



## Policy Attitudes in Institutional Context: Rules, Uncertainty, and the Mass Politics of Public Investment

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This article examines the link between citizens' policy attitudes and the institutional context in which policies are carried out. The article develops a theory of opinion formation toward policies that impose costs on citizens in order to invest in broadly valued social goods. In this framework, problems of agency loss and time inconsistency leave citizens uncertain about whether promised policy benefits will be delivered. Citizen support for public investments thus depends on whether the institutional context makes elites' policy promises credible. We consider hypotheses about how the institutional allocation of authority and the institutional rules governing implementation affect citizen support for public investment, and we find broad support for the framework in three survey experiments administered to representative samples of U.S. citizens. The results shed light on the link between political institutions and citizens' attitudes, the capacities of voters for substantive political reasoning, and the political prospects for public investment.

re citizens' opinions of public policies shaped by institutional context? Public policies emanate from, are embedded within, and shift responsibility across political institutions. Yet standard accounts of public opinion do not assign a prominent role to institutions in explaining policy attitudes. In understanding citizens' evaluations of public policy, scholars commonly focus on the political values that policies reflect (Feldman 1988), the social groups that policies favor (Sniderman, Brody, and Tetlock 1991), and the political affiliations of policies' advocates (Zaller 1992). While political institutions may play an important background role—by, for example, structuring political choices in partisan terms (Jackman and Sniderman 2002) or supplying decision shortcuts (Lupia and McCubbins 1998)—the idea that citizens might contemplate the *substance* of the institutional

arrangements within which policies operate has received little consideration in public opinion scholarship.

In this article, we explore a substantive sense in which the allocation of institutional authority shapes public attitudes toward policies. The adoption of a new policy is a decision about whether public bodies should be granted authority and resources with which to exercise that authority. In this basic sense, policies are decisions about the delegation of tasks to actors within state institutions. Flowing from this observation, this article addresses a critical set of questions about the relationship between institutional context and mass opinion. When deciding whether they want government to do something, do citizens take into account the institutional arrangements under which state action will be carried out?

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We propose a theoretical framework in which citizens believe that the institutional context of policy implementation has implications for what policy will do. In conceiving of policy as an act of delegation, citizens will often be uncertain about how public officials will use public authority and resources. They also have reason to believe that some institutional actors and institutional rules are more likely than others to generate effective policy management, advance declared objectives, and use authority and resources to further the broad public interest. Put differently, we theorize that the institutional context of public policy can matter by conditioning citizens' uncertainty about policy consequences and, in turn, their support for new policy ventures. We expect, furthermore, that such effects will be most prevalent among those citizens for whom considerations relating to the unreliability of governmental commitments are most accessible: antigovernment conservatives.

We test these expectations in three survey experiments that examine the effect of institutional allocations of authority and institutional rules on support for policies that impose broad costs on society in exchange for broadbased future benefits. The findings of these studies have broad implications for our understanding of institutions, mass political cognition, and policy choice. First, the article builds a novel bridge between institutional analysis and the study of political behavior by examining how institutions can condition the credibility problems plaguing interactions between politicians and voters. Second, in contrast to work emphasizing symbolic and associative dimensions of mass cognition, the results below suggest an important respect in which citizens' judgments may be characterized by moderately sophisticated reasoning about institutional structures and policy consequences. Finally, the article provides new insight into the politics of public investment. In particular, the results point to a key source of voters' resistance to policies that impose on them sacrifice today to produce public goods tomorrow. The findings imply that, to a considerable degree, citizens reject costly social investments not because they do not value the goods the state might provide nor because they are inalterably opposed to new taxes—but because they do not trust that governments will ultimately deliver the promised benefits.

# **Institutions and Mass Policy Attitudes**

There is considerable evidence that citizen support for public policies depends in part on how those policies relate to particular governmental institutions and actors. Information about the U.S. president's advocacy of a policy has been found to increase support for the policy among those with favorable presidential evaluations and reduce support among those with an unfavorable view of the president (Bailey, Sigelman, and Wilcox 2003; see also Canes-Wrone and de Marchi 2002; Conover and Sigelman 1982; Mondak et al. 2004; Page, Shapiro, and Dempsey 1987). A closely related literature has found opinion-leadership effects of institutions that are seen as highly credible, most notably the U.S. Supreme Court (for a review, see Bartels and Mutz 2009; see also Sniderman, Brody, and Tetlock 1991). With few exceptions (e.g., Bartels and Mutz 2009), scholars have interpreted such effects as arising from a relatively simple, associative process (e.g., Bailey, Sigelman, and Wilcox 2003; Conover and Sigelman 1982; Mondak et al. 2004). The effect of institutions, in this view, is understood as a heuristic response to a "source cue" (McGuire 1969; Zaller 1992).

Yet citizens may, under certain circumstances, reason about institutions and policy in more substantive ways, related to those policies' likely consequences. In developing our framework, we have in mind a large class of policies that we term social investments: policies that extract resources from a wide swath of the population in exchange for a promise to use those resources to deliver a broadly valued social benefit. The resource extraction may be either direct, as in the imposition of a specific tax, or indirect, as in an allocation of general budgetary funds, implying higher taxes or lower spending elsewhere. The key feature of social investments, then, is that they confront the typical citizen with an intertemporal bargain: the imposition of a cost and the promise of a future benefit. Examples of social investments include an increase in sales or property taxes to pay for investments in education or an expanded police force; a policy that would impose broad spending cuts to head off the economic perils of mounting debt; and a policy that would raise fuel taxes to reduce carbon pollution or pay for upgrades in transportation infrastructure. Such bargains constitute a broad and normatively important category of state action. While some prior work has emphasized the role of citizen trust and institutional confidence in redistributive policies (e.g., Hetherington 2005), there are good reasons to expect matters of confidence to also play a critical role in shaping attitudes toward policies that both impose broad social costs and promise to deliver broad social benefits.

## Social Investments and Uncertainty

For the average citizen, the ultimate outcome of a social investment is potentially fraught with uncertainty. This uncertainty derives in part from the *delegative* nature of

the bargain: the fact that a social investment involves the allocation of new resources and responsibilities to public officials. The implementation of all social investments ultimately takes place at considerable remove from the average citizen, under conditions fraught with informational asymmetries (Jensen and Meckling 1976). The problem is aggravated by the intertemporal character of the bargain: the fact that the policy's costs are generally imposed before its benefits are fully observed. Consider, for instance, the time lag between the imposition of a new fuel tax and the completion of investments in transportation infrastructure. Taken together, social investments' delegative and intertemporal features leave room for considerable uncertainty—about whether, having imposed a policy's costs, the agent will in fact deliver the promised benefits.

This uncertainty can be understood as a problem of misaligned and time-inconsistent incentives (Alesina and Tabellini 1988; North and Weingast 1989; Persson and Tabellini 1994). Once they have been authorized to extract resources from constituents for a stated policy goal, politicians may later face incentives to divert those resources toward unrelated purposes. One potential source of agency costs in this context is the unequal distribution of political influence. Having extracted resources from the average voter, office-seeking politicians may choose to divert those resources toward narrow but well-organized constituencies (e.g., corporations, public-sector unions) whose interests diverge from those of the average voter. Another potential source of slippage is divergence in policy preferences: Funds extracted for one programmatic purpose (e.g., education) may instead be channeled toward goals ideologically favored by officeholders (e.g., tax cuts).

Existing research suggests that the dangers of policy delegation weigh heavily on the mind of the American voter. Hetherington (2005) and Hibbing and Theiss-Morse (2002) find considerable concern in the electorate about the corrupting influence of politics, as well as widespread beliefs that politicians are more strongly inclined to reward narrow groups and follow ideological party dictates than to promote the public welfare. Further, elite rhetoric is likely to make uncertainty-based considerations highly accessible to citizens on a routine basis (Zaller 1992). Opponents of social investments will frequently seek to undermine support not by denigrating the good in question (e.g., schools, clean air, roads), but by calling into question the *credibility* of government promises to deliver the promised benefits. Elite attacks on investments in popular public goods will thus frequently focus citizens' attention on the possibility that politicians will fail to deliver on their benefit commitments, making uncertainty a highly salient consideration (see, e.g., Campbell 2009).

## Uncertainty and the Institutional Allocation of Authority

We have argued that citizens understand social investments, at least implicitly, as acts of delegation laden with uncertainty about the agent's (the public official's) future behavior. This framework, in turn, suggests a number of hypotheses about how citizens' policy attitudes ought to be conditioned by the institutional context of policy implementation.

The first and most basic of these propositions is that the allocation of institutional authority over social investment—the identity of the agents to whom resources and responsibility are delegated—should matter. A number of observational studies find citizens more likely to support costly government programs when they trust the politicians responsible for delivering the benefits (Clinch, Dunne, and Dresner 2006; Davis and Silver 2004; Hetherington 2005). To the extent that citizens hold differentiated views of the motives of public actors, we thus propose the following:

Hypothesis 1 (Allocation of Authority): Support for social investment should be higher when authority over the policy is vested in state actors who are perceived to be more (rather than less) trustworthy.

Further, our theory suggests that attitudes toward social investments should depend on the institutional structure within which implementation unfolds. In the political economy literature, institutions are held to play a critical role in moderating uncertainty and making commitments credible (e.g., North and Weingast 1989; Weingast and Marshall 1988). While arguments about institutions and credibility are usually applied to bargaining among elites, we propose that ordinary citizens will sometimes be attuned—if only intuitively—to the ways in which rules can help or hinder the enforcement of political commitments. We explore in this article two forms of institutional response to problems of political delegation that are prominent in the literatures on public policy, political economy, and public opinion: insulating devices and constraining devices.

Insulating devices are those that make commitments more credible by shielding decision makers from pressures to break their commitments. As students of macroeconomic policy have long argued, for instance, governments' commitments to maintain a given level of monetary growth, in the face of short-run electoral incentives to inflate the economy, can be made more credible by assigning control over the money supply to an authority that is independent of electoral politics (e.g., Rogoff 1985). Similarly, scholars in the public choice

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literature have contended that moral hazard in the production of public goods can be reduced by delegating authority to a bureaucracy insulated from external political pressure (e.g., Miller 2000). At the mass level, Hibbing and Theiss-Morse (2002) find that Americans routinely express a preference for government by neutral experts over partisan politicians. These arguments imply that citizens should find promises of future policy benefits more credible when resources are to be managed by electorally insulated actors (e.g., nonpartisan civil servants) rather than by elected officials, who may be tempted to distribute rents to well-financed interests whose support they need to win reelection.

Constraining devices are those that bind decision makers to a particular course of action. Where decision makers have misaligned incentives, formal rules can, as it were, lash decision-makers to the mast of prior commitments.

In North and Weingast's (1989) analysis of constitutional change in 17th-century England, it is constraint the granting of new constraining powers to Parliament that credibly commits the Crown to repaying its debts. In the realm of public policy, one of the most commonly proposed and employed forms of political constraint consists of budgetary rules, such as the use of tax hypothecation and trust funds. These devices involve rules that require that revenues be spent only on a predeclared policy goal, forbidding the diversion of funds to other government programs. Scholars of public budgeting have argued that such institutions are frequently adopted because they make promise breaking especially easy to detect, and thus make politicians' commitments to specific resource allocations more credible (e.g., Alesina and Perotti 1995; Patashnik 2000; Von Hagen 1992). Even subtle attempts to siphon resources from the U.S. Social Security trust funds, for instance, have created media firestorms, generating high political costs for proponents of diversion.

The existing literature thus suggests at least two hypotheses about the role of institutional rules in generating citizen support for social investment:

Hypothesis 2a (Electoral Insulation): Institutions that insulate implementing officials from electoral pressures, as compared to those that expose implementing officials to electoral pressures, should increase citizen support for social investment.

Hypothesis 2b (Constraint): Constraining institutions, as compared to institutions allowing broad political discretion, should increase citizen support for social investment.

The studies reported below are designed to separately test the effects of these two institutional devices—which

operate on considerably different logics. While electoral insulation removes a potential cause of commitment failure, insulation does nothing to commit public officials to any particular objective or course of action. Though protecting policy implementation from electoral pressures, it leaves insulated officials with unimpeded discretion in deciding how to manage policy and direct resources. Constraint, on the other hand, *binds* policy makers to a specific, predeclared allocation of resources. Constraint, thus, might be expected to reduce uncertainty about the delivery of promised benefits more effectively than insulation—a possibility we consider further in the article's conclusion.

Finally, institutional effects on attitudes are likely to vary across the electorate. While the risks of delegation in principle confront all those who pay the costs of social investment, not all citizens will be equally attentive to the problems of political uncertainty bedeviling social investment. For one thing, some citizens are more likely to have cognitively accessible considerations relating to the uncertainty of political commitments. In particular, those who are generally hostile to government-led solutions to policy problems are likely to be especially attentive to the possibility that public projects will go awry as politicians default on promises of future benefits. While smallgovernment conservatives may value the public goods that governments promise to provide—high-quality infrastructure, schools, police protection—they are more likely to lack confidence that politicians will deliver those goods after imposing policy costs. Along slightly different lines, Rudolph (2009), Rudolph and Popp (2009), and Rudolph and Evans (2005) argue that the activation of trust-based policy reasoning in the mass public depends on the degree of "ideological sacrifice" a policy imposes on citizens. While conservatives may value the ends of many social investments, the policy means—tax and spending increases—impose greater ideological costs on antigovernment conservatives than on liberals. On Rudolph and colleagues' logic, it should thus be among conservatives that a social investment will provoke the most intensive reasoning about whether the system implementing the policy can be trusted.

On either logic, we expect support for social investment among citizens with antigovernment beliefs to be especially sensitive to features of institutional context that amplify (or dampen) the uncertainty of promised policy benefits. We thus propose the following:

Hypothesis 3 (Moderation by Antigovernment Beliefs): Any institutional effects on social investment attitudes should be greater among those individuals who are more skeptical of government intervention in general.

We turn next to three web-based survey experiments designed to test these hypotheses.

## **Policy Blueprint Experiment**

The policy blueprint experiment was designed to test Hypothesis 1 (Allocation of Authority). All experiments reported in the article also provide an opportunity to test Hypothesis 3 (Moderation by Antigovernment Beliefs).

The policy blueprint experiment examined attitudes toward a specific social investment: a policy that would increase gasoline taxes and use the revenues to repair and enhance transportation infrastructure around the United States. The main experimental manipulation involved variation in the institutional actor responsible for implementation of the investment. Full text of the experimental protocol can be found in the supporting information.<sup>1</sup>

### **Study Design**

Stimulus. The stimulus consisted of a policy blueprint: a description of the problem of decaying infrastructure and of a social investment designed to address it. Our interest in the present studies is in how citizens respond to specific policy and institutional conditions (rather than in whether or how they obtain information about those conditions). In designing the experimental stimulus, therefore, a central concern was maximizing the comprehension and absorption of key information. Rather than seeking to mimic a real-world information source (e.g., a newspaper article), the experimental stimulus thus presented, in a clearly organized format, only information directly relevant to the evaluation of the policy

All subjects were informed about the following features of the policy choice:

- Policy problem. Subjects were informed that the country's roads and bridges are in need of major repairs and that well-functioning infrastructure is vital to the country's economy.
- 2. Nature and cost of the proposed solution. A reform proposal was described that would impose an immediate fuel tax increase (8 cents/gallon) to finance repairs to roads and bridges around the country over the next 20 years. This proposal was similar to proposals that had recently been made by prominent political actors in the United States.

3. *Uncertainty rhetoric*. To simulate real-world political discourse, in which opponents of policy reform are likely to cast doubt on governments' benefit promises, subjects were provided statements designed to prime uncertainty-based considerations. Subjects were reminded of the risk that new funds in governments' hands may be spent in ways that benefit well-connected special interests and that successful implementation of the reform would depend on the degree to which the institution responsible could ignore demands from such groups. This uncertainty rhetoric referred only to the problem of specialinterest influence, making no reference to the presence or absence of potential institutional solutions to that problem (the focus of the next two studies).

A final screen offered a bullet-point summary of the problem and solution, which remained on-screen while subjects responded to questions about their level of support for the reform. Question wordings for all studies are available in the supporting information.

Experimental Manipulation. The main treatment consisted of a manipulation of the institutional actor responsible for the proposed social investment. Subjects were randomly assigned to one of three versions of the policy blueprint that differed in the actor that would manage the extracted resources and oversee the transportation upgrades and repairs. In crafting this manipulation, we took advantage of the fact that—especially in a political system with widely dispersed authority—multiple realworld institutional actors might plausibly be involved in policy implementation.

Specifically, we selected policy actors (a) in regard to which the American public is known to have widely differing levels of confidence and (b) who might plausibly play a role in the field of infrastructure policy. Among the federal institutions in which Americans routinely report the highest and lowest levels of confidence, respectively, are the military and Congress.<sup>2</sup> There is also wide variation in levels of trust across levels of government, with trust in local government far exceeding that in the federal government (see, e.g., Jones 2013). Each of these institutions, moreover, plays a role in maintaining the nation's public infrastructure. The three institutional conditions, therefore, assigned responsibility for oversight and management of the investment to Congress, local governments, and the Army Corps of Engineers, respectively.

<sup>&</sup>lt;sup>1</sup>The survey experiment was fielded by YouGov/Polimetrix, May 28–July 26, 2011.

<sup>&</sup>lt;sup>2</sup>See, for example, Gallup Poll, June 1–4, 2013, available at http://www.gallup.com/poll/1597/confidence-institutions.aspx.

TABLE 1 Policy Blueprint Experiment: Factor Structure

Uncertainty Rhetoric	Institution	Time Horizon: 5 Years	Time Horizon: 20 Years
Incentive Based	Congress	58	119
	Local Govts.	56	116
	Army Corps	59	115
Capacity Based	Congress	55	115
	Local Govts.	59	114
	Army Corps	56	114
Control	Congress	60	102
	Local Govts.	59	104
	Army Corps	59	98

*Note:* Cell entries are numbers of subjects. Shaded cells are included in the primary tests of Hypotheses 1 and 3. Unshaded cells are included in tests of alternative explanations.

The design did not include a condition in which respondents received no information about institutional responsibility for the investment. While "pure controls" of this kind play an important role in many experimental setups (Gaines, Kuklinski, and Quirk 2007), comparisons including an "institution-free" control would not have been theoretically informative here. A comparison between any of the three institutional conditions and an institution-free control would have confounded the effect of assigning responsibility to a particular actor with the effect of providing information about institutional responsibility. Any observed differences, thus, could have reflected either the effect of a particular allocation of authority or the effect of variation in the availability of institutional responsibility information per se. As the study's objective is to identify the effect of assigning responsibility to one institution rather than another, we are interested in comparisons between conditions that differ in stated allocations of institutional authority.

Finally, to help isolate the mechanisms underlying our treatment effects, the experiment included two additional experimental factors, randomized orthogonally to the institutional treatment and described in detail below. Unless otherwise specified, all analyses are confined to the conditions represented in the shaded cells in Table 1.

### **Empirical Results**

We begin by testing for the effects of institutional responsibility on respondent support for social investment (Hypothesis 1). Second, we test our interpretation of these results against alternative explanations. Finally, we test for the predicted moderation of institutional effects by antigovernment beliefs (Hypothesis 3). Causal effects are estimated using ordinary least squares regressions and,

unless otherwise noted, with only the treatment variables on the right-hand side. Sample sizes vary across the analyses, as indicated in the results tables.

Institutional Effects. We note above evidence that Americans' trust in the military and local governments is far higher than in Congress. We first confirm that these differences held for our sample, based on a set of institutional confidence questions asked of all respondents (after the measurement of our dependent variable). As in other studies, we find confidence in Congress is far lower than confidence in the other two institutions.<sup>3</sup> We thus expect a social investment managed by the Army Corps or local government to attract greater support than the same investment managed by Congress.

Turning now to the dependent variable in the analysis, levels of support for the social investment are captured with a *support index*, which varies from 0 to 1 and is composed of the average of responses to three questions tapping approval of the proposal (see the supporting information). Higher values on the index indicate more support. Overall, the average respondent is modestly opposed to the reform (M = 0.43).

Support varies significantly by institutional condition. As expected, support is higher in the Army Corps (M=0.48) and Local Government (M=0.45) conditions than in the Congress (M=0.36) condition (see Model 1, Table 2). The reform attracts, on average, 0.12 units more support when managed by the Army Corps than when managed by Congress (p < .01). Likewise, subjects' support for the reform is 0.09 units higher in the Local Government than in the Congress condition (p < .05).

Assessing Alternative Explanations. These differences in means are potentially open to alternative interpretations. First, our subjects' reactions to the institutions may have reflected a more heuristic process driven by differential affective or symbolic associations with these institutions, rather than by a substantive logic of uncertainty and institutional commitment. In other words, like many Americans, perhaps our subjects just dislike Congress. Second, the observed effects may have arisen from a form of uncertainty different from that proposed by our theory: Respondents may have perceived the three institutional actors as differing in their capacity (or competence) to execute the proposed investment, rather than in their incentives to do as promised. We adduce here additional experimental evidence that allows us to eliminate

<sup>&</sup>lt;sup>3</sup>Mean institutional confidence levels can be found in the supporting information.

<sup>&</sup>lt;sup>4</sup>Unless otherwise indicated, we report one-tailed significance tests.

TABLE 2 Policy Blueprint Experiment: Institutional Effects on Social Investment Support

	(1)	(2)	(3)	(4)
Local Government	$0.094^{\dagger}$	$0.094^{\dagger}$	$0.094^{\dagger}$	0.002
	(0.043)	(0.043)	(0.043)	(0.059)
Army Corps	$0.122^{\dagger\dagger}$	$0.122^{\dagger\dagger}$	$0.122^{\dagger\dagger}$	0.083
	(0.043)	(0.043)	(0.044)	(0.058)
5-Year Timing		0.073		
		(0.053)		
Local Govt. × 5-Year Timing		-0.035		
-		(0.075)		
Army Corps $\times$ 5-Year Timing		$-0.138^{\dagger}$		
		(0.075)		
Rhetorical Control			0.019	
			(0.045)	
Capacity-Based Uncertainty			0.082	
			(0.044)	
Local Govt. × Rhetorical Control			-0.051	
			(0.064)	
Local Govt. × Capacity Uncertainty			-0.054	
			(0.062)	
Army Corps × Rhetorical Control			-0.087	
			(0.064)	
Army Corps × Capacity Uncertainty			$-0.161^{\dagger\dagger}$	
			(0.062)	
Antigovernment Belief				-0.337**
				(0.056)
Local Govt. × Antigovernment				$0.195^{\dagger\dagger}$
				(0.080)
Army Corps × Antigovernment				0.087
				(0.080)
Constant	0.356**	0.356**	0.356**	0.529**
	(0.030)	(0.030)	(0.031)	(0.040)
Observations	350	523	997	350
R-squared	0.025	0.020	0.015	0.172

*Note:* Main cell entries are OLS estimates. Standard errors are in parentheses. Reference categories for categorical variables are as follows, in parentheses: Local Government (Congress); Army Corps (Congress); 5-Year Timing (20-Year Timing); Rhetorical Control (Incentive-Based Uncertainty); Capacity-Based Uncertainty (Incentive-Based Uncertainty). We report two-tailed significance tests for parameters about which we propose no directional hypothesis.  $^{\dagger\dagger}p < .01$ ,  $^{\dagger}p < .05$  (one-tailed tests).  $^{**}p < .01$ ,  $^{*}p < .05$  (two-tailed tests).

these alternative explanations for the observed treatment effects.

Timing Dependence. We first assess alternative explanations by analyzing the dependence of institutional effects on the *time horizon* of social investment. In the experiment's basic setup, analyzed above, respondents were told that the infrastructure repairs would occur over a 20-year period. Orthogonally with the institutional manipulation, however, a second experimental factor varied this time horizon: Within each institutional con-

dition, some subjects were randomly assigned to a policy blueprint that indicated a *5-year* period of implementation. Our expectation is that considerations of political uncertainty should depend on the time horizon over which policy promises must be kept (Jacobs and Matthews 2012). Over a much shorter time horizon, politicians will face far fewer opportunities and pressures to renege on promises that they made just a short while ago; there will also be less turnover in office potentially destabilizing policy commitments. If the institutional effects operate via a political uncertainty mechanism, we would thus

expect the timing factor to moderate those effects, with smaller institutional effects appearing in the 5-year timing condition.

The resulting analysis is reported in Model 2 in Table 2, which interacts the timing and institutional factors. The results imply that the marginal effect<sup>5</sup> of assignment to the Army Corps or Local Government conditions (relative to the Congress condition) is significant at conventional levels *only* in the 20-year timing condition and *not* in the 5-year timing condition. The two-way interaction between timing and institutions, furthermore, is statistically significant (at the 95% level) with respect to the Army Corps—Congress difference (the two-way interaction involving the Local Government—Congress difference is not significant).

These findings lend considerable support to an uncertainty-based explanation of the institutional effects. If subjects were responding to the institutions purely on an affective or symbolic level, then increasing the time horizon of implementation should not increase responsiveness. The moderation of institutional effects by timing is far more consistent with a process in which respondents are reasoning about how governmental actors manage policy endeavors over time.

Dependence on Incentive-Based Rhetoric. We next examine the moderation of institutional effects by rhetorical context. Recall that the stimulus seeks to mimic the real-world politics of social investment by pairing a description of the policy proposal with statements about the risk that officials might divert funds toward powerful special interests. This rhetoric is intended to prime considerations of political uncertainty arising from politicians' misaligned incentives, much as elite opponents of social investments are likely to do in everyday political discourse. If the logic of misaligned incentives was in part responsible for the differences in investment support across institutional conditions, then removing rhetoric focused on this logic should diminish the effect of the institutional manipulations. A strong dependence of institutional effects on such rhetoric would also undermine non-uncertainty-based explanations of the treatment effect.

We thus consider the effects of a third experimental factor that allows for a further test of rival explanations. Along this third factor, subjects were assigned to three rhetorical conditions: (1) an *incentive-based uncertainty* condition (i.e., the rhetorical condition analyzed so far), in which the policy blueprint includes uncertainty rhetoric focused on pressure from special interests;

(2) a *rhetorical control* condition, which includes no uncertainty rhetoric; and (3) a *capacity-based uncertainty* condition, which includes rhetoric pointing to the *technical difficulty* of effective implementation. This last condition allows us to examine the possibility, noted above, that institutional effects arise from differences in perceptions of the capacity of institutional actors for effective policy management.

In Model 3 (Table 2), we include two-way interactions between institutions and *rhetoric*, along with all lower-order terms.<sup>6</sup> The results reveal that the rhetorical condition significantly moderates the institutional effects. The marginal effects of assignment to the Army Corps and Local Government conditions (relative to the Congress condition) are statistically insignificant in both the capacity-based uncertainty condition and the rhetorical control condition. The two-way interaction between capacity-based uncertainty and institutions, moreover, is statistically significant at the 99% level with respect to the Army Corps–Congress difference.<sup>7</sup>

These findings provide further support for our theoretical interpretation of the institutional effects. If subjects were responding to a difference across the three institutions other than the level of uncertainty associated with their policy stewardship (e.g., differences in their symbolic associations), then uncertainty-based rhetoric should be unnecessary to generate the institutional effects. The lack of significant institutional effects in the absence of uncertainty-based rhetoric suggests that uncertainty-based reasoning is central to subjects' responsiveness to the allocation of authority. At the same time, the analysis yields little evidence that subjects' policy evaluations arise from differential perceptions of institutional actors' capacities or competence. Institutional effects emerge solely in the presence of arguments about incentive-based uncertainty, which suggests the effects are driven by perceived differences in the political incentives that actors face to break their policy commitments.

Moderation by Antigovernment Beliefs. We have theorized—for reasons relating to both cognitive accessibility and the "ideological costliness" of social investment—that antigovernment conservatives will be more attuned to the risks of commitment-breaking and thus more sensitive to the identity of the public actor that would implement the proposed investment (Hypothesis 3). We test for this moderation using a standard

<sup>&</sup>lt;sup>5</sup>Throughout the article, we report average marginal effects.

<sup>&</sup>lt;sup>6</sup>These are analyzed for subjects in the 20-year timing condition.

 $<sup>^{7}</sup>$ The Army Corps–Congress effect is also smaller in the rhetorical control condition relative to the incentive-based uncertainty condition (p = .095).

American National Election Studies item measuring proversus antigovernment sentiment (see the supporting information). Model 4 (Table 2) presents estimates of the two-way interaction between this ideological indicator and the institutional factor.

The results reveal the theoretically predicted moderation. The positive effects of Army Corps and local government responsibility, as compared to congressional responsibility, are substantially larger among those with antigovernment beliefs. Indeed, the largest institutional effect in this group—the Local Government–Congress contrast, a shift of 0.20 units (significant at the 99% level)—doubles the group's level of support for the reform ( $\hat{\gamma} = 0.39$  units). This effect goes about two-thirds of the way toward bringing support for social investment among those with antigovernment beliefs to the level of support  $(\hat{y} = 0.53 \text{ units})$  displayed by the progovernment group in the Congress condition. The Army Corps-Congress contrast among those with antigovernment beliefs is just slightly smaller: 0.17 units (significant at the 99% level). As a further gauge of substantive significance, we find that these effect magnitudes are comparable to those of many individual-level variables measured in our survey that are commonly thought to be important determinants of attitudes toward government spending and taxation (for details, see the supporting information).

In contrast, among those with progovernment beliefs, neither the Army Corps—Congress difference nor the Local Government—Congress difference is significant. (The Army Corps effect, which is closer to significance, is also about half the size of the Army Corps effect observed in the antigovernment group.) Further, the two-way interaction between the antigovernment measure and institutions is positive and statistically significant (99% level) with respect to the Local Government—Congress difference.

These results suggest that it is those citizens who are most opposed to state intervention in general who are most sensitive to the allocation of institutional authority for new public initiatives.<sup>8</sup> The findings also suggest that institutional choices can go a considerable way toward closing the gap in support for public investment between conservatives and nonconservatives.

## **Institutional Vignette Studies**

Our two institutional vignette studies turn to the role of institutional rules in uncertainty about and support for social investment. These two studies were designed to test for the effects of institutional insulation and institutional constraint, as framed in Hypotheses 2a and 2b. Further, these studies permit an additional test of Hypothesis 3 (Moderation by Antigovernment Beliefs).

Whereas the policy blueprint study asked subjects to consider a single social investment and assigned responsibility for the investment to different specific actors, the institutional vignette experiments administer *generalized* institutional treatments and then measure levels of support for social investments in several public goods. Due to the generalized nature of their manipulations, these two experiments allow us to tap the effects of *rules in themselves*, avoiding potential confounds arising from the assignment of responsibility to specific institutional actors. Further, in measuring support for investments covering a wide range of policy fields, these two studies allow us to estimate effects that are unperturbed by the idiosyncrasies of specific policy issues.

### **Study Designs**

In seeking to test for the effects of institutional rules on citizens' policy attitudes, we confronted the challenge that the causal variable of interest—the institutional context of policymaking—cannot be directly manipulated. Our solution was to manipulate the relative salience of alternative features of an institutionally complex policymaking environment. In each institutional vignette experiment, respondents were presented with a short description of how the federal budget process works in the United States. In embedding treatments within this vignette, we took advantage of the fact that the federal budget is characterized by wide diversity in institutional rules. Each treatment condition thus emphasized a particular institutional feature of the budgetary process. The experimental strategy was to manipulate respondents' mental images of the rules operating within the budgetary process prior to asking them to consider a set of costly social investments. Full protocols for the vignettes are provided in the supporting information.9

Insulation Vignette Study. In this experiment, the vignette informed subjects about the relative roles of *elected officials* as compared to *unelected officials* in deciding how federal dollars are spent. In the Low Electoral Insulation condition, subjects were informed that elected officials play an important role in the process and that, in many

<sup>&</sup>lt;sup>8</sup>This pattern is robust to the inclusion of interactions between the institutional factor and a range of correlates of antigovernment sentiment (see the supporting information).

<sup>&</sup>lt;sup>9</sup>The two experiments were jointly fielded by YouGov/Polimetrix in two waves: September 21–26, 2012, and June 5–10, 2013.

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areas, government agencies have little influence over the allocation of resources. In the High Electoral Insulation condition, subjects were informed that nonpartisan civil servants in independent agencies play an important role in allocating resources and that, in many areas, elected officials have little influence over the details of government spending. Each of these statements is true, of course, in that elected officials play a key budgetary role in some programmatic areas and stages of the policy process, whereas civil servants are more prominent in others. The treatment thus consisted of a manipulation of the salience of electorally influenced, relative to electorally insulated, features of the budgetary process. This manipulation thus allows for a test of the effect on investment support of institutionally distancing implementation from electoral processes.

Constraint Vignette Study. The vignette in this study informed respondents about the role of constraints—specifically, trust fund rules—relative to political discretion in the allocation of tax dollars. In the High Constraint condition, subjects were informed that trust fund rules govern the allocation of resources in many areas, requiring that tax dollars collected for a specific purpose be spent only on that purpose and limiting politicians' discretion. In the Low Constraint condition, in contrast, subjects were told that trust fund rules can be overridden and that elected officials retain wide latitude to allocate resources as they see fit. This study thus manipulated the salience of constraint relative to political discretion in the budgetary process.<sup>10</sup>

In both vignette studies, the treatments were designed to manipulate the salience of *institutional rules*—not to indicate the *effects* of these rules. To allow for a direct test of our institutional hypotheses, we left subjects free to reason for themselves about the effects of the rules (e.g., on the level of policy influence exercised by special interests and the credibility of policy commitments). Further, as in the policy blueprint study, the insulation and constraint vignette studies did not include institution-free control groups (with no information about the federal budgetary process). As our hypotheses concern the effect of variation in institutional conditions, comparisons involving an institution-free control would not have been theoretically informative. Such comparisons would have confounded

<sup>10</sup>In both vignette studies, the rules in question are described as having practical force. The High Electoral Insulation condition thus refers to unelected civil servants as being *in fact* "nonpartisan" and operating "at arm's length from politics." Equivalently, the High Constraint condition refers to trust fund rules as *in fact* constraining politicians from moving resources across program areas.

variation in the substance of institutional rules with the provision or salience of information about those rules.

Social Investment Support Measure. Following the vignette and a distractor question, respondents in each experiment were asked to indicate their level of support for proposed social investments in multiple policy areas. Each subject was asked about two randomly chosen investments out of a total of six. The questions asked whether respondents would be willing to pay an increase in taxes to finance border patrols, law enforcement, public schools, Social Security, roads and highways, or pollution reduction (see the supporting information). After scaling the responses to the (0, 1) interval, we created a social investment support index by taking the average response to the two questions for each respondent.

#### **Empirical Results**

We begin by testing for the effects of the institutional vignette treatments on social investment support (Hypotheses 2a and 2b). We then turn to examining moderation by antigovernment beliefs (Hypothesis 3). Finally, we analyze the mediation of the treatment effects on policy attitudes by subjects' levels of political uncertainty.

Institutional Effects. Overall, the average respondent is roughly as favorable to the social investments evaluated in the institutional vignette experiments as to the transportation reform in the policy blueprint experiment (M=0.40). Hypothesis 2a implies that we should see higher investment support in the High than in the Low Electoral Insulation condition in the insulation vignette study. Hypothesis 2b, in turn, implies that in the constraint vignette study, we should observe higher levels of social investment support in the High than in the Low Constraint condition.

Regression estimates of the relevant treatment effects appear in Tables 3 and 4. There is not a hint of an electoral insulation effect: The difference in social investment support between the two electoral insulation conditions is trivial and far from statistical significance (see Table 3, Model 1). On the other hand, the estimated difference in social investment support between the low constraint and high constraint conditions is 0.05 units, equivalent to a 12% increase in support (p = .087; see Table 4, Model 1). This result is notable in view of the subtlety of the manipulation: an abstract description of institutional rules followed—after a distractor question—by a seemingly unrelated set of policy questions. Further, this difference cannot easily be attributed to merely

TABLE 3 Institutional Vignette Experiments: Electoral Insulation

	(1)	(2)
High Electoral Insulation	-0.009	0.041
	(0.032)	(0.044)
Antigovernment Belief		-0.228**
		(0.041)
High Insulation × Antigovernment		-0.049
		(0.059)
Constant	0.408**	0.526**
	(0.023)	(0.030)
Observations	342	342
R-squared	0.000	0.178

*Note:* Main cell entries are OLS estimates. Standard errors are in parentheses. Reference category is as follows, in parentheses: High Electoral Insulation (Low Electoral Insulation). We report two-tailed significance tests for those parameters about which we propose no directional hypothesis.

 $^{\dagger\dagger}$ p < .01,  $^{\dagger}$ p < .05 (one-tailed tests). \*\*p < .01, \*p < .05 (two-tailed tests).

TABLE 4 Institutional Vignette Experiments: Constraint

	(1)	(2)
High Constraint	0.046	-0.048
	(0.034)	(0.045)
Antigovernment Belief		-0.330**
		(0.043)
High Constraint × Antigovernment		$0.109^{\dagger}$
		(0.061)
Constant	0.368**	0.568**
	(0.024)	(0.034)
Observations	325	325
R-squared	0.006	0.213

*Note:* Main cell entries are OLS estimates. Standard errors in parentheses. Reference category is as follows, in parentheses: High Constraint (Low Constraint). We report two-tailed significance tests for those parameters about which we propose no directional hypothesis.

 $^{\uparrow\dagger}p<.01,^{\dagger}p<.05$  (one-tailed tests). \*\*  $p<.01,^{*}p<.05$  (two-tailed tests).

associative or heuristic processes. As noted, the treatments make no reference to specific institutional actors (like Congress); that is, they do not include the type of information on which, for example, source cue—based reasoning would rely. The mechanism driving the constraint effect, therefore, almost certainly involves a response to generalized features of institutional arrangements.

Moderation by Anti-Government Beliefs. We next examine whether the institutional effects are magnified among those holding broadly antigovernment political attitudes. The second columns of estimates in Tables 3 and 4 characterize the interactions between the institutional vignettes and ideology. Even taking account of ideological considerations, the insulation vignette has no effect on social investment support: The marginal effect of electoral insulation is statistically insignificant, irrespective of levels of antigovernment conservatism (see Table 3, Model 2). By contrast, the effect of constraint is significantly moderated by antigovernment orientation. The two-way interaction between the constraint factor and antigovernment beliefs is positive and statistically significant (at the 95% level; see Table 4, Model 2). In the antigovernment group, a shift from the low- to high-constraint vignette increases social investment support by 0.06 units (p = .068), which corresponds to more than a 25% increase in support within this group. The size of this effect, furthermore, is not far from that of other standard predictors of political attitudes measured in our survey (for details, see the supporting information). Among those with progovernment beliefs, by contrast, the high-/low-constraint difference is statistically insignificant.<sup>11</sup> Thus, as in the policy blueprint experiment, we find evidence that ideological orientation plays a role in activating uncertainty-based reasoning about policy. 12

Mediation Analysis. We gain further leverage on the mechanism underlying our results by examining the effect of our treatments on a theorized mediator of these effects: political uncertainty. We draw here on a module of each vignette study in which a separate sample of subjects was asked about attitudes toward the federal spending process itself—in lieu of the social investment items—after reading the vignette. The responses to these questions can be considered potential mediators of the institutional effects in that they capture beliefs about the political uncertainty associated with the budget process. Subjects were asked six questions regarding various features of government spending decisions (e.g., whether tax dollars collected for a specific program usually go to that program, whether lobbyists exert strong influence over spending), and a subset of four of these items forms a reliable index (Cronbach's  $\alpha = .86$ ; all question wordings appear in the supporting information). In the analysis,

<sup>&</sup>lt;sup>11</sup>The (perverse) negative coefficient suggests liberals may, in fact, prefer public officials to have greater discretion in their use of public resources.

<sup>&</sup>lt;sup>12</sup>This pattern is robust to the inclusion of interactions between the constraint treatment and a range of correlates of political ideology (see the supporting information).

TABLE 5 Institutional Vignette Experiments: Mediation Analysis

	(1)	(2)
High Constraint	-0.008	
	(0.026)	
High Constraint × Antigovernment	-0.051	
	(0.035)	
High Insulation		0.002
		(0.029)
High Insulation × Antigovernment		0.028
		(0.038)
Antigovernment Belief	0.246**	0.229**
	(0.024)	(0.026)
Constant	0.563**	0.527**
	(0.017)	(0.020)
Observations	335	331
R-squared	0.335	0.338

*Note:* Main cell entries are OLS estimates. Standard errors are in parentheses. Reference categories are as follows, in parentheses: High Constraint (Low Constraint); High Insulation (Low Insulation). We report two-tailed significance tests for those parameters about which we propose no directional hypothesis.

 $^{\dagger\dagger}p<.01,^{\dagger}p<.05$  (one-tailed tests). \*\*p < .01, \*p < .05 (two-tailed tests).

this index of political uncertainty is scaled to the (0, 1) interval.

We estimate a set of models that regress the political uncertainty index on the electoral insulation and constraint factors, conditioning on our measure of antigovernment beliefs; see Table 5, Models 1 and 2. Particularly important is the mediation of the constraint effect among those with antigovernment beliefs. If the treatment affects policy preferences in this group via a political uncertainty mechanism, then we should see the same pattern of effects on the political uncertainty index as we observe on social investment support itself, with effects on the mediator emerging *only* for those with antigovernment beliefs.

The results are fully consistent with this prediction. Among those with antigovernment beliefs, moving from the low- to the high-constraint condition reduces political uncertainty by 0.06 units (significant at the 99% level). By contrast, in the progovernment group, the treatment has no effect on political uncertainty (see Table 5, Model 1). For the insulation vignette study, consistent with our results for social investment support, we find neither a statistically significant average effect of electoral insulation on political uncertainty nor moderation of such an effect by antigovernment sentiment (Table 5, Model 2).

<sup>13</sup>This pattern is robust to the inclusion of interactions between the constraint treatment and a range of correlates of political ideology (see the supporting information).

### Conclusion

The logic of uncertainty-based institutional reasoning in the mass public receives robust support from the experiments reported here. As we find in the policy blueprint study, the allocation of institutional responsibility for social investment has substantively large effects, and these effects are concentrated among those citizens expected to be most attuned to threats to the credibility of social investments. Testing alternative explanations of this effect, we find further experimental support for an explanation grounded in citizen uncertainty about whether state actors will be motivated to deliver on policy promises.

The two vignette experiments then allow us to test prominent claims from the political economy and public policy literatures about the credibility-enhancing effects of institutional rules. We find that merely insulating implementation from electoral pressures has no observable effect on support for social investment. Yet describing rules that tightly *constrain* fiscal processes increases support for a wide range of social investments, especially among antigovernment conservatives. First-stage mediation analysis lends further support to our theorized mechanism, revealing that constraining rules—but not electorally insulating ones—reduce the perceived political uncertainty associated with fiscal allocations.

Political uncertainty thus emerges as an important driver of citizen judgments of policies that impose current costs in exchange for the promise of future benefits. The findings suggest that a good deal of citizen opposition to costly public undertakings arises not from intrinsic hostility to taxation or indifference to public goods provision, but from the intertemporal and delegative character of these policy ventures: from a lack of confidence that public officials, having imposed policy costs, will later deliver the public goods that they have promised. The pattern of ideological moderation further suggests that uncertainty about political commitments is an especially critical component of opposition to expansions of public authority among conservatives in the electorate. Intriguingly, it is among those most ideologically resistant to state intervention that institutional guarantees have the greatest influence on levels of support for public investment.

In uncovering these effects, the findings point to a little-examined and important connection between mass political behavior and political institutions. The role of institutions in conditioning the credibility of commitments has long been a theme of the literature on the political economy of bargaining. Our results suggest that mass policy attitudes are potentially subject to broadly similar effects: that citizens sometimes take into account how the "rules of the game" will shape public officials' behavior after policy enactment and the likelihood that policy benefits will be delivered. An important implication also follows for our understanding of the sophistication of mass political reasoning. Citizens appear capable, at least under certain conditions, of making policy judgments that involve the integration of multiple pieces of diagnostic information, taking into account substantively important features of both policy design and the institutional context in which policies are enacted. At a minimum, these results imply a challenge to both a minimalist view of citizen competence and to an understanding of citizens as processors of purely affective associations.

At the same time, our results suggest that not all commonly theorized commitment devices are equally effective, at least when it comes to making policy promises credible to ordinary citizens. We suspect that a key difference between insulating and constraining devices is the differing informational demands these devices place on citizens. Electoral insulation, as noted above, removes a set of potential adverse incentives, but it does nothing to reduce officials' room for maneuver. To make commitments credible, insulation thus requires information about insulated officials' goals—or, in the terms of delegation theory, about the agent's type. In interactions among elites, such information will often be readily available; investors, for instance, have relatively rich information about the goals of independent central bankers. Such information is much less likely to be available in bargains between elites and citizens, who typically have little knowledge of the motives or preferences of state officials. To make matters worse, electoral insulation removes one potential tool for holding public officials to their commitments: the threat of electoral punishment. Constraint, in contrast, does not depend on any particular knowledge of agents' goals or preferences. By limiting agent discretion, constraining rules shield resource distribution from all potential motives for reneging. Constraint, that is, may be a commitment device better suited to the knowledgepoor context of citizen decision making. More generally, the capacity of institutional rules to enhance public trust in government may hinge critically on the informational demands that those rules place on citizens.

Important questions remain for future research to consider. First, the experiments reported here cannot speak to the full causal chain through which institutions shape policy attitudes. The treatments supplied subjects with clear information about policy and institutional features in a controlled setting. Future research might thus examine the processes through which citizens are

exposed to and process institutional information in a "noisy" environment. Second, future work could usefully examine whether and how uncertainty-based reasoning about social investments varies with the type of social good being promised. For instance, different forms of social investment would seem to present citizens with differing informational challenges. Voters can far more readily monitor the implementation of investments in local physical infrastructure, for instance, than investments in diffuse and hard-to-observe goods like national defense or pollution reduction. Further research could fruitfully examine whether and how the strength of uncertaintybased reasoning depends on informational features of the public goods being provided. The object of social investment might also interact with the processes of ideological moderation examined here. While social investment as a policy instrument may in general be more "ideologically costly" to conservatives, additional studies could investigate whether the objective of the investment itself (e.g., national defense versus pollution reduction) generates differential ideological responses, activating differing levels of trust-based reasoning, across political groups.

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## **Supporting Information**

Additional Supporting Information may be found in the online version of this article at the publisher's website:

**Appendix A:** Experimental Protocols

**Appendix B:** Survey Questions

**Appendix C**: Robustness Tests

**Appendix D**: Substantive Importance of Effects