, I can draw meaningful inferences from my sample, but I will refrain from generalizing to the entire electorate. ${ }^{12}$ I do not have any reason, however, to suspect that voters in the eighth largest city in America are more or less knowledgeable than voters in other cities.

### 1.5. Results

My task in this chapter is to compare what people knew about political knowledge to what they knew about consumer knowledge. I create my comparisons by calculating the percent of correct responses for all political knowledge and consumer knowledge questions separately. I then compare the percent of correct responses for political knowledge questions to the percent of correct responses to consumer knowledge questions. In essence, I am placing political and consumer knowledge on the same scale.

[^7]

Figure 1-1 - Percent of Correct Responses for Political and Consumer Knowledge

Figure 1-1 presents the percent of correct responses for all 939 respondents across all nine knowledge questions. To make analysis easier, I arranged, in descending order, the questions from the highest percent of correct answers to the lowest percent of correct answers, starting from the left.

The most important finding from Figure 1-1 is that voters often know more about my political questions than they do about my consumer questions. In particular, the two answers with the highest percent of correct answers are political knowledge questions: recognizing Dick Cheney is Vice President (88.3 percent) and that the Supreme Court
determines the constitutionality of legislation (84.9 percent). Knowing that credit card companies charge different interest rates for cash advances and regular transactions (78.9 percent) is the question with the third highest percent of correct answers, and the consumer knowledge question with the highest percent of correct answers. Another political knowledge question-knowing Democrats control the House of Representatives-is the question with the fourth highest percent of correct answers (73.6 percent). The questions with the fifth and sixth highest percent of correct responses measure consumer knowledge: knowing that a Toyota Tacoma has a worse gas mileage rating than a Ford Focus (61 percent) and an apple has fewer calories than a banana (60.4 percent). The three lowest scoring knowledge questions are a political knowledge question (a congressional override requires a two-thirds vote, 50.1 percent), a consumer knowledge question (a cup of cashews has more calories than a medium McDonald's french fries, 36.8 percent), and a political knowledge question (identifying that John Roberts is the Chief Justice of the Supreme Court, 29.6 percent).

Surprisingly, Figure 1-1 supports the conclusion that voters know as much, if not more, about politics than they know about consumer and investment products. In fact, three out of the four questions with the highest percent of correct responses are political knowledge questions. Furthermore, the only two questions to surpass 80 percent correct are political knowledge questions. Thus, the first comparison of political knowledge to consumer knowledge suggests that voters appear to have a deeper knowledge of simple political facts.

To explore this relationship further, I calculated each individual's total number of correct answers for our political and consumer knowledge questions, respectively. Since

I asked one more political knowledge question, I standardized the responses by calculating the percent correct for each subject for each individual. I then found the average respondent's political knowledge and consumer knowledge score, which I present in Figure 1-2.


Figure 1-2 - Average Percent of Correct Responses for Political and Consumer Knowledge

Figure 1-2 shows that the average respondent in my survey answers 65.3 percent of the political knowledge questions correctly (about 3.3 out of 5 questions correct), but
answers only 59.3 percent of the consumer knowledge questions correctly (about 2.4 out of 4 questions correct). Figure 1-2 also includes 95 percent confidence interval bars for both political and consumer knowledge. This difference is significant at the 95 percent confidence level. ${ }^{13}$ These results imply that the average respondent answers political knowledge questions correctly about 6 percent more often than consumer knowledge questions. Thus, at least for the questions I asked, voters appear to know more about politics than consumer and investment products. This finding is unexpected, given all of the incentives for individuals to learn about consumer knowledge that I outlined in the previous section.

### 1.6. Discussion

I designed my survey to add context to standard political knowledge questions. I chose consumer knowledge as the comparison subject because I view it as more similar to political knowledge than other subjects, including celebrity identification. My intuition also led me to expect that voters would know more about everyday consumer and investment products: individuals make consumer decisions frequently, and the effects of those decisions have an intimate and immediate impact on their lives. The results of my survey, however, show that, on average, voters knew as much about politics as they knew about consumer products. In fact, these data suggest that voters may know more about politics than consumer products. ${ }^{14}$

[^8]Perhaps I should have anticipated these results. In fact, my research echoes the results of previous surveys administered by the Consumer Federation of America (CFA) (2003) and the National Hurricane Survival Initiative (NHSI) (2009; for a related study on what individuals know about economic policy see Blinder and Krueger 2004). In a survey conducted by the CFA about credit scores and credit cards, they found that only 55 percent of individuals knew that using all of the available credit on their credit cards could have an adverse effect on their credit score. In the same survey, only 62 percent of the respondents knew that applying for a new credit card may lower their credit rating, and a surprising 27 percent thought their credit score measured their knowledge of how consumer credit works.

Similar to the findings of the CFA, the NHSI found that individuals located in the Atlantic and Gulf Coast region did not know the basics of hurricane preparedness and protection. In particular, only 30 percent of their respondents knew that the storm surge is the most dangerous component of a hurricane and only 3 percent recognized that the garage door is the part of the house that is most likely to falter under hurricane-force wind. Furthermore, 44 percent knew that the most interior room in the house is the safest place to weather a hurricane, 49 percent responded that masking tape does not stop windows from shattering, and 44 percent recognized kerosene lamps should not be used in a disaster supply kit.

The results of the surveys conducted by the CFA and the NHSI are interesting because credit scores, credit cards, and hurricane safety clearly have a far more
to pay attention to politics. My sample, however, comes from a general election, which should produce a more generalizable sample of voters than a primary election.
immediate, frequent, and intimate impact on the individuals they surveyed. For credit scores and credit cards, these are direct measures of what people know about personal finance (and how to manage it). For hurricane preparedness and safety, knowing how to react to a disaster can mean the difference between life and death. Similar to my results, knowledge of both topics appears to be low. It is probable these surveys would have confirmed my results if they had included measures of political knowledge.

My findings, similar to Lupia (2006) and Prior and Lupia (2008), raise an important analytical question: What do we expect voters to know about politics? If individuals are not omniscient calculators (e.g., March and Simon 1958; Simon 1955; 1957), they must make decisions with imperfect information. While I could ask only a few questions about each, what I found suggests that my sample was better equipped to vote than to purchase a product. I expected to find the opposite.

There are three possible implications of my findings. The first is that the average person is just as woefully clueless about consumer products as they are about politics. Indeed, government often enacts regulations to protect consumers from suffering the consequences of incomplete information (e.g., the Food and Drug Administration has a long and complicated approval process). It is also true that the government attempts to protect the electorate from making poor choices in the voting booth (e.g., defining who can run, regulating and disclosing campaign finance).

The second implication is that voters are better equipped to make decisions on the ballot than scholars commonly acknowledge. Many economists conclude that consumers do engage the market system with incomplete information successfully (e.g., Akerlof 1970; Greenwald and Stiglitz 1986; Spence 1973; Stiglitz and Weiss 1981). By
extension, individuals should be better equipped to make political decisions because they have a superior knowledge base.

The third implication is that the questions I asked are inadequate measures of knowledge. It may be the case that when an individual needs to choose a candidate or purchase a product she relies on her experiential knowledge (Johnson 2009), or she performs an active search for information over time and at her leisure (Prior and Lupia 2008). After she learns what she needs to know, experientially or otherwise, the specific pieces of information that helped construct her choice may simply melt away (see, e.g., Lodge, McGraw, and Stroh 1989; Lupia and McCubbins 1998; Popkin 1994). Finally, the questions I used to measure knowledge may be inconsequential-and therefore not worth remembering - to the average person (Lupia 2006).

The above results are suggestive and only highlight the need for additional research. Three extensions to this research will satisfy my call to create additional comparative benchmarks. First, I will replicate my results with a nationally representative sample. Second, I intend to expand upon this research by asking additional political (e.g., local institutions and elected officials) and consumer knowledge questions (e.g., computers, mortgages, pensions). I also anticipate collecting data on different knowledge subjects, such as professional sports (rules and results), celebrities, and geography. Third, I plan to move to the Educational Testing Service (ETS) model of measurement (creating, in essence, Guttman scales for knowledge of political, consumer, sports, celebrity, and other matters). Similar to the Scholastic Aptitude Test, I will have categories of questions that vary in degree of difficulty, allowing me to give a more precise score to each individual than simple averages.

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## Chapter 2 - Informed Democracy?

### 2.1. Abstract

Direct democracy provides voters with an opportunity to make policy choices that may have an immediate impact on their lives. Because voters know very little about politics, some scholars question whether direct democracy works. Others argue that extensive political knowledge is unnecessary since voters use information shortcuts to make reasoned choices. In fact, Lupia's (1994) seminal finding that voters use such shortcuts has dominated the literature on direct democracy. Using data from two election surveys, I examine the hypothesis that voters use shortcuts to make reasoned decisions in initiative and referendum elections. Similar to Lupia, I find that most voters are not walking encyclopedias and many voters are ignorant of the relevant shortcuts for most ballot measures. Somewhat ironically, I also show that voters rarely use their knowledge of shortcuts to make decisions. My findings question whether scholars should assume that voters often use shortcuts in direct democracy.

### 2.2. Introduction

Competent choices require information. Yet, voters know little about politics (for a summary see Delli Carpini and Keeter 1996). So little, in fact, that many scholars question whether representative democracy can exist in a world where voters do not comprehend how the political system works (e.g., Campbell et al. 1960; Converse 1964; Bennett 1988; Entman 1989; Somin 1998; 2004). While the preponderance of the available evidence focuses on the average voter's lack of knowledge at the national level, other research suggests that voters also know very little about initiatives and referenda (e.g., Bowler and Donovan 1998; Broder 2000). Similar to voter ignorance about national politics, lack of knowledge about initiatives and referenda calls into question whether direct democracy works (see Broder 2000; but see Bowler and Donovan 1998; Matsusaka 2004).

Some scholars, however, argue that voters do not need much information to make reasoned choices. They contend that voters can use information shortcuts to approximate an informed vote (e.g., McKelvey and Ordeshook 1985; 1986; Popkin 1994; Lupia 1992; 1994; Lupia and McCubbins 1998; Arceneaux 2008). Overall, these researchers conclude that democracy, direct or otherwise, can work in a world where voters lack full information.

Information shortcuts, however, are not a panacea for democracy. For example, Lupia and McCubbins (1998) define the conditions that allow voters to utilize information shortcuts to make reasoned decisions. As Lupia and McCubbins (1998) note,
these conditions may be difficult to satisfy in the real world. As a result, information shortcuts may not be useful to many voters even though they are available.

Using the framework of Lupia (1994) and Lupia and McCubbins (1998), in this chapter I test the hypothesis that voters use information shortcuts to evaluate initiatives and referenda in two elections. My results echo previous research: Voters are not walking encyclopedias, and they know a ballot measure's relevant information shortcut about 50 percent of the time (Bowler and Donovan 1998; Lupia 1994). Quite surprisingly, my findings also show that voters who knew the relevant information shortcuts rarely used them to make reasoned decisions. In real world settings, I argue, many voters are either unaware of the information shortcuts or knowledgeable voters choose not to use them. Therefore, the majority of information shortcuts are not valuable because they do not persuade voters. Voters may use information shortcuts much less often and less successfully than scholars have assumed.

In what follows, I provide some theoretical background on the conditions that make information shortcuts viable in an election, and I present my hypothesis. The second section describes my data. In the third section, I outline my research design and methods. The fourth section presents my results. The final section offers a brief discussion.

### 2.3. Background and Hypothesis

I utilize the theoretical framework of Lupia and McCubbins (1998, Chapters 2-5) as the foundation for this chapter. They argue that voters (whom they call "principals") can utilize information from cue-givers (whom they call "speakers") when the
information shortcut meets the following common-knowledge conditions: 1) the cuegiver and the voter have a common interest, or some external force or forces are strong enough to substitute for common interest (therefore, the cue-giver is trustworthy); and 2) the voter perceives the cue-giver to be knowledgeable about the subject matter (thus, the cue-giver has knowledge she desires). ${ }^{1}$ Of course, the cue-giver can persuade only when the voter is uncertain about which option is better (Lupia and McCubbins 1998, 55).

While information shortcuts have great potential to help voters make decisions, the realities of a political campaigns place limits on how often shortcuts can persuade voters. For instance, Garrett and McCubbins (2008) find that many information shortcuts fail to meet the two basic conditions set forth by Lupia and McCubbins, with or without the existence of external forces, and are therefore not useful. Moreover, Boudreau (2009a) uses experimental evidence to show that information shortcuts succeed only when an external entity provides verification. In a related study, Boudreau (2009b) discovers that an individual may ignore credible cues if she thinks she is capable of making an independent decision (see also Zaller 1992). In sum, information shortcuts can work, but elections that meet the conditions for voter persuasion may be rare.

Many scholars now incorporate information shortcuts as an essential component of vote choice models. These models assume that voters successfully and routinely overcome their information deficiencies by relying on simple cues (cf. Popkin 1994). Indeed, shortcuts can work well in elections that allow party and incumbent labels on the

[^9]ballot. Party labels demonstrate a common interest, and incumbency signals to voters that one option has knowledge from experience (for a different perspective, see Bartels 1996). Moreover, these shortcuts are available on the printed ballot, which reduces the cognitive costs for voters to acquire information. As a result, I expect voters to utilize the shortcuts in national elections at a high rate.

By contrast, initiatives and referenda do not have information shortcuts printed on the ballot. In order for voters to use cues with ballot measures, the following must be true: the information shortcut satisfies both Lupia and McCubbins conditions and voters know the information shortcut before they vote. Yet, voters are cognitive misers and many do not perform extensive searches for information about politics (see, e.g., Downs 1957). Because the cues for ballot measures are not available on the ballot, I expect that voters will employ information shortcuts to make decisions less often in initiative and referendum elections when compared to national elections.

Lupia (1994) is the first to offer empirical support showing that voters can use information shortcuts to approximate a fully informed vote in direct democracy. Lupia conducted a survey of Los Angeles voters during the 1988 general election in California to measure the electorate's awareness of prominent endorsers and opponents of five ballot measures. In his survey, Lupia finds that voters who knew the information shortcuts were able to utilize the cues to arrive at reasoned decisions on the five initiatives. As Lupia and Matsusaka note about the seminal work, "Such evidence supports the claim that voters with apparently low levels of political information can use information shortcuts to emulate the voting behavior they would have exhibited if they were as informed as the best-informed persons in the survey" (2004: 468). As Bartels
(1996) observes and Lupia and Matsusaka (2004) confirms, however, very little empirical evidence examines whether voters do substitute information shortcuts for extensive factual knowledge. Still, Lupia's (1994) findings enjoy widespread recognition amongst scholars that low-information voters use information shortcuts to make a reasoned choice. Lupia's findings, in fact, have become common wisdom in subsequent research.

The goal of this chapter is to estimate how often voters use information shortcuts to compensate for their lack of factual knowledge in direct democracy. Following from Lupia (1994) and using the framework of Lupia and McCubbins (1998), I test the following hypothesis: In lieu of full information, voters use information shortcuts to arrive at reasoned choices. To be clear, I am not interested in measuring voters' actual policy choices. Instead, this hypothesis assesses whether voters use information shortcuts to help them make decisions.

### 2.4. Data

I use data collected during the presidential primary on February 5, 2008, and the general election on November 4, 2008, to test my hypothesis. During these elections, I assessed voters' knowledge about many of the propositions on the ballot, including the endorsements of prominent cue-givers. I also asked respondents to report their vote choices, policy preferences, and demographic information (e.g., party identification, income, education). For the presidential primary, I completed 615 interviews and received 467 refusals, for a response rate of 56.8 percent. For the general election, 1,002 respondents completed interviews and 1,051 refused, yielding a response rate of 49
percent. In both surveys, my student volunteers asked every other exiting voter for an interview to help randomize the sample and reduce selection bias.

For the presidential primary, I asked respondents about four referenda on the ballot: Propositions 94, 95, 96 and 97. Proposition 94 licensed the Pechanga Band of Luiseño Mission Indians to install and operate 5,500 additional slot machines beyond the 2,000 slot machines already operating at their casino in Riverside County. In exchange, the Pechanga Band would make annual payments to the state of California's general fund in the amount of $\$ 42.5$ million plus a percentage of the revenue from the additional slot machines. The referendum also exempted the project from some of the standards set by the California Environmental Quality Act (CEQA).

Proposition 95 authorized the Morongo Band of Mission Indians to install an additional 5,500 slot machines in their Riverside County casino (which also had 2,000 slot machines). Proposition 95 stipulated that the Morongo Band would make annual payments to the state of California's general fund in the amount of $\$ 36.7$ million plus a percentage of the revenue that the additional slot machines would generate. Proposition 95 also provided this expansion some exemptions from parts of CEQA.

Proposition 96 allowed the Sycuan Band of the Kumeyaay Nation to expand the number of slot machines in their San Diego County casino by 3,000. This would increase the number of slot machines from 2,000 to 5,000. In exchange, the Sycuan Band would make annual payments to the state of California's general fund in the amount of \$20 million plus a percentage of the revenues from the additional slot machines. As was the case with Propositions 94 and 95, this expansion was exempt from parts of CEQA.

Proposition 97 ratified an agreement that authorized the Agua Caliente Band of Cahuilla Indians to expand the number of slot machines in their Riverside County casino by 3,000 . The additional slot machines would raise the total number of allowed slot machines to 5,000. In exchange, the Agua Caliente Band would make annual payments to the state's general fund in the amount of $\$ 23.4$ million plus a percentage of the revenues generated by the additional slot machines. As with the other propositions, there were proposed exemptions to CEQA.

Governor Arnold Schwarzenegger endorsed all four propositions. Indeed, he was the best-known cue-giver and thus his stance in favor provided voters with a visible and valuable information shortcut for the propositions. Governor Schwarzenegger hailed the legislation that led to the referenda as "historic bipartisan agreement[s]" in widely aired television advertisements. The governor also urged voters to "vote yes for billions of dollars for California families. Vote yes for California." Governor Schwarzenegger was the information shortcut that satisfied both of the Lupia and McCubbins conditions. That is, many California voters shared a common interest with Governor Schwarzenegger, and he was presumably knowledgeable about the state's budget. Thus, I included a question about his endorsement on the survey.

For the 2008 general election, I asked respondents about two initiatives that would have amended the California state constitution. Proposition 4 was an initiative that required medical officials to provide notification to an unemancipated minor's parent or legal guardian 48 hours before performing an abortion. Proposition 4 did not require parental or guardian consent. The initiative allowed for a number of exceptions: when the minor showed convincing evidence of maturity; when a court deemed that forgoing
notification is in the best interest of the minor; when the parent(s) or guardian(s) had given previous consent; or in the case of a medical emergency. Additionally, Proposition 4 would have instituted mandatory reporting requirements for physicians and penalties for non-compliance.

Proposition 4 had many proponents and opponents. Governor Schwarzenegger, a notable proponent, offered his support of the initiative on "Meet the Press" the June before the election. Governor Schwarzenegger, however, was a quiet supporter throughout the remainder of the campaign. The most vocal opponent of Proposition 4 was Planned Parenthood. Planned Parenthood's position satisfied the trustworthiness and knowledgeability conditions because Planned Parenthood is an outspoken supporter of pro-choice policies. Thus, many voters will share a common interest with Planned Parenthood, and many others will have conflicting interests. Moreover, Planned Parenthood satisfies the knowledgeability condition because they presumably have expertise about the effects of abortion regulation.

The second initiative from the 2008 general election ballot on my survey was Proposition 8. Proposition 8 was an initiative to amend the state constitution to limit the definition of marriage to be between one man and one woman. Proposition 8 offered California voters the opportunity to repeal a decision by the California Supreme Court that made Proposition 22 (a statutory initiative that limited marriage to be between one man and one woman) unconstitutional. The court's written decision on Proposition 22 also interpreted the California Constitution to mean that same-sex couples had a legal right to marry.

Proposition 8 attracted wealthy and organized proponents and opponents. Both sides spent an incredible amount of money on their campaigns, totaling more than $\$ 70$ million. The California Republican Party and Democratic Party took opposite positions on Proposition 8 (with the Republican Party in favor and the Democratic Party against the initiative). Both parties also sent their endorsements out as part of a slate mailer. Voters often use political party endorsements as a cue on how to vote because they are trustworthy (relying on a pre-existing common interest with their members) and knowledgeable (political parties are policy experts on public policy). Thus, I measure my respondents' use of the parties' endorsements.

For each ballot measure, I asked two factual knowledge questions. Unlike the cue-givers, these questions required respondents to recall details about the ballot measure, what Lupia (1994) calls encyclopedic knowledge. By including these factual knowledge questions, I can separate voters who have deep knowledge of a ballot measure from voters who only have knowledge of the information shortcut. Moreover, voters who cannot provide a correct answer to any of our knowledge questions are relatively uninformed. All of the questions I used to measure recognition of an information shortcut and factual knowledge are available in Appendix A. I also provide the ballot summary of each proposition in Appendix B.

### 2.5. Research Design and Methods

I use a post-test only blocking research design to test my hypothesis. I do this by first dividing my sample into two groups: a group that supports the policy position that a particular proposition promises to implement and another group that opposes the policy
position in favor of the status quo. I then use responses to the factual knowledge and information shortcut questions to estimate the effect of information on vote choice. The four blocks of individuals I estimate are: (1) voters who had neither factual knowledge of the proposition nor knowledge of the information shortcut; (2) voters who had knowledge of the information shortcut for a particular ballot measure; (3) voters who provided the correct answer to a true or false about a given proposition; and (4) voters who gave a correct answer to an open-ended factual knowledge question. I then use a logit regression and Monte Carlo simulations to evaluate whether knowledge-both factual knowledge and knowledge of the available shortcut-had an effect on vote choice. ${ }^{2}$

My model is an improvement from Lupia's (1994) research. Unlike Lupia, I do not assume that voters have preferences for one policy outcome over another. Instead, I asked respondents to report their relevant policy preferences in my surveys. Thus, I account for each voter's stated policy preference when I measure voting outcomes; this model assesses how well voters are able to make decisions that are in accordance with those stated preferences, an outcome I call consistent voting. ${ }^{3}$ Individuals practice consistent voting when they select a policy outcome that is in agreement with their stated policy preference (Gerber and Lupia 1999; Rabinowitz and MacDonald 1989). In essence, I view consistent votes as reasoned choices.

[^10]This conceptualization of voting is useful for three reasons. First, voters may prefer a policy, but can disagree with the proposed legislation for one reason or another (e.g., it was written poorly, implementation looks to be implausible, it does not contain oversight). Consistent voting allows this outcome to occur without focusing on the actual vote choice. Second, I treat policy preference as an important covariate that can improve my predictions about how each respondent votes. I accomplish this by interacting policy preferences with voter knowledge to predict vote choice; this model assumes that there should be some variance between preferences and votes because I cannot measure every variable. Doing so also affords me the ability to focus on how individuals translate their preferences into policy choices instead of concentrating on the quality of the outcome. Third, I can use simple measures of policy preferences to assess consistent voting in small-scale surveys such as mine. That is, collecting data to implement a correct voting algorithm is impractical for these surveys because it would require a burdensome amount of my resources.

I use a logit regression to model each respondent's vote choice on all six propositions with the following equation:

$$
\begin{gather*}
\operatorname{Pr}\left(y_{i z}=1\right)=1 /\left(1+e^{-n_{i z}}\right) \\
n_{i z}=\left(\beta_{0}+\beta_{1} F A V O R_{i z}+\beta_{2} O P E N_{i z}+\beta_{3} T F_{i z}+\beta_{4} C U E_{i z}+\beta_{5} F A V O R * O P E N_{i z}+\right.  \tag{1}\\
\left.\beta_{6} F A V O R * T F_{i z}+\beta_{7} F A V O R * C U E_{i z}+\beta_{8} X_{i z}\right)
\end{gather*}
$$

In Equation (1), $y_{i z}$ is respondent $i$ 's estimated probability of voting in favor (where " 1 " indicates a "yes" vote and " 0 " represents a "no" vote) of proposition $z$. The variable $n_{i z}$ defines the model that estimates $y_{i z}$. In the model, $F A V O R_{i z}$ is a dichotomous measure of
whether respondent $i$ supported the policy associated with initiative $z$, coded as " 1 " for "favor" and " 0 " for "oppose." $O P E N_{i z}$ is a dichotomous measure of respondent $i$ 's knowledge of proposition $z$, derived from the open-ended question related to proposition z. $T F_{i z}$ indicates whether respondent $i$ gave a correct answer to a true or false factual question about proposition z. $C U E_{i z}$ measures whether respondent $i$ was able to identify the correct stance of a prominent information cue-giver on proposition $z$.

To implement my blocking design, I include interactions between all knowledge variables and respondent $i$ 's policy preference denoted by FAVOR (Trochim and Donnelly 2007, Chs. 10 and 14). Including these interactions creates intercept changes for all measured sources of knowledge and the respondent's relevant policy preference. In essence, the interaction terms block off the two main groups-those who favor the policy and those who oppose the policy-and four subgroups based on types of knowledge that voters have. As a result, FAVOR $_{i z}$ estimates the coefficient for voters who have no knowledge of the ballot measure but favor the policy; $O P E N_{i z}$ measures the effect of knowing the correct answer to the open-ended factual knowledge questions for respondents who do not favor the policy; $T F_{i z}$ estimates the effect of knowing the correct answer to the true or false factual knowledge questions for voters who do not favor the policy; $C U E_{i z}$ evaluates the effect of knowing the information shortcut for voters who do not favor the policy. Likewise, the interaction terms-FAVOR $* O P E N_{i z}, F A V O R * T F_{i z}$, and $F A V O R * C U E_{i z}$-measure the effects of each type of knowledge for voters who favor the policy. The constant, then, estimates the effect of having no knowledge for voters
who do not favor the policy. The final term, $\boldsymbol{X}$, is a matrix of covariates that control for Age, Income, Education, Partisanship, Ideology, ${ }^{4}$ and general Political Knowledge. ${ }^{5}$

Propositions 94, 95, 96, and 97 require two minor alterations to Equation (1). Instead of an open-ended question, I used the multiple choice question format to measure whether respondents knew the number of additional slot machines the propositions would authorize. This is a negligible difference, since using a multiple choice question with four responses and a "don't know" option only increases the probability of guessing correctly from zero (for an open-ended question) to 25 percent. The second difference is that I alter the information shortcut question by adding some context to the variable. In particular, I make recognizing that Governor Schwarzenegger supported the referenda a "positive" cue: thus, $C U E_{i z}$ and $F A V O R * C U E_{i z}$ measure the effect of knowing Governor Schwarzenegger's position if the respondent gave him a positive job approval rating.

Proposition 8 also requires a small change to Equation (1) because I asked respondents about two information shortcuts: the Democratic and Republican Party endorsements. Thus, Proposition 8 has one open-ended knowledge question, one truefalse knowledge question, and two questions about the Democratic and Republican Parties' positions. This means that the regression equation for Proposition 8 includes an additional knowledge variable and an additional interaction with policy preference.

[^11]All regressions measure the effect of factual knowledge and information shortcuts on vote choice. These regressions hold constant the respondent's stated policy preference to test whether factual knowledge and information shortcuts improve the voter's ability to make choices that are consistent with their preferences. The results of these regressions are the subject of the next section.

### 2.6. Results

I discuss my results in three steps. First, I present summary statistics to assess how much voters know about the propositions on the ballot; I also consider source credibility (Iyengar and Valentino 2000; Druckman 2001a; 2001b) and the satisfaction of the conditions for persuasion (Lupia and McCubbins 1998). Second, I display the percent of voters who casted consistent votes. Third, I report regressions of Equation (1) for all six propositions. Finally, I calculate the probability of casting a consistent vote for each of the six propositions, and display these probabilities in simple figures.

To begin, I consider how much people knew about the propositions on the ballot. I present the results regarding voters' knowledge for Propositions 94, 95, 96 and 97 in Figure 2-1.

We can draw two conclusions from Figure 2-1. The first conclusion is that the electorate did not appear to know much about the specifics of these referenda, as only 17.1 percent of the respondents knew that these referenda would allow for an additional 17,000 new slot machines (this was the multiple-choice question). Moreover, only 30.6 percent knew that these referenda did not require full compliance with the California Environmental Quality Act (CEQA) (this was the true or false question). The second
conclusion is that voters appeared to know, quite overwhelmingly, that Governor Schwarzenegger (the main cue-giver that took a position on these propositions) supported these referenda (86.1 percent).


Figure 2-1 - Knowledge About Propositions 94, 95, 96, and 97

It is plausible that Governor Schwarzenegger was a persuasive cue-giver. First, knowledge of Governor Schwarzenegger's position was widespread amongst my respondents. This could mean that voters believed he was a credible source of information about what is good for the California budget (because he is the governor). Second, voters could have used Governor Schwarzenegger as a focal point to derive their own opinions about how to vote on the propositions because he is a prominent political figure. Those who disagree with Governor Schwarzenegger's fiscal policies might have
inferred from his position that they should vote against the propositions since agreement with the cue-giver is not a necessary condition for persuasion. Third, knowledge of Governor Schwarzenegger's position correlates positively, but weakly, with general political knowledge (.18). ${ }^{6}$ This means that knowledge of this cue is not a byproduct of being politically knowledgeable or aware. Finally, there is no significant correlation between knowledge of Schwarzenegger's position and knowledge about other aspects of the referenda. In fact, recognizing the cue and knowing that the referenda provided CEQA exemptions correlates at .01 , and being able to recall the number of new slot machines that the referenda authorized correlates at .05 . While voters could identify Governor Schwarzenegger's position, did voters use this information shortcut to make their decisions? I turn to this question later.

Next, consider Figure 2-2. For Proposition 4, 55.1 percent of voters knew that passing the initiative would require physicians to notify the parent or legal guardian 48 hours before an unemancipated minor could receive an abortion (this was the open-ended question). Moreover, only 27 percent of the respondents appeared to know that Proposition 4 did not require parental consent (this was the true or false question). In agreement with Lupia's (1994) findings, 48.2 percent could identify the cue that Planned Parenthood did not support Proposition 4.

[^12]

Figure 2-2 - Knowledge About Proposition 4

Many voters did not recognize Planned Parenthood's position. Yet, the organization may have been a viable information shortcut for those voters who could identify their position. For instance, some voters might have viewed Planned Parenthood as a credible source of information about Proposition 4, since they provide low-cost to no-cost health services, including abortions. Moreover, Planned Parenthood takes a consistent pro-choice position. It is therefore reasonable that an individual could infer her own preference about a ballot measure based on Planned Parenthood's recommendation.

Similar to above, there is a mild correlation between having general political knowledge and identifying Planned Parenthood's position (.27). Again, being able to identify the cue's recommendation is not a byproduct of being politically informed.

Finally, there appears to be no correlation between knowing Planned Parenthood's position and having factual knowledge about other aspects of the initiative. Among my sample of voters, identifying Planned Parenthood's position correlates with knowing that the initiative required notification 48 hours before an abortion at .06 , and knowing that the initiative did not require consent at .07 . Overall, voters recognized Planned Parenthood's position less than 50 percent of the time. Moreover, having factual knowledge of the initiative and possessing an information shortcut appear to be unrelated. Thus, Planned Parenthood appears to be an information shortcut that is independent of my main covariates and other sources of information. While knowledge of their position was not widespread amongst my sample, voters who did recognize Planned Parenthood's voting recommendation could use this information shortcut to make a reasoned choice.

Finally, Figure 2-3 shows that Proposition 8 enjoyed widespread recognition. It is clear, however, that voters understood the crux of the initiative but not the details. For instance, only 49.2 percent of the respondents knew that the initiative, as a constitutional amendment, required a simple majority of votes to pass (this was the open-ended question). Moreover, many voters did not know that the Democratic Party of California opposed (54.8 percent correct) and that the Republican Party of California supported the measure ( 52.8 percent correct). Conversely, 91.2 percent of voters knew that Proposition 8 would limit marriage to be between one man and one woman, thereby overturning a recent California Supreme Court decision (this was the true or false question). This finding suggests that voters knew the issue at the heart of the proposition, but they were unaware of the salient cues and the institutional threshold required to pass the initiative as a constitutional amendment.


Figure 2-3 - Knowledge About Proposition 8

Around 50 percent of my sample knew the positions of the Democratic and Republican Parties. Political parties provide trustworthy cues as they share a common interest with their members. Further, political parties send out information to guide voters in their choices for upcoming elections via slate mailers. Parties also provide information about their positions on their websites and in the voter information guide. Moreover, political parties are policy experts, and they therefore satisfy the knowledgeable condition. While limited, these information shortcuts may be useful for the voters who recognized the parties' positions.

As before, knowledge of Proposition 8 's cues appeared to be unrelated to general political knowledge and factual knowledge of the initiative. There is a weak correlation between knowledge of the parties' positions and general political knowledge (for

Democrats it was .20 ; for Republicans it was .08 ). This suggests that knowledge of a cue is independent of political knowledge. Voters' factual knowledge of Proposition 8 and knowledge of the parties' positions are also unrelated. For instance, knowing that Proposition 8 required a majority of votes to pass correlates with knowing the Democratic Party's position and the Republican Party's position at .15 and .06 , respectively. Likewise, individuals who knew that Proposition 8 would overturn a decision by the California Supreme Court decision did not appear to know the political parties' positions at a high rate (both the Democratic Party and Republican Party's position correlates at .13).

Political parties do satisfy the Lupia and McCubbins conditions for persuasion. Still, their usefulness may be of limited effect. For example, most voters may have already developed strong attitudes about same-sex marriage because it is a contentious issue. Moreover, the $\$ 70$ million campaign surrounding Proposition 8 led to a saturated information environment. It seems reasonable, therefore, that the political parties could not provide much in the way of an information shortcut for voters.

Overall, I can interpret Figures 1, 2, and 3 to mean that voters did tend to know something about the ballot propositions they faced, but their knowledge varied from proposition to proposition. Moreover, many voters did not recognize the relevant cues for some propositions. This means that information shortcuts can help only a subset of the population.

I turn now to test whether those individuals who identified the information shortcuts used them to arrive at a decision. To explore this, I calculate the raw number of
consistent votes, estimate a logit regression for each proposition based on Equation (1), and compute Monte Carlo simulations to explore the magnitude of our regressions.

I expect voters to make decisions that are consistent with their preferences. As Figure 2-4 shows, individuals do not always translate their policy preferences into a consistent vote. In fact, voters only made consistent voting decisions on the Indian gaming referenda about 80 percent of the time. For Propositions 4 and 8 , voters made inconsistent decisions about 7 percent and 14 percent of the time, respectively. It is important to establish that preferences do not predict vote choices perfectly; if they did, there would be no reason to investigate voters' choices. By controlling for policy preference, I am analyzing whether information shortcuts helped individuals make more consistent votes.


Figure 2-4 - Percent of Consistent Votes, By Proposition

Table 2-1 contains the regression results for the Indian gaming referenda (Propositions 94, 95, 96, and 97) on the February ballot. The most striking result in Table 1 is that all of the knowledge variables and their interactions are statistically insignificant. That is, no information of any kind-factual or shortcut-predicts how voters casted their vote after accounting for their stated policy preference. What I find in this regression is that voters tended to cast voters that were consistent with their stated policy preference. The only other pattern present is that more educated voters tended to vote "no" (although all four propositions passed). The important finding is that knowledge about the initiatives did not seem to matter. Indeed, voters who had factual knowledge, knowledge of a voting cue, and no knowledge all made similar decisions. Therefore, I must reject my hypothesis that information shortcuts help voters to make reasoned decisions on these ballot measures.

Table 2-1 - Logit Regression Results for Referenda Authorizing Additional Gaming

|  | Prop. 94 | Prop. 95 | Prop. 96 | Prop. 97 |
| :--- | :--- | :--- | :--- | :--- |
| FAVOR | $2.15^{* *}$ | $2.30^{* *}$ | $2.28^{* *}$ | $2.32^{* *}$ |
|  | $(0.53)$ | $(0.54)$ | $(0.53)$ | $(0.54)$ |
| OPEN (Number of Slots) ${ }^{7}$ | -0.17 | -0.22 | -0.24 | -0.23 |
|  | $(0.62)$ | $(0.61)$ | $(0.61)$ | $(0.61)$ |
| TF (CEQA Exemptions) | -0.68 | -0.51 | -0.51 | -0.53 |
|  | $(0.46)$ | $(0.45)$ | $(0.45)$ | $(0.45)$ |
| CUE (Schwarzenegger Supported) | 0.27 | 0.40 | 0.39 | 0.43 |
|  | $(0.42)$ | $(0.42)$ | $(0.42)$ | $(0.42)$ |
| FAVOR*OPEN | 0.49 | 0.47 | 0.63 | 0.39 |
|  | $(0.86)$ | $(0.86)$ | $(0.82)$ | $(0.86)$ |
| FAVOR*TF | 0.39 | 0.17 | -0.20 | 0.14 |
|  | $(0.66)$ | $(0.66)$ | $(0.62)$ | $(0.66)$ |
| FAVOR*CUE | 1.15 | 1.09 | 0.71 | 1.13 |
|  | $(0.60)$ | $(0.61)$ | $(0.58)$ | $(0.61)$ |
| Democrat | -0.39 | -0.36 | -0.23 | -0.35 |
|  | $(0.50)$ | $(0.50)$ | $(0.48)$ | $(0.50)$ |
| Republican | -0.62 | -0.57 | -0.57 | -0.45 |
|  | $(0.54)$ | $(0.53)$ | $(0.51)$ | $(0.54)$ |
| Age | 0.06 | 0.06 | 0.00 | 0.07 |
|  | $(0.10)$ | $(0.10)$ | $(0.09)$ | $(0.10)$ |
| Education | -0.34 | $-0.42^{*}$ | $-0.39 *$ | $-0.40^{*}$ |
|  | $(0.19)$ | $(0.19)$ | $(0.18)$ | $(0.19)$ |
| Income | 0.21 | 0.19 | 0.17 | 0.16 |
| Female | $(0.15)$ | $(0.15)$ | $(0.14)$ | $(0.15)$ |
| General Political Knowledge | 0.42 | 0.41 | 0.25 | 0.44 |
|  | $(0.32)$ | $(0.32)$ | $(0.30)$ | $(0.32)$ |
| Constant | -0.61 | -0.67 | -0.95 | -0.56 |
|  | $(0.63)$ | $(0.64)$ | $(0.62)$ | $(0.65)$ |
| Pseudo-R ${ }^{2}$ | 0.17 | 0.47 | 0.85 | 0.30 |
| N | $(1.00)$ | $(1.01)$ | $(0.98)$ | $(1.02)$ |
|  | 0.367 | 0.371 | 0.326 | 0.376 |
|  | 354 | 353 | 353 | 351 |

Notes: Logit Regression of Vote Choice ( $0=$ Vote Against Proposition, $1=$ Vote For Proposition). Standard errors are in parentheses. ${ }^{*} \mathrm{p}<0.05,{ }^{* *} \mathrm{p}<0.01$

Next, Table 2-2 presents the logit regression results for Proposition 4 from the
November ballot. Table 2-2 exhibits some mild evidence that information shortcuts

[^13]helped voters make reasoned choices. As was the case with the Indian gaming referenda, voters' policy preferences played a larger role in helping voters decide. Here, however, I find that if a voter knew the cue-that Planned Parenthood opposed the initiative-and she favored the policy (requiring parental notification), then she was significantly more likely to vote "yes" on Proposition $4(F A V O R * C U E)$. Additionally, voters who selfidentified as conservative were also significantly more likely to vote "yes." In sum, voters who favored notification laws and knew the shortcut utilized the Planned Parenthood cue to arrive at a reasoned choice.

Support for my hypothesis is limited because knowing that Planned Parenthood opposed the initiative did not help those individuals who opposed notification laws. ${ }^{8}$ This finding is consistent with Lupia and McCubbins, who note that oftentimes the most persuasive cue-givers are those with whom you disagree. Furthermore, the support I do find is limited to a subset of the 46 percent of our respondents who knew Planned Parenthood's position. Thus far, voters have used cues in only one out of ten opportunities.

[^14]Table 2-2 - Logit Regression Results for Proposition 4, Initiative to Require 48 Hour Notification of Abortion for Minors

| FAVOR | $4.73^{* *}$ |
| :--- | :--- |
| OPEN (48 Hour Notification) | $(0.55)$ |
| TF (Notification Only, No Consent) | 0.45 |
|  | $(0.51)$ |
| CUE (Planned Parenthood Opposed) | 0.21 |
|  | $(0.55)$ |
| FAVOR*OPEN | -1.12 |
|  | $(0.59)$ |
| FAVOR*TF | -0.58 |
|  | $(0.64)$ |
| FAVOR*CUE | 0.16 |
|  | $(0.72)$ |
| Democrat | $1.63^{*}$ |
|  | $(0.71)$ |
| Republican | -0.45 |
|  | $(0.48)$ |
| Liberal | 0.29 |
|  | $(0.53)$ |
| Conservative | 0.15 |
|  | $(0.37)$ |
| Age | $0.83^{*}$ |
|  | $(0.41)$ |
| Education | -0.03 |
| Income | $(0.11)$ |
| Female | -0.19 |
| General Political Knowledge | $(0.15)$ |
| Constant | 0.17 |
|  | $(0.15)$ |
| Pseudo-R ${ }^{2}$ | 0.13 |
| N | $(0.31)$ |

Notes: Logit Regression of Vote Choice ( $0=$ Vote Against Proposition, $1=$ Vote For Proposition). Standard errors are in parentheses. ${ }^{*} \mathrm{p}<0.05,{ }^{* *} \mathrm{p}<0.01$

The regression results for Proposition 8 are available in Table 2-3. Similar to Propositions 94 through 97, information does not seem to affect voters' decisions on Proposition 8. In other words, once I account for voters' policy preferences, I find that voters do not use their factual knowledge of the proposition or knowledge of a voting cue to make a reasoned choice. Instead, individuals made their voting decisions based on their policy preferences and their ideology; as such, I must reject my hypothesis.

As noted above, Proposition 8 may be a special case. Because Proposition 8 was so well known, voters may not have needed additional information beyond their own preferences to make a decision. As Lupia and McCubbins (1998) note, if voters are certain of their decision, they do not need cue-givers to persuade them. This implies that voters, even if they were aware of a cue-giver's position, would not need to use an information shortcut.

Table 2-3 - Logit Regression Results for Proposition 8, Initiative to Limit Marriage

| FAVOR | 2.81** |
| :---: | :---: |
|  | (0.87) |
| OPEN (Majority Required to Approve) | 0.03 |
|  | (0.40) |
| TF (Overturned CA Supreme Court) | 0.35 |
|  | (0.72) |
| $C U E_{D}$ (CA Democratic Party Opposed) | -0.07 |
|  | (0.44) |
| $C U E_{R}($ CA Republican Party Opposed) | -0.16 |
|  | (0.44) |
| $F A V O R * O P E N$ | -0.36 |
|  | (0.53) |
| FAVOR*TF | 0.34 |
|  | (0.89) |
| $F A V O R * C U E_{D}$ | 0.45 |
|  | (0.58) |
| $F A V O R * C U E_{R}$ | -0.23 |
|  | (0.60) |
| Democrat | -0.35 |
|  | (0.40) |
| Republican | 0.63 |
|  | (0.42) |
| Liberal | -1.53** |
|  | (0.35) |
| Conservative | 1.14** |
|  | (0.33) |
| Age | 0.21* |
|  | (0.09) |
| Education | -0.30* |
|  | (0.14) |
| Income | -0.29* |
|  | (0.14) |
| Female | -0.15 |
|  | (0.27) |
| General Political Knowledge | -0.10 |
|  | (0.56) |
| Constant | -0.96 |
|  | (0.92) |
| Pseudo-R ${ }^{2}$ | 0.544 |
| $N$ | 763 |

Notes: Logit Regression of Vote Choice ( $0=$ Vote Against Proposition, $1=$ Vote For
Proposition). Standard errors are in parentheses. * $\mathrm{p}<0.05$, ** $\mathrm{p}<0.01$

To provide context to the logit coefficients presented in the previous three tables, I calculated voting probabilities for all initiatives using Tomz, Wittenberg, and King's (2001) CLARIFY program for Stata (see also King, Tomz and Wittenberg 2000). I generated these probabilities by changing the respondent's level of informationseparated by policy preference-holding all of the covariates at their mean value. In particular, I estimated the effects of having full information, complete factual knowledge in isolation, knowledge of the voting cue in isolation, and lacking knowledge for both respondents who favored and opposed the policy.

Figure 2-5 presents the predictions for Proposition 94 (which is representative of the Indian gaming referenda) for voters who favored additional gaming. As the figure shows, someone who had 1) full knowledge casted a consistent vote 93.2 percent of the time; 2) knowledge of both facts casted a consistent vote 83.8 percent of the time; 3) knowledge of the cue (Governor Schwarzenegger supported) casted a consistent vote 89.1 percent of the time; and 4) no knowledge casted a consistent vote 73.3 percent of the time. As the error bars indicate, these predictions are not statistically different, which is consistent with my regression results: once I account for policy preference, voters do not appear to use their knowledge of an information shortcut to make reasoned decisions when compared to voters who had factual knowledge or lacked knowledge.


Figure 2-5 - Probability of Casting a Consistent Vote on Proposition 94, Favored More Gaming

Figure 2-6 displays the predictions for voters who opposed additional slot machines: voters casted a consistent vote 82.7 percent of the time if they had full knowledge, 86 percent of the time if they had knowledge of both facts in isolation, 69.9 percent of the time if they had knowledge of the cue in isolation, and 74.5 percent of the time if they had no knowledge. Similar to Figure 2-5, these predictions are not statistically different. This suggests that voters did not use their knowledge of an information shortcut to make a reasoned choice when compared to voters who had factual knowledge or no knowledge.


Figure 2-6 - Probability of Casting a Consistent Vote on Proposition 94, Opposed More Gaming

Similar to above, the predicted probabilities of casting a consistent vote on Proposition 4 demonstrate that knowledge of the ballot measure, including knowledge of the relevant cue-giver, appeared to have no effect on vote choice. As Figure 2-7 shows, voters who had full knowledge and favored notification laws made a consistent choice 92 percent of the time. Moreover, voters who knew both facts and favored notification laws recorded a consistent vote about 74 percent of the time. Voters who had knowledge of the cue only and favored notification laws registered a consistent vote about 95.6 percent of the time. Finally, voters who knew nothing about the proposition but favored abortion notification had an 83.7 percent probability of casting a consistent vote. As before, however, these predictions are not statistically different, despite the fact that knowing the
information shortcut was statistically significant in the regression analysis of Proposition 4 (presented in Table 2-2). ${ }^{9}$


Figure 2-7 - Probability of Casting a Consistent Vote on Proposition 4, Favored Notification Laws

Figure 2-8 contains the probabilities of casting a consistent vote on Proposition 4 for individuals who opposed notification laws. Again, knowledge appeared to have no effect on vote choice: voters who had full knowledge ( 96.5 percent consistent voting), knowledge of both facts ( 90.6 percent consistent voting), knowledge of the cue only (98.2 percent consistent voting), and no knowledge (95.1 percent consistent voting) all made statistically equivalent decisions. Figure 2-8, then, offers further support for the

[^15]conclusion that voters who had knowledge of an information shortcut-when compared voters who had factual knowledge or no knowledge-did not utilize the cue to help them make a reasoned choice.


Figure 2-8 - Probability of Casting a Consistent Vote on Proposition 4, Opposed Notification Laws

My final ballot measure is Proposition 8, a constitutional initiative to limit marriage. I present the probabilities of casting a consistent vote for individuals who favored limiting marriage in Figure 2-9. Proposition 8's predictions differ from the previous predictions. In particular, I calculated the effect of knowing both cues (the Democratic and Republican Party endorsements) and each cue independently. This results in six predictions for Proposition 8. As listed in Figure 2-9, voters who had full knowledge (knowledge of both facts and both endorsements) and favored limiting
marriage made a consistent "yes" vote 50.3 percent of the time. Likewise, voters who had knowledge of both facts and knowledge of both information shortcuts in isolation casted a consistent vote 46 percent and 50.4 percent of the time, respectively. Similarly, voters who knew the Democratic cue only recorded a consistent vote 56.2 percent of the time, and voters who knew the Republican cue only voted in accordance with their policy preference 40.3 percent of the time. Finally, voters who knew nothing but favored limiting marriage had a 45.6 percent chance of casting a consistent vote. As before, Figure 2-9 does not provide any evidence to support my hypothesis.


Figure 2-9 - Probability of Casting a Consistent Vote on Proposition 8, Favored Limiting Marriage

Finally, Figure 2-10 presents the predicted probabilities for voters who opposed limiting marriage. Similar to voters who favored limiting marriage, knowledge appeared
to have no effect on voters who opposed limiting marriage: voters who had full knowledge ( 94.2 percent consistent voting), knowledge of both facts ( 94.2 percent consistent voting), knowledge of both cues ( 94.8 percent consistent voting), knowledge of the Democratic cue only ( 94.2 percent consistent voting), knowledge of the Republican cue only ( 94.4 percent consistent voting), and no knowledge ( 94 percent consistent voting) all made decisions that were statistically indistinguishable from each other. In sum, knowledge of Proposition 8's relevant information shortcuts did not influence an individual's vote choice when compared to other types of knowledge (or lack thereof).


Figure 2-10 - Probability of Casting a Consistent Vote on Proposition 8, Opposed Limiting Marriage

My results do not offer strong support for my hypothesis. Voters did not appear to make much use of information shortcuts to help them make decisions consistent with their stated policy preferences. Thus, I must reject my hypothesis. Next, I offer a brief discussion of what these results mean for the study of information in direct democracy and political science.

### 2.7. Discussion

My results show that voters often fail to recognize the relevant information shortcut for most ballot measures. Somewhat surprisingly, my findings reveal that the majority of voters who knew the information shortcuts chose not to use them to arrive at a decision. In sum, this chapter calls into question how much scholars should assume that voters use information shortcuts to make decisions.

Many scholars worry about the average citizen's ability to make democratic decisions (e.g., Converse 1964; Somin 1998). Others argue that voters use information shortcuts in lieu of full information to arrive at reasoned decisions (e.g., Lupia 1994; Lupia and McCubbins 1998; Popkin 1994). Information shortcuts, however, are not without their limits. As Lupia and McCubbins (1998) show, information shortcuts must be trustworthy, and they must have knowledge that an individual desires in order for the shortcut to be persuasive. Still, even if the cue-givers satisfy the conditions for persuasion, voters must choose to utilize them.

Elections for national office have institutionalized information shortcuts (e.g., party and incumbency labels); these shortcuts often satisfy the conditions for persuasion. Moreover, voters receive a reminder to use the information shortcuts in the voting booth
because these shortcuts appear on the ballot, at the critical point where individuals mark their choice. Initiative and referendum elections do not have institutionalized information shortcuts. Instead, a ballot measure's relevant information shortcut must meet the conditions for persuasion before the voter enters the voting booth. The threshold for information shortcuts to be persuasive in direct democracy is therefore higher. While information shortcuts may persuade voters, the ballot does not remind voters to use them when they consider initiatives or referenda.

My results support the conclusion that voters do not utilize information shortcuts in many elections. In my survey, voters were only able to identify the correct position taken by three out of the four cue-givers about 50 percent of the time. These results agree with previous research that found voters do not often know many of the information shortcuts (e.g., Lupia 1994). In most elections, then, many voters are not aware of a ballot measure's cue-givers.

The results I present diverge from the previous research by showing that voters do not appear to use information shortcuts to make their decisions on ballot propositions. In fact, respondents who knew the information shortcuts appeared to use them only 7 percent of the time (one out of fourteen possible uses of information shortcuts in our regressions). That is, the voters who did know the information shortcuts chose not to use them. This result is troubling for scholarship that argues low-information voters can overcome their knowledge deficiencies by relying on prominent endorsers and opponents of ballot measures to make informed decisions in initiative and referendum elections. In essence, my results suggest that scholars need to adjust how much they assume that voters use information shortcuts.

My findings, however, do not imply that information shortcuts are ineffective. In fact, Table 2-2 shows that some voters utilized Planned Parenthood's endorsement to arrive at a reasoned choice on Proposition 4. What my results do suggest is that the use of cues is limited in direct democracy. Moreover, voters seem to rely on their baseline policy preferences to make decisions. This means that other factors-not informationmust be influencing voters. Despite their infrequent use, information shortcuts remain a valuable tool that voters can use to make reasoned decisions.

How do we increase the use of information shortcuts in direct democracy? The answer, I argue, is a simple policy change: institutionalize cues by including information about a proposition's prominent endorsers and opponents on the actual ballot. Adopting this policy would be analogous to having party identification and incumbency labels that appear on the ballot for many elected offices. By providing a candidate's party label and incumbency status, voters can make inferences about a candidate based on their own evaluations of that candidate's political party and past job performance (see, e.g., Fiorina 1981; MacKuen, Erikson, and Stimson 1989). Voters can perform these evaluations because they have the information shortcuts available to them on the ballot when they make their choice. Including relevant endorsers and opponents on the ballot for initiatives and referenda would thus allow voters to use their evaluations of those cueproviders to make more informed decisions when they mark their choice. In sum, including cues on the ballot for every proposition would increase awareness of the relevant endorsers and opponents for individuals who were not aware of them before Election Day, and it would remind knowledgeable voters to utilize the cues when they
mark their choice. Together, this should increase the likelihood that voters would use information shortcuts to make informed decisions.

Direct democracy allows voters to make policy decisions that are independent of their elected representatives. Yet, my results demonstrate that we do not know enough about how voters make decisions on initiatives and referenda. I need to conduct additional research to investigate how individuals learn about the propositions, where they learn about them, and when they learn it. To accomplish this I plan to conduct a series of panel studies that assess what voters learn about initiatives and referenda over time. While scholars know much about how the American voter chooses candidates, we know less about how they choose policies. My findings help build a foundation for a research agenda that will close this gap.

### 2.8. Appendix A - Question Wording for Knowledge Questions

Propositions 94-97:

1) True or False: Propositions $94,95,96$, and 97 do not require complete adherence to the California Environmental Quality Act (True)
2) Multiple Choice: How many more slot machines would Propositions 94, 95, 96, and

97 allow if they all succeed? (1) 25,000 , (2) 17,000 , (3) 11,000 , (4) 4,000 ? ( 17,000 )
3) Do you know if Arnold Schwarzenegger supported, opposed or took no position on the Indian Gaming referenda (Propositions 94, 95, 96, and 97)? (Supported) (CUE QUESTION)

## Proposition 4:

1) Open Ended: Under Proposition 4, do you know the number of hours before their child receives an abortion that a parent must be notified? (48 hours)
2) True or False: Proposition 4 requires minors to get consent of a parent before having an abortion (False)
3) Do you happen to know if Planned Parenthood supported, opposed or took no position on Proposition 4 (the one about parental notification for an abortion)? (Opposed) (CUE QUESTION)

## Proposition 8:

1) Open Ended: As a constitutional amendment, what percent of the vote is required to pass Proposition 8, eliminating same-sex marriage? (Majority)
2) True or False: Proposition 8 would limit marriage, overturning a recent California Supreme Court decision (True)
3) Do you happen to know if the Democratic Party supported, opposed or took no position on Proposition 8 (the one about same-sex marriage)? (Opposed) (CUE QUESTION)
4) Do you happen to know if the Republican Party supported, opposed or took no position on Proposition 8 (the one about same-sex marriage)? (Supported) (CUE QUESTION)

### 2.9. Appendix B - Text of Propositions from the Ballot

February 5, 2008 - Presidential Primary:
Proposition 94
Referendum Amendment to Indian Gaming Compact
"Yes" Vote approves, and "No" Vote rejects, a law that ratifies an amendment to existing gaming compact between the state and Pechanga Band of Luiseño Mission Indians.

## Proposition 95

Referendum Amendment to Indian Gaming Compact
"Yes" Vote approves, and "No" Vote rejects, a law that ratifies an amendment to existing gaming compact between the state and Morongo Band of Mission Indians.

Proposition 96
Referendum Amendment to Indian Gaming Compact
"Yes" Vote approves, and "No" Vote rejects, a law that ratifies an amendment to existing gaming compact between the state and Sycuan Band of the Kumeyaay Nation.

Proposition 97
Referendum Amendment to Indian Gaming Compact
"Yes" Vote approves, and "No" Vote rejects, a law that ratifies an amendment to
existing gaming compact between the state and Agua Caliente Band of Cahuilla
Indians.

November 4, 2008 - General Election:
Proposition 4
Waiting Period and Parental Notification before Termination of Minor's Pregnancy Initiative Constitutional Amendment.
Changes California Constitution, prohibiting abortion for unemancipated minor until 48 hours after physician notifies minor's parent, legal guardian, or, in limited cases, substitute adult relative. Provides an exception for medical emergency or parental waiver.

Proposition 8
Eliminates Right of Same-Sex Couples to Marry.
Initiative Constitutional Amendment.

Changes California Constitution to eliminate the right of same-sex couples to marry. Provides that only marriage between a man and a woman is valid or recognized in California.

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## Chapter 3 - A Tale of Two Initiatives: How Campaigns Help Voters Learn in Direct Democracy

### 3.1. Abstract

A campaign, by definition, entails a contest. Indeed, most initiative and referendum elections have campaigns. That is, they have proponents and opponents. The proponents hope their policy will attract support from a majority of voters. Opponents prefer the status quo policy and try to convince voters that the initiative or referendum is somehow defective. What happens when a ballot measure becomes an orphan and there is no campaign? California's Proposition 91 provides such a scenario. The initiative's proponents changed their minds. They urged the electorate to reject the initiative and they closed their campaign doors more than two months before the election; there was no campaign. As a result, Proposition 91 offers a unique opportunity to study what voters learn about an initiative when there are no campaign effects. Using an election survey, I assess what voters exiting the polling booth learned about Proposition 91 and compare it to what they learned about Proposition 93, a second measure on the same ballot. My results suggest that-at least in the case of Propositions 91 and 93-campaigns, however contentious or confusing they may be, do help voters learn.

### 3.2. Introduction

A primal debate in political science focuses on whether political campaigns matter. As Lazarsfeld, Berelson, and Gaudet asked in The People's Choice, "[W]hat does the campaign do that would not have been done by the mere passage of time?" (1944, 101). The early research on the subject found that most voters were impervious to persuasion from presidential political campaigns (Berelson, Lazarsfeld, and McPhee 1954; Lazarsfeld, Berelson, and Gaudet 1944; Campbell, Converse, Miller, and Stokes 1960). While the pioneering studies found that there was significant potential for campaign to influence mass public opinion, the actual campaign effects they measured were, in the aggregate, "minimal."

If campaigns do not influence voters, then why do political hopefuls spend so much of their campaign contributions hiring and following the advice of campaign consultants who promise victory? Recent research has shown the potential of campaigns to influence voters is palpable. For example, scholars have demonstrated that the news media wield the power to prime and frame issues (e.g., Iyengar 1991; Iyengar and Kinder 1987), television ads can change voters' evaluations of candidates (e.g., Ansolabehere and Iyengar 1995), and that campaigns can inform voters (e.g., Alvarez 1997; Lupia and McCubbins 1998; Popkin 1994; Zaller 1992). Although aggregate campaign effects may be small (e.g., Erikson and Wlezien 1999; Gelman and King 1993), many individual voters are susceptible to influence.

Campaign effects in direct democracy, however, remain understudied. Moreover, the extant research has focused on voters' awareness of ballot measures and how
campaign spending and news media coverage affects awareness (e.g., Bowler and Donovan 1994; 1998; 2002; Nicholson 2003; Pelika 2008). Similarly, other studies have shown that states with direct democracy, on average, tend to have more informed voters (e.g., Smith and Tolbert 2004; Tolbert and Smith 2005). Related to this chapter, Iyengar, Lowenstein, and Masket (2001) find that slate mailers can influence voters' decisions. Yet, none of these studies attempt to measure what voters actually learn from a ballot measure's campaign.

This chapter takes a step toward estimating whether and how much campaigns educate voters about initiatives. In particular, I present results from an election survey that asked voters factual knowledge questions about two ballot measures on the same ballot: Propositions 91 and 93. In addition to being one of the few studies that attempts to measure what voters actually know about initiatives on Election Day (see Burnett, Garrett, and McCubbins 2010), Proposition 91—orphaned by its authors-presents a unique opportunity to examine what voters learned about an initiative when there was no accompanying political campaign. By contrast, a significant and vibrant campaign surrounded Proposition 93. I use similarly constructed survey instruments to measure knowledge of both initiatives. I then compare what my respondents knew about both initiatives for each question; I also compare the average number of correct responses for both initiatives. My results suggest that voters learned more about Proposition 93, the initiative that had an active, and perhaps even confusing, campaign.

### 3.3. Background

Candidates for political office believe campaigns matter. Campaign consultants make careers out of convincing their clients that campaigns influence voters' decisions. These consultants engage in two activities: 1) measuring what voters are thinking and want from their representatives and 2) crafting a campaign strategy to convince voters that their candidate is the right choice. Indeed, consultants gain professional prestige from delivering victory to their clients. As Vavreck (2009) notes, candidates also think campaigns matter: in 2008, the two presidential candidates used a sizeable portion of their nearly $\$ 1$ billion in campaign contributions to pay campaign consultants and polling firms. Candidates, and especially presidential candidates, need only to consider the 2000 and 2004 presidential elections to understand that-while campaigns may not be responsible for large shifts in vote choice-every persuadable vote counts.

In fact, the original research on campaign effects suggests that voters are largely impervious to campaigns. In The People's Choice (1948), for example, Lazarsfeld, Berelson, and Gaudet conclude that the news media-namely newspapers and radiohave very little effect on voters' evaluations of candidates. Later, Berelson, Lazarsfeld, and McPhee in Voting (1954) find that the vast majority of voters do not change their minds. When Campbell, Converse, Miller, and Stokes published The American Voter (1960), it became clear that most voters engage the political system by using their partisan attachment as a filter. Partisanship is relatively static, which explains why most
voters choose to cast their vote in favor of their party's presidential candidate. The early research thus implies that campaigns have a "minimal effect" on voters. ${ }^{1}$

Later research on presidential campaigns came to differ on the importance of candidates' campaigns. By applying a spatial model to democratic competition (Downs 1957), many scholars have focused on economic variables, which downplays the potential for campaign effects. Fiorina (1981; but see also Key 1966) posits that voters have intimate knowledge of their own personal economic situation. With this information, they can evaluate the performance of the incumbent or the incumbent's party retrospectively. The theory seems plausible, as aggregate economic variables are excellent predictors of campaigns (e.g., Fair 1978; Erikson 1989; Kinder and Kiewiet 1981; Tufte 1978). If the economy matters, however, then campaigns have a significant opportunity to inform voters about how good, or bad, things are (Gelman and King 1993; also see Arceneaux 2005).

Research has also examined on the specific avenues that campaigns can use to influence voters. A series of studies have found that campaign contact and mobilization efforts can increase turnout (e.g., Gerber and Green 2000; 2001; Gosnell 1927; Rosenstone and Hansen 1993; Verba, Schlozman, and Brady (1995). The news mediawhich candidates try to influence (e.g., Cook 2005; Patterson 1993)—can alter what voters think is important (priming); they can also adjust how voters view an issue (framing) (e.g., Druckman 2004; Druckman and Holmes 2004; Iyengar and Kinder 1987; Iyengar 1991; for a review see Chong and Druckman 2007). Research has shown that

[^16]political advertising, a direct activity of campaigns, can affect turnout (e.g., Ansolabehere and Iyengar 1995; Finkel and Geer 1998). ${ }^{2}$

The preponderance of research on campaign effects has concentrated on presidential elections. We know far less, however, about how voters interact with ballot measure campaigns in direct democracy. Bowler and Donovan (1994) show that voters' opinions about an initiative become less volatile as the campaign matures. They find that voters are not changing their minds, per se; instead, voters solidify an opinion about a ballot measure when Election Day draws near and they become aware of the issue. Similarly, Bowler and Donovan (1998; 2002) find that campaigns-in particular, the amount of money spent and the frequency of television advertisements-do more to educate voters that a specific initiative or referendum exists. In a similar study, Pelika (2008) discovers that a greater amount of newspaper coverage of a ballot measure has a significant and positive effect on voter awareness. A related strand of research suggests that voters learn more about politics when their state has the initiative (e.g., Smith and Tolbert 2004; Tolbert and Smith 2005). Their results suggest that initiatives help inspire voters to learn more about politics because initiatives allow voters to participate in the democratic process directly.

Very little research has examined whether campaigns have a quantifiable effect on actual voting behavior or facilitate learning. Bowler and Donovan (1998) fail to find a relationship between the amount of money spent on a campaign and voting decisions. They conclude, however, that campaigns do increase awareness, which, in turn, increases

[^17]the likelihood that voters will vote "no." Iyengar, Lowenstein, and Masket (2001) find that slate mailers-campaign material that makes suggestions to voters about how they should vote-can influence voters when an individual is unsure of the best choice. ${ }^{3}$ Lupia (1994) shows that voters who learn the endorsements of prominent proponents and opponents from the campaign-in his case, it was the endorsements of lawyers and insurance companies - could use that information to cast a competent vote. Similarly, Burnett, Garrett, and McCubbins (2010) have observed that voters learn very little about most ballot measures, and, in contrast to Lupia, most voters do not use their knowledge of a voting cue to make decisions.

The task of this chapter is to estimate whether voters learned more from an initiative that had a vibrant political campaign when compared to an orphaned initiative that had no political campaign. That is, I wish to explore whether campaigns help educate voters about ballot measures. In what follows, I first provide a brief description of both Propositions 91 and 93, including some background information on their respective campaigns. Second, I present my hypothesis and research design. Third, I describe my survey and data collection methods. Fourth, I present my results. The final section offers a brief discussion and conclusion.

### 3.4. Proposition 91 and 93

An initiative can reach the ballot in many ways. Proposition 91's path, however, was atypical. The issue at the heart of Proposition 91 is not complicated: consumer groups sought to tie politicians' hands so they could not re-appropriate the taxes collected

[^18]from a statewide gas surcharge that was intended for road repairs and improvements. For years, Sacramento had used the Transportation Investment Fund to ameliorate budget shortfalls and pursue projects that were unrelated to the original intent of the gas tax. The initiative's authors, however, never intended to see their brainchild reach the ballot. Instead, the authors wanted the initiative to be "the gun behind the door" (Gerber 1996; Lascher, Hagen, and Rochlin 1996). Their threat to pursue a constitutional amendment was successful: extensive bargaining with the legislature brought about the creation and eventual passage of Proposition 1A-a constitutional legislative referendum-that largely accomplished what the authors had set out to achieve.

During the course of bargaining, Proposition 91's authors had submitted signatures to the Secretary of State. They submitted enough signatures, in fact, to qualify for the February 5, 2008 ballot. With victory in hand, Proposition 91's proponents orphaned the measure: they spent their sizeable campaign contributions to support the passage of Proposition 1A, changed their official campaign status as being in opposition of their own measure, and closed their campaign doors almost two months before the February primary. ${ }^{4}$ Furthermore, the argument that they submitted for the official voter information guide urged voters to vote no: "Prop. 91 is NO LONGER NEEDED. Please VOTE NO. Voters passed Proposition 1A in 2006, accomplishing what Prop. 91 set out to do. Prop. 1A stopped Sacramento politicians from taking our gas tax dollars and using those funds for non-transportation purposes. Prop. 91 is no longer needed. VOTE NO." ${ }^{5}$

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\({ }^{4} \mathrm{http}: / /\) cal-
access.ss.ca.gov/Campaign/Committees/Detail.aspx?id=1282482\&session=2007\&view=
general
\({ }^{5}\) http://primary2008.sos.ca.gov/voterguide/title_sum/prop_91_title_sum.html
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As a result, there was no active proponent or opponent of the measure. In the month before the election, a small consumer group adopted the proposition. ${ }^{6}$ They did not, however, receive any campaign contributions or make any official campaign expenditures. The group did not register with the Secretary of State to become the official proponent (which would have allowed them to collect and spend campaign funds), and they limited their campaign efforts to putting up a (now defunct) website and speaking to the news media on a few occasions. Moreover, Proposition 91 did not need an opponent since the official proponents were urging voters to defeat the initiative.

The lack of an active campaign meant that information about Proposition 91 was scarce. In fact, the primary source of information for voters was the official voter information guide. Media coverage was minimal, as there were only a handful of newspaper articles that mentioned the initiative; the articles that did report on the initiative often highlighted the fact that the authors now urged voters to defeat the measure. The initiative lost at the polls, with 41.6 percent of the electorate voting in favor.

Proposition 93 was a more typical California initiative. In 1990, Californians passed Proposition 140, which set strict term limits for both the Assembly and Senate. Under Proposition 140, elected representatives could not serve more than three two-year terms in the Assembly and two four-year terms in the Senate (a total of fourteen years). The intent of Proposition 140 was to inspire turnover in both houses, thereby removing

[^19]entrenched professional politicians and making the legislature more representative of the electorate.

For some, however, Proposition 140 had significant drawbacks. For example, Kousser (2005) has argued that the California legislature has become less professional. Kousser shows that the legislature is less likely to challenge and alter the Governor's budget, and inter-branch bargaining has become more adversarial (also see Cain and Kousser 2004). State Assembly Speaker Fabian Nunez and State Senate President Don Perata drafted Proposition 93 in an attempt to strike a balance between California voters' desire for term limits and the need for experienced politicians. At base, Proposition 93 would have allowed elected representatives to serve up to twelve years in the legislature-two years fewer than Proposition 140 allowed—but legislators could serve those twelve years in one house. For example, an assemblywoman could serve six consecutive two-year terms in the assembly, or a senator could serve three consecutive four-year terms in the senate. The initiative also provided an exception for 42 legislators to serve out additional terms in their current house. Proposition 93's authors hoped that voters would agree to the initiative because it reduced the total number of allowed years for future cohorts of legislators. ${ }^{7}$

The opponents of Proposition 93 adopted an aggressive frame. They claimed that, instead of a reduction in total number of years allowed, Proposition 93 was, "...a scam written by politicians and funded by special interests. It has a special loophole that

[^20]benefits 42 termed out incumbent politicians by giving them more time in office. It doubles Assembly terms from 6 to 12 years and increases Senate terms from 8 to 12 years." Indeed, this was the message that the opponents adopted throughout the campaign in their media advertisements, postal mailers, and the official voting guide.

While Proposition 93 was not a blockbuster for campaign spending, both the supporting and opposing campaigns were active and substantial. The two major supporting groups registered with the California Secretary of State spent a combined amount of almost $\$ 11.4$ million. Likewise, the main opposition group-headed by California State Insurance Commissioner and future gubernatorial hopeful Steve Poizner-spent over $\$ 7.1$ million.

Then State Assembly Speaker Fabian Nunez and State Senate President Don Perata were the measure's key supporters. They argued that Proposition 140 had created term limits that were too short. While the proponents acknowledged the need for limits, they asserted that the result of Proposition 140 was an inexperienced legislature. Other key proponents-the California Teachers Association, the American Federation of County and Municipal Employees, and Governor Arnold Schwarzenegger, for examplesupported the measure on the basis that a more experienced legislature was necessary for better government. ${ }^{8}$ In fact, the supporting campaign's message was one of information and clarification. They wanted to provide voters with the facts of the initiative, and

[^21]hoped that voters would support the measure because it did not increase or eliminate term limits.

The opposing campaign did not try to confuse voters, but instead highlighted the initiative's potential negative consequences. In particular, the opposition focused on informing voters that Proposition 93 would authorize 42 legislators to serve additional terms in office beyond the Proposition 140 limits, which would have allowed some representatives to serve more than twenty years in the legislature. ${ }^{9}$ Furthermore, the opposition campaign did not focus on the total number of years a representative could serve in office. Rather, they chose to elucidate the fact that the total number of terms possible doubled in the Assembly and increased by one term in the Senate, should legislators choose to serve the entire period in one legislative house. Moreover, joined by the likes of the California Republican Party and former Governor Pete Wilson, the opponents argued that Proposition 93 was an initiative that Democrats devised to help them keep control over the legislature. The opponents of Proposition 93 hoped that voters would find these factual pieces of information unsavory. Because both the proponents and opponents provided different interpretations of the same facts, voters may have found their campaigns confusing. Voters defeated Proposition 93 at the polls, with only 46.3 percent of the electorate supporting the measure.

Proposition 93 is a typical Californian initiative. The two sides of the campaign did not exhaust exorbitant amounts of money, but they did spend enough to deliver their message to voters. In other words, Proposition 93 enjoyed a conventional campaign where voters had many opportunities to learn about the initiative's merits or faults

[^22]through political advertisements, mailers, newspapers, and the official voter information guide. By contrast, information about Proposition 91 was limited to a handful of news stories and the official voter information guide.

### 3.5. Hypothesis and Research Design

Proponents and opponents of ballot measures alike use campaigns to propagate their position. Proponents focus on the initiative's potential positive effects, hoping that, by informing voters, the electorate will pass the measure. The opponents highlight the initiative's shortcomings, relying on voters' reluctance to change policies if the outcome is ambiguous (see, e.g., Bowler and Donovan 1998; Burnett, Garrett, and McCubbins 2010). The expected effect of a campaign, which I examine below, is that voters should learn more about an initiative when there is a viable and active contest.

To test my hypothesis, I use a posttest-only within-subjects design to compare what voters learned about an initiative that had no substantial political campaign (Proposition 91) to what they learned about an average initiative that had a significant political campaign (Proposition 93). As described above, Proposition 91 provides a unique opportunity to study what voters learn about an initiative without the assistance of a campaign. Proposition 93 was a more typical California initiative that had a substantial and animated campaign. Thus, because Proposition 91 lacked a campaign, voters should have learned more about Proposition 93.

To assess what voters knew, I asked a sample of voters to answer factual knowledge questions about both initiatives as they departed the voting booth. The survey included four factual knowledge questions about Proposition 91 and three factual
knowledge questions about Proposition 93. All seven questions used the true or false question format; respondents could also refuse to answer the question or indicate that they did not know the correct answer. From these surveys, I examine the percentage of correct answers for each question for both propositions. I then compare the average number of correct answers for Proposition 91 to the average number of correct answers for Proposition 93. I use a standard paired $t$-test to estimate whether the difference in the rate of correct answers between the two initiatives is significant.

The advantage of using an exit poll to analyze my hypothesis is that I am capturing voters in the wild, so to speak. That is, unlike a laboratory setting or a field experiment, the voters I sample will have engaged the campaign in the same manner as if there was no study. What voters chose to learn about both Propositions 91 and 93 occurred as a natural part of the ballot measures' respective campaign. In the case of Proposition 91, there was no viable campaign. My survey, then, offers an opportunity to study what voters learn about both policies, varying only the treatment variable (absence or existence of a campaign). If my analysis shows that voters had more or equal knowledge about Proposition 91 when compared to Proposition 93, then I must reject my hypothesis that political campaigns inform voters in direct democracy. If my results indicate that voters knew more about Proposition 93 when compared to Proposition 91, I can accept my hypothesis, albeit with limitations, that voters learned more about Proposition 93 from the viable campaign that accompanied the initiative.

### 3.6. Data

I use data from a survey I conducted in San Diego, California, during the presidential primary on February 5, 2008, to test my hypothesis. For this survey, I recruited over 70 student volunteers to collect responses from voters as they departed the voting booth. The survey asked respondents to answer true or false factual knowledge questions about both Proposition 91 and 93. I collected survey responses for the duration of Election Day (7:00 am to 8:00 pm). My student volunteers gathered surveys at eight polling locations, which covered thirteen precincts. In total, I received 615 interviews and 467 refusals, for a response rate of 56.8 percent. While the sampling scheme was not random, I asked my student volunteers to ask every other voter exiting the voting location for an interview to help minimize selection bias.

On the survey, I asked voters four true or false questions about Proposition 91 and three true or false questions about Proposition 93. For Proposition 91, I asked the following four questions (in order):

1) True or False: Proposition 91, if enacted, would restrict the ability of the California state legislature and governor to use taxes collected from gasoline purchases and would require some of the funds to be placed in the Transportation Investment Fund (The correct answer is "true").
2) True or False: The authors of Proposition 91 claim that passing Proposition 91 would mean more money for road repairs and would stabilize funding for mass transit (The correct answer is "false").
3) True or False: The authors of Proposition 91 claim that passing Proposition 91 is no longer necessary (The correct answer is "true").
4) True or False: The authors of Proposition 91 claim that passing Proposition 91 would reduce taxes (The correct answer is "false").

Question (1) measured whether voters could recall the issue at the heart of Proposition 91: the authors of the initiative intended to require politicians to use most of California's gasoline taxes for road repairs and improvements. This question should be easy for voters since the ballot's official description of the proposition included enough information to empower voters to provide a correct answer. ${ }^{10}$ For other voters, this may be a difficult question if they did not pay attention to the official campaign materials or simply forgot about the specifics of the initiative after they voted (see, e.g., Fiorina 1981; Lodge, McGraw, and Stroh 1989; Lupia and McCubbins 1998; Popkin 1994).

Question (2) asked voters to recall the author's arguments in favor of Proposition 91. The authors, however, made no substantive argument about what Proposition 91 would do if the voters passed the measure; therefore, the correct answer is "false." ${ }^{11}$ Moreover, the official text on the ballot suggested that-while the initiative would have stabilized funding for roads and highways-funding for public transit was uncertain. This provided an additional tip to voters that the correct answer was "false." Voters who were unfamiliar with the author's position on their own ballot measure or the substance

[^23]of the initiative may have found this question difficult. Voters who were familiar with the author's position should have found this question easy.

Question (3) assessed whether voters knew the author's position on their own initiative: they deemed the measure no longer necessary. The authors made their recommendation to vote against their own measure clear in the voter information guide. Newspaper coverage of the initiative also highlighted the peculiarity of the measure because the authors had abandoned it. The Sacramento Bee even titled one article "Finally, a vote for $91,{ }^{12}$ which recounted the ballot measure's bogus journey. For voters who paid attention to any of the official election documentation or news coverage concerning Proposition 91, Question (3) should have been easy to answer. Question (3) should have been difficult if voters were unaware of the authors' position: the information was not available on the ballot and voters should expect that the authors of an initiative would support their own ballot measure.

Question (4), the final question concerning Proposition 91, asked respondents to indicate whether the authors claimed that the initiative would reduce taxes. Similar to Question (2), the authors did not make any substantive claims about the initiative, and instead urged voters to defeat the measure; the correct answer is therefore "false." Moreover, Proposition 91's goal was to stop the redistribution of taxes, not decrease taxes. Voters who knew both the authors' position and the facts of the proposition should have found this question simple. Voters who did not know much about the measure or the authors' position should have found this question difficult.

[^24]Later in the survey, I asked respondents to report what they knew about Proposition 93. The three true or false questions that I asked are (in order):
5) True or False: Proposition 93, if passed, will reduce the number of years one can serve in the California state legislature (The correct answer is "true").
6) True or False: Proposition 93, if passed, will allow state legislators to serve all of their terms in a single house of the legislature (The correct answer is "true").
7) True or False: Proposition 93, if passed, will allow some state legislators to serve more than the current limit (The correct answer is "true").

Question (5) measured whether voters knew that the initiative would have reduced the total number of years a legislator could serve in the California state legislature. Indeed, Proposition 93 would have reduced the total number of years from fourteen, as defined by Proposition 140, to twelve. Proponents of the initiative made this the focal point throughout the campaign, hoping that voters would understand that the measure would not overturn term limits. Moreover, the fact that the initiative reduced the total number of years allowed was evident from the official voter information guide ${ }^{13}$ and ballot description. ${ }^{14}$ Voters who had paid attention to the campaign or any of the official campaign material-including the ballot-should have found this question

[^25]straightforward. Voters who did not pay attention to the campaign or the official election materials should have found this question difficult.

Question (6) asked voters to report if they knew that Proposition 93 would allow legislators to serve all of their terms in a single house of the state legislature. This question embodies Proposition 93's core mission to strike a balance between professional legislators and the need for turnover in office. As outlined above, both the proponents and opponents of the initiative cited the fact that legislators could serve all of their terms in one office. Similar to Question (5), voters could have learned the answer to this question from the actual ballot. Thus, as before, voters who paid attention to the campaign or the official electoral material should have found the question easy; the opposite is true for voters who did not pay attention to either information source.

Question (7) assessed whether voters understood that Proposition 93 provided exceptions for some legislators so that they could serve more than the total number of years allowed by Proposition 140. During the campaign, opponents emphasized the fact that 42 legislators would have the opportunity to serve additional years if Proposition 93 passed. The opponents suggested further that politicians-some of whom were the authors-were attempting to use the initiative process to circumvent Proposition 140 and, by extension, the voters' will. While some discerning voters could have inferred from the ballot that Proposition 93 provided exceptions, the ballot did not make this fact explicit. Thus, voters who followed the campaign or read the official voter guide would have had the opportunity to learn the correct answer to this question; voters who did not should have found the question difficult.

On balance, the two sets of questions covered issues that were at the core of both proposals. To be sure, I would have preferred to devise and ask questions that were of equal difficulty (and more of them). Designing equivalent questions for both measures, however, is difficult, if not impossible. The two initiatives proposed very different policies. Therefore, I designed the questions to be straightforward measurements of what voters knew about the two ballot measures. Additionally, voters could find the correct answer to most of the questions on the ballot, and all of the questions used the true or false question format. While imperfect, these measurements allow me to estimate the differences in voters' knowledge between the two initiatives.

### 3.7. Results

My results unfold in two steps. First, I present the percentage of correct responses for all of the questions just described. These simple calculations provide a snapshot of what voters knew about each ballot measure. Second, I calculate the average percent of correct responses for each individual. I also estimate a simple paired t-test to discern whether the average percent of correct responses between the two measures is statistically significant.

Of the 615 interviews, 454 respondents answered all seven factual knowledge questions. The remaining 161 respondents either refused to answer at least one of the questions or stopped giving an interview partway through the survey. Excluding the 161 respondents who did not answer at least one of the questions makes comparisons easier. ${ }^{15}$

[^26]Moreover, I am not making any claims to generalizability, since I am using a withinsubjects design.

Figure 3-1 below presents the percent of correct, incorrect, and "don't know" responses for the questions pertaining to Proposition 91. For Question (1), a strong majority ( 60.4 percent) of voters knew that Proposition 91 would have restricted lawmakers' ability to appropriate gasoline taxes for general fund usage. That is, even in the absence of a campaign, voters understood the initiative's core issue. Voters provided the correct answer to Question (2)—that the authors did not claim the initiative would increase the amount of funding for roads and stabilize mass transit-only 25.6 percent of the time. This implies that voters seemed to be aware of the initiative's basics, but unaware of what the authors said about their own initiative. Question (3), which asked voters to recall that the authors asked voters to defeat their own measure, confirms the previous point: only 28.9 percent of my sample understood that the initiative was an orphan. This is somewhat surprising, given that the state-sanctioned information guides and every news media story highlighted this fact. The final question asked voters to recall if the initiative's authors claimed that passing the measure would reduce taxes. Similar to Question (1), a majority of voters (51.8 percent) knew that the correct answer to Question (4) was "false."
correlation between two knowledge questions is less than .23 for Proposition 91 and less than .25 for Proposition 93. Likewise, covariates such as education, age, income, and party identification are also poor predictors of knowledge.


Figure 3-1 - Responses to Questions About Proposition 91

Similar to above, Figure 3-2 displays the percent of correct, incorrect, and "don't know" responses for Proposition 93. For Question (5), a majority of voters (57.1 percent) understood that the initiative would have reduced the overall number of years a legislator could serve. Similarly, a slightly larger majority of voters ( 59 percent) knew the correct answer to Question (6): legislators could serve all of their years in a single legislative house. Finally, for Question (7), a majority of voters (50.9 percent) knew that Proposition 93 would have provided exemptions for some politicians to serve additional years beyond the limit allowed by Proposition 140.


Figure 3-2 - Responses to Questions About Proposition 93

Overall, voters knew more about Proposition 93 when compared to Proposition 91. One noticeable difference between the two initiatives is that all of the questions about Proposition 93 (Figure 3-2) had a greater than 50 percent correct response rate. Conversely, only two of the four questions about Proposition 91 received a correct response rate greater than 50 percent. Furthermore, the number of "don't know" responses for questions concerning Proposition 93 is lower than the "don't know" response rate for questions about Proposition 91. In fact, the highest rate of "don't know" responses was 22 percent (Question 6) for Proposition 93, whereas the lowest percent of "don't know" responses for Proposition 91 was 23.1 percent (Question 2).

I now turn to examine the differences between the two initiatives in more detail. Because I asked four questions about Proposition 91 and three questions about

Proposition 93, I need to place the two initiatives on a comparable scale. To accomplish this, I first calculated the rate of correct responses for each question. That is, I scored every correct answer as a " 1 ", and both incorrect and "don't know" responses as " 0. . I then summed up the total number of correct responses for each initiative and divided by the total number of possible correct responses: four for Proposition 91 and three for Proposition 93. In essence, this gives a percent of correct responses for each individual for both ballot measures. From these scores, I can compare the two initiatives by using a simple paired t-test. I present the results of these computations in Figure 3-3.


Figure 3-3 - Percent of Correct Responses for Propositions 91 and 93

Figure 3-3 confirms the preliminary results presented in Figures 3-1 and 3-2: on average, voters knew more about Proposition 93 when compared to Proposition 91. In fact, the voters in my sample gave a correct answer to a question concerning Proposition 91 only 41.6 percent of the time ( 1.66 out of 4 questions). For Proposition 93, they provided a correct answer 55.7 percent percent of the time (1.67 out of 3 questions). As the error bars indicate, these averages are statistically different at the 95 percent
confidence level (where $t$ is -8.56 ). ${ }^{16}$ Because voters were more knowledgeable about Proposition 93, I can accept my hypothesis that campaigns do in fact help inform voters about ballot measures.

### 3.8. Discussion

While the results may not be surprising, this is one of the only studies to examine campaign effects in direct democracy. My findings also speak to the larger literature on campaign effects, suggesting that campaigns, while convoluted, do in fact deliver vital information to voters. For instance, the majority of voters knew the basic facts about Proposition 93, which was accompanied by a complex and, often, negative campaign. For Proposition 91, voters were more or less unaware that the authors of the initiative had abandoned the measure. Voters did understand, however, the core issue at the heart of the measure; yet, voters could have gleaned that information from the ballot. If voters with more information make better decisions (e.g., Bartels 1996; Delli Carpini and Keeter 1996; Lau and Redlawsk 1997), then campaigns are more capable of informing voters than officially sanctioned documents, such as the voter information guide (despite the fact that every registered voter receives the same official material).

I accept my hypothesis recognizing that there are limitations to the generalizability of this study. First, the sample is not representative. While it is impossible to know whether a different sample would have had more knowledge about

[^27]Proposition 91, it seems unlikely. Second, it is unclear where voters learned what they knew about both initiatives. Additional research is necessary to explore this limitation. Finally, this paper falls short of analyzing how information affects voters' decisions. For example, voters may have learned more about Proposition 93, but, as a result, were more likely to abstain from voting or decided to vote "no" because they found the measure too complicated. Likewise, voters who knew that the authors of Proposition 91 abandoned their initiative may have been more likely to use that piece of information to make a decision. ${ }^{17}$ Exploring how campaigns affect voter decisions in direct democracy is an obvious extension of this research.

I tested the hypothesis that campaigns help inform voters in direct democracy. I capitalized on Proposition 91-an initiative that lacked a campaign-to show that, when compared to a typical California initiative, voters learn more about the ballot measure that has a viable and active contest. I concluded that campaigns-even if they are viral and confusing-help voters learn about complex policy proposals that democracy asks them to consider.

[^28]
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## Conclusion

Above, I conducted three studies that examined on the competence of the American voter. In the first chapter, I showed that voters knew more about politics than everyday consumer and investment products. This finding is compelling because it implied two important conclusions. The first conclusion was that scholars of voting behavior have not thought enough about how to measure political knowledge. While a recent strand of research has begun to ask questions about how to improve the construct validity of political knowledge, no substantial improvement in measurement has come to fruition. The second conclusion is that voters may be more capable of making democratic decisions than scholars tend to acknowledge. If voters succeed in making everyday consumer choices with limited and often imperfect information, then voters should be just as capable to choose candidates, policies, etc. By putting political knowledge into context, voters appear competent.

This chapter is the beginning of a larger research project. Indeed, the amount of data I have collected places strict limits on what I can conclude and how much I can generalize my results to a broader population. With these preliminary results, I hope to receive monetary support continue and expand the study. In particular, I need to collect responses from a larger sample that is nationally representative. Moreover, I plan to ask questions that cover additional types of knowledge, including sports, personal finance, celebrities, and international affairs, among other topics. Expanding this research agenda will allow me to created stronger benchmarks for political knowledge.

In the second chapter, I found that voters use information shortcuts at a much lower rate than scholars have commonly assumed. By accounting for policy preference, I
demonstrated that voters seem to make decisions independent of what they know about a particular ballot measure. This is problematic for students of voting behavior who make it a standard assumption that voters overcome their information deficiencies by relying on cues. Unexpectedly, I also found that voters appear to make reasoned choices regardless of what they knew. This finding, while welcome, highlights the need to conduct additional research so that we can update our models of voter decision-making in direct democracy (and elsewhere).

The natural extension of this research is to examine what sources voters use to learn about a ballot measure, and what kinds of information voters choose to remember and internalize. I have begun an additional data collection effort in order to fill in these knowledge gaps. Specifically, I have conducted a three-wave panel study of New Jersey voters. In the study, I asked my respondents questions about New Jersey's 2009 open space bond (a referendum). I designed the questions on the survey to measure from what sources voters were learning about the measure and how much they were learning about it. This research design will provide me a glimpse into how voters learn about ballot measures and how they use what they learn to make decisions.

The final chapter explored whether voters are able to learn from campaigns. I capitalized on Proposition 91, a proposition that was orphaned by its authors. I compared what voters learned about Proposition 91 to Proposition 93, another measure on the same ballot that had an active campaign. My results showed that voters learned more about Proposition 93. This finding suggests that voters are able to learn from political campaigns, even if campaigns are negative and convoluted. Furthermore, I concluded that campaigns provide more information to voters than official campaign documents.

This chapter represents one of the few studies about what voters learn from campaigns in direct democracy. As outlined above, I plan to utilize a three-wave panel to assess what voters learn during the course of the campaign. Moreover, I need to conduct additional research to estimate what voters learn from the campaign versus what they learn from the news media and other sources of information. While we know a great deal about presidential elections, we know far less about what and how voters learn about ballot measures. Additional research will remedy this oversight.


[^0]:    ${ }^{1}$ Delli Carpini and Keeter (1996) and Delli Carpini (2009), however, both note level of civic knowledge correlates with value-consistent opinions.

[^1]:    ${ }^{2}$ Before the advent of modern public opinion research, Lippmann (1922) and Schumpeter (1950) opine that the electorate is grossly under informed. Indeed, Schumpeter famously argues that the commoner returns to a "primitive" state when interacting with the political world.
    ${ }^{3}$ In a recent review, Althaus (2006) questions the assumption that prominent democratic theorists claim an informed electorate is necessary for democracy to work. Despite the lack of an explicit connection to traditional democratic theory, most contemporary

[^2]:    ${ }^{4}$ In a related study, Jerit, Barabas, and Bolsen (2008) have demonstrated that political knowledge questions designed to measure awareness of current events vary in difficulty for individuals depending on the respondent's level of education and preferred news medium. Their results suggest that researchers should be cognizant of the fact that respondents do not all receive the same treatment (exposure to information and education).

[^3]:    ${ }^{5}$ In the same volume, Delli Carpini (2009) agrees in principle with Johnson (2009), but suggests that civic knowledge will correlate significantly with operative knowledge.
    ${ }^{6}$ Prior and Lupia included a treatment that provided a monetary incentive and additional time to research the answer that also supported their conclusions.

[^4]:    ${ }^{7}$ To be sure, some individuals may enjoy a direct benefit from a particular policy (e.g., someone who gains employment because of ARRA), but this applies to a very small percentage of the population.

[^5]:    ${ }^{8}$ I used the EPA miles per gallon estimates for the 2008 models of both automobiles. I also selected the model with the highest EPA estimates. For the Ford Focus, I used the four-cylinder manual transmission engine estimates. For the Toyota Tacoma, I chose the two-wheel drive four-cylinder manual transmission engine estimates. The correct answer is not sensitive to automobile model choice.

[^6]:    ${ }^{9}$ Knowing the Democrats control the House of Representatives is a possible exception, as it is reasonable to assume that a small percentage of voters may be using this information to make decisions.
    ${ }^{10}$ The thirteen polling locations covered nineteen precincts.
    ${ }^{11}$ My election survey is different from an exit poll since my student volunteers mark the responses of voters as they interview them, whereas an exit poll asks the voter to mark the responses on the survey directly.

[^7]:    ${ }^{12}$ The demographics of my sample are: the modal age is between $36-45$ years of age; the modal income is between $\$ 50,000-100,000$; the modal education is finished four-year college degree; 49.9 percent female; 4 percent very conservative, 19.5 percent conservative, 33.7 percent moderate, 30.5 percent liberal, 11.5 percent very liberal; 28.2 percent strong Democrat, 13.2 percent weak Democrat, 16.6 percent leans Democrat, 4.9 percent Independent, 6.4 percent leans Republican, 12.4 percent weak Republican, 12.4 percent strong Republican, and 3.3 percent other.

[^8]:    ${ }^{13}$ While it is difficult to see from the chart, the error bars do not overlap. To test the differences in means, I ran a simple paired t-test and find that the means are significantly different, with a t-statistic of 5.05 .
    ${ }^{14}$ By collecting a sample of voters, I may have biased my results toward finding that voters knew more about politics. Individuals who choose to vote may be more motivated

[^9]:    ${ }^{1}$ Lupia and McCubbins model learning as a function of persuasion with the goal of avoiding pain and maximizing pleasure. Thus, in their language, if an information shortcut is not persuasive it does not succeed in conveying information to the voter to help them make a decision that maximizes pleasure.

[^10]:    ${ }^{2}$ Monte Carlo simulations also allow me to approximate a factorial design. I could not estimate a factorial design at the outset because the subsamples would have been too small to produce statistically meaningful results.
    ${ }^{3}$ Consistent voting is not the same Lau and Redlawsk's (1997; 2007) concept of "correct voting." Whereas "correct voting" uses an algorithm to estimate a voter's ideal candidate, consistent voting only estimates whether votes match a voter's stated policy preference. Baum and Jamison (2006) also use the term "consistent voting" in their research; in practice, however, they use a "correct voting" algorithm.

[^11]:    ${ }^{4}$ I did not collect a measure of ideology on the presidential primary survey; as a result, I do not control for ideology in the regressions for Propositions 94, 95, 96, and 97. ${ }^{5}$ We transform Partisanship and Ideology into a series of dichotomous variables to make the construct cardinal. For Partisanship, Independents are the comparison group. For Ideology, moderates are the comparison group. Political Knowledge is the percent of correct answers on five common political knowledge questions.

[^12]:    ${ }^{6}$ Recall that my measure of political knowledge is the percent of correct responses to commonly asked national political knowledge questions, and is therefore unrelated to the propositions.

[^13]:    ${ }^{7}$ As explained above, OPEN measures the effect of a multiple choice factual knowledge question for these regressions.

[^14]:    ${ }^{8}$ In Table 2-2, however, $C U E$ is significant at the $\mathrm{p}<0.10$ level and almost significant at the $p<0.05$ level. This suggests that the cue may have helped both voters who favored and opposed notification laws.

[^15]:    ${ }^{9}$ Indeed, the regression analysis indicates that cues did help voters make reasoned choices. When I use the mean effects of my covariates, however, the predictions indicate that other factors-e.g., ideology in the case of Proposition 4-play a more prominent role in decision-making.

[^16]:    ${ }^{1}$ A careful reading of the classic literature, which Shaw (2006, Chapter 2) provides, notes that the classic research recognized the great potential that campaigns could have on voters.

[^17]:    ${ }^{2}$ For a more complete review of presidential campaign effects, see Shaw (2006, Chapter 2) and Vavreck (2009, Chapter 2).

[^18]:    ${ }^{3}$ Iyengar, Lowenstein, and Masket also find that voter uncertainty stems from being unfamiliar with more obscure ballot measures.

[^19]:    ${ }^{6} \mathrm{http}: / /$ articles.sfgate.com/2008-01-10/bay-area/17148207_1_transportation-industry-initiative-ballot

[^20]:    ${ }^{7}$ In fact, opponents of the proposition detested the fact that Attorney General Jerry Brown, when crafting the official ballot summary, focused on the reduction in the total number of years. http://legacy.signonsandiego.com/news/politics/20080124-99991n24limits.html

[^21]:    ${ }^{8}$ It should come as no surprise that some of the strongest proponents of the measure are two of the largest interest groups in California politics. Changing term limits would allow these groups to maintain long-standing relationships with politicians. http://primary2008.sos.ca.gov/voterguide/argu_rebut/argu_rebutt93.html

[^22]:    ${ }^{9}$ Ibid.

[^23]:    ${ }^{10}$ The official text that appeared on the ballot for Proposition 91 was: "TRANSPORTATION FUNDS. INITIATIVE CONSTITUTIONAL AMENDMENT. Prohibits certain motor vehicle fuel taxes from being retained in General Fund and delays repayment of such taxes previously retained. Charges how and when General Fund borrowing of certain transportation funds is allowed. Fiscal Impact: Increases stability of state funding for highways, streets, and roads and may decrease stability of state funding for public transit. May reduce stability of certain local funds for public transit."
    ${ }^{11}$ The official voter information guide for Proposition 91 is available through the California Secretary of State:
    http://primary2008.sos.ca.gov/voterguide/title_sum/prop_91_title_sum.html

[^24]:    ${ }^{12} \mathrm{http}: / / \mathrm{www}$. sacbee.com/static/weblogs/capitolalertlatest/2008/01/finally-a-vote.html

[^25]:    ${ }^{13}$ The official voter information guide for Proposition 93 is available from the California Secretary of State:
    http://primary2008.sos.ca.gov/voterguide/title_sum/prop_93_title_sum.html
    ${ }^{14}$ The official text that appeared on the ballot for Proposition 93 was: "LIMITS ON LEGISLATORS' TERMS IN OFFICE. INITIATIVE CONSTITUTIONAL AMENDMENT. Reduces permissible state legislative service to 12 years. Allows 12 years' service in one house. Current legislators can service 12 years in current house, regardless of prior legislative service. Fiscal Impact: No direct fiscal effect on state or local governments."

[^26]:    ${ }^{15}$ Imputing respondents' answers is problematic since there are no adequate predictors of what voters will learn about each ballot measure. For example, knowledge of one aspect of an initiative is not a strong predictor of additional knowledge. In fact, the highest

[^27]:    ${ }^{16}$ To test this relationship further, I created a single dependent variable that contained each individual's response to all seven questions. Then, employing a fixed effects conditional logit model, I used a dichotomous variable to measure the difference between answers to Proposition 93 and Proposition 91. The dichotomous variable was significant at the $\mathrm{p}<.000$ level, where the coefficient was .61 and $z$ was 8.05 . The regression confirms the results of the paired t -test.

[^28]:    ${ }^{17}$ Without accounting for policy preference, voters who knew that the authors abandoned their initiative were significantly more likely to vote against Proposition 91 (where $\mathrm{p}<.05$ ).

