Georgia State University
Digital Archive @ GSU

Political Science Theses | Department of Political Science

8-11-2011

The Priming Effects of Polling Location on Ballot Initiative Voting Decisions

Jeffrey M. Glas
Georgia State University, jglas1@student.gsu.edu

Follow this and additional works at: http://digitalarchive.gsu.edu/political_science_theses

Recommended Citation
Glas, Jeffrey M., "The Priming Effects of Polling Location on Ballot Initiative Voting Decisions" (2011). *Political Science Theses.* Paper 39.

This Thesis is brought to you for free and open access by the Department of Political Science at Digital Archive @ GSU. It has been accepted for inclusion in Political Science Theses by an authorized administrator of Digital Archive @ GSU. For more information, please contact digitalarchive@gsu.edu.

THE PRIMING EFFECTS OF POLLING LOCATION ON BALLOT INITIATIVE VOTING DECISIONS

by

JEFFREY M. GLAS

ABSTRACT

Do the physical settings in which a voter casts their ballot affect their vote choices? Every state uses a variety of polling locations for the administration of election: churches, schools, libraries, fire stations, and etcetera. The literature on priming effects and voting is massive, but very little research examines the impact of the venue in which a ballot is cast has on voters' decisions. In this study I argue that polling venues situated on church, school, or veteran's association property influences the proportion of votes cast in favor of ballot measures related to each institution. I test these hypotheses using precinct level election results and population data from California's 2008 general election and find results supporting, or suggesting, such a relationship.

INDEX WORDS: Direct democracy, Elections, Voting, Polling location, Automaticity, Contextual priming, Voting precinct

THE PRIMING EFFECTS OF POLLING LOCATION ON BALLOT INITIATIVE VOTING DECISIONS

by

JEFFREY M. GLAS

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

in the College of Arts and Sciences

Georgia State University

2011

Copyright by

Jeffrey M. Glas

2011

THE PRIMING EFFECTS OF POLLING LOCATION ON BALLOT INITIATIVE VOTING DECISIONS

by

JEFFREY M. GLAS

Committee Chair: Jason Reifler, PhD.

Committee: Ryan Carlin, PhD.

Sean Richey, PhD.

Electronic Version Approved:

Office of Graduate Studies

College of Arts and Sciences

Georgia State University

August 2011

TABLE OF CONTENTS

LIST OF TABLES		v
1	Introduction	1
2	Review of the Literature	1
3	Theoretical Foundations	5
4	Data & Hypotheses	8
5	Methods	10
6	Results	14
7	Conclusion	19
8	Works Cited	23
9	Appendix	25

LIST OF TABLES

Table 1: Summary Statistics 11

Table 2: Frequency of Polling Location Types 15

Table 3: Populations Characteristics and Polling Location 16

Table 4: Ballot Initiative in function of Polling Location 18

Table 5: Spending on Ballot Propositions by Group 20

Introduction

Every year millions of Americans spend countless hours reading newspapers, searching websites on the Internet, watching television news coverage and campaign advertisements, however willingly, to determine how to cast their ballot on Election Day. In an attempt to ensure the polling locations at which these voters participate in this democratic experience are environments of comfort that are sterilized of politically charged distractions many states and local governments have prohibited acts of campaigning in or near these democratically hallowed grounds. The states of Georgia and New York, for example, prohibit campaigning or the presence of campaign signs within 100 feet of the front door of a polling location. Voters are not allowed to wear campaign buttons or t-shirts when standing in line to cast their ballot. Similarly, the state of Ohio prohibits such behavior within 50 feet of the building in which voting takes place. The effectiveness of such action, in some circumstances, may be questionable as new research suggests that the polling locations themselves may affect voter decision making.

Thus, for the voting experience to be free and clear of external distractions and provide the contexts for voters to make political decisions in an environment that promotes rationality, it stands to reason, polling locations themselves must not be a source of affect. The purpose of the paper is to investigate and draw conclusions regarding the impact polling locations have on vote decisions. To do this I will examine how polling stations located at various locations affect vote choice on ballot initiatives in California's 2008 General Election.

Review of the Literature

The field of political behavior has a well established tradition in which voters and other political actors are viewed by principal investigators and political theorists as being rational and strategic actors. These models conceptualize the voter as a utility maximizing agent whose

engagement in, or abstention from, political action is the result of some calculation. From the decision to vote or abstain (Riker & Ordeshook 1968) to selection based upon the calculation of the utility differentials between candidates or political parties under various electoral scenarios (Downs 1957), the voting behavior literature is teeming with these rational choice models.

The past thirty years have seen a strong break from these normative models of economic rationality toward a research tradition more solidly based in social and cognitive psychological theory. The literature on priming effects in political decision making is vast. It has been demonstrated that priming from media sources can affect the orderings of issue importance (Roskos-Ewoldsen, Roskos-Ewoldsen, and Carpentier2002), political attitudes and political priorities have been shown to be affected by news media (Iyengar & Kinder 1987; Krosnik & Kinder 1990; Nelson Clawson & Oxley 1997), the alteration of evaluative criteria and approval of political elites and candidates for political office (Iyengar and Kinder 1987; Krosnik and Kinder 1990), as well as an alteration of attitudes on racial issues (Valentino, Hutchings, and White 2002).

In addition to the priming literature there is a well established field of research regarding the use of heuristics in voting. Though the rationality of using heuristics is a topic of continuous debate, the empirical reality in which political decisions are made exhibits frequent use of such cognitive shortcuts throughout the population. In the case of ballot initiatives, and other items found further down the ballot, heuristics have been shown to be of great importance (Lupia 1994). Lupia's (1994) seminal work on heuristics and decision making on ballot initiatives shows that while voters may not come to the polls armed with an encyclopedia of information on the often complex ballot measures with which they face on election day, they are likely to make the "correct" decision if they simply know which side of the ballot measure various interest

groups align themselves. Tying Lupia's work to this paper, when evaluating relatively complicated, and often new, information on the spot with the intent to make a voting decision people do not conduct a search of all relevant information stored in their memory. Rather they rely on accessible and existing constructs that have already been built within their minds. The physical space in which a person casts a ballot may serve as an activation mechanism of such a heuristic. Thus, in this particular research paper, the physical building in which a voter casts their ballot possibly provides a very transparent and accessible heuristic for one to tap, consciously or not, when making voting decisions.

Despite the vast amounts of research investigating various models of decision making and the effects of influence from various sources there is reason to believe that other psychological mechanisms may determine the way in which voters cast their ballots. The priming research covered above, which suggests that observable behavior can be influenced by the external stimuli, is now a topic covered extensively in the political psychology literature. Research on the relationship between polling locations and vote choice is rather new, but the psychological mechanisms at work are relatively well established.

One particular piece of recent research has investigated the affect polling locations have on vote choice. Berger, Meredith and Wheeler (2008) use data from Arizona's 2000 General Election to determine whether voting precinct polling venues located in schools prime voters to cast their ballot in favor of a ballot initiative, Proposition 301, that proposed increasing state sales tax rates to finance an increase in spending on education. The results indicated that there were, in fact, significantly higher proportions of votes cast in favor of Proposition 301 from polling locations situated in schools compared to other venues. An experiment conducted in a computer lab, in which participants assigned to the treatment condition are shown pictures of

high school lockers and other common scenes one would encounter when walking through a school followed by a questionnaire to gauge support for measures similar to Proposition 301, further supports the finding that the environment in which a voter casts their ballot can affect vote choice.

Berger, Meredith and Wheeler base their argument from which they derive their hypothesis on contextual priming. Contextual priming has traditionally been studied in the fields of consumer and market research, but the implications of this research can be easily translated into political research. In one such study researchers set up displays for wines from two different countries, France and Germany. The treatment in this study was the type of music the researchers played, either classical French or German compositions, from the display and they found that shoppers purchased the French wine at a significantly higher rate when French music was playing as well as the converse; that shoppers purchased German wine at a significantly higher rate when German music emanated from the speakers at the display case (North, Hargreaves, and McKendrick 1999).

While there are no political undertones to be attached to this example in the literature, this example does demonstrate how seemingly meaningless environmental cues affect purchasing decisions. Thus, the contexts in which people are to make decisions may, to an extent, determine the decisions they make. On one hand the stimuli in the contextual priming research is teeming with environmental stimuli, but on the other hand each of this stimuli are engage sensory perceptions not of physical environment but rather music, as in North, Hargreaves, and McKendrick (1999), or the brand of briefcase an actor is carrying in a television commercial, as in Yi (1993).

This same phenomenon exhibited in these veins of research bear striking resemblance to political research on the variation in responses to public opinion survey questions dependent upon the interviewer's race, economic class, or the presence of other objects in the nearby environment (Lenski and Leggett 1960; Schuman and Converse 1971; Converse and Schuman 1974; Schuman and Presser 1981). The implications of this body of research are contentious as there is disagreement between researchers interested in the cognitive psychology, such as Zaller and Feldman (1992), as opposed to research focused on social interaction, such as Converse and Schuman. Where the cognitive psychology camp argues that this effect is the result of the respondent's lack of a "true attitude" regarding a survey question and they are merely responding to their environment at a particular time, the social psychology camp argues that social desirability bias arises between, essentially, two human beings engaged in a random conversation.

Theoretical Foundations

There exists a body of research much more suited to act as a foundation from which to build a scientific argument that the physical location in which a person casts their ballot can influence their voting decision. Research on automaticity focuses more on the psychological relationships between environment and behavior (Dijksterhuis and Bargh 2001; Ferguson and Bargh 2004). The suggestion of this line of research is that people automatically arrive at judgments or decisions without necessarily engaging in the expenditure of cognitive resources. To use the words of Bargh, Chen and Burrows, such research has shown that "trait concepts and stereotypes become active automatically in the presence of relevant behavior or stereo-typed-group‖ and situational features (1996 pp. 230)." As an example, in Bargh, Chen and Burrows (1996) experimental participants are primed with words associated with, or synonymous to,

“impoliteness.” The words are embedded in an exercise in which participants in the treatment condition are to decipher a scrambled sentence then, when finished with the exercise, they are to bring their results to the proctor. All other details of the experiment aside, those participants primed with the words associated with impoliteness were likely to respond to requests and situations presented by the proctor in an impolite manner. Similarly, in another experiment, participants were primed with words tangentially associated with elderly people. Words such as “Florida” and “bingo” were used to prime participants and these participants, upon completion of the exercise, were timed on how long it took them to bring their results to the proctor after finishing the exercise. Those in the treatment condition, on average, walked slower as a result of the priming condition.

The sum of the above literature illustrates that human decision making can be influenced by seemingly mundane details that, off hand, can go unnoticed to the conscious mind. Further research in social psychology links these environmental stimuli to behavior and the activation of socially desirable behavioral norms. A 2004 study by Kay, Wheeler, Bargh and Ross demonstrates specific behavioral norms are activated by specific location. This particular project involved the placement of treatment participants into a corporate setting to see how their behavior in negotiation games differed from control participants at an offsite neutral location. As expected those participants engaging in the negotiation game in a corporate setting acted in a manner that was more competitive and more generally characterized as the type of behavior in which the “corporate” type would acquiesce. In a similar vein Aarts and Dijksterhuis (2003) expected and found a relationship between norms of silence and presence in a library. It is a well known courtesy that one should be quite, whispering if verbal communication is at all necessary, when in a library. This is a behavioral norm typically taught to children upon their first visit to a

library and one that is enforced throughout their years of education; one would be hard pressed to find a library void of some sign requesting patrons to keep the volume of their voice to a minimum.

The take away from this literature is that humans have learned behaviors that can be activated, unknowingly, in their memory through the physical and social situation one perceives themselves to occupy at any given time. It stands to reason that if norms of silence are activated when one enters a library or norms of competitiveness are activated when one occupies a corporate setting that these psychological mechanisms will be employed in political situations. Theoretically, we should find that an effect similar to that found by Berger, Meredith and Wheeler (2008) exists when the voting venue is changed to a church, or religiously laden polling location, and the ballot initiative changed to some proposition of religious valence, same sex marriage and abortion rights for example. It just so happens that voting locations are situated in several types of buildings providing a good deal of variation from one precinct to the next and this offers excellent conditions to investigate the activation of situation-relevant norms by polling locations. We should expect the stimuli of different polling locations, and their environments, to act similarly in that they automatically activate psychological constructs priming voters to cast their ballot in a particular and specific direction. For the purposes of this paper, if theories of automaticity and contextual priming are to hold we should expect the proportion of votes cast in favor of the position associated with Christian doctrine, actual or popularly perceived, to be higher in polling locations that are churches or somehow related specifically and transparently to the Christian faith (i.e. convocation centers and community centers specified as areas of Christian faith-based activity). Thus, a general hypothesis this research posits expects that polling places located in churches have a systematic impact on voter decisions, by priming voters

to think about ballot measures as moral issues. Specifically, I propose polling places located in churches influence the proportion of votes cast in favor of ballot measures that have received explicit endorsement or condemnation from prominent religious bodies. I also expect to find a relationship between other polling locations and ballot initiatives that have latent relationships.

Data and Hypotheses

To test my hypotheses I will be using elections and population data from the 2008 General Election for the State of California. For a number of reasons, California, I believe, provides an ideal case in which to research aggregate polling place priming effects. A number of data conditions must be met for the purposes of causal inference. The most obvious data requirement concerns the types of polling precincts a political jurisdiction offers its voters as well as numerous ballot propositions or initiatives. Every state uses more than two types of polling locations, but ballot initiatives are another matter. To make causal claims that are to carry weight I must show that the polling precinct is causing the hypothesized voting behavior and that significantly higher proportions of votes favoring the position of institutional bodies are not a result of traits held by the population residing within a precinct. Thus, necessarily, there must be several initiatives proposed on the ballot for all voters in all precincts to decide on. This offers a straightforward evaluative criterion in which new dependent variables for each ballot initiative can be generated with the expectation that there will not be a significant relationship, in either the positive or negative direction, between polling locations situated in institutionally laden location and the other ballot propositions. Such relationships would potentially indicate that precinct population characteristics are determining the value of the dependent variable. In addition to the above listed considerations, it is important that the election chosen to examine be one of high salience as previous research has shown that elections with lower levels of interest

within the electorate tend to turn out those voters that are particularly motivated because of a few intense interests in the outcomes of the election (Kernell 1979; Patty 2006). The dataset used in this paper contains 10 of California's 55 counties. The selection of counties was carried out through an ordering of counties by the number of precincts situated within the county (from highest to lowest) and then I proceeded to obtain data available online through each county's board of elections on polling location addresses for the 2008 general election[1].

California's 2008 General Election fulfills each of the above data considerations. The 2008 election cycle was of considerable salience and received the highest voter turnout, as measured by the proportion of the voting age population turning out to vote, since 1968 (MacDonald 2010). The 2008 ballot in California asked voters, statewide, to decide on twelve ballot measures with considerable variation on topics[2]. There are four ballot initiatives from California in this election cycle that pertains to this study, Propositions 3, 4, 8, and 12. To state my hypotheses in operational terms:

H_1: The proportion of votes cast in favor of passing Proposition 3 should be higher when polling venues are located in primary schools than in other types of polling locations.

H_2: The proportion of votes cast in favor of passing Proposition 4 should be higher when polling venues are located in churches and other transparently religious institutions than in other types of polling locations.

H_3: The proportion of votes cast in favor of passing Proposition 8 should be higher when polling venues are located in churches and other transparently religious institutions than in other types of polling locations.

[1] The counties are: Butte, El dorado, Humboldt, Imperial, Lassen, Madera, Mariposa, Placer, Sacramento

[2] See Appendix A for list of ballot measures and official wording as seen on the ballot by California voters.

H_4: The proportion of votes cast in favor of passing Proposition 12 should be higher when polling venues are located in veteran's halls than in other types of polling locations.

Furthermore, as a means of testing that the characteristics of precinct populations are not the cause of the expected increase in the proportion of votes cast in favor of each ballot measure I posit the following hypothesis:

H_5: No precinct priming effects should be detected in evaluations of the proportions of the vote cast for other ballot initiatives[3].

Methods

The nature of this particular study and its question lends itself to a number of methods, but I will be using aggregate level data for this specific piece. The unit of analysis in this paper is the consolidated voter precinct. Most polling locations serve several voter precincts, a consolidated precinct is a geographic unit composed of all precincts served by a single ballot at a single polling location. To illustrate by way of example, if precinct numbers 1, 2, and 3 all cast like ballots, by like ballot I mean that the precincts all lie within the same political jurisdictions, at the same polling location they composed a consolidated precinct (from this point forward the use of the word "precinct" should be interpreted as ―consolidated precinct‖). The numerical identification of consolidated precincts was generated by a statewide database housed at the University of California-Berkeley and is used by county election boards to identify the precincts within their own jurisdictions.

[3] I must add one exception to this hypothesis, that being the use of Vote by Mail (VBM) systems in various precincts. Given the nature of VBM I am not able to discern what objects may be present when people cast their ballot by mail, nor from where they are actually making their vote decisions.

Table 1: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Vote-by-Mail	1721	0.178966	0.383435	0	1
Church	1721	0.241139	0.427899	0	1
Primary School	1721	0.122022	0.327406	0	1
Secondary School	1721	0.013945	0.117298	0	1
Mason	1721	0.009297	0.095999	0	1
Civic Center	1721	0.112144	0.315635	0	1
Veterans	1721	0.016851	0.128749	0	1
Country Club	1721	0.016851	0.128749	0	1
Firestation	1721	0.062754	0.242591	0	1
Library	1721	0.013364	0.114863	0	1
Government Building	1721	0.037188	0.189277	0	1
Mobile Home	1721	0.013364	0.114863	0	1
Retirement Community	1721	0.026729	0.161336	0	1
Misc. Private Residence	1721	0.081348	0.273448	0	1
Prop 1a_Yes	1681	0.451192	0.111296	0.190476	0.727273
Prop 2_Yes	1671	0.588441	0.089587	0.357143	0.817602
Prop 3_Yes	1687	0.445811	0.09739	0.214286	0.797101
Prop 4_Yes	1656	0.465816	0.114459	0.179415	0.820334
Prop 5_Yes	1658	0.361198	0.100754	0.121951	0.632184
Prop 6_Yes	1677	0.273916	0.065697	0.097967	0.461039
Prop 7_Yes	1693	0.326238	0.069563	0.136364	0.538983
Prop 8_Yes	1625	0.554283	0.137604	0.131579	0.882353
Prop 9_Yes	1698	0.523351	0.075509	0.323944	0.733333
Prop 10_Yes	1692	0.32929	0.082548	0.121951	0.564474
Prop 11_Yes	1695	0.551309	0.072901	0.347475	0.734694
Prop 12_Yes	1694	0.592946	0.069219	0.298592	0.78
Democrat	1721	0.408307	0.130761	0	1
Republican	1721	0.362521	0.156362	0	1
Hispanic	1721	0.104046	0.119115	0	1
Asian	1721	0.033193	0.038042	0	0.358156
Age 18-24	1721	0.086047	0.067482	0	0.95709
Age 25-34	1721	0.143843	0.080788	0	0.6
Age 35-44	1721	0.1748	0.07034	0	0.666667
Age 45-54	1721	0.23308	0.073462	0	1
Age 55-64	1721	0.191308	0.067296	0	0.727273
Age 65+	1721	0.170873	0.121718	0	0.940171

The dependent variables in this study are the proportions of votes cast in a precinct in favor of passing Propositions 3, 4, 8, and 12. To operationalize these variables I use precinct level election results data gathered by the Institute for Governmental Studies at the University of California - Berkeley. This database has been a source of voting and population data hosted and compiled by the non-partisan Institute of Governmental Studies at U.C. Berkeley for the purposes of legislative redistricting since 1981. Vote percentages by precinct are not included in this data; vote totals, however, are included. Thus I created the dependent variables by calculating the quotient of the total yes votes divided by the total ballots cast for, and against, each ballot proposition within a precinct. As a means to test Hypothesis 5 I generated vote proportions using this same simple yet direct method for all other propositions appearing on the ballot. There were a considerable number of precincts with smaller populations that cast 100% of their ballots for or against a ballot measure, which is a phenomenon that is present in every initiative on the ballot. To prevent the bias created by these highly homogenous districts from skewing my results I excluded those districts that lay two standard deviations from the mean on each ballot initiative from the data used to estimate each model.

My independent variable of interest is the type of polling location in which voters of a precinct cast their ballots. This data has not previously been collected by researchers nor is it housed in any centralized database. Rather, to obtain this data I visited the online archives of individual counties to extract “Statements of Vote” from each county and manually researched addresses of polling locations. Conveniently some of the counties identified the physical location as well as the address of the voting venue. Operationally these variables are dichotomous dummy variables created to identify the type of building used as the polling location for a given voter precinct. The types of locations, listed by the variable name, are: *Vote-by-Mail*, *Church*,

Primary School, *Secondary School*, *Freemason Lodge*, *Community Civic Center*, *Country Club*, *Fire Station*, *Library*, *Government Building*, *Mobile Home* neighborhood, *Retirement Community*, and *Miscellaneous Private* residences. Each variable is coded "1" if the location is represented by the indicated building, or "0" if otherwise.

There is considerable evidence to be found throughout political science literature that variables such as ethnicity, gender, age, ideology, income and education, amongst others, all affect the opinions, values and predispositions of political actors (e.g. voters). Availability of this data by precinct is scarce. The Statewide Database mentioned above does contain demographic data on ethnicity, age and party registration. Each of these variables are operationalized as percentages of the precinct population of registered voters using the precinct level data contained in the Statewide Database from the Institute for Governmental Studies at U.C. Berkeley. Rather than using these variables to control for hypothetical differential effects, given the inherent noise oscillated by aggregate level data, I use this data only to determine the exogeneity of polling location from population characteristics. To do this will simply regress each of these independent variables on a dependent variable for polling location to demonstrate that polling locations are assigned quasi-randomly, but namely that population characteristics do not determine the assignment of one type of polling location or another. At the heart of each of these small tests is an attempt to peel away the layers of noise inherent in the use of aggregate level data and to eliminate the possibility that there is selection bias in my model. Though it makes no theoretical sense to expect a person to include the location in which they will vote as a criterion for the selection of their residence the demonstration that these two variables are not correlated will invalidate claims of selection bias and demonstrate the quasi-random nature of selection in this study. Furthermore, exhibiting the absence of a correlation between polling location and party

registration statistics should also preclude claims that self-interested strategic actors are assigning polling locations to precincts based on a hypothetical assumption that the relationship I propose between polling location and voting decisions is not only real, but of electoral significance.

Results

As stated in the section above, there is little reason to suspect that election officials assign polling locations based on precinct population characteristics. Nonetheless, to demonstrate the exogeneity of population characteristics, and thus assume them out of the model, I conduct regressions using polling location as the dependent variable and available demographics as the independent variables. Each of these demographic variables is continuous and given the relatively small size of many of these populations, I felt it is appropriate to use OLS to estimate bivariate relationships between polling locations and the demographics rather than breaking each variable down into an ordinal variable and estimating the relationships using a Chi-Squared test (see Table 3). With few exceptions, nearly all relationships between population characteristics and polling location are insignificant. Notable exceptions include party registration and the assignment of a precinct to vote-by-mail and to primary schools. The possibility of bias generated by such relationships is small considering that those relationships present in the data move in the same direction for both political parties on both of these polling location variables. This is most likely the result how frequently vote-by-mail and primary schools are used as polling locations as they are the second and third most used types of polling location present in my data (see Table 2). The remaining relationships between precinct ethnic populations and polling location have little bearing on this research as none of the locations with which a

significant relationship is present is a location of interest for my hypotheses and there is no theoretical explanation as to why such a correlation would exist.

Table 2: Frequency of Polling Location Types

Polling Location	Frequency
Vote by Mail	308
Church	415
Primary School	210
Secondary School	24
Mason	16
Civic Center	193
Veterans	29
Country Club	29
Fire station	108
Library	23
Government Building	64
Mobile Home Community	23
Retirement Community	46
Misc. Private Building	140

Given the limited resources provided for the administration of elections, it should come as no surprise that polling locations are not correlated with many of these demographic characteristics. The fact that precincts are consolidated so as to share a single polling location, which cuts down on the administrative costs of elections, lends some support to the idea that polling locations are probably determined largely on the convenience of the location. Additionally, there are no districts encountered in my data that are made up of only one precinct, nor are there any districts in which there is no variation of the polling location variable. The logical extension of this second consideration is that elections are won from aggregated results across all precincts within a district, and if polling locations were determined by a method in which electoral advantage was the primary concern, we should see districts with little or no variation on the polling location variable.

Table 3: Bivariate Regression Estimations of Population Characteristics on Polling Location

	Democrat	*Republican*	*Hispanic*	*Asian*	*Age18-24*	*Age25-34*	*Age35-44*	*Age45-54*	*Age55-64*	*Age65+*
Church	.064 (.162)	.154 (.138)	-.007 (.072)	-.349 (.230)	10.388 (15.29)	10.59 (15.27)	10.27 (15.28)	10.25 (15.28)	10.22 (15.28)	9.94 (15.27)
1-School	**.465**** (.116)	**.325**** (.102)	-.103 (.053)	**.859**** (.140)	5.47 (11.31)	5.40 (11.29)	5.88 (11.30)	5.528 (11.29)	5.202 (11.3)	5.209 (11.3)
2-School	.0389 (.0437)	.0262 (.0372)	-.009 (.019)	.088 (.062)	1.987 (4.132)	1.929 (4.128)	1.934 (4.129)	1.935 (4.128)	1.87 (4.13)	1.89 (4.129)
Veterans	-.088 (.05)	-.064 (.051)	-.014 (.021)	-.088 (.068)	.004 (4.54)	-.01 (4.53)	-.091 (4.53)	-.032 (5.54)	-.048 (4.54)	-.062 (4.54)
Civic Center	.128 (.120)	-.068 (.103)	-.071 (.053)	**-.523*** (.171)	5.81 (11.36)	5.28 (11.36)	5.47 (11.36)	5.39 (11.36)	5.60 (11.36)	5.61 (11.36)
CountryClub	.051 (.048)	.066 (.041)	-.023 (.021)	1.46 (.068)	1.47 (4.55)	1.58 (4.54)	1.47 (4.54)	1.47 (4.54)	1.47 (4.54)	1.50 (4.54)
Fire Station	-0.045 (.09)	-.002 (.077)	**-.079*** (.039)	-.108 (.128)	-1.85 (8.51)	-1.94 (8.51)	-1.71 (8.51)	-1.72 (8.51)	-1.67 (8.51)	-1.93 (8.51)
Government	-.018 (.073)	-.114 (.063)	.06 (.033)	**-.244*** (.105)	4.13 (6.99)	4.21 (6.99)	4.19 (6.99)	4.16 (6.99)	4.18 (6.99)	4.16 (6.98)
Library	-.016 (.043)	-.024 (.037)	.005 (.019)	-.035 (.061)	1.18 (4.06)	1.19 (4.06)	1.24 (4.06)	1.23 (4.06)	1.19 (4.06)	1.20 (4.06)
Mason	.006 (.036)	.029 (.031)	**-.034*** (.016)	-.0492 (.051)	1.161 (3.389)	1.135 (3.387)	1.141 (3.388)	1.141 (3.367)	1.168 (3.387)	1.124 (3.387)
Misc. Private	.091 (.103)	.102 (.088)	-.008 (.046)	.228 (.147)	-3.17 (9.79)	-2.87 (9.78)	-3.08 (9.78)	-3.20 (9.78)	-3.22 (9.78)	-2.94 (9.78)
MobileHome	.018 (.042)	.013 (.037)	-.019 (.019)	.013 (.061)	1.39 (4.06)	1.39 (4.05)	1.36 (4.06)	1.38 (4.06)	1.36 (4.06)	1.42 (4.06)
Retirement	.008 (.061)	-.014 (.052)	.004 (.027)	.03 (.087)	-3.91 (5.76)	-3.83 (5.76)	-3.91 (5.75)	-3.88 (5.76)	-3.93 (5.76)	-3.84 (5.76)
VBM	**-.617**** (.147)	**-.290*** (.125)	.06 (.07)	.385 (.21)	-20.02 (13.9)	-19.86 (13.87)	-20.27 (13.88)	-19.58 (13.87)	-19.38 (13.88)	-19.13 (13.87)

Standard Errors between parentheses: *Indicates p < .05; **Indicates p < .0

After the elimination of population characteristics as meaningful systemic causal links, I then estimate bivariate regression models to test my hypotheses. The results of these regression models are presented in Table 4. Consistent with my first hypothesis, in which vote shares favoring Proposition 3, a measure to fund children's hospitals, are significantly higher in primary schools my model estimates an increase of approximately 2% in favor of Proposition 3 in polling locations situated on the grounds of primary schools. Related to this hypothesis, secondary schools move in the same direction, but the relationship between secondary schools and Proposition 3 is not significant. While this increase of 2% is not large enough to flip the results of this particular election, it is large enough to flip to results of several precincts and is of considerable importance for the support of my argument.

Unfortunately the test of Hypothesis 1 is the only one in which the results bear out my expectations. While there are not significant relationships between polling locations situated on the grounds of churches and vote proportions for Propositions 4 and 8, the model estimates a relationship in the correct, positive, direction. This is also the result found for Proposition 12 and veteran's associations that are used as polling locations. To begin with the latter, as you can see from Table 3, the number of veteran's halls present in the data is comparatively low. The relationship is in the positive direction and with a p-value of .266; this is most likely the result of statistic power issues. This is obviously not the case with the results from my tests of Hypotheses 2 and 3 as the use of churches as polling locations is highly frequent. That being said, these two ballot initiatives were two of the more salient propositions put before voters in the California election of 2008. Table 5 presents the spending data from all groups engaging in the expressed advocacy of the passage or defeat of ballot measures in the 2008 election. While

Table 4 : Bivariate Regression Estimations of Polling Location on Ballot Propositions

	Prop1a	*Prop 2*	*Prop 3*	*Prop 4*	*Prop 5*	*Prop 6*	*Prop 7*	*Prop 8*	*Prop 9*	*Prop 10*	*Prop 11*	*Prop 12*
Church	-.004 (.572)	.002 (.755)	.0004 (.953)	.009 (.127)	-.0007 (.918)	.006 (.208)	-.008 (.149)	.012 (.117)	-.004 (.469)	.00001 (.997)	-.00007 (.990)	-.007 (.202)
1-School	.125 (.205)	.001 (.884)	**.02** (.001)	.009 (.417)	**-.025** (.008)	**.026** (.000)	.003 (.717)	.009 (.466)	.002 (.756)	.015 (.068)	.008 (.256)	**-.026** (.000)
2-School	.031 (.269)	.022 (.356)	.039 (.144)	.015 (.613)	.007 (.799)	.031 (.096)	.027 (.204)	.006 (.869)	.024 (.247)	**.046** (.044)	-.008 (.682)	-.008 (.0687)
Veterans	-.015 (.564)	.035 (.110)	-.018 (.465)	-.037 (.171)	.041 (.088)	-.031 (.069)	-.021 (.263)	-.042 (.196)	-.026 (.182)	-.005 (.819)	.009 (.592)	.0014 (.266)
Civic Center	.017 (.098)	.006 (.501)	.004 (.678)	**-.032** (.002)	**.026** (.007)	**-.019** (.007)	-.007 (.370)	**-.042** (.001)	**-.029** (.000)	-.007 (.424)	-.006 (.403)	**.015** (.037)
CountryClub	-.011 (.662)	-.015 (.487)	-.034 (.160)	-.014 (.171)	-.049 (.591)	**-.012** (.041)	-.031 (.504)	-.013 (.104)	-.011 (.694)	**-.041** (.05)	.033 (.073)	-.019 (.284)
Fire Station	**-.032** (.016)	**-.022** (.049)	**-.042** (.001)	-.011 (.458)	-.018 (.164)	-.016 (.084)	-.019 (.053)	.007 (.696)	-.003 (.736)	**-.034** (.002)	.01 (.302)	-.017 (.075)
Government	**.076** (.000)	**.05** (.000)	**.079** (.000)	-.307 (.078)	**.081** (.000)	.014 (.210)	**.04** (.001)	**-.076** (.000)	-.006 (.593)	**.037** (.006)	**-.037** (.002)	**.049** (.000)
Library	.044 (.123)	.034 (.161)	.009 (.716)	-.038 (.203)	.028 (.302)	-.004 (.834)	.008 (.691)	-.068 (.061	-.015 (.493)	.017 (.465)	.019 (.361)	.009 (.636)
Mason	.021 (.537)	.018 (.542)	-.023 (.409)	**-.102** (.005)	.033 (.314)	**-.065** (.005)	-.045 (.081)	**-.125** (.004)	**-.097** (.000)	**-.062** (.026)	.028 (.266)	.02 (.402)
Misc. Private	.014 (.237)	.006 (.572)	.002 (.847)	.004 (.730)	-.019 (.080)	**.019** (.015)	.0007 (.993)	-.006 (.687)	-.006 (.488)	.009 (.308)	**.028** (.001)	-.013 (.125)
MobileHome	-.049 (.085)	.0004 (.987)	-.014 (.616)	.035 (.244)	-.022 (.404)	.015 (.453)	-.019 (.382)	.047 (.197)	-.012 (.566)	-.005 (.817)	.009 (.665)	.016 (.434)
Retirement	.011 (.595)	.017 (.311)	.022 (.234)	.0005 (.844)	.003 (.862)	.017 (.200)	.001 (.946)	-.011 (.657)	-.012 (.419)	.006 (.737)	.003 (.860)	.007 (.623)
VBM	**-.036** (.000)	**-.022** (.001)	**-.037** (.000)	.013 (.119)	**-.015** (.049)	**-.028** (.000)	-.0002 (.976)	**.054** (.000)	**.031** (.000)	-.013 (.054)	.0005 (.925)	.006 (.257)
Aggregated	.004 (.522)	-.004 (.375)	-.005 (.356)	-.010 (.127)	-.003 (.646)	**-.009** (.015)	.003 (.435)	-.012 (.117)	-.002 (.659)	-.009 (.111)	.002 (.684)	.005 (.531)

P-Values in Parentheses

Proposition 4 was heavily financed, far more than Proposition 3 and Proposition 12, which had no registered campaigns, Proposition 8 drew more than $70million worth of campaign spending making it the second most expensive campaign in the United States during the 2008 election cycle (the campaign for United State President ranking number one). The coefficients for both Propositions 4 and 8 are in the expected, positive, directions and the p-values approach significance, but given the subtle theoretical effects hypothesized it is likely the case that the high saliency of both of these ballot initiatives mitigated the proposed polling location effects.

Lastly, I conduct another series of bivariate regression to test Hypothesis 5, that there should be no effects of polling location on the remaining ballot initiatives. My first test, with the disaggregated series of each type of location on each ballot initiative offers results contradictory to my hypothesis as there are several significant relationships. Many of these polling location types have few occurrences in the data and statistical power may be an issue. Another possibility is that there are attitudes and other predispositions, such as public service or environment conservation, which are being primed and are not considered by this paper. Support for the statistical power argument can be found by a new variable created post-hoc and labeled in Table 4 as *Aggregated* and provides some evidence to support Hypothesis 5. This variable is the aggregation of all polling locations without specific hypotheses and has only one significant relationship out of the twelve propositions.

Conclusion

Consistent with the aforementioned hypotheses, polling location could have a significant impact on vote selection. Churches, schools, and veterans associations are highly symbolic structures and offer nearly every adult an easily accessible psychological construct to which they can attach, positively or even negatively, as a means to make decisions without the expenditure

Table 5: Spending on Ballot Propositions by Group (from California Sec. of State)

Prop	Group	Support	Oppose
1a	CALIFORNIANS FOR HIGH SPEED TRAINS	$2,544,821.02	
1a	PIRG	$67,186.00	
2	CALIFORNIANS FOR HUMANE FARMS	$10,314,025.44	
2	CALIFORNIANS FOR S.A.F.E. FOOD		$8,795,907.10
3	CHILDREN'S HOSPITAL ASSOCIATION INITIATIVE FUND	$6,892,201.24	
4	CAMPAIGN FOR TEEN SAFETY		$9,297,084.91
4	FRIENDS OF SARAH	$2,527,222.72	
4	CAMPAIGN FOR TEEN HEALTH AND SAFETY		$1,003,770.57
4	CREDO VICTORY FUND TO DEFEAT PROP. 4		$16,834.00
5	NORA CAMPAIGN	$7,577,697.07	
5	PEOPLE AGAINST THE PROPOSITION 5 DECEPTION		$2,870,657.48
5	CAMPAIGN AGAINST PROPOSITIONS 4, 6, 8, 9		$35,609.03
6	COMMITTEE TO TAKE BACK OUR NEIGHBORHOODS	$1,600,728.69	
6	NO ON PROPS 6 & 9		$2,331,308.75
6	SAFE NEIGHBORHOODS ACT: YES ON PROPOSITION 6	$198,441.21	
6	CAMPAIGN AGAINST PROPOSITIONS 4, 6, 8, 9		
7	CALIFORNIANS AGAINST ANOTHER COSTLY ENERGY SCHEME		$29,787,573.70
7	CALIFORNIANS FOR SOLAR AND CLEAN ENERGY	$9,286,604.82	
8	PROTECTMARRIAGE.COM - YES ON 8	$39,642,911.00	
8	NATIONAL ORGANIZATION FOR MARRIAGE CALIFORNIA	$1,856,193.33	
8	NO ON 8, EQUALITY FOR ALL		$43,027,785.59
8	YES ON PROPOSITION 8	$125,022.34	
8	EQUALITY CALIFORNIA ISSUES PAC		$12,582,533.34
8	FAMILY RESEARCH COUNCIL		$74,401.52
8	CALIFORNIANS FOR MARRIAGE	$8,466.00	
8	MARRIAGE EQUALITY USA ISSUES COMMITTEE		$82,053.83
8	CAMPAIGN AGAINST PROPOSITIONS 4, 6, 8, 9		$35,609.03
8	NATIONAL CENTER FOR LESBIAN RIGHTS SOCIAL JUSTICE FUND		$591,687.90
8	CALIFORNIANS FOR PROGRESS		$1,134,747.83
8	TASK FORCE CALIFORNIA COMMITTEE		$275,779.14
9	MARSY'S LAW: JUSTICE FOR CRIME VICTIMS	$4,835,872.12	
9	NO ON PROPS 6 & 9		$2,331,308.75
9	YES ON PROP 9	$272,693.76	
9	CAMPAIGN AGAINST PROPOSITIONS 4, 6, 8, 9		$35,609.03
10	CALIFORNIANS FOR ENERGY INDEPENDENCE	$22,859,347.25	
10	CALIFORNIANS AGAINST THE $10 BILLION LEMON		$182,009.38
11	CALIFORNIA VOTERS FIRST	$6,488,759.22	
11	YES ON 11 - HOLD POLITICIANS ACCOUNTABLE	$10,134,639.24	
11	COMMON CAUSE FOR FAIR REDISTRICTING	$118,526.56	
11	CITIZENS FOR ACCOUNTABILITY		$1,632,455.30

of cognitive resources. The model estimated in this paper provides mixed results that polling venues can affect support for direct democracy measures. By no means are these results conclusive, they are, at least, however, highly suggestive that there is some phenomenon are play. Moreover, the theoretical relationship presented in this paper lends itself quite intuitively to other methods of evaluations, particularly experimental research. Aggregate data is, after all, full of noise, however precise and error free the observations happen to be, it is fallacious to make a causal claim regarding psychological mechanisms and their impact on voters' decisions without cementing this finding with individual level research.

There is also reason to suspect a broader impact on voting decisions by the physical space one occupies when making such a decision. Conservative candidates and candidates that publicly express their attachment to a particular faith may experience a bump in their totals as a result of a higher percentage of church polling locations. There is also reason to suspect that schools and churches are not alone in their effect on voting decisions. Many polling locations are housed at local fire stations, conservation centers and state parks, and it could be argued that these physical spaces may prime voters to cast ballots in favor of environmental regulation, or spending increases for local emergency services and so forth. Norms and social desirability standards, as artificial as they may be, probably determine behavior in other ways as well. Candidate forums, town hall meetings, legislating, and protests are all conducted in physical spaces each with a different standard of decorum. Political elites go to great lengths to deliver speeches at specific locations under assumptions that the location carries with it some symbolism that can deliver a level of tangibility to their message that would otherwise fall on deaf ears were such an appeal made from the podium in front of a press corp. Each of these considerations offers research

questions and realistic situations in which political scientists could observe and measure behavior.

Furthermore, if polling location impacts vote choice, there are questions to be asked about the efficacy of democratic procedures. Systematic biases in election results make the justification of democratic government difficult. It cannot be stated enough: more research is needed to determine the extent to which polling locations bias voting decisions. There are several policy prescriptions that may reduce this bias, namely the institution of vote-by-mail (VBM) systems. Despite the debate over the definitions of rational behavior, there is some consensus that what makes a voting decision rational is that the decision is made free of exogenous bias, and that it reflects the interests of the voter. VBM allows voters an opportunity to make their political decisions in the environments in which they experience the effects of the outcomes of elections.

Works Cited

Aarts, H., & Dijksterhuis, A. (2003). "The Silence of the Library: Environment, Situational Norm, and Social Behavior." *Journal of Personality and Social Psychology* 84: 18–28.

Bargh, J. A., Chen, M. & Burrows, L. 1996. "The Automaticity of Social Behavior: Direct Effects of Trait concept and Stereotype Activation on Action." *Journal of Personality and Social Psychology* 71(2): 230-244.

Berger Jonah, Meredith Marc, Wheeler S Christian. 2008. "Contextual Priming: Where People Vote Affects How They Vote." *Proceedings of the National Academy of Sciences*. 105(26): 8846–8849.

Converse, Jean and Howard Schuman. 1974. *Conversations at Random: Survey Research as Interviewers See It*. New York: John Wiley & Sons.

Dijksterhuis, A., & Bargh, J.A. (2001). "The Perception-Behavior Expressway: Automatic Effects of Social Perception on Social Behavior." *Advances in Experimental Social Psychology* 33: 1–39.

Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York: Harper & Brothers.

Ferguson, M.J., & Bargh, J.A. (2004). "How Social Perception Automatically Can Influence Behavior." *Trends in Cognitive Sciences* 8: 33–39.

Iyengar, Shanto and Donald Kinder. 1987 *News that Matters.* Chicago: The University of Chicago Press.

Kay, A. C., Wheeler, S. C., Bargh, J. A., & Ross, L. (2004). "Material Priming: The Influence of Mundane Physical Objects on Situational Construal and Competitive Behavioral Choice." *Organizational Behavior and Human Decision Processes* 95: 83–96.

Kernell, S., 1977. "Presidential Popularity and Negative Voting: An Alternative Explanation of the Midterm Congressional Decline of the President's Party." *American Political Science Review* 71 (1): 44-66.

Krosnick, Jon and Donald Kinder. 1990. "Altering the Foundations of Support for the President through Priming." *American Political Science Review* 84(2): 497-512.

Lenski, G. E. and J. C. Leggett. 1960. "Caste, Class, and Deference in the Research Interview." *American Journal of Sociology* 65: 463-467.

Lupia, Arthur. 1994. "Shortcuts Versus Encyclopedias: Information and Voting Behavior in California Insurance Reform Elections." *American Political Science Review* 88(1): 63-76.

MacDonald, Mike. 2010. *United States Elections Project*. George Mason University. <http://elections.gmu.edu/voter_turnout.htm>. Accessed: 20 November 2010.

North, A. C., Hargreaves, D.J. & McKendrick, J. (1999). The Influence of in-store Music on Wine Selections. *Journal of Applied Psychology* 84: 271-276.

Patty, John W. 2006. “Loss Aversion, Presidential Responsibility, and Midterm Congressional Elections.” *Electoral Studies* 25: 227–47.

“Political Reform: Campaign Finance.” *California Secretary of State*. < http://cal-access.sos.ca.gov/Campaign/Measures/list.aspx?session=2007>

Riker, William H., and Peter C. Ordeshook. 1968. “A Theory of the Calculus of Voting.” *American Political Science Review* 62: 25-42.

Roskos-Ewoldsen, D. R., Roskos-Ewoldsen, B., & Dillman Carpentier, F. R. (2002). Media priming: A synthesis. In J. Bryant & D. Zillmann (Eds.), *Media Effects: Advances in Theory and Research* (pp. 97–120). Hillsdale, NJ: Erlbaum.

Schuman, Howard and Jean Converse. 1971. “The Effects of Black and White Interviewers on Black Responses in 1968.” *Public Opinion Quarterly 36: 347-354.*

Shuman, Howard, and Stanley Presser. 1981. *Questions and Answers in Attitude Surveys*. New York: Academic Press.

“Statewide Database” *Institute for Governmental* Studies. 2009. University of California - Berkeley. < http://swdb.berkeley.edu/index.html>. Accessed: 9 December 2010.

Valentino, N. A., V. L. Hutchings and I. K. White. 2002. “Cues that Matter: How Political Ads Prime Racial Attitudes During Campaigns” *American Political Science Review* 96: 75-90.

“Voter Education and Outreach.” *California Secretary of State*. <http://www.sos.ca.gov/elections/voter_ed.htm>. Accessed: 5 September 2010.

Yi, Youjae. 1993. “Contextual Priming Effects in Print Advertisements: The Moderating Role of Prior Knowledge.” *Journal of Advertising* 22(1): 1-10.

Zaller, John and Stanley Feldman. 1992. “A Simple Theory of the Survey Response: Answering Questions versus Revealing Preferences.” *American Journal of Political Science* 36(3): 579-616.

Appendix A[4]

Proposition 1a: To provide Californians a safe, convenient, affordable, and reliable alternative to driving and high gas prices; to provide good-paying jobs and improve California's economy while reducing air pollution, global warming greenhouse gases, and our dependence on foreign oil, shall $9.95 billion in bonds be issued to establish a clean, efficient high-speed train service linking Southern California, the Sacramento/San Joaquin Valley, and the San Francisco Bay Area, with at least 90 percent of bond funds spent for specific projects, with federal and private matching funds required, all bond funds subject to an independent audit?

Proposition 2: Shall certain farm animals be allowed, for the majority of every day, to fully extend their limbs or wings, lie down, stand up and turn around?

Proposition 3: Shall $980,000,000 in general obligation bonds be authorized for construction, expansion, remodeling, renovation, furnishing and equipping of eligible children's hospitals?

Proposition 4: Shall the California Constitution be changed to prohibit abortion for an unemancipated minor until 48 hours after physician notifies minor's parent, legal guardian, or, in limited cases, substitute adult relative?

Proposition 5: Shall $460,000,000 be allocated annually to improve and expand treatment programs?

Proposition 6: Shall of minimum of $965,000,000 of state funding be required each year for police and local law enforcement?

Proposition 7: Shall government-owned utilities be required to generate 20% of their electricity from renewable energy by 2010, a standard currently applicable to private electrical corporations? Shall all utilities be required to generate 40% by 2020 and 50% by 2025?

Proposition 8: Shall the California Constitution be changed to eliminate the right of same-sex couples to marry providing that only marriage between a man and a woman is valid or recognized in California?

Proposition 9: Shall notification to victim and opportunity for input during phases of criminal justice process, including bail, pleas, sentencing and parole be required? Shall victim safety be a consideration for bail or parole?

Proposition 10: Shall $5 billion in bonds paid from state's General Fund be authorized to help consumers and others purchase certain vehicles, and to help research in renewable energy and alternative fuel vehicles?

Proposition 11: Shall the authority for establishing state office boundaries be changed from elected representatives to a commission comprised of Democrats, Republicans, and representatives of neither party selected from the registered voter pool in a multilevel process?

Proposition 12: Shall a nine hundred million dollar ($900,000,000) bond be issued to provide farm and home aid for California veterans?

---

[4] From the California Secretary of State's Office