Abstract: Despite an enormous amount of research on the connection between electoral systems and the representation of underrepresented groups, we still do not have a clear understanding of what systems positively or negatively affect representation for women and racial and ethnic minorities. Existing scholarship has been unable to determine exactly how institutions and representation are linked because insufficient attention has been paid to the mechanisms through which district or at-large elections influence electoral outcomes. Using two experiments we find that women and racial and ethnic minorities are more likely to win elections than white men overall. However, both types of candidates are disadvantaged in elections that feature more than two candidates. We argue that this is a result of the complexity of the task facing voters in multi-candidate races.
"In Australia, France, Germany, Great Britain, and the United States women elected from single-member districts typically are less than one-half the percentages of women chosen in multimember districts at their parliamentary and local government levels" (Rule and Zimmerman 1994, 19).

"[In California] women are more likely to run for and win districted seats compared to at-large seats" (Crowder-Meyer, Gadarian, and Trounstine 2015).

"It does not appear to make a substantial difference whether women run in district or at-large electoral systems" (Trounstine & Valdini 2008, 567).

"The ability of at-large systems to represent blacks has improved dramatically since the 1970s. The differences among systems no longer achieve statistical significance.... Overall, district elections do not promote more equitable representation for Hispanics" (Welch 1990, 1072).

“Black gains in local legislatures result from the increased capacity of electoral structures, SMDs in particular, to translate votes into seats" (Marschall, Ruhil, and Shah 2010, 122).

If you want to increase the descriptive representation of women and racial and ethnic minorities, research suggests you should change the rules governing elections. Unfortunately, precisely how to change those rules remains unclear. As the quotes beginning this paper highlight, district elections might be the solution for racial and ethnic minority representation – except in cases where they have limited or no effects. And at-large, multimember district elections are the recommended mechanism to increase women’s representation – except in cases where they don’t matter or actually decrease the number of female candidates and elected officials. Despite an enormous amount of research on the connection between electoral systems and the representation of underrepresented groups, we still do not have a clear understanding of what systems positively or negatively affect representation for women and racial and ethnic minorities.

Why does this lack of clarity persist? In short, because existing scholarship has been unable to determine exactly how institutions and representation are linked. We contend that a better understanding of the connection between electoral structure and representation requires taking a closer look at the mechanisms through which district or at-large elections influence electoral outcomes. Theoretically electoral structure could influence representation by affecting the supply of candidates from racial or gender groups (for example, by shaping the behavior of potential candidates and recruiters), by affecting demand for diverse candidates (by influencing voter behavior), or may matter as a side effect of other factors (e.g., prestige of the office indicated by different types of election). While these mechanisms are frequently discussed in
existing literature, they are rarely directly tested. In this paper, we analyze one of these mechanisms by concentrating on voters’ candidate selections when we vary only the race and gender of the candidates and the number of seats up for election. We use experiments to evaluate the process of voter decision-making when faced with two or multiple candidates to determine whether the effects of electoral structure might be driven by the ways in which stereotypes and prejudice affect voter behavior in different voting contexts.

In short, over two experiments, we find that women and racial and ethnic minorities are more likely to win elections than white men overall. However, both types of candidates are disadvantaged in elections that feature more than two candidates. We argue that this is a result of the complexity of the task facing voters in multi-candidate races. Importantly, the benefit of districts for women and minorities in our experiments cannot be due to geographic concentrations of supportive voters, nor can it be attributed to a presence or lack of polarized voting. What we show is that there is something inherent in the electoral structure itself that generates a cost to certain types of candidates.

**Importance of Women and Minorities in Local Office**

Women hold only a quarter of city council seats (ICMA 2001, Svara 2003b), 15 to 17% of county commission positions (ICMA 2007, Crowder-Meyer 2010), 18% of mayoral seats in cities with at least 30,000 residents (CAWP 2014), and 39% of school board positions (Hess 2002). African Americans hold about 6% of city council seats, Latinos hold about 3%, and Asian Americans hold less than 1%, compared to population percentages of 12%, 19%, and 5% respectively (ICMA 2006). This underrepresentation has significant consequences for the many policies that are created and implemented at the local level, and the substantive representation of the preferences of female and minority residents of localities across the United States.

We know that women and racial minorities have preferences that differ from the preferences of men and whites with respect to the actions of local government and the ways in which services are provided (Burns and Schumaker 1987, Alozie and McNamara 2010, Holman 2013, Hajnal and Trounstine 2013a, Hajnal and Trounstine 2013b). For example, women are more supportive than men of alternative forms of crime prevention over traditional policing (Alozie and McNamara 2010) and African Americans are much more likely to support school desegregation policies than whites (Smith and Seltzer 2000).

These differences in the public parallel gender and race differences among local elected officials and candidates. Studies identify a wide variety of local issues on which male and female candidates and policymakers differ (Schumaker and Burns 1988, Deckman 2007). For instance, women in local office are more likely than men to support government provision of social welfare programs (Burns and Schumaker 1987, Holman 2013) and are also frequently leaders in prioritizing and pushing for policy on issues that particularly affect women such as sexual assault, domestic violence, childcare, and childbirth in public hospitals (Boles 2001). Research has even found that the presence of women mayors has a positive effect on gender parity in municipal employment (Saltzstein 1986). African American and Latino elected officials also
have significant effects on minority public employment (Kerr and Mladenka 1994, Mladenka 1989, Polinard et al 1994), police practices (Marschall and Shah 2007, Salzstein 1989), education policies (Meier and England 1984), and social welfare spending (Karnig and Welch 1980). In short, local descriptive representation produces local substantive representation. In this paper, we contribute to understanding the conditions that enhance or obstruct descriptive (and thus substantive) representation of women and racial minorities.

Institutional Influences on Underrepresented Groups’ Representation on City Councils

A great deal of research has analyzed the advantage or disadvantage that local electoral institutions may provide women and racial minorities. Scholars have found a strong, consistently positive effect of district elections for racial minorities (Marschall, Ruhil, Shah 2010, Trounstine and Valdini 2008, though see Welch 1990) and much more mixed results for women. For example, while King (2002) and Crowder-Meyer et al. (2015) present evidence that districts benefit women, many others find no effect (Smith, Reingold, and Owens 2012, Alozie and Manganaro 1993, Bullock and MacManus 1991), and a number of studies have shown that women make up a slightly larger share of city councils elected at-large (Trounstine and Valdini 2008, McManus and Bullock 1995, Darcy, Welch, and Clark 1994, Karnig and Walter 1976). Scholars have suggested that the different results across underrepresented groups has to do with the geographic distribution of minority and women voters (i.e. minorities are residentially segregated while women are not) and the absence of polarized voting along gender lines as compared to continued racial polarization (King & Matland 2003; McDermott 1997).

We ask instead what role prejudice and stereotypes play in the electoral process. We posit that district elections, which frequently feature just two major candidates, present a cognitively simpler task than at-large elections in which voters are asked to make multiple selections among a large field of contenders. When the cognitive task is simplified, voters are more likely to be able to suppress negative stereotypes that are inconsistent with their personal beliefs or desire to respond in a socially appropriate way. In other words, district elections may yield more support for candidates from underrepresented groups for reasons that have nothing to do with geographic segregation or polarized voting.

The Use of Stereotypes in Elections

While stereotypes undoubtedly play a role in all political contests, at the local level the use of stereotypes in decision making could be especially important. Voters are more likely to use stereotypes in elections with low levels of available information about the candidates (Riggle et al. 1992, McDermott 1998) – a description that characterizes most local contests across the US. Perhaps the most important piece of information used by voters – partisanship – is also absent in many local elections. Although party cues can outweigh the influence of other stereotypes in voter decision-making (Huddy and Capelos 2002; Koch 2002; King and Matland 2003, though see Sanbonmatsu and Dolan 2009), in the absence of party cues, voters should be more likely to rely on other information, such as gender and racial cues, when determining for
whom to vote. Finally, because local elections receive very little public or media attention, voters in these contests likely have low motivation to allocate time to making their decision between candidates. In these circumstances, research shows stereotypes are more likely to be used (Pratto and Bargh 1991). Thus, stereotypes about candidates’ race and gender may strongly influence who wins local elections.

Although there has been substantial reduction in support for blatantly racist or sexist sentiments, negative stereotypes of women and racial and ethnic minorities persist. And these stereotypes can influence how voters behave (Sanbonmatsu 2002). For example using an Implicit Attitude Test (IAT) Cecilia Mo (2015) finds that both men and women have a harder time pairing female names with words like “president,” “governor,” and “executive,” and an easier time pairing them with words like “secretary,” “assistant,” and “aide.” Respondents who are less likely to see women as leaders are also less likely to vote for them. Mo’s findings underscore research suggesting that that women are seen as less capable leaders or executives (Best and Williams 1990; Fox and Oxley 2003; Huddy and Terkildsen 1993; Mueller 1986), but better at constituency service (Richardson and Freeman 1995; Thomas 1992) and secretarial tasks. Research also demonstrates that women are perceived as less competent than men, particularly at tasks related to management (Schein 2001; Brenner, Tomkiewicz, and Schein 1989, Heilman, Block, Martell, and Simon 1989; Eagly and Mladinic 1994). Additionally, men are stereotyped as having instrumental strengths such as independence, knowledge, toughness, and assertiveness (Ashmore and Del Bocca 1979, Deaux and Lewis 1984; Best and Williams 1990; Lawless 2004), strengths that are prized by voters as necessary for a “good politician” to have (Huddy and Terkildsen 1993).

Research also highlights the continuing power of racial stereotypes among Americans. Implicit Attitude Tests show that pictures of black people are more quickly associated with negative words while white faces are associated with positive words (Knowles et al. 2010) and implicit attitudes toward Latino immigrants are strong predictors of policy preferences (Perez 2010). Implicit prejudice against blacks also predicted vote choice in the 2008 election which featured a biracial contest (Finn and Glaser 2010, Payne et al. 2010, Knowles et al. 2010). Even research that measures racial stereotypes and prejudices more explicitly – and may understate levels of prejudice due to social desirability pressures (Kuklinski et al. 1997, Berinsky 1999) – finds significant proportions of Americans hold negative racial stereotypes. When asked to rate whites and blacks on a variety of traits, Bobo et al. (2012) find that over 40% of whites rate whites as more hardworking than blacks and almost a quarter of whites rate whites as more intelligent than blacks in 2008 – figures that have changed little since the mid-1990s. The stereotype that blacks are lazy is particularly persistent (e.g., Sniderman and Piazza 1993, Peffley and Sheilds 1996, Gilens 1999, Sears and Henry 2003), with a recent study finding that “40%–50% of our respondents indicate that a lack of sufficient internal motivation accounts ‘a great deal’ or ‘some’ for disparate educational and economic racial outcomes” (Huddy and Feldman 2009, 430). Furthermore, these stereotypes are not restricted to white respondents – for example, between 2000-2008, fully half of white GSS respondents and 44% of black GSS respondents
attribute racial socioeconomic inequality to blacks lacking “the motivation or will power to pull themselves up out of poverty” (Bobo, et al. 2012, 62).

The persistence of stereotypes of racial minorities as less intelligent or lazier than whites may have significant consequences for candidates of color. Recent surveys of party leaders and the general public reveal that intelligence and being hardworking are among the most commonly prized traits mentioned when asked “In an ideal world, what personal qualities would you like all your party’s political candidates to have?” (Broockman, et al. 2014). Indeed, experimental research has demonstrated that both explicit measures of stereotypes of Latinos (are they hardworking, trustworthy, intelligent) and implicit racial views affect support for Latino candidates, particularly in the absence of party cues (Kam 2007). Further, studies using a variety of methods highlight that racial prejudice lowered Obama’s vote share in the presidential nomination and general elections (Huddy and Feldman 2009, Highton 2011, Stephens-Davidowitz 2013). Thus, there is certainly potential for stereotypes of both women and racial and ethnic minorities to negatively affect voter support of candidates from these groups.  

However, voters (and respondents in our experiments) may sometimes override their own negative attitudes. In the language of cognitive psychology, voters possess both implicit and explicit attitudes toward women and racial minorities. While implicit attitudes are automatic and unconscious, explicit attitudes are deliberate and intentional. Sometimes these attitudes are in conflict. That is, a person might be unconsciously racially biased but express egalitarian ideals when asked directly about his views. Some egalitarians may be expressing what is known as social desirability bias – the belief that revealing one’s racism or sexism is inappropriate (Krumpal 2013), while others might feel firmly committed to egalitarian ideals (Devine and Monteith 1993). Scholars have found that both implicit and explicit attitudes affect vote choice and policy preferences (Mo 2015, Malhotra et al 2012, Perez 2010, Payne et al 2010, Arcuri et al.2008; Finn and Glaser 2010; Galdi et al. 2008; Greenwald et al. 2009, Lodge and Taber 2000,  

1 Specifically, among party leaders, intelligence was the second most frequently mentioned quality, and being hardworking was the fourth most frequently mentioned quality. Among the general public, these qualities were the third and sixth most frequently mentioned traits desired among candidates. 

2 Of course, not all stereotypes are negative. Women are perceived as more honest and as better at dealing with policies related to care and compassion, helping the elderly or poor, and addressing needs related to education or health (Kahn 1996; Alexander and Andersen 1993; Huddy and Terkildson 1993; Lawless 2004; Herrnson, Lay, and Stokes 2003). And women are seen as better at – and in fact report spending more time on – constituency service than men in similar elected offices (Richardson and Freeman 1995; Thomas 1992). We expect that these more positive perceptions of female candidates will be most important in elections for elected offices that are not legislative or executive in nature (for example, elections for city clerk). We plan to explore the possibility of a positive stereotype effect in future work. While researchers have found less evidence of positive racial than gender stereotypes, Asian-Americans are consistently perceived as academically gifted – particularly at math (e.g., Kao 1995) – and, blacks are typically perceived as better at athletics (Czopp and Monteith 2006), less sensitive to pain (Trawalter, et al. 2012), and more likely to possess superhuman abilities and mystical powers (Waytz, et al. 2015). However, it is not clear that these latter stereotypes would be relevant to voter decisions between political candidates. Furthermore, research demonstrates that exposure to positive racial stereotypes, such as the view that blacks are more athletic, is actually “more likely to increase beliefs in a biological underpinning to Black–White differences in behavior… and more likely to facilitate the application of negative stereotypes to African American targets” (Kay, et al. 2013, 291). Therefore, we do not expect positive racial stereotypes to significantly influence voter decisions for racial and ethnic minority candidates.
Most importantly for this study, scholars have shown that explicit attitudes can be invoked to dominate implicit attitudes (Devine 1989). For example, Mo (2015) finds that respondents who explicitly state being gender-equitable, but who implicitly prefer male leaders are able to suppress their implicit preference and select the more qualified candidate regardless of sex. Terkildsen (1993) finds that the negative relationship between racial prejudice and voting for (particularly dark-skinned) black candidates was reversed among high self-monitors – people who are more sensitive to social norms. Racially intolerant self-monitors actually indicated a greater likelihood of voting for a dark-skinned black candidate and rated this candidate more highly on a feeling thermometer than their racially tolerant counterparts (see also Berinsky 2004, Feldman and Huddy 2005).

Scholars have largely investigated the factors that trigger the use of implicit versus explicit political attitudes by focusing on the degree to which information is available and voters are motivated to suppress or override negative stereotypes (Mo 2015, Galdi et al 2008, Berinsky and Mendelberg 2005). Instead, we analyze the ways in which institutions may affect this process. Social psychological research on cognitive processing has determined that suppressing or overriding implicit prejudicial attitudes is mentally taxing. Fazio and Olsen (2003) propose that implicit attitudes will dominate explicit attitudes’ influence on judgements and behavior unless the motivation and opportunity to engage in deliberative processing are high. In a review of the literature Crandall and Schaller (2004) explain “Suppression takes mental energy, and a resultant mental fatigue can lead to suppression failures, inadvertent slips, and less ability to self-regulate.”

We argue that some institutional settings are more likely than others to encourage or enable voters to suppress negative stereotypes. Drawing on research in the consumer cognition literature, we suggest that when asked to make multiple choices at once, voters will be more likely to rely on simple heuristics (Iyengar and Lepper 2010) and affective reactions (Shiv and Fedorikhin 1999). At the local level the two dominant methods for electing city councilors vary distinctly along this dimension. In cities where councilors are elected by ward or district, each voter must select one candidate for city council – typically choosing between two clear contenders. In cities where councilors are elected at-large, voters are asked to pick multiple candidates from a large field. Our research shows that there are commonly twice as many candidates as seats available for election in at-large contests. Thus, if three councilors are being selected in an at-large election, a voter would select three of six candidates. We propose that the two candidate race presents a cognitively simpler task than the six candidate race, and so expect to see more suppression of negative attitudes in this setting. Thus, we expect women and minorities to be advantaged in two candidate races as compared to six candidate races.

Methodology

We use an experiment to evaluate the way in which electoral structure affects women’s and minorities’ representation in order to address the complexity of the electoral process and the ways that complexity limits existing studies. Candidates turn into elected officials through a
process that involves an individual candidate’s choice to run, encouragement and support from parties and interest groups, and voters’ choices. Underrepresentation of women and minorities may occur through multiple processes - women and minorities may be less interested in running than their white, male counterparts, be excluded or blocked by donors or parties, or be systematically chosen less by voters. Our experiment directly tests whether underrepresentation of certain groups may due to voters themselves, in an attempt to overcome several issues with existing research. First, voters can only choose the representatives that are presented to them in the election booth. If candidates from underrepresented groups choose not to run and/or parties discourage the participation of underrepresented candidates in at-large types of elections due to beliefs about likely victory in this type of election, then existing estimates of the effect of institutions themselves may be misleading. Second, it may also be the case that cities with at-large and district elections vary along a variety of dimensions (such as residential segregation) that are correlated with factors that may facilitate the election of women and minorities, and that the election of diverse candidates is a function of these antecedent factors rather than the electoral institutions themselves. Evaluating whether districts or at-large rules facilitate diverse representatives using electoral data may overestimate the ability of female and minority candidates to win if these candidates choose to run in the most favorable conditions. Third, survey data can provide an estimate of voters’ beliefs and attitudes about minority and female candidates, but may suffer from potential social desirability biases if a subset of people systematically overestimate their probability of voting for minority or female candidates (Hopkins 2009; Reeves 1997) or opt to not answer questions about their likely vote when there are minority or female candidates (Berinsky 1999). Survey data are also less well suited to measure actual behavior.

We overcome these inference problems by utilizing a 2 (Electoral type – district v. at-large) x 4 (race of candidate: African-American, Latino, Asian-American, White) x 2 (gender of candidate) conjoint design experiment that avoids the candidate self-selection issue by randomly assigning candidates of varying race and gender to respondents to vote under a randomly assigned electoral rule. Conjoint designs are experimental techniques for “handling situations in which a decision maker has to deal with options that simultaneously vary across two or more attributes.” Following Hainsmueller, Hopkins, and Yamamoto (2014) we apply this type of design to a political choice – an election. In our experiment, respondents were asked to act like voters in an election and each respondent was randomly assigned to either vote in a “district election” where they chose one candidate out of two presented or they voted in the cognitively more complicated at-large rule where they chose three candidates out of a total of six presented. Each respondent “voted” in three different types of elections: city council, county board of supervisors, and a parks and recreation board.3

3 Respondents also made 2 nonpolitical choices as well for the person (or people) who would star in a new talk show and for the budget committee for the University of California system. We exclude those choices from this analysis because these do not have real world electoral analogues. However, the patterns we observe hold if we include these nonpolitical choices (Models upon request).
In each election, respondents were presented with pictures of candidates side by side and asked to choose which one they preferred for the office. Figure 1 displays a screenshot of a type of decision that a respondent made in the at-large condition. Each election was on a separate screen. Each photo signaled the race and gender of the candidate, with eight possible combinations of race and gender within each photo and up to six photos per election. Each photo was randomized separately without replacement so that no respondent saw two of the same photo within the same election (although they could see the same photo in another election). In district elections there were 64 different possible combinations of candidate race and gender while in the at-large elections the complexity increases substantially with 262,144 possible combinations of candidate race and gender across the six candidates. The benefit of the conjoint design is that we are able to test the interaction of electoral rules and vary candidate race and gender within the same study rather than relying on separate survey experiments that test a limited set of hypotheses (i.e. varying only the race of candidates but not gender). After completing the choices for offices, each respondent also answered a series of demographic (e.g., partisanship, ideology, gender, education) and attitudinal questions (e.g., racial attitudes, gender attitudes, interest in politics).

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4 Each photo could be either a white man, white woman, black man, black woman, Latino man, Latino woman, or Asian man or Asian woman.

5 A total of 80 pictures are used in the experiment. We utilized pictures from a prior study by Alexander Todorov (Olivola and Todorov 2010; Todorov et al 2005) using only pictures calculated to be within two competency score standard deviations from one another. A total of 40 pictures were gathered from Todorov’s existing dataset of governors and senators while the remaining 40 pictures were collected online by us. The online pictures are of state or local elected officials from Arizona, Florida, Georgia, Hawaii, North Carolina, and Texas. Using Mturk, a separate sample of 1000 participants rated each photo on attractiveness, competency, and trustworthiness, characteristics that have been found to predict election outcomes (Todorov et al 2005). No significant differences exist between the two sets of pictures.

6 We ran the study with undergraduates randomly varying whether respondents answered the racial resentment scale from the American National Election Studies prior to making their choices between candidates or afterward and find no difference in choices based on the timing of those questions. We pool the Merced data across those two versions.
We designed our experiment to replicate conditions of many local and other low information elections in which voters typically know little about the candidates other than their name (which can signal gender and race/ethnicity) and images available in campaign mailings, posters, or other literature. We do not include other information about the candidates such as partisanship since this information is not often present in city elections. By asking respondents to make decisions quickly with limited information, we are reproducing the decision-making process of many voters in lower-level elections, who typically have few incentives to devote much time or effort to their candidate selections (Downs 1957, Schaffner et al. 2001. The set of photos from which candidates were selected for each experimental election included equal numbers of men and women and candidates of each race, making this a best case scenario for diversity since the probability of being presented a candidate of color or a female candidate is random rather than driven by the institutional rules or beliefs about voters and there is a higher proportion of candidates of color and female candidates than in most elections.

The experiment was administered online during Spring 2014 and again during Spring 2015. The first experiment utilized the University of California, Merced (UCM) student population while the second was administered on Amazon’s Mechanical Turk (Mturk) workplace. The student sample received extra credit for their participation in the survey and the Mturk participants received 50 cents upon completion of the survey. The student sample is composed of 701 subjects with 66% females, 58% Democrats, and 50% Latinos (See Table 1). Despite the reservations that come with the use of student samples, they do not diminish

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7 The Mturk HIT was described as a survey on decision making and group membership. In order to qualify, individuals needed to have approval rates for all requesters’ HITS to be greater than or equal to 95%, have a minimum of 50 HITS previously approved, and be located in the United States. Individuals who participated in rating pictures in a separate Mturk HIT were not allowed to take part in this survey.
experimental realism and may actually create a more challenging assessment of causal testing (Druckman and Kam 2011). We complement the UCM sample with a nonstudent sample using Mturk workplace. Mturk respondents have been found to be more representative than other types of convenience samples (Berinsky, Huber, and Lenz 2012). MTurk samples are young and more able to attract Latino and Asian respondents than nationally representative samples like the Cooperative Congressional Election Study (CCES) but worse at attracting African Americans (Huff and Tingley 2015). Compared to the Merced sample, the 960 person Mturk sample is more evenly split by gender with 43% females, and has substantially more (79%) white participants. Overall, the respondents on MTurk are more representative of the broader U.S. population than the UC Merced sample, but, on average, both samples are younger and more liberal than the broader voting population. If young, liberal respondents are more likely to be motivated to support diversity and more likely to self-monitor when possible, then this sample provides a hard test of our theory and may thus be a conservative estimate of how cognitive difficulty undercuts diversity among elected officials. Furthermore, as we will show our results are similar across our samples, suggesting that they are robust to variation in respondent age, education, race, ethnicity, and gender.

Table 1: Experimental samples

<table>
<thead>
<tr>
<th></th>
<th>UC Merced</th>
<th>Mturk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>33.94</td>
<td>56.40</td>
</tr>
<tr>
<td>Female</td>
<td>66.06</td>
<td>43.60</td>
</tr>
<tr>
<td>Democrats</td>
<td>58.02</td>
<td>61.63</td>
</tr>
<tr>
<td>Independents</td>
<td>5.96</td>
<td>9.57</td>
</tr>
<tr>
<td>Republicans</td>
<td>36.01</td>
<td>28.81</td>
</tr>
<tr>
<td>White</td>
<td>14.96</td>
<td>79.07</td>
</tr>
<tr>
<td>African American</td>
<td>7.76</td>
<td>7.00</td>
</tr>
<tr>
<td>Asian American</td>
<td>27.88</td>
<td>10.41</td>
</tr>
<tr>
<td>Latino</td>
<td>50.72</td>
<td>6.55</td>
</tr>
<tr>
<td>Other race</td>
<td>6.28</td>
<td>2.54</td>
</tr>
<tr>
<td>N respondents</td>
<td>701</td>
<td>960</td>
</tr>
<tr>
<td>N choices</td>
<td>9,148</td>
<td>11,352</td>
</tr>
</tbody>
</table>

We expect that the cognitively easier district elections should facilitate the choice of female candidates and candidates of color more easily than at-large elections, where it is more difficult to self-monitor and suppress negative stereotypes. Thus, we expect that minority and female candidates will be more likely to be chosen in district elections than in at-large contests.8 We test

8 Since there are differences in beliefs about specific racial and ethnic groups, we may observe differences in the probability of choosing candidates from some racial groups rather than others, but we do not have an a priori theory
this hypothesis across both the undergraduate sample and the Mechanical Turk sample and find strikingly similar patterns and effect sizes. To model the effect of candidate characteristics on voters’ choices, we use a linear regression with dummy variables for candidate race (African American, Latino, Asian-American) and gender (female candidates) with white candidates and male candidates as the baseline categories. The coefficients for each candidate attribute are the Average Marginal Component Effects (AMCE), which can be interpreted as the average change in the probability that a candidate will be chosen when she (he) has a given characteristic rather than the baseline.\(^9\) Pooling across the three different decisions made by each respondent, the 701 UCM respondents made a total of 9,148 decisions and the 960 Mturk respondents made 11,352 decisions. Since each respondent makes multiple choices, we cluster the standard errors by respondent to account for individual differences that systematically influence each choice made by the respondent.

**Results**

To test whether female and racial or ethnic minority candidates receive more support in some electoral contexts than others, we evaluate the likelihood that a voter selected a candidate with various traits in a simulated district election (select one of two candidates) or at-large election (select three of six candidates). Recall that we expect that candidates who may be more subject to negative stereotypes and prejudices due to their race or gender should be more frequently supported in *district* than at-large election contexts due to the greater complexity of selecting multiple candidates from a larger field in at-large elections. In short, the difficulty of the at-large voting task should make it harder for our voters to suppress negative stereotypes against female and minority candidates, while the simplicity of district elections should make it easier for voters to overcome prejudices and demonstrate support for female and minority candidates, perhaps out of a desire to appear non-prejudiced.

In Figure 2, we display the ACMEs (average component-specific marginal effects) of candidate race and gender on the probability that a voter would select that candidate, with bars indicating 95% confidence intervals. These can be interpreted as the change in the likelihood that a candidate is selected by a voter when they possess a given trait (e.g., are black, are female) compared to if they were a member of our baseline candidate group (white, male). The ACMEs for each candidate characteristic within districts are stacked on top of the matching characteristic within at-large races. We are most interested in the difference between these coefficients.

\(^9\) Formally, Hainmueller, Hopkins, and Yamamoto (2014) define the AMCE as “the increase in the population probability that a profile would be chosen if the value of its \(l\)th component was changed from \(t_0\) to \(t_1\), averaged over all the possible values of the other components given the joint distribution of the profile attributes \(p(t)\)” (Hainmueller, Hopkins, Yamamoto 2014, 11).
Figure 2: Basic Model
Effect of candidate race, gender, and institution on vote choice

<table>
<thead>
<tr>
<th>Merced Sample</th>
<th>Mechanical Turk Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black_AL</td>
<td></td>
</tr>
<tr>
<td>Black_D</td>
<td></td>
</tr>
<tr>
<td>Asian_AL</td>
<td></td>
</tr>
<tr>
<td>Asian_D</td>
<td></td>
</tr>
<tr>
<td>Hispanic_AL</td>
<td></td>
</tr>
<tr>
<td>Hispanic_D</td>
<td></td>
</tr>
<tr>
<td>Female_AL</td>
<td></td>
</tr>
<tr>
<td>Female_D</td>
<td></td>
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</tbody>
</table>

Note: These figures show estimates of the effects of randomly assigned candidate attributes on respondents’ vote choices. Estimates are based on OLS regression estimators with standard errors clustered on respondent, and split by election type (district vs. at-large); bars represent 95% confidence intervals. Base category for race is white and male for gender. Coefficients can be interpreted as the effect of moving from a white (male) candidate to a black (female) candidate on the probability that that candidate is chosen.
The first pattern that is clear from this figure is that minority and female candidates are preferred over white and male candidates in both district and at-large election contexts across both samples. This finding was not expected, and may be a consequence of the extremely low-information election context in our experimental elections.10 Because the only traits our voters have to use when making their voting decisions are visible candidate characteristics – namely, race and gender – and because voters are likely to see diverse (non-white, non-male) candidates quite frequently in the experimental elections due to their common presence in our candidate photo pool - all the voters in our experiments may be seeking to avoid displaying prejudice, thus leading them to demonstrate a preference for diverse candidates (see Terkildsen 1993 for a similar effect among racially prejudiced voters).

The results in Figure 2 also demonstrate support for our hypothesis that female and minority candidates will receive more support from voters in the simpler electoral context of (select one of two) district elections than in more complex (select three of six) at-large elections. Specifically, we find that the probability that a voter will support a black or female candidate (relative to a white or male candidate) in district elections is significantly higher than that probability in at-large elections. For example, in the Mturk sample, respondents preferred a black candidate over a white candidate by .14 (SE=.026) in a district election but by .07 (SE=.019) in an at-large election, a difference that is statistically significant (F(1,959)=8.04, p<.01).11 Similarly, female candidates have a .09 (SE=.01) higher probability than men of being chosen in districts but get a smaller boost of .03 (SE=.01) in at-large elections (F(1,959), p<.01). On the other hand, Asian and Latino candidates are equally likely to be picked in district and at-large contests. In other words, Asians and Latino candidates receive no additional benefit from districts in the way that black candidates do. We show these results graphically in Figure 3.

10 It is also possible that a young, liberal sample is more likely to show favor toward a diverse slate of candidates because these candidates are likely to share their own gender or ethnicity or be perceived as ideologically closer to the Democratic party than white male candidates (Lerman and Sadin 2014). However, if this is the case, we’d expect an additional benefit to minority and women candidates in the more complicated elections (the at-large setting). We find the opposite. Furthermore, we do not find evidence that respondents are simply choosing candidates that share their own demographic characteristics, which we discuss further below. In addition, survey data shows that upwards of 90% of respondents on national surveys as of 2010 state that they are willing (at least in the abstract) to vote for a qualified African American or female candidate for president, suggesting that these findings may be similar even in a broader sample. (http://www.ropercenter.uconn.edu/willingness-to-vote-for-womanblack-for-president/). Lastly, as one way of determining whether respondents are projecting ideology or partisanship on to the candidates rather than relying on more general stereotypes, we utilize one of the non-political choices respondents made. Respondents were asked to choose participants in a new talk show, and it should not be the case that respondents should project ideology or partisanship onto a talk show host/panelist. We find that female candidates in the talk show election get a larger bump in the district (ACME = .10, SE=.01) than in at-large contests (.06, SE=.02; F(1,959), p<.08), the same patterns we observe in the political elections. This suggests that the political findings are not simply being driven by projections of ideology or partisanship. However, we cannot rule out that possibility for candidate race, which is a better predictor of partisanship. Black and Latino candidates are equally likely to be chosen over a white candidate across both institutions, where Asian candidates get a larger boost from districts over at-large races.

11 We model the impact of candidate race and district by interacting the electoral rule with the race of candidate with white candidates as the excluded category and controlling for the gender of candidates. After estimating this OLS model, we use Stata’s post-estimation “test” command to test whether the coefficient for black candidates in districts is equal to the coefficient for black candidates in at-large races.
These findings are consistent with our theory that the reason female and minority candidates should be preferred in district elections is that these elections provide a context where its easiest for voters to intentionally counter their prejudices and make a socially desirable choice. Because the negative stereotypes regarding women’s and blacks’ suitability for political office and leadership positions are more prominent than stereotypes about Latinos and Asians, voters are aware of and work to overcome their stereotypes when voting for women and blacks particularly in the less cognitively complex district election context, but may not feel pressure to do the same when evaluating Asian and Latino candidates.\textsuperscript{12}

The effects of negative stereotypes on voting behavior – and any desire to overcome stereotypes to cast socially acceptable votes – should be higher among respondents who are not themselves subject to these stereotypes.\textsuperscript{13} Specifically, if our theory is correct, we should see a larger difference between votes for minority and female candidates in the district and at-large

\textsuperscript{12} It is also possible that the ethnicity of Latino candidates is less clear in our photographs than the race of Black candidates. This too could result in the lack of difference in voter support for Latino candidates between at-large and district election contexts.

\textsuperscript{13} Research has demonstrated that compared to men and whites, women and racial minorities hold less negative stereotypes of their respective groups (Dolan 2014, Schuman et al. 1997)
contexts among white voters and male voters than among their minority and female counterparts. The results in Figures 4 and 5 reveal support for this expectation.14

First, when we compare male to female respondents (Figure 4), we see that the difference in support for female candidates by electoral context in our basic model is largely being driven by our male respondents. Women are more likely than men to support female candidates generally, and the level of support for female candidates among women does not significantly differ in district or at-large elections. On the other hand, the likelihood of a male respondent voting for a female candidate over our male candidate baseline differs substantially between our more and less complex electoral contexts. Male respondents in district races give a slight advantage to female candidates of .03 (SE=.02), yet in the more cognitively challenging at-large election, male respondents are more likely to choose male candidates by .03 (SE=.02), a significant swing of 6 percentage points toward male candidates due to the change in institution (F(1, 532), p<.01). In our more complex electoral setting – at-large races – male respondents are more likely to vote for a more traditional candidate - a man.

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14 For space considerations, Figures 4 and 5 display the results from our Mturk sample – a sample that is more representative of the American population than our student sample from UC Merced. However, the findings we discuss here are substantively similar in our Merced sample. Both sets of findings are available.
Figure 4: Gender Effects
Effect of candidate race, gender, and institution on vote choice by gender of respondent
Mechanical Turk Sample

Male Respondents

Black
Asian
Hispanic
Male_D
Female_AL
Female_D

Female Respondents

Black
Asian
Hispanic
Male_D
Female_AL
Female_D

Note: These figures show estimates of the effects of randomly assigned candidate attributes on respondents’ vote choices. Estimates are based on OLS regression estimators with standard errors clustered on respondent in which gender of candidate is interacted with election type (district vs. at-large) and the sample is split by gender of respondent; bars represent 95% confidence intervals. Base category for race is white and male for gender. Coefficients can be interpreted as the effect of moving from a white (male) candidate to a black (female) candidate on the probability that that candidate is chosen.
**Figure 5: Race Effects**

Effect of candidate race, gender, and institution on vote choice by race of respondent

**Mechanical Turk Sample**

<table>
<thead>
<tr>
<th>White Respondents</th>
<th>Non White Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>White_D</td>
<td>White_D</td>
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<tr>
<td>Black_AL</td>
<td>Black_AL</td>
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<tr>
<td>Hispanic_D</td>
<td>Hispanic_D</td>
</tr>
<tr>
<td>Female</td>
<td>Female</td>
</tr>
</tbody>
</table>

**Mechanical Turk Sample**

Note: These figures show estimates of the effects of randomly assigned candidate attributes on respondents’ vote choices. Estimates are based on OLS regression estimators with standard errors clustered on respondent in which race of candidate is interacted with election type (district vs. at-large) and the sample is split by race of respondent; bars represent 95% confidence intervals. Base category for race is white and male for gender. Coefficients can be interpreted as the effect of moving from a white (male) candidate to a black (female) candidate on the probability that that candidate is chosen.
Similarly, the results in Figure 5 reveal that the greater preference for minority candidates in district elections in our basic model is being driven primarily by the actions of white respondents. Among black, Latino, and Asian respondents we find no significant difference in the likelihood of voting for a minority candidate in district versus at-large elections. However, when examining white respondents an electoral context effect is clear. Whites are substantially (and statistically significantly) more likely to vote for a black candidate in a district election than an at-large election. White voters in this sample express a preference for minority candidates over white candidates, but what we are most interested in is the difference across electoral rules. Among white respondents, black candidates have a higher probability of being chosen by .12 (SE=.02) over white candidates in district elections but a significantly smaller bump of .05 (SE=.02) in the at-large setting (F(1,752), p<.01). Stereotypes about African Americans are more negative, more well-formed, and more accessible to whites than stereotypes about Latinos and Asians potentially making it likely that white respondents will be more motivated to monitor their reactions to black candidates than candidates from other racial groups. Thus, the findings among male and female respondents, and white and minority respondents, are consistent with our hypothesis that respondents will be able to intentionally overcome negative stereotypes when faced with a less demanding cognitive task but will make vote choices consistent with their prejudices when the electoral context is more demanding. In other words, the negative stereotypes that diminish support for women and black candidates will work more effectively (particularly for men and white respondents) in pick three of six candidate at-large elections than pick one of two candidate district elections.

Our hypothesis that cognitively difficult decisions allow stereotypes to leach into decision-making even when people do not actively endorse these stereotypes and may be motivated to overcome them implies that respondents with the highest motivation should be most affected by the institutional change. In other words, it should be the case that electoral structure will exhibit the clearest effect among respondents who have self-reported egalitarian views. Stereotypes do not need to be endorsed to affect candidate evaluation or vote choice (Berinsky

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15 One alternative mechanism that voters could use in making a choice in the more difficult at-large setting would be to rely on their own identity as a heuristic for choosing a candidate, and we’d observe that in-group voting (i.e. black respondents voting for black candidates) would increase in the at-large setting in comparison to the district setting. The findings from Figure 5 suggest that respondents are not simply using their own identity as a heuristic to vote for in the more cognitively difficult at-large setting. Minority voters are as likely as white respondents to choose an in-group representative in the district condition as in the at-large condition, and are more likely to pick other minority candidates over white candidates at almost the same rate as their own in-group candidates.

16 For simplicity of display, we group these respondents together in the model in Figure 3, but our findings are the same when we examine black, Latino, and Asian respondents separately.

17 White respondents in the UCM sample also significantly preferred black and other minority candidates to white candidates, although these differences were not significant due to the smaller number of whites. However, together, the findings suggest that there are subsets of white respondents, particularly young and left-leaning whites, in the broader public who may not punish black candidates at the ballot box and who may actively prefer them. However, even among this group that may prefer black candidates, these respondents were less able to express this preference in the more cognitively challenging environment of the at-large race.

18 It is also possible that respondents have an easier time differentiating white and black candidates than they do differentiating white and Latino candidates.
and Mendelberg 2005). If this is the case, then it is respondents who themselves express more progressive views on gender and race who should have a lower probability of choosing female and minority candidates in at-large contests in comparison to district ones. It is among this group that we should expect the strongest motivation to suppress negative stereotypes. Respondents with more traditional views of gender (i.e. that men and women should occupy separate spheres) and who are more racially conservative may be less affected by the cognitive complexity because they are less likely to choose female or minority candidates respectively and less motivated to intentionally counteract these attitudes in the district context by choosing candidates that they may consider less well suited for politics.

To test this implication, we model how the electoral institution matters for respondents at differing levels of gender and race attitudes. We measure gender attitudes using a scale constructed from six questions: 1. Are men or women better suited for politics, 2. Do women have too much influence in politics, 3. Would a woman president be good or bad for the country, 4. Should women work outside of their homes, 5. Whether there should be preferential hiring of women, and 6. How much of a problem is gender discrimination and were scaled so that higher values indicate more support for equal gender roles. These questions tap into basic attitudes toward gender roles in society and more specific ideas about gender and politics, and they scale well together (Cronbach’s alpha = .75). To measure attitudes about race, we combine five questions from the racial resentment battery (Kinder and Sanders 1996) into an index where higher values indicate more endorsement of the belief that blacks do not conform to the American ethos (Cronbach’s alpha = .86). Respondents were asked to agree or disagree with statements that 1. Irish, Jewish, Italians and other minorities overcame prejudice and blacks should do the same, 2. Blacks have gotten less than what they deserve, 3. The amount of discrimination against blacks limits their chances to get ahead, 4. Slavery and discrimination make it difficult for blacks to get out of the lower classes, and 5. It’s really a matter of blacks not trying hard enough. All of the respondents in the Mturk sample received the racial resentment questions and the gender attitudes questions after making their candidate choices. In the UCM sample, half of the respondents received the race questions prior to choosing the candidates and half answered them post-election, but we found no difference in candidate choice based on the order of the race question.

Figure 6 demonstrates that those people who are explicitly more supportive of diversity in representation, who express support for gender equity and are low on racial resentment, are most affected by the change in institutions. These figures model the effect of institution on the probability of choosing a candidate, with gender attitudes and racial resentment split at their

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We also run a principal components factor analysis and the six questions loaded highly onto a single factor (Eigenvalue = 2.10). It is the case that our male and female respondents differ in their gender attitudes with female respondents significantly more supportive of equity (On a 0 to 1 scale, M_male = .54, M_female = .63, t = .28, p < .01, two-tailed) but the correlation between respondent gender and identity is .26 (Pearson’s r, p < .01) meaning that gender attitudes are not simply a reflection of the respondent’s own sex. Additionally, if we run these models on gender progressiveness only among male respondents, the ACMEs are of almost identical size and female candidates do significantly better in district races than at-large races (Female candidate in district = .10 (SE = .02), Female candidate in at-large = .03 (SE = .026), F(1, 233) = 10.28, p < .01).
means. Respondents who would prefer traditional gender roles (those low on our gender attitudes scale) essentially flip a coin between male and female candidates in district elections (ACME = -.01, SE=.47) and give a small benefit of .03 (SE=.02) to male candidates in at-large elections, but there is not a significant difference between at-large and district races (F(1,466)=1.41, p<.24) (See Figure 5). On the other hand, individuals who express more support for gender equity give a significant bump to female candidates in districts of .14 (SE=.02), and while they do still prefer female to male candidates in the at-large races, the preference is significantly attenuated to .09 (SE=.01), a difference that is significant (F(1,512, p<.01).

Respondents who express more racially resentful views are unaffected by the institutional rules; they are no more likely to support a minority candidate than white candidate under any electoral rule (See bottom left quadrant of Figure 6). However, for respondents low in racial resentment (less than the mean of .4 on the 0 to 1 scale), who endorse the idea that discrimination is still problematic and reject the notion that blacks do not work hard enough, the electoral rules do matter and at-large contests appear to make it harder to line up these beliefs with vote choice. Specifically, in district elections, less resentful respondents gave a large benefit to black candidates of .21 (SE=.03) over white candidates, and a smaller benefit to black candidates in at-large contests (ACME=.15, SE=.03). Overall, these findings from more than 20,000 different decisions provide support for the idea that at-large races make it more likely that voters will rely on heuristics that benefit candidates seen as more fitting for public office – white men – because they are more cognitively challenging. Even those voters motivated to support diverse candidates are less able to fully realize these preferences in at-large contests compared to districts. On the whole, the respondents in these two studies were very supportive of minority and female candidates over white male candidates, but were less able to express this support fully in the at-large races.

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20 We run a model that interacts the electoral institution with the gender of the candidate and calculate the differences in the coefficient between female candidates in districts and female candidates in at-large races using Stata’s postestimation “test” command.

21 Theoretically, it may be the case that racial resentment has a particular resonance with white respondents rather than all respondents since the attitudes it taps are about how blacks live up to (or not) a particular American ethos derived from the experiences of whites. When we run these models solely among whites, the ACMEs are almost identical and the patterns remain the same. Whites high on racial resentment are not more likely to pick minority candidates than white candidates under any electoral rules and there are no differences between at-large and district elections. Whites low on racial resentment are not more likely to pick minority candidates than white candidates under any electoral rules and there are no differences between at-large and district elections. Whites low on racial resentment (less than the mean) give a large boost to black candidates (ACME = .21 (SE=.03) in the district condition and a smaller boost to black candidates in the at-large races (ACME=.14, SE=.03), a difference that is significant and in the expected direction (F(1,371)=6.82, p<.01).

22 To put this in context, of all of the candidates in the at-large races, respondents low on racial resentment choose 21% white candidates and 28% black candidates (with Latino and Asian candidates making up the remaining 50%). In district races, respondents low on racial resentment still choose 21% white candidates but 32% black candidates, giving black candidates a plurality over other candidates.
Figure 6: Explicit Attitude Effects
Effect of candidate race, gender, and institution on vote choice by gender and racial progressiveness
Mechanical Turk Sample

<table>
<thead>
<tr>
<th>Low on Gender Progressiveness</th>
<th>High on Gender Progressiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
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<tr>
<td>Asian</td>
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<tr>
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<td>Hispanic</td>
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<tr>
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<tr>
<td>Female_D</td>
<td>Female_D</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Low on Racial Progressiveness (high racial resentment)</th>
<th>High on Racial Progressiveness (low racial resentment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White_D</td>
<td>White_D</td>
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<tr>
<td>Black_AL</td>
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<td>Female</td>
<td>Female</td>
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</table>

Note: These figures show estimates of the effects of randomly assigned candidate attributes on respondents’ vote choices. Estimates are based on OLS regression estimators with standard errors clustered on respondent in which gender/race of candidate is interacted with election type (district vs. at-large) and the sample is split by gender and race progressivity at the mean of each scale; bars represent 95% confidence intervals. Base category for race is white and male for gender. Coefficients can be interpreted as the effect of moving from a white (male) candidate to a black (female) candidate on the probability that that candidate is chosen.
Conclusion

Democracy asks a great deal of its constituents. In America, citizens of voting age have the opportunity to vote in multiple elections every year or two. Sometimes these elections are straightforward contests between two clearly differentiated candidates (like when voting for president). But much more often, residents are presented with an array of choices for political outcomes that they may know (or even care) little about. A single ballot may be multiple pages long and request that the voter make a decision about candidates for different kinds of offices and policies. In some cases residents are also provided a great deal of information about candidates and policy options. As a result, we contend that participating in representative democracy is cognitively challenging.

When individuals are confronted with cognitively challenging situations they are more likely to rely on fast, intuitive thinking rather than slow, deliberative thinking in making choices (Evans 2008). Prejudice and stereotypes fall into the category of intuitive thinking, while suppression of these attitudes requires deliberate thought. The more choice and information given to voters, the more likely they are to fall back on stereotypical characterizations of candidates. The result is a lower probability of electing women and racial and ethnic minority candidates. To be clear, on average, the respondents in this sample actively preferred female and minority candidates over white, male candidates, but at-large elections made the expression of these preferences more difficult.

At this point our research has provided a new explanation for the advantage of district elections as compared to at-large contests for underrepresented groups. When an election presents voters with a cognitively difficult task, such as selecting multiple candidates for a single legislature, they may be less able to suppress negative stereotypes about the candidates they encounter. But we intend to push this argument further and more precisely with additional experiments. In one we plan to purposefully increase the cognitive load of our respondents by asking them to commit long numbers to memory and then ask them to vote. In another we seek to elicit the heuristic that respondents are using in cognitively challenging elections by varying candidate attributes and determining how many of these attributes are utilized in decision making. Finally, we propose to explore different types of mental taxation by varying the amount of information provided to respondents as well as the number of choices to be made.
Works Cited


presented at the The Annual Meeting of the American Political Science Association, Washington DC.


Iyengar and Lepper, 2010 "When Choice is Demotivating: Can One Desire Too Much of a Good Thing?" faculty.washington.edu/jdb/345/345 Articles/Iyengar %26 Lepper (2000).pdf


