

# Multidimensional Democracy: Citizen Demand for the Components of Political Representation

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Dissertation Chapter 1

## Abstract

Most American politics scholarship defines representation as mass-elite policy congruence, and typically focuses on the perspectives of representatives rather than constituents. However, the fact that legislators win re-election despite obstacles to policy congruence implies that representation is inherently more complex. I unify four unique components of representation—policy, service, allocation, and descriptive—as well as specific “role orientations” within two components in a model of citizen demand. I posit that citizens’ expectations about government’s role in their lives—as observed through economic factors, ideology, and gender and race—drive demand for representation. Using survey experiments from a nationally-representative sample, I examine citizen preferences for (1) the four components of representation and (2) role orientations within policy (delegates versus trustees) and allocation (legislators who allocate through pork barrel projects versus securing a fair share of funds). Results indicate that expectations about government’s role structure preferences for “multidimensional” representation, with economic factors and ideology producing the strongest influence.

**Keywords:** Representation · Policy congruence · Constituent service · Allocation · Descriptive representation · Legislator role orientations

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In examining the fundamental element of American democracy—that all citizens should be represented in government—scholars typically focus on some form of mass-elite policy congruence. The most common example is the delegate model of policy representation, in which representation occurs when legislators’ voting behavior matches the policy preferences of their constituents. While this relationship is undoubtedly a crucial element, defining representation solely through policy responsiveness gives rise to a key theoretical tension. On one hand, the fact that legislators in the U.S. often win re-election suggests that this policy responsiveness relationship must be strong; if an incumbent stays in office, constituents must generally approve of his or her actions in the legislature. However, several decades’ worth of research contradicts this logic by identifying factors that obstruct or weaken policy congruence. One potential explanation for this apparent contradiction is that representation in practice is more than just voting according to constituent policy opinions. Indeed, legislators’ success in staying in office suggests that representation is a complex, multifaceted concept.

I advance this explanation here by developing and testing a theory of constituent preferences for multiple dimensions of representation. I show that, in addition to following district policy opinions, citizens place varying degrees of demand on their legislators for several other components of representation: *service*, or individual assistance with government agencies, *allocation*, or the securing of funding for the district, and *descriptive*, which denotes a connection based on identity traits like gender or race. Furthermore, I show that constituents’ demand for representation extends to preferences for different legislator “role orientations” within policy (*delegates* versus *trustees*) and allocation (legislators who allocate through *pork barrel* projects versus securing a *fair share* of funds). Previous scholarship defines typologies of these dimensions of representation—the four components and the role orientations—but does not provide a theory about the formation of preferences for them.<sup>1</sup>

In providing such a theory, my contribution solves two critical problems in the study of rep-

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<sup>1</sup>I refer to the four components of representation as policy, service, allocation, and descriptive representation, while the term “dimensions of representation” includes both the four components *and* the role orientations within the policy and allocation components.

resentation. First, while scholars as far back as Eulau and Karps (1977) have called for expansion beyond the delegate policy responsiveness dimension, most efforts of doing so still focus narrowly on only one. This is especially problematic because there is likely to be overlap—or correlation—between the different dimensions. Thus, not accounting for each one could lead to misleading conclusions about the dimension of interest. Additionally, my focus on citizen demand for representation solves a second, and equally-important problem: the disproportionate amount of literature examining only the perspectives of elites. While scholarship on legislators' provision of representation is important, focusing only on elites mischaracterizes representation as unidirectional, which contrasts with Pitkin's (1967) depiction of a two-way relationship. Understanding what constituents want from their representatives can help political scientists evaluate representation as a commodity that is both supplied and demanded.

My main theoretical contributions are in showing that demand for the various dimensions of representation stems from how citizens expect government to play a role in their lives. Building from recent work utilizing demographics to infer public preferences, I measure these expectations through several observable characteristics: economic factors, ideology, and gender and race. I show that beyond structuring issue preferences, expectations about the role of government also influence judgments of how legislators should divide their time and resources in providing representation. Moreover, I show that expectations of government's role also affect whether constituents want their representative to be a delegate or trustee and allocate through pork barrel projects or by securing the district's fair share of funding. In short, from citizens' perspectives representation is not just a legislator voting according to constituent policy preferences. Instead, representation means bringing government to the areas of citizens' lives where it can be most relevant and helpful.

Empirical support comes from survey experiments that presented a representative sample of Americans with hypothetical election information and e-mail conversations between a constituent and legislator. I manipulated the message content to emphasize the components of representation and role orientations described above, then asked respondents to evaluate the legislator. Results support my theoretical claim that preferences for the dimensions of representation vary accord-

ing to expectations of government's role. I conclude that scholars should account for multiple dimensions of representation in theoretical models of the process because meaningful and systematic variation in citizens' preferences for those dimensions implies different strategies in providing representation on the part of legislators.

## 1 The Dimensions of Representation

The need for theory-building on multiple dimensions of representation is highlighted by the simple observation that American legislators typically win re-election despite a wide range of factors that obstruct the basic policy congruence relationship. These factors include (but are not limited to) constituent knowledge and awareness (Verba and Nie 1972; Griffin and Flavin 2007) interest groups and bureaucracy (Lowi 1979; Jacobs and Shapiro 2000), partisan or legislators' own preferences (Mayhew 1974; Jacobs and Shapiro 2000), variance in electoral competition (Fiorina 1974; Griffin 2006), or constituency traits like population size and opinion heterogeneity (Hibbing and Alford 1990; Bailey and Brady 1998). In fact, Fenno's (1978) work could be viewed as legislators emphasizing multiple dimensions of representation to develop trust in the district, thereby giving them freedom in policy activities away from home.

Eulau and Karps (1977) were some of the first to make the point that scholars too often conceptualize representation exclusively as policy congruence. However, although recent scholarship has developed beyond just policy, the literature's typical response to Eulau and Karps (1977) has been a narrow focus on one component rather than a comprehensive look at all (or many) of them.<sup>2</sup> For example, researchers have added to the study of policy congruence through identifying factors that make it stronger or weaker and through examination of the electoral consequences of weak policy congruence.<sup>3</sup> Similarly, a separate literature identifies factors such as constituency size, commu-

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<sup>2</sup>This work also distinguishes between individual-level representation (e.g., constituents and their legislator) and system-level, or collective representation (e.g., Weissberg 1978; Erikson, MacKuen, and Stimson 2002). I focus on individual-level representation here because two dimensions, service and allocation, are inherently individual methods of providing representation.

<sup>3</sup>See Achen (1978), Bartels (1991), Canes-Wrone, Brady, and Cogan (2002), Sulkin (2005), Kousser, Lewis, and Masket (2007), or Hogan (2008).

nication medium, and cues from the constituent as explanations for the provision of service.<sup>4</sup> Still more work points to the importance of securing distributive funding, including its implications within the legislature and its electoral impact.<sup>5</sup> Finally, an extensive literature exists on descriptive representation. This is one area where multiple dimensions are studied together, as many scholars examine how descriptive representation affects policy outputs.<sup>6</sup>

The result of this tendency to focus narrowly is not one integrated body of research on representation, but rather several relatively separate literatures on different dimensions. Even Eulau and Karps (1977) provide only a typology of the four different components, not a theory connecting them (or any mention of role orientations). By developing isolated theories explaining each one, these studies force preferences into one dimension by assuming that constituents want the type of representation that is the topic of study. For instance, research on policy congruence assumes constituents only want the delegate model of policy responsiveness. Few studies explicitly allow the different dimensions to compete with one another in a theoretical or empirical setting.

## 1.1 Citizen Preferences

Additionally, because a large majority of this work is elite-centered, knowledge of what kind of representation citizens want from their legislators is relatively sparse. To be sure, research on voting behavior is centered precisely on citizen preferences (e.g., Rabinowitz and Macdonald 1989; Tomz and Van Houweling 2008). However, that work typically assumes that voters simply want policy representation (but see Cain, Ferejohn, and Fiorina 1987; Desposato and Petrocik 2003). It does not focus on preferences for the multiple dimensions given above.

There is a smaller body of research that examines constituent preferences for these dimensions. This literature demonstrates that there is variance in what citizens expect from legislators, though findings are not consistent.<sup>7</sup> For instance, Cain, Ferejohn, and Fiorina (1987) find that most con-

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<sup>4</sup>See Fiorina (1977), Johannes (1984), Cain, Ferejohn, and Fiorina (1987), Serra and Moon (1994), Freeman and Richardson (1996), Oppenheimer (1996), Adler, Gent, and Overmeyer (1998), Ellickson and Whistler (2001), and Butler and Broockman (2011).

<sup>5</sup>See Stein and Bickers (1995), Chen and Malhotra (2007), Lazarus (2009), Lazarus (2010), Lazarus and Reilly (2010), Primo and Snyder (2010), and Gamm and Kousser (2010).

<sup>6</sup>For examples, see Rosenthal (1995), Hero and Tolbert (1995), Lublin (1997), Arceneaux (2001), Tate (2001), Dovi (2002), Gay (2002), Lawless (2004), Meier, Juenke, Wrinkle, and Polinard (2005), or Griffin and Flavin (2007).

<sup>7</sup>See Krasno (1994), Kimball and Patterson (1997), Carman (2006), Carman (2007), Barker and Carman (2009),

stituents want their members of Congress to “keep in touch” on national issues, while Grant and Rudolph (2004) show that the most common expectation is that they will “work on local issues.” Similarly, as Box-Steffensmeier, Kimball, and Meinke (2003) show, shared race and gender with a representative can have differing effects on different measures of citizen preferences.

Existing work explaining this variance in representational demand largely focuses on the preferences of particular groups of constituents rather than developing a more general account. Tate (2003) finds that African-Americans place high demand on a legislator who brings funding back to the district (see also Grose 2011). Similarly, Griffin and Flavin (2007) find that African-Americans are less inclined to sanction legislators for weak policy responsiveness. Griffin and Flavin (2011) find that low income citizens are less concerned with policy than the wealthy. In short, scholars make clear that not all constituents want the same type of representation. However, this literature lacks a comprehensive theoretical model that incorporates demand for the four components of representation as well as role orientations within those components.

Furthermore, existing literature largely relies on evidence from direct questioning about citizens’ preferences. This is problematic because survey respondents may be influenced by social desirability. For example, respondents may rate policy representation as most important in part because they view doing so as consistent with the image of an ideal citizen who is informed and concerned. In contrast, rating allocation as most important may be seen as less desirable (even if it reflects true opinion) if respondents are wary of appearing to be most concerned with the distribution of government “hand-outs.”

I address all of these issues here. I develop the first (to my knowledge) comprehensive theoretical model of citizen demand for four components of representation and role orientations within two components. I also present the first (to my knowledge) empirical analysis of demand for representation employing a survey-experimental research design that mitigates the potential for social desirability effects. Overall, I demonstrate that beyond simply structuring policy preferences, expectations on the role of government influence preferences for the types of representation

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Barker and Carman (2010), or Griffin and Flavin (2011).

legislators should provide *and* for the role orientations they should take on in the process.

## **2 A Model of Citizen Demand for Representation**

My central claim is that citizens' view of the role of government drives demand for representation. I contend that this characterizes preferences for the four components of representation as well as role orientations within policy and allocation. I first present the model within the context of the four components, then describe how it also encompasses preferences for role orientations.

I begin with the assumption that citizens are self-interested, or motivated by some set of economic, policy, or other goals, and that they see government as a means of fulfilling those goals. Given these assumptions, I posit that citizens form preferences over how government might help them achieve their goals. I expect that people view some goals as better met by one component of representation and other goals better met by other components. This leads to a demand for different components of representation that varies as a function of their goals.

Panel (a) of Figure 1 depicts this process graphically. Citizens' self interest produces preferences over how government should play a role in their lives, which subsequently leads to a demand for representation. This may unfold in a direct and tangible manner, or through an abstract expectation about government's proper role. For example, if a citizen is interested in fulfilling basic needs while unemployed, I expect that he or she prefers government to give assistance through social programs, such as the provision of unemployment benefits. This preference would then lead to a demand for district-centric representation—service or allocation—that is focused on providing immediate, tangible assistance. Alternatively, if someone is interested in the conservative ideal of smaller, limited government, then he or she prefers government to scale-back social programs. This would contribute to less demand for allocation. As a final example, some constituents may have an interest in seeing that people of their gender or race are adequately accounted for in government. This would lead to a preference for the demographic make-up of the legislature reflecting that of the constituents, producing a stronger demand for descriptive representation.

[Insert Figure 1 here]

Testing this model empirically requires a way of assessing citizens' preferences for the role of government in their lives. Direct measures that encompass all the ways people view government's role are not generally available in space-constrained survey settings. Thus, I infer these preferences from demographic and other characteristics. Two justifications support this measurement strategy. First, recent work on estimating public preferences shows that demographics can be used to develop accurate and reliable measures of subnational public opinion via multilevel regression and poststratification (MRP, see Park, Gelman, and Bafumi 2004; Lax and Phillips 2009*a,b*; Kestell, Lax, and Phillips 2010). MRP models issue opinion as a function of demographic and geographic traits, then uses the model to predict state-level opinion based on each state's demographic makeup.<sup>8</sup> Second, as detailed below, extant literature gives considerable guidance on how specific demographic traits and preferences for government's role are connected.

With these justifications, Figure 1, panel (b) depicts my operationalization of the model. I employ a set of observable characteristics—economic factors, ideology, and gender and race—as a means of inferring preferences for the role of government. Of course, eliminating this assumption with a direct measure of views on government's role would provide a more elegant test of the model; see footnote 17 and the appendix for details on my efforts to do this empirically.

## 2.1 Economic Factors

First, I expect that citizens' economic self-interest determines how government should be involved in their lives, with those in economically-disadvantaged circumstances holding relatively strong preferences for obtaining tangible benefits. For instance, low income citizens stand to gain more from service and allocation representation compared to the wealthy because government assistance is likely more important in their daily lives. Soss (1999) finds that people who use welfare services evaluate government and develop an understanding of how it works based on interactions with providers of those services (see also Griffin and Flavin 2011). From this, I expect that the

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<sup>8</sup>Although those authors emphasize the importance of geographic variation, a central finding from their work is that demographics provide useful information for measuring public preferences. Indeed, one of the key innovations of MRP—compensation for small within-state samples—is that “all [survey respondents], regardless of their location, yield information about demographic patterns that can be applied to all state estimates” (Lax and Phillips 2009*a*, 371).

poor and those likely to use government services, such as the unemployed, prefer a representative who focuses on providing material benefits to the district or individual constituents because it is likely that they will have such a need at some point in time. In contrast, policy congruence is less important to poorer citizens because it is more abstract. This does not necessarily mean that disadvantaged constituents lack their own policy preferences, but that whether their preferences match their representative's voting behavior is relatively less important.

Furthermore, I expect that people with higher incomes, the employed, and the more highly-educated are more likely to prioritize policy responsiveness. These economically-advantaged citizens likely have more at stake in policy matters, are more engaged in policy debate, and/or feel greater political efficacy (Delli Carpini and Keeter 1996; Hutchings 2003; Griffin and Flavin 2011). Thus, they are more likely to view government's proper role as engaging in the policy process, and prefer policy representation from their legislators. These citizens may still need constituent service or desire distributive benefits, but they do not rely on government assistance as much as the poor, unemployed, or uneducated, and thus service and allocation are less likely to be a top priority.

## **2.2 Ideology**

The dominant left-right ideological dimension in American politics traditionally embodies views on the role of government, and thus likely also impacts demand for representation. In particular, the conservative preference for smaller government and less government intervention is at odds with allocation representation. Indeed, allocation necessarily implies government spending, which conservatives may view as an unwarranted addition to the tax burden. In contrast, liberals favor government taking an active role in citizens' lives through social services, funding assistance, and redistribution of wealth. Therefore, I posit that liberals are more likely to view allocation as in line with the government's role in their lives, and prioritize it higher than do conservatives. This is not to say that conservatives always oppose or liberals always favor any and all distributive spending. I simply expect that, on average, liberals have a stronger preference for allocation because it comports better with their overall view of government's role.

I do not expect to find differences in preferences for policy or service representation between

liberals and conservatives. Both groups both show distinct policy preferences, but I see no reason to expect one to be more concerned with their preferred set of policy outcomes than the other. Additionally, service work is inherently individualized and case-specific. This renders constituent service considerably less ideologically divisive than allocation.

### **2.3 Gender and Race**

I also expect gender- and race-based differences in views on the government's role to affect preferences for representation. In its simplest form, I expect women and racial minorities to have an interest in their gender or race being represented in government, leading to a stronger expectation of descriptive representation compared to men and whites. However, there is good reason to expect additional patterns based on gender and race, as past work suggests that women and blacks hold unique views on how government should affect their lives. Tate's (2003) analysis indicates that African-Americans are most likely to expect allocation from their representatives in Congress. Similarly, Griffin and Flavin (2007) show that whites are more likely to hold legislators' accountable for their policy behavior on Election Day. Scholars also find that women are socialized to be more concerned with interpersonal relationships and care-taking (e.g., Eagly 1987; Kathlene 1989). Thus, I expect that women prefer service more than do men, that blacks rate service and allocation more highly than do whites, and that whites prefer policy more than do blacks.

These expectations are indirectly supported by elite-level research. Scholars find that women legislators are stereotyped as "problem-solvers" while men are "leaders" (Thomas 1992; Richardson and Freeman 1995). Similarly, compared to whites, black legislators more often take on roles as district-centric providers of assistance (Nelson and van Horne 1974; Cole 1976; Grose 2011). If these roles are carried out in response to demand from those groups, then it is likely that women and African-Americans want service and allocation more so than do men and whites.

## **3 Preferences for Policy and Allocation Role Orientations**

By encompassing citizen preferences for four components of representation, the model described above signifies a substantial expansion over the literature's typical conceptualization. How-

ever, there still remains the potential for variation in how legislators could carry out their representative functions within each individual component. Accordingly, I examine preferences for different legislator role orientations within policy and allocation representation, and posit that the same role-of-government thesis described above also explains variation in preferences for those specific types. Wahlke, Eulau, Buchanan, and Ferguson (1962) established the typologies of delegates and trustees as common policy role orientations (though they do not address citizen preferences). In the delegate model, a representative's behavior is driven by district opinion. In the trustee model, the representative uses judgment to decide what is best for the district.<sup>9</sup> Although policy congruence fits most closely with the delegate model, both delegates and trustees could credibly be considered as representing their districts through policy responsiveness.

Similarly, allocation representation could take two distinct forms. In one, the legislator secures district benefits by adding a particularized amendment securing funding for his or her district to a bill *that is not primarily intended as a funding package*. This is allocation in the classic pork barrel sense that is typically criticized by media and citizens as wasteful and bad for democracy (see Stein and Bickers 1995). Alternatively, the legislator may bring funding back to the district by directing money to areas where the district needs help from a bill *that is specifically designed to fund district projects*. For example, in this fair share style of allocation, a legislator works to guarantee that a bill funding infrastructure improvements specifically targets his or her district's infrastructure in need of repair. As with policy, both styles are distinct, but fit the definition of allocation representation—the representative brings money home to benefit the district.

### **3.1 The Role of Government and Delegates versus Trustees**

Evidence is mixed on the question of whether citizens prefer delegates or trustees (cf. Patterson, Hedlund, and Boynton 1975; Hibbing and Theiss-Morse 2002). Furthermore, only a few studies actually attempt to explain variation in those preferences (e.g., Carman 2007; Barker and Carman 2009, 2010). Though not stated explicitly, this work suggests that views on the government's role

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<sup>9</sup>Wahlke et al. (1962) also introduce a third role orientation—the “politico”—who is a hybrid of the other two. For simplicity, I only focus on the delegate and trustee types here.

in citizens' lives affect demand for delegates or trustees through preferences for egalitarianism or traditionalism. Referring back to the theoretical model in Figure 1, panel (a), some people may have an egalitarian interest in citizens playing a role in government, while traditionalists are more interested in a hierarchical power structure and deference to elites' decisions. These two divergent interests imply either a preference for a delegate or a trustee, respectively. Thus, I expect that those with predispositions to egalitarianism believe government should provide access for ordinary citizens to make decisions, and prefer delegates, while people who favor traditionalistic viewpoints see a need for elites in government to exert control, and thus prefer trustees.

Building from this logic, I again employ observable characteristics as a means of inferring preferences—in this case, egalitarian and traditionalistic values (as before, see the appendix for a more direct test). Hunter's (1991) work on American "culture wars" suggests that division of opinion falls along partisan lines, with Democrats leaning toward a secular, egalitarian view and Republicans favoring Christian-based traditionalism (Barker and Carman 2010). However, this line of reasoning also suggests ideology as a contributing factor. Thus, I posit that egalitarian and traditionalistic values are associated with both ideology and partisanship, and seek to determine whether the effects of each can be distinguished from one another. Specifically, I expect that liberals and Democrats identify with "ordinary citizens," preferring delegates compared to conservatives and Republicans, who are more likely to hold traditional values and prefer trustees.

### **3.2 The Role of Government and Pork Barrel versus Fair Share**

The question of pork barrel versus fair share allocation likely centers on the extent to which constituents feel providing allocation is an important part of the government's role. Thus, preferences for these role orientations constitutes another test of the general theory outlined above. As the general disdain for wasteful pork barrel politics attests to, fair share funding is more equitable and in line with democratic ideals. Consequently, overall preference for fair share allocation is likely higher. However, democratic ideals may be less important to people whose daily lives are more substantially impacted by allocation. Consider again the theoretical model in panel (a) of Figure 1. A person whose main interest is in securing basic needs and who sees government's role

as providing such assistance likely places more importance on their representative bringing home distributive funding, regardless of the exact means by which it is procured.

I posit that the same factors that make allocation more important than the other components also moderate differences in preference for pork barrel versus fair share allocation. As before, this means operationalizing preferences for government's role from observable characteristics, as shown in Figure 1, panel (b) (see the appendix for details on relaxing this assumption). For instance, wealthy, employed, and educated citizens, who are likely to be less reliant on district funding, should exhibit the strongest preference for fair share allocation over pork barrel. In contrast, the poor, unemployed, and those with less education should hold the two types in closer regard, because any type of funding directed back to their district is potentially beneficial.

Additionally, I expect the influence of ideology to appear here. As noted above, I expect conservatives to have weaker preferences for allocation because they are more likely to be opposed to government spending. I anticipate that similar logic holds in this case. Pork barrel allocation is a clearer signal of unnecessary government spending to conservatives, whereas fair share spending is more justified. Thus, I expect liberals to prefer both types of allocation more than conservatives, but I expect the difference between the two groups to be larger when evaluating pork barrel allocation than when evaluating fair share.

## **4 Hypotheses**

My main theoretical contention is that demand for representation is driven by expectations of government's proper role in constituents' lives. Using observable characteristics as a means of measuring these expectations I present the following set of hypotheses.

### **4.1 Demand for the Four Components of Representation**

- H1 *Economic factors.* Economically-advantaged citizens prefer policy representation while economically-disadvantaged citizens prefer service and allocation.
- H2 *Ideology.* Liberals prefer allocation more highly than do conservatives.
- H3 *Gender.* (a) Citizens prefer a representative who shares their gender. (b) Men prefer policy representation while women prefer service.

H4 *Race*. Whites have a stronger preference for policy than do blacks while blacks have a stronger preference for service and allocation.

## 4.2 Demand for Delegate versus Trustee Role Orientations

H5 *Ideology*. Conservatives prefer trustees and liberals prefer delegates.

H6 *Party*. Republicans prefer trustees and Democrats prefer delegates.

## 4.3 Demand for Pork Barrel versus Fair Share Role Orientations

H7 *Economic factors*. The difference in preferences for pork barrel and fair share is larger for economically-advantaged citizens and smaller for economically-disadvantaged citizens.

H8 *Ideology*. The difference in preferences for pork barrel and fair share is larger for conservatives and smaller for liberals.

# 5 Research Design

The data used to test these hypotheses come from survey experiments administered in October and November of 2010 as part of a block of “team content” on the Cooperative Congressional Election Study (CCES). Polimetrix administered the survey online to a nationally-representative sample of 1,000 respondents.<sup>10</sup> The sample is a reasonable reflection of the American electorate, though it is more politically engaged than the general population.<sup>11</sup> This characteristic is consistent with past CCES data (see Rivers 2006; Vavreck and Rivers 2008). As a correction, I use the CCES sampling weight constructed for the block throughout the analyses presented below.<sup>12</sup>

## 5.1 Experimental Manipulations and Questions

The survey presented respondents with three manipulations designed to assess preferences for (1) the four components of representation, (2) delegate or trustee policy representation, and (3)

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<sup>10</sup>Nonresponse produced about 200 cases with missing data. Although this can be a problem for analyses using observational data, the potential for bias due to missingness is less of a concern here because respondents were randomly assigned into treatments, and thus the missingness is randomly distributed across conditions.

<sup>11</sup>For instance, 656 out of 1,000 respondents considered themselves “very interested” in politics and 679 reported the intention to vote in the November 2010 elections.

<sup>12</sup>The CCES sampling methodology uses a two-stage matching procedure. First, a random sample is drawn from the target population. Then, for each member of this target sample, members of an opt-in panel of respondents that match the target respondents on key characteristics are chosen to produce the matched sample (see Rivers 2006).

pork barrel or fair share allocation representation.<sup>13</sup> All respondents viewed the four components manipulation first, then the latter two in random order. See the appendix for a complete description.

### **5.1.1 Four Components: Election Information Experiment**

The first experiment randomly presented respondents with hypothetical excerpts from non-partisan election information about an incumbent state legislator in an unidentified state. The text discussed the legislator's reputation, specifically mentioning that the legislator performed well in providing one of policy, service, or allocation, but not the other two. Instead of assuming that legislators can perfectly provide all components of representation, this approach highlighted a tradeoff between them. The policy condition portrayed the legislator as a delegate and the allocation treatment did not reference pork barrel or fair share allocation. To test the descriptive representation expectations, I crossed treatments by gender via the legislator's name ("Aaron" or "Alicia"). The legislator's partisanship was not mentioned in this or any other manipulation.<sup>14</sup>

Thus, there were six treatments—three dimensions by two legislator names—of which each respondent saw one. After reading the text, each respondent then evaluated the legislator as if the legislator represented the respondent. This evaluation was measured on a feeling thermometer scaled from 0 to 100, with 100 being the warmest, or most positive feelings, toward the legislator.

### **5.1.2 Policy Role Orientations: Health Care E-mail Experiment**

Respondents also participated in manipulations that took the form of reading and evaluating a hypothetical e-mail exchange between a state legislator and a constituent. They first saw the constituent's question, then the legislator's response, then evaluated the legislator on the same 0–100 feeling thermometer. One constituent question that all respondents saw asked how the legislator planned to address implementing the 2010 Federal health care reform in the state. Respondents were then randomly presented with one of two e-mail responses. In the delegate response, the

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<sup>13</sup>Given that my main objective is to bring the dimensions of representation together, it may seem contradictory that two of the experiments focus on only one component. A solution would be to add delegate and trustee policy conditions and pork barrel and fair share allocation conditions to the first experiment. However, doing so would make it extremely complex. I consider dividing the analysis into three experiments worthwhile because it makes each one simpler.

<sup>14</sup>Decades of research clearly establish the importance of party in driving evaluations of political elites. I control for partisanship in the research design as a means of examining what additional factors beyond party structure constituents' evaluations of their representatives.

legislator explains that he or she does not personally support the bill, but will work toward its full implementation because a district poll indicates that there is support for it in the constituency. In the trustee response, the legislator acknowledges that there is support in the district, but explains that after consulting with experts, he or she believes it is best to request a state waiver of certain sections.<sup>15</sup> The legislator’s name was also crossed by gender (“Eric” or “Erica”), producing four treatments (two responses by two names), of which each respondent saw one.

### **5.1.3 Allocation Role Orientations: Road Repair E-mail Experiment**

Another e-mail manipulation addressed preferences for pork barrel or fair share allocation. In this case the constituent question that all respondents saw was a complaint about poor road conditions in the district. Respondents then randomly viewed one of two responses. In the pork barrel response, the legislator explains that he or she was able to add an amendment to an *education* bill just before the final vote that specifically sets money aside for road repair, but only in the legislator’s district because of its extreme need. In the fair share response, the legislator explains that he or she was able to secure funding for road repair in a *transportation* bill because the district has a real need. Again, the legislator’s name was crossed by gender (“Vincent” or “Kendra”), producing four treatments (two response types by two names), of which each respondent saw one.

## **5.2 Estimation Strategy**

My strategy in testing the hypotheses listed above is to use ordinary least squares (OLS) to model the thermometer rating of the legislator in each experiment as a function of indicators for each treatment and their interactions with relevant respondent characteristics. These characteristics capture expectations about the role of government, as shown in Figure 1, panel (b): economic factors (income, employment status, and education), ideology, gender, and race.<sup>16</sup> My interest is not solely in the effect of each treatment on the thermometer rating, but on how the effects change as a function of these key respondent traits. In addition, some questions on the CCES tapped

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<sup>15</sup>In both conditions the district supports the reform and the legislator does not. The difference is in the legislator’s action—the delegate legislator’s action is pro-reform while the trustee’s is not. I control for the confounding effects of respondent opinion toward health care reform (see below).

<sup>16</sup>The appendix contains independent and dependent variable descriptions and summary statistics and a correlation matrix of the independent variables.

directly into respondents' views about government. I also estimated the models with these variables to relax the assumption that observable characteristics reflect preferences for government's role, and found results consistent with what I report here. See the appendix for more details.<sup>17</sup>

Though a series of simple mean comparisons are one option for testing these interactive hypotheses, I use a regression framework to improve efficiency of the estimates.<sup>18</sup> Additionally, I chose to estimate the model separately for each independent variable of interest. Another option is to put all of the variables and their interactions with each treatment in a single model. I present results from separate, smaller models because the literature on interaction terms makes clear that the large model approach is essentially uninterpretable. It has more than 30 variables, with half of them being interaction terms (see Jaccard and Turrisi 2003; Brambor, Clark, and Golder 2006).

Of course, this strategy opens the door to the issue of underspecification. While treatments were randomly assigned to respondents, the demographic variables—which are likely to be correlated—were not, and thus there is the potential for omitted variable bias. However, in this case the two approaches produce findings that are largely consistent; see the appendix for both sets of results. Thus, because conclusions are essentially unaffected by the choice, I use the smaller models to mitigate the “curse of dimensionality” from large models (see Achen 2002).

## 6 Results

Before presenting the main results, I briefly assess the baseline treatment effects for descriptive purposes. I present these baseline models graphically in the appendix. They show that, on average, people prefer (1) the policy condition over service and service condition over allocation, (2) the delegate condition over trustee, and (3) the fair share spending condition over pork barrel. How-

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<sup>17</sup>Specifically, I used questions asking respondents “how good is government?” and “how powerful is government?” Answers were given on 0–100 scales, with 0 signifying “awful” or “weak,” respectively, and 100 meaning “good” or “powerful.” My main conclusion from that analysis—given in the appendix—is that neither demographics and other characteristics nor the “good” and “powerful” questions are perfect measures of preferences for government's role. However, the robustness of results across both measurement approaches bolsters my confidence in the empirical support for the theory found in these data.

<sup>18</sup>Freedman (2008) contends that the use of regression on experimental data is problematic because randomization does not guarantee unbiasedness in the covariates of a multiple regression model (see also Sekhon 2009). However, Freedman and others also show that this issue is trivial in sample sizes larger than 500 (Freedman 2008, 191, see also Green 2009). Thus, with nearly 800 usable cases in each model, I use regression as a means of improving efficiency.

ever, my central concern is identifying factors that produce changes in these baseline preferences. I turn to this task below, displaying the main results in graphic form. See the appendix for complete results in table form.

## 6.1 Election Information Model

Figure 2 shows several graphs depicting tests of the first two hypotheses (economic factors and ideology). The x-axes display treatment conditions and the average thermometer rating is plotted on the y-axes. An asterisk above two same-shaded bars indicates a statistically significant difference between them ( $p < 0.05$ , two-tailed). The ratings are calculated with the male legislator condition, unless noted otherwise.

[Insert Figure 2 here]

As expected in H1, panel (a) shows that wealthy citizens have a stronger preference for the policy legislator than do poor citizens, while the poor have stronger preferences for the allocation condition (differences in ratings of the service condition are negligible). Furthermore, wealthy citizens' average rating of the policy legislator is larger than their ratings of the service and allocation conditions, on average. All of these effects are statistically significant ( $p < 0.05$ ) and substantively large. For example, the difference in average ratings of the policy condition between the very poor (\$10,000/year) and very rich (more than \$150,000) is about 22 points on the 0–100 feeling thermometer. Similarly, the poor rate the allocation legislator approximately 12 points higher, on average, than do the wealthy.

Employment status (panel b) shows similar effects. On average, employed citizens rate the policy treatment 18 points higher than do the unemployed (significant at  $p < 0.05$ ), while the unemployed rate the allocation legislator 18 points higher than do employed people (significant at  $p < 0.05$ ). Additionally, within employed people the average policy condition rating is significantly larger than ratings of the service and allocation legislators. In contrast, unemployed respondents show the opposite effect: their average ratings of the allocation and service conditions are notably larger than the average policy condition rating (9 and 22 points, respectively).

Panel (c) of Figure 2 is also supportive of the expectations in H1. In particular, highly-educated respondents (those with post-graduate training) rate the policy legislator 11 points higher on average than do those with a high school diploma. As expected, less-educated respondents rate the allocation legislator moderately higher than do the educated (4 points), though this difference is not statistically significant.

Finally, panel (d) shows supportive results regarding the effects of ideology (H2). In particular, liberals' average rating of the allocation treatment is significantly larger than that of conservatives. Again, this difference is substantively large—20 points, or one-fifth of the entire range of the feeling thermometer. In contrast, liberals' and conservatives' average ratings of the policy legislator are not significantly distinguishable, nor are their average ratings of the service condition. This suggests that liberals and conservatives do not have different preferences for policy or service representation.

Figure 3 displays results corresponding to tests of H3 and H4 (gender and race). Panels (a) and (b) give the average ratings of the female and male legislator name, respectively, by respondent gender. They show only partial support for H3. In contrast to my expectations, respondents do not rate the legislator of their same gender more highly than the other gender. There is some support for the notion that women prefer service while men prefer policy: in panel (a), women rate the service condition higher than do men, while men rate the policy condition higher than do women. However, this finding only appears in ratings of the female legislator, and so I do not take it as strong support for H3.

[Insert Figure 3 here]

Figure 3, panel (c) shows support for my expectations concerning race (H4). Specifically, whites have a stronger preference for the policy treatment, on average, compared to blacks. This difference is large (19 points) and statistically significant ( $p < 0.05$ ). As expected, the average black ratings of the service and allocation conditions are larger than whites' (5 points in each), but these differences are not statistically distinguishable from zero. Within blacks, the average ratings of the service and allocation legislators are 13 and 9 points larger than the average black rating

of the policy legislator, though only the difference between service and policy treatment ratings is statistically significant at the 0.05 level.

In summary, this first set of results shows support for several hypotheses outlined above. Consistent with my expectations about the role of government in citizens' lives, the election information experiment indicates that economic factors, ideology, race, and (to a lesser degree) gender impact demand for the dimensions of representation. Economically-advantaged citizens and whites show a preference for policy representation while the economically-disadvantaged and blacks prefer service and/or allocation. Ideology also matters—liberals show a stronger preference for allocation than do conservatives. However, these components are not the only preferences for representation that citizens can hold. Below I continue the test of my theoretical framework in the experiments on preferences for legislator role orientations.

## 6.2 Health Care E-mail Model

A key issue in the analysis of the health care e-mail experiment—which examines preferences for policy role orientations—is the potentially confounding influence of respondents' opinions on health care reform.<sup>19</sup> To address this I include an indicator for support or opposition to the health care bill in the model testing H5 (ideology) and H6 (party).<sup>20</sup> As before, I present results in graphic form; see the appendix for complete results in table form. Figure 4 displays the average thermometer rating by ideology (strong liberal versus strong conservative) and party (strong Democrat versus strong Republican).

[Insert Figure 4 here]

Panel (a) shows the effects of ideology, controlling for respondents' support or opposition to the health care bill and its interaction with each treatment. Conservatives display a significantly

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<sup>19</sup>Recall that in both messages the district supports health care but the legislator does not. The difference between the two is in the legislator's action—the delegate's action is pro-reform while the trustee's action is not.

<sup>20</sup>This approach controls for health care opinion on the average thermometer rating. However, it may be the case that the polarizing nature of the health care debate caused Republicans and Democrats to respond differently to the treatments. For instance, a heterogeneous treatment effect could emerge if Republicans who are opposed the health care bill favor the trustee condition more strongly than Democrats who support the bill favor the delegate. I include additional control specifications in the appendix and find that the results shown here are robust.

stronger average preference for the trustee condition than do liberals. This difference is 23 points, or almost one-fourth of the entire range of the feeling thermometer. Moreover, liberals rate the delegate condition significantly larger on average than do conservatives (12 points). Finally, conservatives prefer the trustee legislator significantly more than they prefer the delegate (25 point difference) and liberals, on average, rate the delegate legislator higher than they rate the trustee (8 points), though this difference is not significant.

Party shows similar results, again controlling for health care opinion (panel b). Republicans' average rating of the trustee condition is significantly larger than that of Democrats (18 points), while Democrats' average rating of the delegate legislator is significantly larger than that of Republicans (11 points). Furthermore, within Republicans (Democrats) the average rating of the trustee (delegate) condition is larger than the delegate (trustee) condition, though the difference is only significant within Republicans.

Panels (a) and (b) of Figure 4 demonstrate that ideology and party exert effects in the expected direction, not accounting for the other. However, as mentioned above, whether the two variables have separate effects on this process is an unanswered question. Estimating the model with both variables included indicates that they do exert independent effects. As shown in the appendix, these two effects weaken slightly in magnitude from the models presented in Figure 4, but each remain statistically significant at the 0.05 level. Overall, the health care e-mail experiment shows support for the expectations outlined above. Conservatives and Republicans show a stronger preference for trustee policy representation, while liberals and Democrats prefer delegates.

### **6.3 Road Repair E-mail Model**

The final experiment tested my expectations for allocation role orientations. Figure 5 presents the graphs of thermometer ratings by treatment conditions for H7 and H8. See the appendix for complete results in table form.

[Insert Figure 5 here]

Panel (a) shows support for H7 through the effects of income. Note that, on average, the poor rate the pork barrel condition higher than do the wealthy, while the wealthy rate the fair share condition higher than do the poor. Furthermore, poor citizens' average ratings of the two conditions are not statistically distinguishable (and actually higher in the pork barrel treatment). In stark contrast, wealthy respondents rate the fair share condition 20 points higher on average than they rate the pork barrel condition (significant at  $p < 0.05$ ). Results for employment status also support H7 (panel b). There is no statistically discernible difference between average ratings of the two types by the unemployed, but the employed rate the fair share legislator 9 points higher on average than they rate the pork barrel legislator (significant at  $p < 0.05$ ).

The same finding holds with the third economic factor, education, as depicted in panel (c) of Figure 5. In that case, both respondents with high school diplomas and those with post-graduate training prefer the fair share condition over the pork barrel condition, on average. However, this difference is small and statistically nonsignificant among those with low education (2 points) and large and statistically significant among highly-educated respondents (20 points).

Finally, panel (d) shows supportive results for the effects of ideology (H8) that are consistent with results from the election information experiment. Notice that as before, liberals rate both allocation conditions statistically significantly higher on average than do conservatives. Furthermore, liberals rate the fair share condition only slightly higher on average than they rate the pork barrel condition (2 points, nonsignificant). In contrast, conservatives' average rating of the fair share condition is 17 points higher than their average rating of the pork barrel condition ( $p < 0.05$ ).

To summarize, the road repair e-mail experiment breaks new ground in understanding demand for representation by dividing allocation into two distinct role orientations, and provides a third piece of evidence supporting my theoretical model of demand for representation. In particular, several effects seen in the election information experiment regarding preferences for allocation representation carry over to preferences for pork barrel versus fair share allocation. For example, the effects of income, employment status, and education show that economic considerations are important. Economically-advantaged citizens show a dislike for pork barrel compared to fair

share, but economically-disadvantaged respondents make no discernible distinction between the two. Similarly, conservatives again show a dislike for allocation compared to liberals, especially when assessing a pork barrel project.

## 7 Conclusions

This research presents a substantial contribution to the literature on representation by unifying several unique dimensions of the concept—four components and role orientations within two components—into a single model of citizen demand. I contend that citizens’ goals lead to expectations on how government should be involved in their lives, which corresponds to demand for representation. By using survey experiments to mitigate social desirability bias and by encompassing preferences for four components and role orientations, I provide the most comprehensive theoretical and empirical treatment of the multiple dimensions of representation. I show that the typical delegate model policy congruence paradigm—or any study that forces citizen preferences for representation into a single dimension—oversimplifies a larger and more complex process.

More specifically, results support my theoretical claim that demand for the dimensions of representation is shaped by expectations of government’s role, as measured by several observable characteristics. The effects of economic factors and ideology are particularly strong. People who stand to gain the most from government assistance or see intervention as part of government’s role favor district-centric representation (service and/or allocation), while those who rely less on government or view its role as smaller and limited have a stronger relative preference for policy. Furthermore, liberals and Democrats, who are likely to hold the egalitarian view that ordinary citizens should maintain a voice in government, favor delegates, while the more traditionalistic conservatives and Republicans prefer trustees. Finally, consistent with results from the model of demand for the four components, preferences for pork barrel or fair share allocation representation vary as expected by economic factors and ideology. Those who are less likely to rely on the government for basic needs exhibit a larger preference for fair share allocation over pork barrel than do those who stand to benefit more from government assistance.

Representation scholars dating back to Miller and Stokes (1963) show that the policy congru-

ence relationship in American politics is not as strong as would be expected in an ideal representative democracy. At first glance, this contrasts sharply with the observation that many legislators still have long, successful careers in office. The results presented here shed light on this puzzle by showing that there are more ways of providing representation to constituents than addressing policy concerns. Indeed, citizens exhibit meaningful and systematic variance in preferences for several dimensions of representation that legislators could potentially leverage to gain support. Thus, even if the multiple dimensions are entirely independent of one another, scholars should still account for each one in theoretical models of the process simply because constituents' preferences suggest the need for different strategies among representatives. Depending on constituent demand for representation, a legislator who follows policy opinion may not actually be providing it, while one who does not focus on constituent policy views may still be highly regarded. The fundamental question of whether citizens are represented in government cannot be answered unless the type of representation they want is made clear.

## References

- Achen, Christopher H. 1978. "Measuring Representation." *American Journal of Political Science* 22(3): 475–510.
- Achen, Christopher H. 2002. "Toward a New Political Methodology: Microfoundations and ART." *Annual Review of Political Science* 5(1): 423–450.
- Adler, E. Scott, Chariti E. Gent, and Cary B. Overmeyer. 1998. "The Home Style Homepage: Legislator Use of the World Wide Web for Constituency Contact." *Legislative Studies Quarterly* 23(4): 585–595.
- Arceneaux, Kevin. 2001. "The 'Gender Gap' in State Legislative Representation: New Data to Tackle an Old Question." *Political Research Quarterly* 54(1): 143–160.
- Bailey, Michael, and David W. Brady. 1998. "Heterogeneity and Representation: The Senate and Free Trade." *American Journal of Political Science* 42(2): 524–544.
- Barker, David C., and Christopher Jan Carman. 2009. "Political Geography, Church Attendance and Mass Preferences Regarding Democratic Representation." *Journal of Elections, Public Opinion, and Parties* 19(2): 125–145.
- Barker, David C., and Christopher Jan Carman. 2010. "Yes WE Can or Yes HE Can? Citizen Preferences Regarding Styles of Representation and Presidential Voting Behavior." *Presidential Studies Quarterly* 40(3): 431–448.
- Bartels, Larry M. 1991. "Constituency Opinion and Congressional Policy Making: The Reagan Defense Buildup." *American Political Science Review* 85(2): 457–474.
- Box-Steffensmeier, Janet M., David C. Kimball, and Scott R. Meinke. 2003. "The Effects of Political Representation on the Electoral Advantages of House Incumbents." *Political Research Quarterly* 56(3): 259–270.
- Brambor, Thomas, William Roberts Clark, and Matt Golder. 2006. "Understanding Interaction Models: Improving Empirical Analyses." *Political Analysis* 14(1): 63–82.
- Butler, Daniel M., and David E. Broockman. 2011. "Do Politicians Racially Discriminate Against Constituents? A Field Experiment on State Legislators." *American Journal of Political Science* 55(3): 463–477.
- Cain, Bruce, John Ferejohn, and Morris P. Fiorina. 1987. *The Personal Vote: Constituency Service and Electoral Independence*. Cambridge, MA: Harvard University Press.
- Canes-Wrone, Brandice, David W. Brady, and John F. Cogan. 2002. "Out of Step, Out of Office: Electoral Accountability and House Members' Voting." *American Political Science Review* 96(1): 127–140.
- Carman, Christopher Jan. 2006. "Public Preferences for Parliamentary Representation in the U.K.: An Overlooked Link?" *Political Studies* 54(1): 103–122.
- Carman, Christopher Jan. 2007. "Assessing Preferences for Political Representation in the U.S." *Journal of Elections, Public Opinion, and Parties* 17(1): 1–19.
- Chen, Jowei, and Neil Malhotra. 2007. "The Law of  $k/n$ : The Effect of Chamber Size on Government Spending in Bicameral Legislatures." *American Political Science Review* 101(4): 655–674.
- Cole, Leonard A. 1976. *Blacks in Power: A Comparative Study of Black and White Elected Officials*. Princeton, NJ: Princeton University Press.

- Delli Carpini, Michael X., and Scott Keeter. 1996. *What Americans Know About Politics and Why it Matters*. New Haven, CT: Yale University Press.
- Desposato, Scott W., and John R. Petrocik. 2003. "The Variable Incumbency Advantage: New Voters, Redistricting, and the Personal Vote." *American Journal of Political Science* 47(1): 18–32.
- Dovi, Suzanne. 2002. "Preferable Descriptive Representatives: Will Just Any Woman, Black, or Latino Do?" *American Political Science Review* 96(4): 729–743.
- Eagly, Alice H. 1987. *Sex Differences in Social Behavior: A Social-Role Interpretation*. Hillsdale, NJ: Erlbaum.
- Ellickson, Mark C., and Donald E. Whistler. 2001. "Explaining State Legislators' Casework and Public Resource Allocations." *Political Research Quarterly* 54(3): 553–569.
- Erikson, Robert S., Michael B. MacKuen, and James A. Stimson. 2002. *The Macro Polity*. New York: Cambridge University Press.
- Eulau, Heinz, and Paul D. Karps. 1977. "The Puzzle of Representation: Specifying Components of Responsiveness." *Legislative Studies Quarterly* 2(3): 233–254.
- Fenno, Richard F. 1978. *Home Style: House Members in Their Districts*. Boston: Little, Brown.
- Fiorina, Morris. 1974. *Representatives, Roll Call, and Constituencies*. Lexington, MA: Lexington Books.
- Fiorina, Morris P. 1977. "The Case of the Vanishing Marginals: The Bureaucracy Did It." *American Political Science Review* 71(1): 177–181.
- Freedman, David A. 2008. "On Regression Adjustments to Experimental Data." *Advances in Applied Mathematics* 40(2): 180–193.
- Freeman, Patricia K., and Lilliard E. Richardson. 1996. "Explaining Variation in Casework among State Legislators." *Legislative Studies Quarterly* 21(1): 41–56.
- Gamm, Gerald, and Thad Kousser. 2010. "Broad Bills or Particularistic Policy? Historical Patterns in American State Legislatures." *American Political Science Review* 104(1): 151–170.
- Gay, Claudine. 2002. "Spirals of Trust? The Effect of Descriptive Representation on the Relationship Between Citizens and Their Government." *American Journal of Political Science* 46(4): 717–732.
- Grant, J. Tobin, and Thomas J. Rudolph. 2004. "The Job of Representation in Congress: Public Expectations and Representative Approval." *Legislative Studies Quarterly* 29(3): 431–445.
- Green, Donald P. 2009. "Regression Adjustments to Experimental Data: Do David Freedman's Concerns Apply to Political Science?" Presented at the 26<sup>th</sup> Annual Meeting of the Society for Political Methodology, Yale University, New Haven, CT.
- Griffin, John D. 2006. "Electoral Competition and Democratic Responsiveness: A Defense of the Marginality Hypothesis." *Journal of Politics* 68(4): 909–919.
- Griffin, John D., and Patrick Flavin. 2007. "Racial Differences in Information, Expectations, and Accountability." *Journal of Politics* 69(1): 220–236.
- Griffin, John D., and Patrick Flavin. 2011. "How Citizens and Their Legislators Prioritize Spheres of Representation." Forthcoming, *Political Research Quarterly*.
- Grose, Christian R. 2011. *Congress in Black and White: Race and Representation in Washington*

- and at Home*. New York: Cambridge University Press.
- Hero, Rodney E., and Caroline J. Tolbert. 1995. "Latinos and Substantive Representation in the U.S. House of Representatives: Direct, Indirect, or Nonexistent?" *American Journal of Political Science* 39(3): 640–652.
- Hibbing, John R., and Elizabeth Theiss-Morse. 2002. *Stealth Democracy: Americans Beliefs about How Government Should Work*. New York: Cambridge University Press.
- Hibbing, John R., and John R. Alford. 1990. "Constituency Population and Representation in the U. S. Senate." *Legislative Studies Quarterly* 15(4): 581–598.
- Hogan, Robert E. 2008. "Policy Responsiveness and Incumbent Reelection in State Legislatures." *American Journal of Political Science* 52(4): 858–873.
- Hunter, James Davison. 1991. *Culture Wars: The Struggle to Define America*. New York: Basic Books.
- Hutchings, Vincent. 2003. *Public Opinion and Democratic Accountability: How Citizens Learn about Politics*. Princeton, NJ: Princeton University Press.
- Jaccard, James, and Robert Turrisi. 2003. *Interaction Effects in Multiple Regression*. Thousand Oaks, CA: Sage.
- Jacobs, Lawrence R., and Robert Y. Shapiro. 2000. *Politicians Don't Pander: Political Manipulation and the Loss of Democratic Responsiveness*. Chicago: University of Chicago Press.
- Johannes, John R. 1984. *To Serve the People: Congress and Constituency Service*. Lincoln, NE: University of Nebraska Press.
- Kastellec, Jonathan P., Jeffrey R. Lax, and Justin H. Phillips. 2010. "Public Opinion and Senate Confirmation of Supreme Court Nominees." *Journal of Politics* 72(3): 767–784.
- Kathlene, Lyn. 1989. "Uncovering the Political Impacts of Gender: An Exploratory Study." *Western Political Quarterly* 42(2): 397–421.
- Kimball, David C., and Samuel C. Patterson. 1997. "Living up to Expectations: Public Attitudes Toward Congress." *Journal of Politics* 59(3): 701–728.
- Kousser, Thad, Jeffrey B. Lewis, and Seth E. Masket. 2007. "Ideological Adaptation? The Survival Instinct of Threatened Legislators." *Journal of Politics* 69(3): 828–843.
- Krasno, Jonathan S. 1994. *Challengers, Competition, and Reelection: Comparing Senate and House Elections*. New Haven, CT: Yale University Press.
- Lawless, Jennifer. 2004. "Politics of Presence? Congresswomen and Symbolic Representation." *Political Research Quarterly* 57(1): 81–99.
- Lax, Jeffrey R., and Justin H. Phillips. 2009a. "Gay Rights in the States: Public Opinion and Policy Responsiveness." *American Political Science Review* 103(3): 367–386.
- Lax, Jeffrey R., and Justin H. Phillips. 2009b. "How Should We Estimate Public Opinion in the States?" *American Journal of Political Science* 53(1): 107–121.
- Lazarus, Jeffrey. 2009. "Party, Electoral Vulnerability, and Earmarks in the U.S. House of Representatives." *Journal of Politics* 71(3): 1050–1061.
- Lazarus, Jeffrey. 2010. "Giving the People What they Want? The Distribution of Earmarks in the U.S. House of Representatives." *American Journal of Political Science* 54(2): 338–353.

- Lazarus, Jeffrey, and Shauna Reilly. 2010. "The Electoral Benefits of Distributive Spending." *Political Research Quarterly* 63(2): 343–355.
- Lowi, Theodore J. 1979. *The End of Liberalism*. New York: W.W. Norton & Company.
- Lublin, David. 1997. *The Paradox of Representation: Racial Gerrymandering and Minority Interests in Congress*. Princeton, NJ: Princeton University Press.
- Mayhew, David R. 1974. *Congress: The Electoral Connection*. New Haven, CT: Yale University Press.
- Meier, Kenneth J., Eric Gonzalez Juenke, Robert D. Wrinkle, and J. L. Polinard. 2005. "Structural Choices and Representational Biases: The Post-Election Color of Representation." *American Journal of Political Science* 49(4): 758–768.
- Miller, Warren E., and Donald E. Stokes. 1963. "Constituency Influence in Congress." *American Political Science Review* 57(1): 45–56.
- Nelson, William E., and Winston van Horne. 1974. "Black Elected Administrators: The Trials of Office." *Public Administration Review* 34(6): 526–533.
- Oppenheimer, Bruce I. 1996. "The Representational Experience: The Effect of State Population on Senator-Constituency Linkages." *American Journal of Political Science* 40(4): 1280–1299.
- Park, David K., Andrew Gelman, and Joseph Bafumi. 2004. "Bayesian Multilevel Estimation with Poststratification: State-Level Estimates from National Polls." *Political Analysis* 12(4): 375–385.
- Patterson, Samuel C., Ronald D. Hedlund, and G. Robert Boynton. 1975. *Representatives and the Represented: Bases of Support for the American Legislatures*. New York: Wiley.
- Pitkin, Hanna Fenichel. 1967. *The Concept of Representation*. Berkeley, CA: University of California Press.
- Primo, David M., and James M. Snyder. 2010. "Party Strength, the Personal Vote, and Government Spending." *American Journal of Political Science* 54(2): 354–370.
- Rabinowitz, George, and Stuart Elaine Macdonald. 1989. "A Directional Theory of Issue Voting." *American Political Science Review* 83(1): 93–121.
- Richardson, Lilliard E., and Patricia K. Freeman. 1995. "Gender Differences in Constituency Service Among State Legislators." *Political Research Quarterly* 48(1): 169–179.
- Rivers, Douglas. 2006. "Sample Matching: Representative Sampling from Internet Panels." Polimetrix White Paper Series.
- Rosenthal, Cindy Simon. 1995. "The Role of Gender in Descriptive Representation." *Political Research Quarterly* 48(3): 599–611.
- Sekhon, Jasjeet S. 2009. "Opiates for the Matches: Matching Methods for Causal Inference." *Annual Review of Political Science* 12(1): 487–508.
- Serra, George, and David Moon. 1994. "Casework, Issue Positions, and Voting in Congressional Elections: A District Analysis." *Journal of Politics* 56(1): 200–213.
- Soss, Joe. 1999. "Lessons of Welfare: Policy Design, Political Learning, and Political Action." *American Political Science Review* 93(2): 363–380.
- Stein, Robert M., and Kenneth N. Bickers. 1995. *Perpetuating the Pork Barrel: Policy Subsystems and American Democracy*. New York: Cambridge University Press.

- Sulkin, Tracy. 2005. *Issue Politics in Congress*. New York: Cambridge University Press.
- Tate, Katherine. 2001. "The Political Representation of Blacks in Congress: Does Race Matter?" *Legislative Studies Quarterly* 26(4): 623–638.
- Tate, Katherine. 2003. *Black Faces in the Mirror: African Americans and their Representatives in the U.S. Congress*. Princeton, NJ: Princeton University Press.
- Thomas, Sue. 1992. "The Effects of Race and Gender on Constituency Service." *Western Political Quarterly* 45(1): 169–180.
- Tomz, Michael, and Robert P. Van Houweling. 2008. "Candidate Positioning and Vote Choice." *American Political Science Review* 102(3): 303–318.
- Vavreck, Lynn, and Douglas Rivers. 2008. "The 2006 Cooperative Congressional Election Study." *Journal of Elections, Public Opinion, and Parties* 18(4): 355–366.
- Verba, Sidney, and Norman H. Nie. 1972. *Participation in America: Political Democracy and Social Equality*. New York: Harper and Row.
- Wahlke, John, Heinz Eulau, William Buchanan, and LeRoy C. Ferguson. 1962. *The Legislative System*. New York: Wiley.
- Weissberg, Robert. 1978. "Collective vs. Dyadic Representation in Congress." *American Political Science Review* 72(2): 535–547.

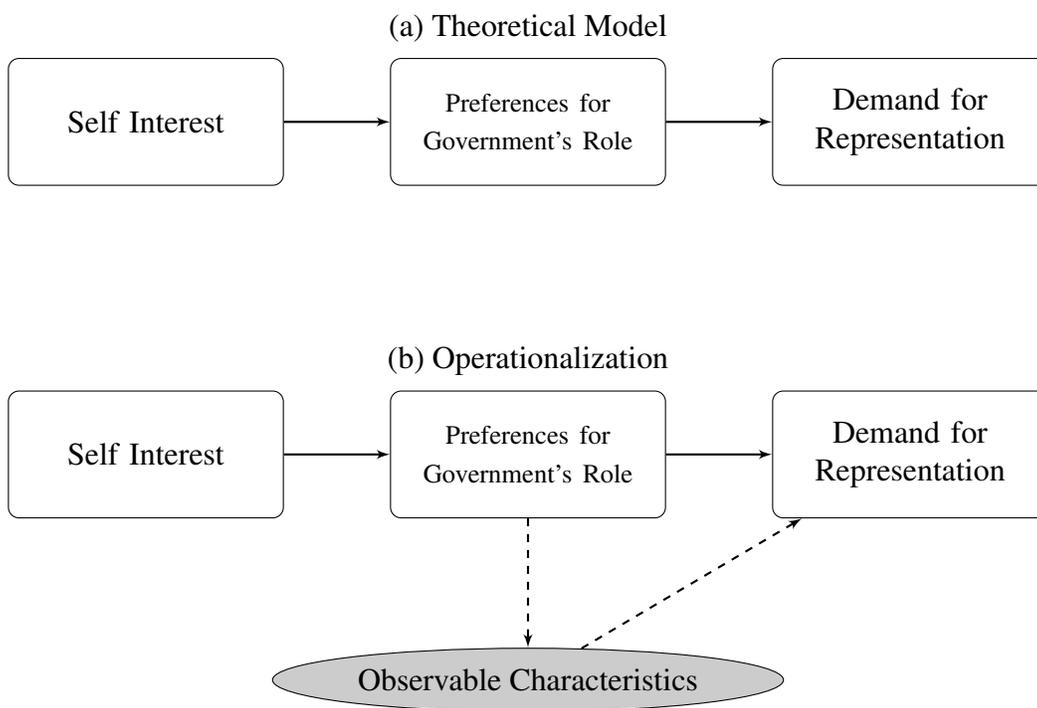
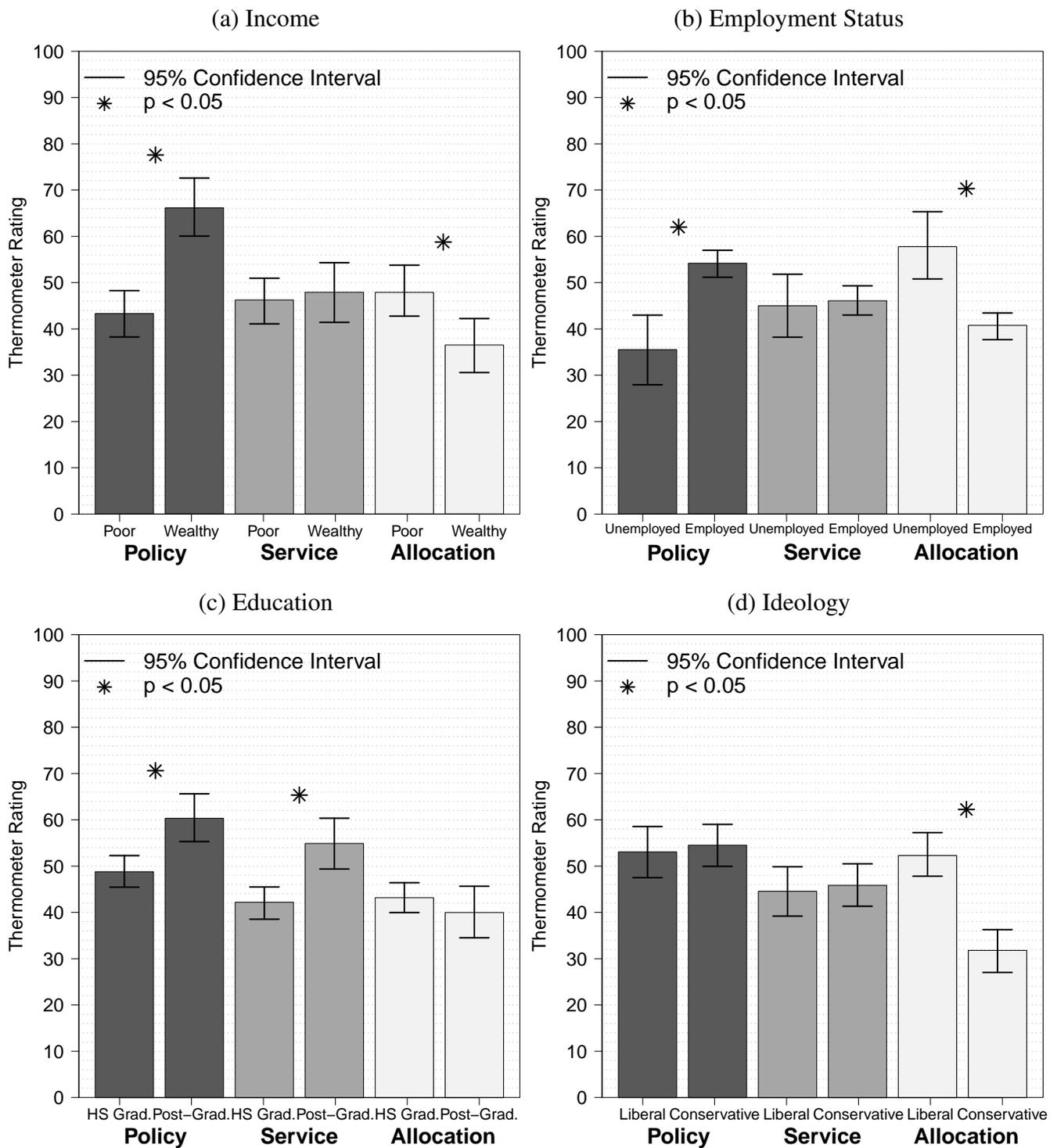
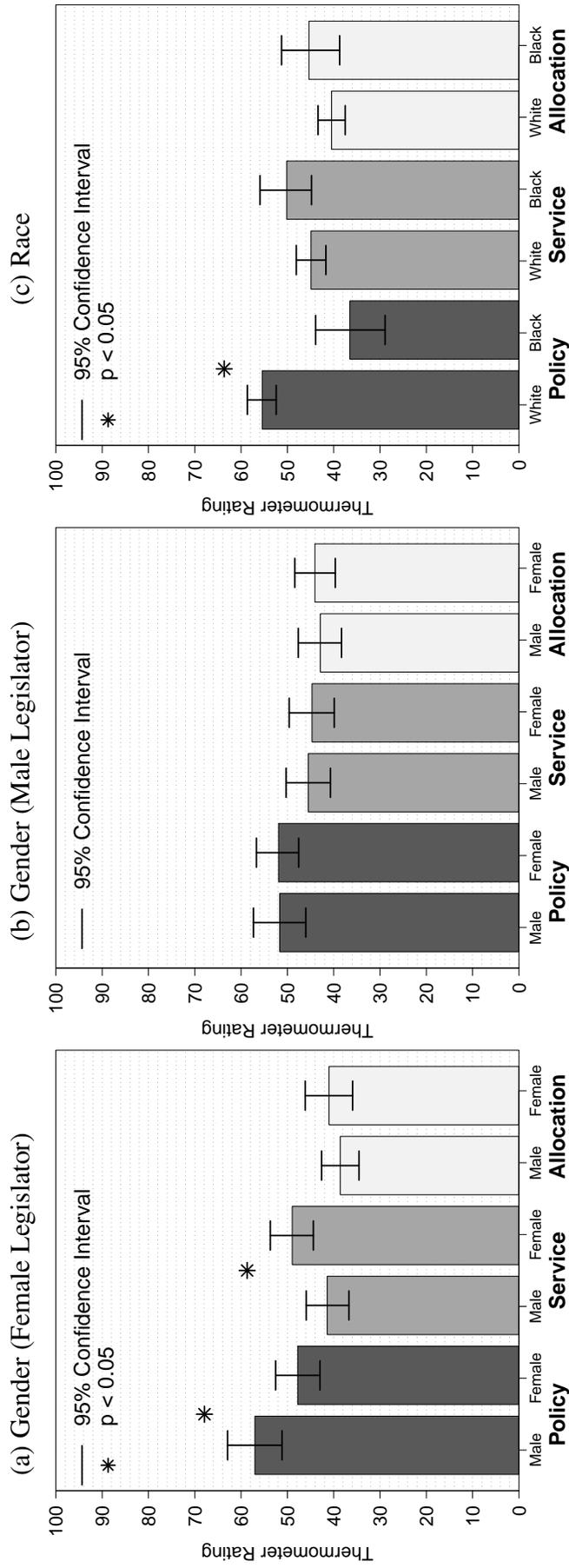


Figure 1: A Model of Citizen Demand for the Dimensions of Representation



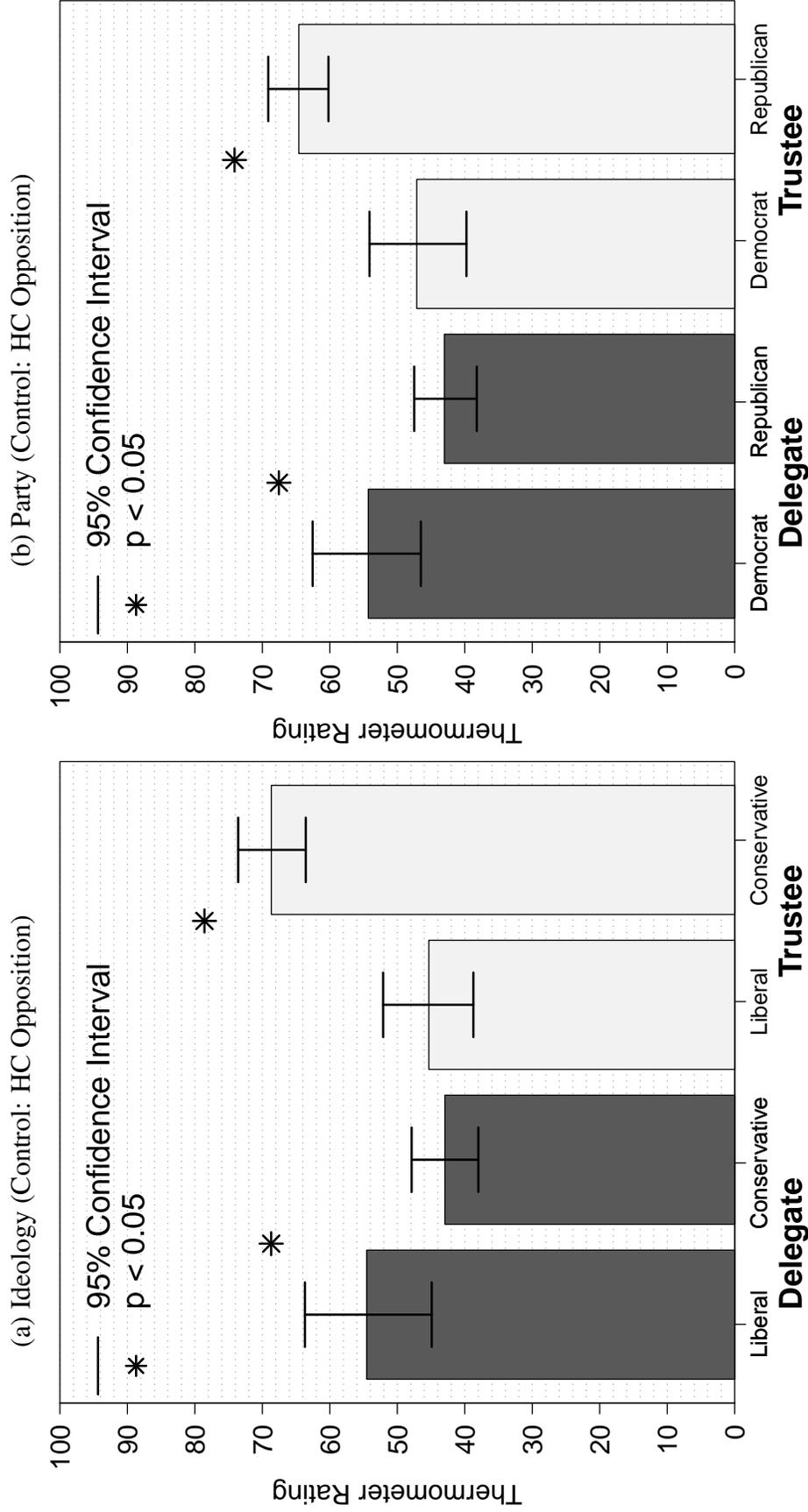
*Note: The graphs present the average thermometer rating for the minimum and maximum value of each respondent trait. \* Difference between two same-shaded bars is statistically significant at  $p < 0.05$  (two-tailed).*

Figure 2: Average Thermometer Ratings by Income, Employment Status, Education, and Ideology in the Election Information Experiment



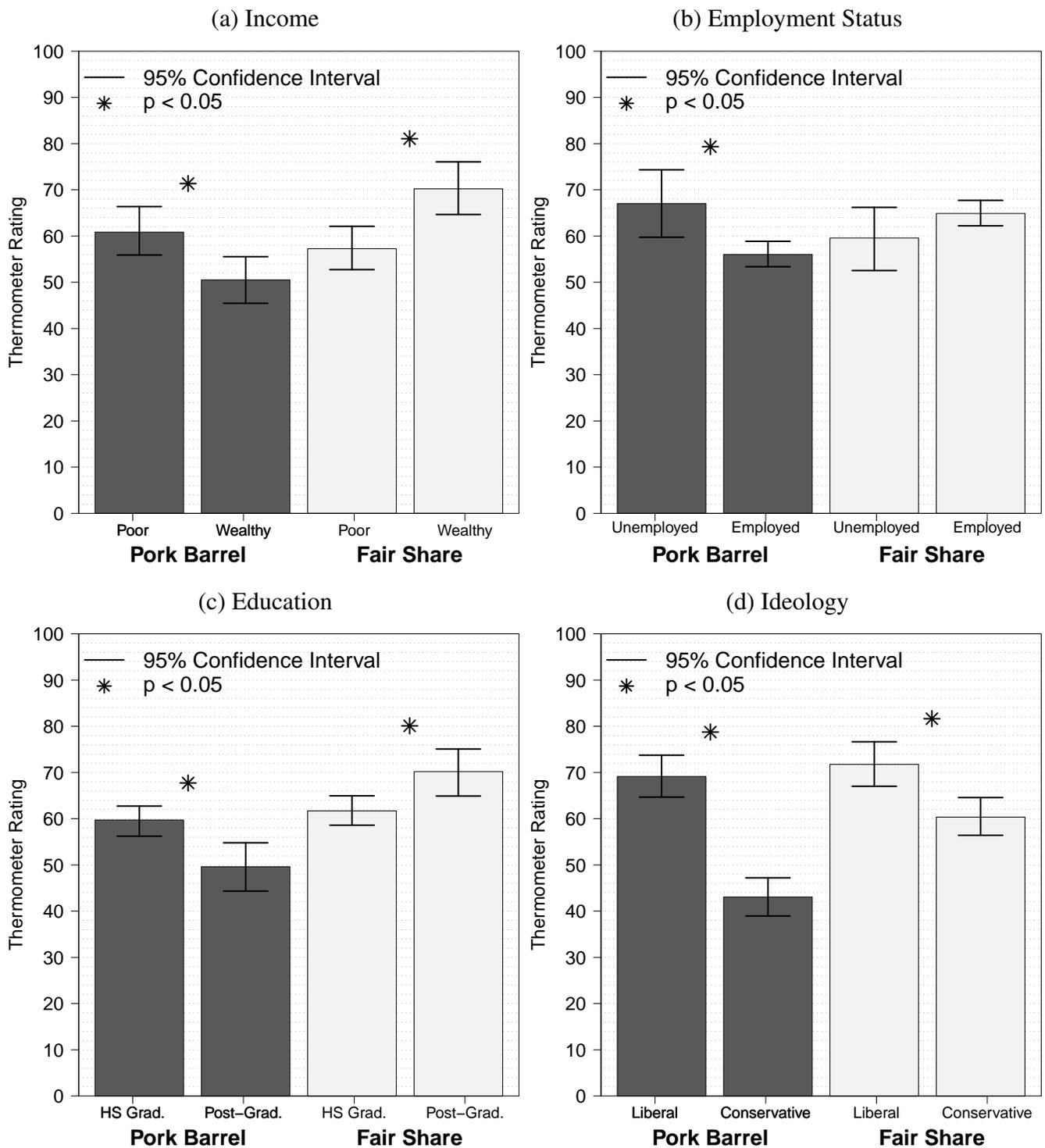
Note: The graphs present differences in thermometer ratings comparing male and female respondents in both gender conditions (panels a and b) and white and black respondents (panel c). \* Difference between two same-shaded bars is statistically significant at  $p < 0.05$  (two-tailed).

Figure 3: Average Thermometer Ratings by Gender and Race in the Election Information Experiment



Note: The graphs present the effects of ideology and party on the thermometer rating. Both sets of results include a control for opposition to the health care bill and its interaction with each treatment. \* Difference between two same-shaded bars is statistically significant at  $p < 0.05$  (two-tailed).

Figure 4: Average Thermometer Ratings by Ideology and Party in the Health Care E-mail Experiment



*Note: The graphs present the average thermometer rating for the minimum and maximum value of each respondent trait. \* Difference between two same-shaded bars is statistically significant at  $p < 0.05$  (two-tailed).*

Figure 5: Average Thermometer Ratings by Income, Employment Status, Education, and Ideology in the Road Repair E-mail Experiment

# Appendix to “Multidimensional Democracy: Citizen Demand for the Components of Political Representation”

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# 1 Survey Instrument

The complete text of the survey instrument is given below. Respondents viewed the election information experiment first, then the two e-mail experiments in random order.

## 1.1 Election Information Experiment

All respondents viewed the introductory text first, then were randomly presented with one of three messages that emphasized either policy, service, or allocation as the legislator’s focus. The legislator’s name (in brackets) was also randomized.

### *Introductory Text*

A non-partisan group in another state is distributing information on the reputations of state legislators to voters for the upcoming elections. Below is an excerpt from the entry for one representative. First, read the description. Then based only on the information that is given, evaluate your feelings toward the legislator as if the legislator were your representative. Select your evaluation on the “feeling thermometer” provided after the description. This measure ranges from 0 to 100, with higher scores indicating a more favorable rating. If you feel neutral toward the legislator, select the score 50.

### *Policy Treatment*

Rep. [Aaron/Alicia] B. Jones is well known for listening to constituents in [his/her] district on policy issues and voting in line with majority opinion. [He/She] has even voted against the party at times when citizen opinion was on the other side of the issue. However, [he/she] was criticized last year for moving very slowly to address and resolve constituents’ service requests, and is also not known for bringing back much funding to the district like many of [his/her] colleagues.

### *Service Treatment*

Rep. [Aaron/Alicia] B. Jones is well known for providing excellent constituency service. [He/She] is quick to respond to anyone in [his/her] district who has a problem with a state agency or wants a tour of the state capitol. However, Jones is not known for bringing back much funding to the district like many of [his/her] colleagues and was criticized last year for ignoring the policy views of [his/her] constituents when voting on the floor.

### *Allocation Treatment*

Rep. [Aaron/Alicia] B. Jones is well known for bringing state funding to the district in all sorts of ways. If money is being spent by the state on just about anything—roads, schools, or other public goods—Jones always manages to make sure it benefits [his/her] district as much as possible. However, [he/she] was criticized last year for ignoring the policy views of [his/her] constituents and for moving very slowly to address and resolve constituents’ service requests.

## 1.2 Health Care E-mail Experiment

All respondents viewed the introductory text first, then were randomly presented with either the delegate or trustee treatment message. The legislator's name (in brackets) was also randomized.

### *Introductory Text*

The next question is based on excerpts from an e-mail conversation between a constituent and a state legislator. Imagine that you are the constituent asking the question. Then based only on the information that is given, evaluate your feelings toward the legislator as if the legislator were your representative. Select your evaluation on the "feeling thermometer" provided after the description. This measure ranges from 0 to 100, with higher scores indicating a more favorable rating. If you feel neutral toward the legislator, select the score 50.

*Constituent Question: How do you plan to address the implementation of the recent health care bill in our state?*

### *Delegate Treatment*

Dear Constituent,

My own personal opinion is that the bill could do more harm than good. However, my staff conducted a large survey of the district last month and found a great deal of support for the bill. So I plan to work hard to make sure it gets fully implemented in our state.

Sincerely,  
Rep. [Eric/Erica] R. Smith

### *Trustee Treatment*

Dear Constituent,

I realize that a majority of the people in my district support the bill. However, I have access to a lot of information from experts I trust, and after careful reflection I truly believe it is in the district's best interest for the state to request a waiver of certain sections. I think the state can provide coverage that is just as comprehensive as the federal bill, but at much less cost.

Sincerely,  
Rep. [Eric/Erica] R. Smith

## 1.3 Road Repair E-mail Experiment

All respondents viewed the introductory text first, then were randomly presented with either the pork barrel or fair share treatment message. The legislator's name (in brackets) was also randomized.

### Introductory Text

The next question is based on excerpts from an e-mail conversation between a constituent and a state legislator. Imagine that you are the constituent asking the question. Then based only on the information that is given, evaluate your feelings toward the legislator as if the legislator were your representative. Select your evaluation on the “feeling thermometer” provided after the description. This measure ranges from 0 to 100, with higher scores indicating a more favorable rating. If you feel neutral toward the legislator, select the score 50.

*Constituent Question: The roads around town have gotten terrible the last several years. I know you live here too. Can't you get any funding to fix some potholes?*

### Pork Barrel Treatment

Dear Constituent,

Things will start to improve next year. Do you remember the big education bill passed this past summer? I was able to add an amendment just before the final vote that specifically set money aside for improving a few major roads in our district's borders. It's a special allotment of bonus money, just for our district! I was able to convince the legislature that we have a real need, which means we will be getting almost twice as much as the average district for repairs. So look for smoother roads in the future!

Sincerely,  
Rep. [Vincent/Kendra] A. Taylor

### Fair Share Treatment

Dear Constituent,

Things will start to improve next year. Do you remember the transportation bill passed this past summer? That bill set aside an allotment of several million dollars solely for road repair. Dividing that money quickly became a partisan struggle. However, with the help of several others, I was able to convince the legislature that the money should be divided based on need. The area covering most of our district will be getting almost twice as much as the average district for repairs. So look for smoother roads in the future!

Sincerely,  
Rep. [Vincent/Kendra] A. Taylor

## **2 Experimental Design Cells**

The tables below summarize the randomization of respondents to treatment conditions in each of the survey experiments. Several balance checks (not shown) confirmed that this random assignment was not significantly related to any respondent characteristics or other variables.

### Election Information Experiment

Legislator is good at...	<b>Male Legislator</b>	<b>Female Legislator</b>
<b>Policy</b>	$n = 185$	$n = 153$
<b>Service</b>	$n = 152$	$n = 171$
<b>Allocation</b>	$n = 164$	$n = 175$

### Health Care E-mail Experiment

Role orientation is...	<b>Male Legislator</b>	<b>Female Legislator</b>
<b>Delegate</b>	$n = 240$	$n = 272$
<b>Trustee</b>	$n = 263$	$n = 225$

### Road Repair E-mail Experiment

Role orientation is...	<b>Male Legislator</b>	<b>Female Legislator</b>
<b>Pork Barrel</b>	$n = 240$	$n = 275$
<b>Fair Share</b>	$n = 233$	$n = 252$

## 3 Baseline Models

Figure A.1 displays the baseline treatment effects, with the election information experiment in panel (a), health care e-mail experiment in panel (b), and road repair e-mail experiment in panel (c). In each graph the x-axis plots the experimental conditions and the y-axis plots the thermometer rating. Solid lines indicate 95% confidence intervals.

[Insert Figure A.1 here]

The average thermometer rating in the election information experiment is 48 with a standard deviation of 24. Panel (a) shows that the policy treatments produced the highest ratings, with the service and allocation conditions producing slightly lower ratings. In addition, the male legislator was rated slightly higher than the female. The policy/male treatment is significantly different from the service and allocation treatments and the policy/female condition is significantly different from service/female and both allocation conditions.

Panel (b) shows the baseline health care e-mail experiment results. The average thermometer rating in that case is 51 with a standard deviation of 30. The graph shows that the delegate treatments produced moderately larger ratings that are statistically significant within the legislator gender conditions; the delegate/male treatment is significantly larger than the trustee/male treatment and delegate/female is significantly larger than trustee/female. However, the male conditions are not statistically significantly different from the female conditions.

Finally, panel (c) displays results from the road repair e-mail experiment. The average thermometer rating is 59 and the standard deviation is 26. In that case the fair share treatments produced moderately larger ratings than did the pork barrel conditions, and again these differences are statistically significantly different within the gender conditions. Like the previous two, the male and female conditions are not significantly different.

## **4 Complete Model Results**

Tables A.1–A.3 present the complete model results, including models with all of the variables and their interactions with treatments. Overall, these tables show that the same patterns reported in the main text generally hold, even when controlling for other factors.

[Insert Table A.1 here]

[Insert Table A.2 here]

[Insert Table A.3 here]

## **5 Additional Controls in the Health Care E-mail Experiment**

Figure A.2 shows results with additional controls from the health care e-mail experiment. Panel (a) shows the results for ideology, but with controls for both health care opposition and partisanship and their interactions with each condition. In panel (c) I control for health care opposition, party, their interactions with the each condition, and a three-way interaction between opposition, party, and the trustee condition. I use this specification to guard against a heterogeneous treat-

ment effect—it may be the case that Republicans who are opposed to health care favor the trustee condition more strongly than Democrats who support health care favor the delegate.

[Insert Figure A.2 here]

Between the main text and these results, I show three different ways of controlling for the confounding effect of health care opinion. The effect weakens somewhat with the additional controls in Figure A.2 due to collinearity between the independent variables, but the same general pattern emerges: liberals prefer delegates and conservatives prefer trustees.

## **6 Results from Direct Questioning about Views on Government**

As noted in the main text, I operationalize the theoretical model by measuring preferences for government’s role with observable characteristics. This decision is supported by literature showing that demographics can be used to develop accurate and reliable measures of subnational public opinion (e.g., Park, Gelman, and Bafumi 2004; Lax and Phillips 2009*a,b*; Kesteltec, Lax, and Phillips 2010). However, a more elegant test of the theory would use direct measures of respondents’ views toward government’s role. This is difficult in a space-constrained survey setting because obtaining such measures would require several questions, such as those asking about whether government should provide social programs, whether ordinary citizens should be more or less involved in government, and others.

Despite this, two questions on the CCES asked respondents “how good is government?” and “how powerful is government?” Answers were given on 0–100 scales, with 0 signifying “awful” or “weak,” respectively, and 100 meaning “good” or “powerful.” I consider these questions too vague to form the sole test of my theoretical framework, but they are good enough to use as a robustness check. I do so in Figure A.3.

[Insert Figure A.3 here]

For the election information experiment, I use the “good” question as a measure of the extent to which respondents think government should provide social programs and, in general, be active

in citizens' lives. I expect that those whose preference is for minimal government gave lower ratings on this measure, and those who prefer larger, active government provided higher ratings. My theoretical claim discussed in the main text would predict that those who think government is good rate district-centric representation—service and allocation—higher than do those who think government is bad. Panel (a) in Figure A.3 shows support for this expectation—respondents at the 95<sup>th</sup> percentile of the “good” measure rate the service and allocation conditions 12 and 11 points higher than do respondents at the 5<sup>th</sup> percentile of that variable. These differences are significant at the 0.05 and 0.10 level, respectively.

Next, for the health care e-mail experiment, I use the “powerful” question as a measure of egalitarian versus traditionalistic viewpoints. I expect respondents who view government as weak see a need for ordinary citizens to play a controlling role in government, while those who view government as powerful are more apt to defer to elites. Thus, my theory would predict that those who see government as weak (powerful) prefer delegates (trustees). Panel (b) shows partial support for this expectation. Controlling again for health care opinion, respondents at the 5<sup>th</sup> percentile of the “powerful” measure rate the delegate condition higher on average than do those at the 95<sup>th</sup> percentile. Furthermore, those who view government as powerful rate the trustee condition higher than the delegate condition on average, but the difference between conditions for those who see government as weak is not statistically significant.

Finally, I again use the “good” measure in the road repair e-mail experiment as a measure of the extent to which respondents think government should be active in citizens' lives. My theory would predict that the difference in evaluations of the pork barrel and fair share conditions should be large in favor of fair share for those who think government is bad, and smaller for those who think it is good. Panel (c) shows results consistent with that prediction. Respondents at the 95<sup>th</sup> percentile of the “good” measure rate allocation higher than those at the 5<sup>th</sup> percentile in both conditions. Additionally, there is no statistically discernible difference between the average ratings of the two conditions among those who view government as good. In contrast, the average difference between conditions for those who view government as bad is a statistically significant 19 points.

Overall, neither demographics and other characteristics nor these questions about government are perfect measures of preferences for government's role. However, the robustness of results across both measurement approaches bolsters my confidence in the empirical support for the theory found in these data.

## 7 Variable Descriptions and Summary Statistics

Table A.4 presents descriptions and summary statistics (mean and standard deviation) for the variables used in the analyses.

[Insert Table A.4 here]

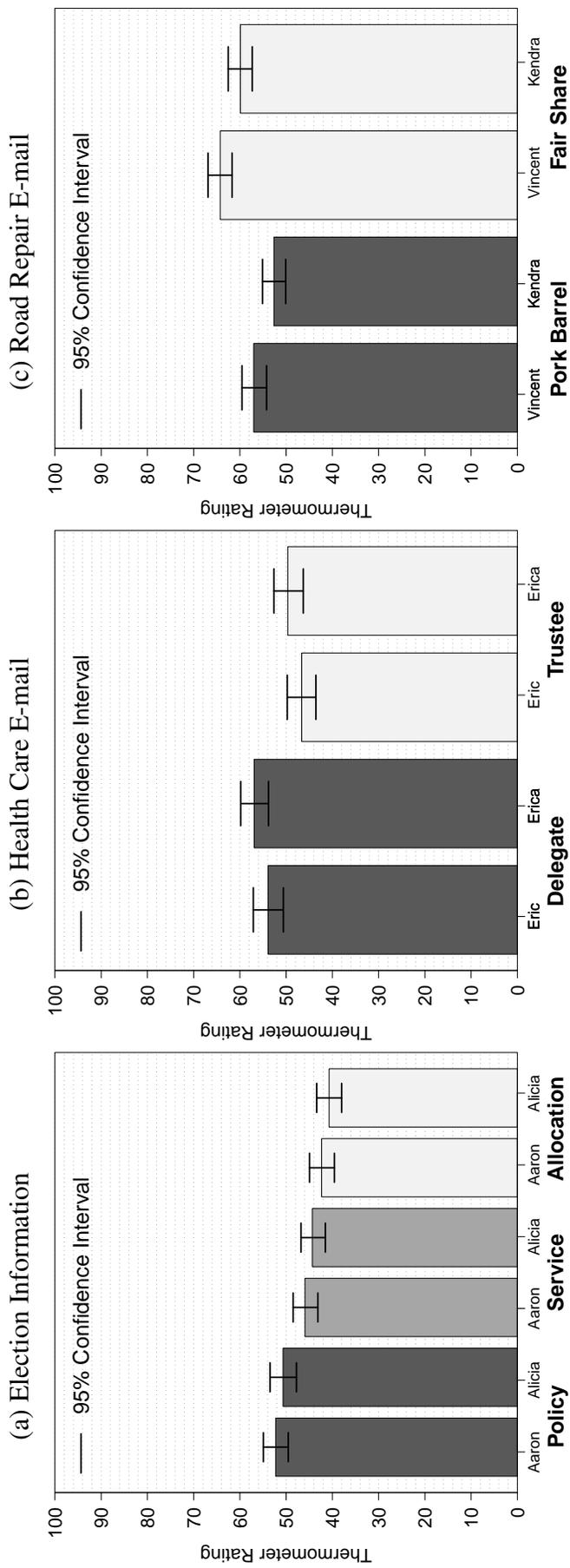
## 8 Variable Correlation Matrix

Table A.5 reports pairwise correlations between the independent variables used in the analyses.

[Insert Table A.5 here]

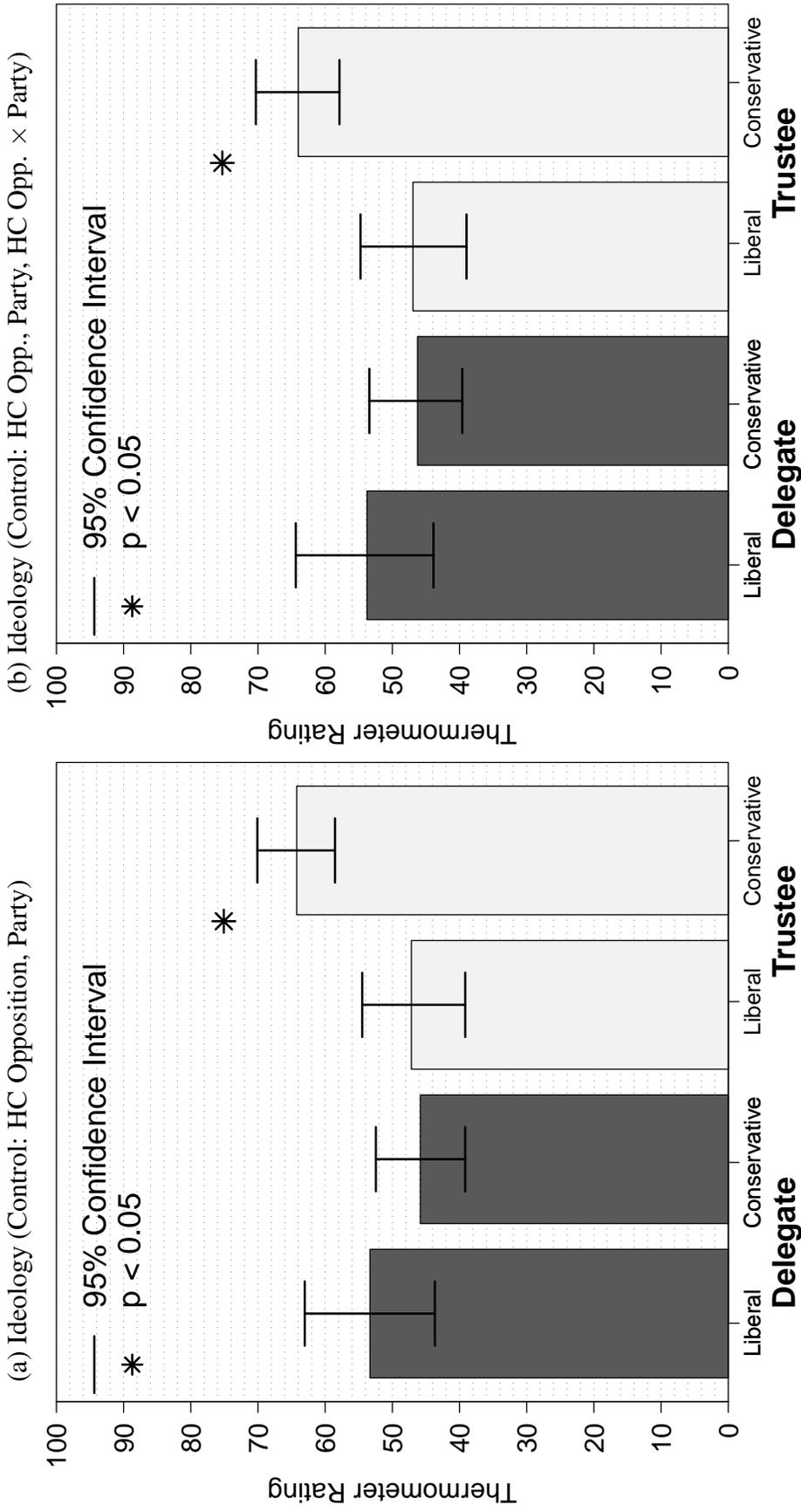
## References

- Kastellec, Jonathan P., Jeffrey R. Lax, and Justin H. Phillips. 2010. "Public Opinion and Senate Confirmation of Supreme Court Nominees." *Journal of Politics* 72(3): 767–784.
- Lax, Jeffrey R., and Justin H. Phillips. 2009a. "Gay Rights in the States: Public Opinion and Policy Responsiveness." *American Political Science Review* 103(3): 367–386.
- Lax, Jeffrey R., and Justin H. Phillips. 2009b. "How Should We Estimate Public Opinion in the States?" *American Journal of Political Science* 53(1): 107–121.
- Park, David K., Andrew Gelman, and Joseph Bafumi. 2004. "Bayesian Multilevel Estimation with Poststratification: State-Level Estimates from National Polls." *Political Analysis* 12(4): 375–385.
- Rivers, Douglas. 2006. "Sample Matching: Representative Sampling from Internet Panels." Polimetrix White Paper Series.



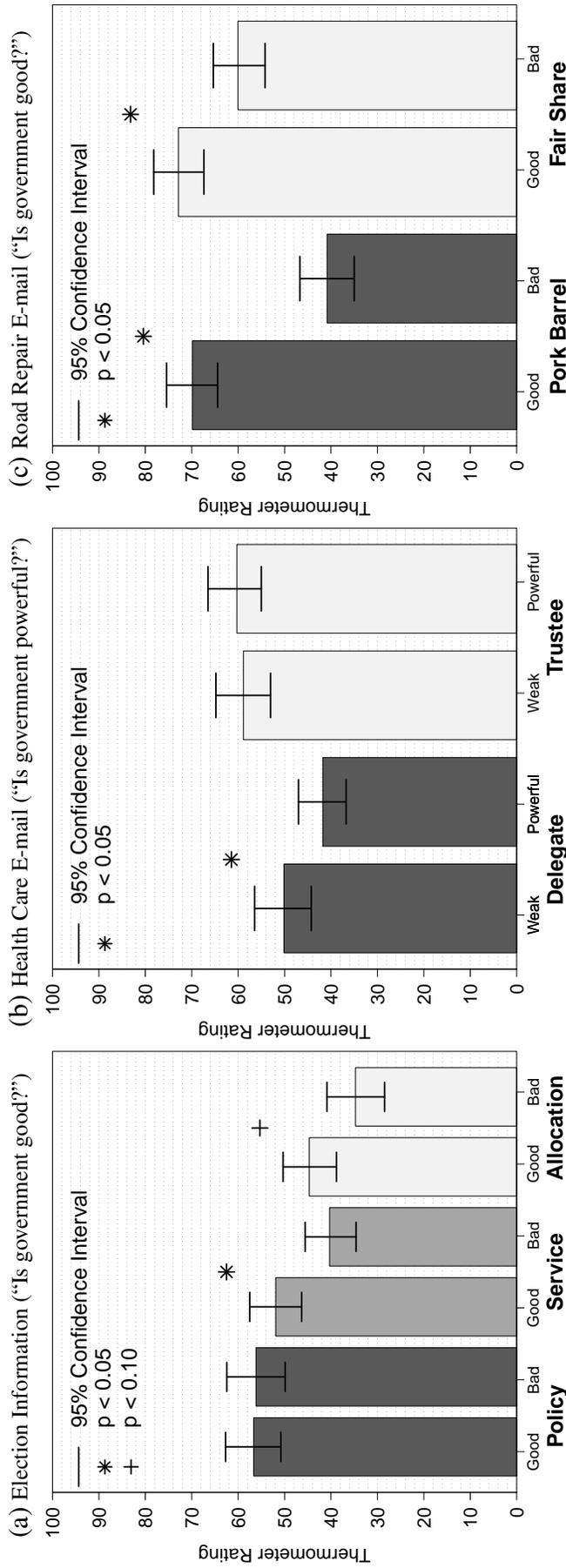
Note: The graphs present differences in thermometer ratings as a function of the treatments for each of the three survey experiments.

Figure A.1: Baseline Treatment Effects in the Three Survey Experiments



Note: The graphs present the effects of ideology and party on the thermometer rating. Panel (a) shows the results for ideology, controlling for opposition to the health care bill, partisanship, and their interactions with the trustee treatment. Panel (b) includes a control for opposition to the health care bill, partisanship, and a three-way interaction between opposition, partisanship, and the trustee treatment. \* Difference between two same-shaded bars is statistically significant at  $p < 0.05$ .

Figure A.2: Additional Controls in the Health Care E-mail Experiment



Note: The graphs present differences in thermometer ratings as a function of the treatments and their interactions with respondent views on whether the government is good or bad (panels a and c) and whether the government is weak or powerful (panel b). \* Difference between two same-colored bars is statistically significant at  $p < 0.05$ . +  $p < 0.10$ .

Figure A.3: Effects of Respondent Views on Whether the Government is Good or Bad (Election Information/Road Repair E-mail) and Whether the Government is Weak or Powerful (Health Care E-mail)

Table A.1: Complete Results from the Election Information Experiment

	Income	Employment Status	Education	Ideology	Gender	Race	Full Model
Intercept	41.57* (2.82)	54.19* (1.47)	43.04* (3.12)	52.82* (3.53)	51.66* (2.67)	47.63* (3.22)	40.60* (6.90)
Service Treatment	4.56 (3.93)	-8.11* (1.86)	-7.22 (4.17)	-8.49 (4.77)	-6.18 (3.65)	-2.00 (5.10)	-7.48 (9.89)
Allocation Treatment	7.21 (4.07)	-13.43* (1.81)	1.72 (4.15)	2.89 (4.61)	-8.78* (3.65)	2.58 (4.71)	22.50* (9.17)
Female Legislator	-3.32* (1.53)	-1.63 (1.41)	-1.57 (1.41)	-0.81 (1.44)	5.35 (4.08)	-1.48 (1.42)	0.74 (4.32)
Income	1.76* (0.37)						1.06* (0.40)
Service × Income	-1.63* (0.51)						-1.64* (0.59)
Allocation × Income	-2.63* (0.53)						-2.11* (0.60)
Unemployed		-18.67* (4.14)					-10.90* (4.80)
Service × Unemployed		17.60* (5.56)					9.14 (6.38)
Allocation × Unemployed		35.68* (5.77)					16.47* (7.01)
Education			2.88* (0.86)				0.52 (1.02)
Service × Education			0.30 (1.19)				3.61* (1.41)
Allocation × Education			-3.68* (1.20)				1.20 (1.44)
Ideology				0.24 (0.72)			-0.51 (0.83)
Service × Ideology				-0.03 (0.99)			1.88 (1.13)
Allocation × Ideology				-3.66* (0.98)			-2.31* (1.12)
Female					0.25 (3.51)		4.90 (3.80)
Service × Female					-1.05 (5.04)		-8.00 (5.46)
Allocation × Female					0.93 (4.88)		-4.26 (5.26)
Female Legislator × Female					-9.49 (5.24)		-8.65 (5.50)
Service × Female Legislator					-9.43 (5.33)		-6.15 (5.62)
Allocation × Female Legislator					-9.66 (5.25)		0.18 (5.62)
Service × Female Legislator × Female					17.83* (7.21)		18.27* (7.65)
Allocation × Female Legislator × Female					10.73 (7.10)		4.18 (7.47)
Black						-11.12* (5.01)	-12.42* (5.01)
White						7.81* (3.52)	10.85* (3.57)
Service × Black						15.62* (7.06)	8.65 (7.45)
Allocation × Black						6.25 (6.84)	6.42 (7.30)
Service × White						-8.55 (5.49)	-12.01* (5.58)
Allocation × White						-17.57* (5.12)	-21.52* (5.35)
N	830	956	956	915	956	956	794
Adjusted R <sup>2</sup>	0.07	0.07	0.06	0.08	0.04	0.06	0.16

Note: Cell entries report OLS coefficients and standard errors (in parentheses) from the election information experiment. The dependent variable is the thermometer rating of the legislator. Data are weighted to reflect population marginals from the American Community Survey (see Rivers 2006). \* p < 0.05 (two-tailed).

Table A.2: Complete Results from the Health Care E-mail Experiment

	Ideology	Party	Ideology/Party	Ideology/Party/Interaction	Full Model
Intercept	70.23* (3.88)	66.84* (2.85)	71.39* (3.91)	70.42* (4.53)	84.77* (8.35)
Trustee Treatment	-48.78* (4.90)	-41.87* (3.64)	-52.47* (5.02)	-51.03* (5.82)	-69.75* (10.72)
Female Legislator	2.23 (1.79)	4.15* (1.78)	2.67 (1.83)	2.65 (1.85)	4.06* (1.95)
Oppose Health Care Bill	-13.77* (3.33)	-10.65* (3.45)	-10.96* (3.89)	-8.41 (7.25)	-11.44 (7.55)
Ideology	-1.93* (0.98)		-1.25 (1.16)	-1.25 (1.16)	-0.97 (1.23)
Trustee × Oppose HC	33.75* (4.34)	29.89* (4.70)	29.52* (5.15)	25.53* (9.69)	25.27* (10.04)
Trustee × Ideology	5.82* (1.23)		4.09* (1.44)	4.10* (1.44)	4.98* (1.56)
Party		-1.88* (0.81)	-1.46 (1.00)	-1.02 (1.46)	-2.45 (1.55)
Trustee × Party		4.79* (1.08)	3.17* (1.26)	2.54 (1.81)	3.64 (1.93)
Oppose HC × Party				-0.73 (1.74)	0.16 (1.83)
Trustee × Oppose HC × Party				1.10 (2.26)	-0.04 (2.36)
Income					-0.02 (0.43)
Unemployed					2.69 (5.74)
Education					-0.70 (1.02)
Female					-7.64* (2.88)
Black					-12.83* (6.22)
White					-5.15 (4.84)
Use Government Health Care					-1.64 (3.29)
Trustee × Income					0.83 (0.63)
Trustee × Unemployed					-6.63 (7.34)
Trustee × Education					-1.04 (1.49)
Trustee × Female					17.32* (3.99)
Trustee × Black					-1.58 (8.29)
Trustee × White					0.15 (6.40)
Trustee × Gov. HC					13.77* (4.50)
N	920	936	901	901	784
Adjusted R <sup>2</sup>	0.19	0.18	0.20	0.20	0.24

Note: Cell entries report OLS coefficients and standard errors (in parentheses) from the health care e-mail experiment. The dependent variable is the thermometer rating of the legislator. Data are weighted to reflect population marginals from the American Community Survey (see Rivers 2006). \* p < 0.05 (two-tailed).

Table A.3: Complete Results from the Road Repair E-mail Experiment

	Income	Employment Status	Education	Ideology	Full Model
Intercept	61.64* (2.76)	56.02* (1.44)	64.80* (2.79)	73.49* (2.91)	87.72* (6.00)
Fair Share Treatment	-5.39 (3.56)	8.87* (1.65)	-7.34* (3.68)	0.16 (4.07)	-18.41* (8.06)
Female Legislator	-3.66* (1.68)	-4.34* (1.57)	-3.92* (1.56)	-2.42 (1.55)	-0.60 (1.66)
Income	-0.80* (0.32)				0.41 (0.36)
Fair Share × Income	1.79* (0.46)				0.09 (0.51)
Unemployed		11.03* (3.83)			7.62 (4.03)
Fair Share × Unemployed		-16.35* (5.13)			-15.10* (5.67)
Education			-2.53* (0.77)		-3.12* (0.90)
Fair Share × Education			4.65* (1.07)		2.91* (1.25)
Ideology				-4.35* (0.60)	-4.30* (0.69)
Fair Share × Ideology				2.44* (0.86)	2.97* (0.98)
Female					1.54 (2.35)
Black					-5.63 (4.79)
White					-12.04* (3.69)
Fair Share × Female					2.88 (3.40)
Fair Share × Black					-2.77 (6.58)
Fair Share × White					7.64 (4.87)
N	841	970	970	928	804
Adjusted R <sup>2</sup>	0.04	0.04	0.05	0.10	0.13

Note: Cell entries report OLS coefficients and standard errors (in parentheses) from the road repair e-mail experiment. The dependent variable is the thermometer rating of the legislator. Data are weighted to reflect population marginals from the American Community Survey (see Rivers 2006). \* p < 0.05 (two-tailed).

Table A.4: Variable Descriptions and Summary Statistics

Variable	Description	Mean	SD
Ideology	Strong Liberal–Strong Conservative; 7-point scale	4.52	1.86
Party	Strong Democrat–Strong Republican; 7-point scale	4.00	2.26
Income	< \$10K– ≥ \$150K; 14-point scale	8.04	3.51
Education	No HS–Post-graduate; 6-point scale	3.78	1.42
Black	Yes = 119; No = 881	–	–
Female	Yes = 531; No = 469	–	–
Unemployed	Yes = 73; No = 934	–	–
Uses Medicare/Medicaid	Yes = 294; No = 706	–	–
Oppose Health Care Bill	Yes = 523; No = 471	–	–

*Note: Cell entries report descriptions and summary statistics (mean and standard deviation) for the variables used in the analyses.*

Table A.5: Variable Correlation Matrix

	Ideology	Party	Income	Education	Black	Female	Unemployed	Use Gov. HC	Oppose HC
Ideology	1.00								
Party	0.71	1.00							
Income	0.13	0.14	1.00						
Education	-0.15	-0.08	0.31	1.00					
Black	-0.12	-0.31	-0.15	-0.05	1.00				
Female	-0.13	-0.10	-0.23	-0.12	0.07	1.00			
Unemployed	-0.04	-0.06	-0.16	-0.07	0.03	0.03	1.00		
Use Gov. HC	0.04	0.02	-0.24	-0.15	0.02	0.03	-0.05	1.00	
Oppose HC	0.65	0.70	0.15	-0.15	-0.25	-0.13	-0.07	0.05	1.00

*Note: Cell entries report pairwise correlations between the independent variables used in the analyses.*