How Voters Use Contextual Information to Reward and Punish:
Credit Claiming, Legislative Performance, and Democratic Accountability

Abstract

Some studies have found that constituents do not evaluate legislators more favorably for claiming credit for delivering large grants than for claiming credit for delivering tiny ones. It remains unclear, however, whether the observed lack of sensitivity to the amount of money claimed reflects innumeracy or simply the difficulty that many people have understanding the size of a government expenditure in the abstract. Building on work by Grimmer et al. (2015), we perform a survey experiment in which we give respondents information about both the absolute and relative size of expenditure projects. We find that subjects evaluate legislators significantly more favorably for claiming credit for relatively large projects. Our results suggest that subjects are responsive to the magnitudes in claims of accomplishment, but only when provided a benchmark for evaluating an otherwise context-free claim. We also find evidence of an asymmetric effect; subjects are more inclined to punish legislators for delivering grants of below average size than they are to reward them for delivering grants of above average size.

Recent research suggests that legislators receive the same credit from constituents for claiming credit for delivering minuscule projects to the district as they do for claiming credit for bringing home large ones (Grimmer et al. 2015, Grimmer et al. 2012). This finding helps us understand politicians' incentives and may raise concerns for democratic accountability, as it implies that a representative's performance has little bearing on the reward they receive from constituents.

If we stipulate that constituents treat delivering projects to the district as a measure of officeholder performance, one possible explanation for the insensitivity of constituent evaluations to the amount of spending is innumeracy, meaning the inability to make sense of numbers and process mathematical operations (Peters 2012, Paulos 1988). Innumeracy, or what Gaissmaier and Gigerenzer call "collective statistical illiteracy" (2008, 411) implies that people lack the basic cognitive ability to use numbers appropriately in their decision-making. In this account, people "zone out" when numbers are presented, which implies a serious limitation on the mass electorate's capacity to form independent judgments of officeholder performance.[1] Another explanation is that people's use of numbers depends on how they are presented. If numbers are presented in a way that renders them abstract or difficult to understand, people will ignore them in their decision-making. However, people will attend to numbers and use them in reasonable ways, when given a benchmark to put quantitative information into a graspable context. Voters use numbers in a manner similar to "yardstick competition" in labor economics in which compensation is based not on the performance of an individual or firm, but on the individual's or firm's performance relative to similar workers or firms (Shleifer 1985; Besley and Case 1992).

[1] Innumeracy may be associated with political attitudes (Choma et al. 2019, Barnes et al. 2015).

Concerns about the existence and effects of innumeracy relate to the longstanding debate over voter competence. One key strand of this literature focuses on whether the use of cues or informational shortcuts can offset voters' lack of information and political sophistication (see Bartels 1994, Lupia 1994), A related strand examines whether voters respond to information in logical ways or make irrational decisions, such as punishing incumbents for events beyond their control (see Achen and Bartels 2016, Healy and Malhotra 2010).

In this paper, we explore whether innumeracy prevents voters from delivering sensible rewards and punishments to legislators for their credit-claiming performance. We successfully replicate and then extend a survey experiment from Grimmer et al. (2015) by giving respondents information about both the absolute and relative size of expenditure projects. In our experimental extension, we find evidence that constituents evaluate legislators significantly more favorably for claiming credit for relatively large projects. Our results suggest that subjects are sensitive to magnitudes in claims of accomplishment, but only when provided a benchmark for evaluating an otherwise context-free claim.[2] However, we also find evidence of an asymmetric effect; respondents are particularly sensitive to being informed that a project delivered by a legislator is of below average size.

Replication

In a survey experiment, Grimmer et al. (2015, 91) presented respondents with a brief newspaper story that described a legislator (with name redacted) who claimed credit for securing a grant from the Edward Byrne Memorial Justice Assistance Grant (JAG) Program to hire and

[2] See also Scotto et al. (2017), which shows that providing respondents with information about foreign aid spending as a percentage of the national budget significantly reduces support for cuts.

train new police officers. We replicated this experiment using a sample of 751 survey respondents on Amazon's Mechanical Turk (MTurk). Following the protocol used in Grimmer et al. (2015), we randomized two treatments. In the Grimmer et al. experiment, the size of the grant and the legislator's party are randomized. The grant's value was randomly drawn from a uniform distribution ranging between $10,000 and $10 million. Respondents then evaluated the legislator on a 0 to 100 feeling thermometer scale. Grimmer et al. (2015) found that constituents did not provide additional rewards to legislators for amounts secured above $1.4 million. For example, an increase in spending from $1.4 million to $10 million caused only a 0.9 increase on the feeling thermometer scale, a change that is "neither substantively nor statistically significant" (Grimmer et al. 2015, 94).

The first column of Table 1 displays the results of our replication in which legislator favorability is regressed on the size of the reported grant. [3] As the dependent variable is approval, we include a control for a match in the partisan identification of the legislator and the respondent. The control is coded as +1 if a Democratic [Republican] subject is randomized to read about a

[3] See Table A1 for vignette text. Our replication differs from the original Grimmer et al. study (2015) in two key ways. The original experiment was conducted using 2,020 subjects from an online SSI panel. We replicate using 751 MTurk workers. Their subjects had participated in another credit-claiming survey experiment before participating in the experiment of interest, ours were assigned to only one experimental design. Nevertheless, in this framework we replicated the major finding of Grimmer et al., the insensitivity to the dollar amount of credit claiming. We find no correlation between key demographics and the treatment variables. See Table A9. A balance check shows that groups are similar on the same demographics. See Table A16.

Democratic [Republican] legislator, -1 if the party identification of the respondent is Republican [Democratic] and the legislator is a Democrat [Republican]. Independent respondents are coded as 0. Our replication confirms the results of the original Grimmer, Messing, and Westwood (2015) study.[4] Consistent with Grimmer et al. (2015), there is little evidence that securing a large grant (in dollars) increases the favorability of the legislator (the coefficient on grant size is negative, although not statistically distinct from zero). Matching party identification of the respondent and legislator increases favorability by an estimated 2.8 points on the 0 to 100 scale ($p < 0.01$).[5]

[Table 1 Here]

Figure 1 displays a scatterplot of the subjects' evaluations of the legislator (the y-axis) with the treatment, the size of the grant announced (the x-axis). Using a nonparametric regression, we plot the conditional mean, the line in the plot, for the evaluation across the possible grant values. There is little evidence that the size of the grant secured is positively related to approval of the lawmaker. Figure 1 reinforces that the relationship between support and the size of the project is either weak or negative.

[Figure 1 Here]

[4] See Tables A6, A10 and A11 for alternative operationalizations of party identification match.

[5] It is possible that partisans may reward legislators of the same party for large grants, while punishing legislators of the opposite party for large grants, resulting in no average approval gain to large grants. To test for this, we interact several combinations of subject PID and legislator PID. See Appendix Tables A6, A7, A8, A12, and A13. Figure A3 shows little evidence that PID matching conditions evaluations. The slope of grant amount's effect on evaluation is mostly flat across all possible PID pairs.

Experimental Extension

Having replicated Grimmer et al.'s finding of insensitivity to the size of a grant, we extend the experiment in the same environment. With a second sample (816 MTurk workers) we experimentally manipulate contextual information about the relative size of the grant announced in the credit-claiming story. Subjects read the same news story in the replication experiment, except for an addendum at its conclusion stating how large the grant is relative to the average grant awarded by the agency that year, ranging from "50 percent smaller than the average grant" to "200 percent larger than the average grant." We randomly assign this relative context variable from a discrete set of values that are listed in Table A3. Subjects then evaluated the legislator on a 0 to 100 scale. We repeated this exercise two more times with each subject, keeping the absolute dollar size of the grant the same but varying the information provided about the relative size of the grant. For example, in the second round of the experimental extension, subjects were told that "instead of securing a [grant dollar amount] that was [relative size of grant stated in the first round] the average award distributed by the JAG program this year, the [grant dollar amount] was in fact [new relative size of grant] the average award distributed by the JAG program this year." Subjects then provided their evaluation of the legislator on the 0 to 100 thermometer scale. We repeated this exercise a third time with each subject, again varying the relative size of the grant. In effect, subjects evaluated the same legislator three times under varying informational conditions. The new context values are never repeated for a given subject. Tables A2 and A4 provide text of the vignette used in the experimental extension.

Columns 2 and 3 of Table 1 present the results of our experimental extensions. Once again, legislator favorability is regressed on the size of the grant and the matched partisan control variable. A variable ("context of grant) for the relative size of the grant is coded as 0.5 to 3 to

represent the variable's presentation in the news article (i.e., 50 percent smaller than to 200 percent larger than the average grant). We include two dummy variables to indicate whether the subject response is in the second or third round.

The key result of the extension is that providing contextual information about the *relative* grant size greatly influences respondents' evaluations of the legislator. The coefficient on *context of grant* (5.15) is substantively large and statistically significant ($p<0.01$).[6] To illustrate the size of this effect, compared to a subject who learns the grant is 200 percent larger than the average grant, the estimated marginal effect is roughly 15.5 points on the favorability scale, all else being equal. That is, the model predicts that while a legislator cannot improve her standing by increasing the absolute magnitude of a grant size *per se*, she can improve her evaluation by securing larger grants than the average grant given out by an agency. The mean in our extension is 64.66. The difference in marginal effects moving from the lowest context condition to the highest is an increase of slightly more than one-half of a standard deviation in the outcome variable.

In column 3, we examine whether respondents are equally sensitive to learning that the grant delivered by the legislator is smaller or larger than the average grant the agency awarded. We use a three-category dummy variable that indicates whether the grant context variable was less than the average grant, equal to the average grant (the baseline category), or greater than the average grant. We find a significant asymmetry in subjects' responses: they punish smaller than

[6] We find little evidence that the response to relative project size is conditioned by partisan match. See Tables A8 and A13. Republicans are found to be relatively more responsive to the relative size, but it does not appear to be a function of matching with the partisanship of the legislator.

average grants significantly, but there is little evidence that they reward larger than average grants. Specifically, we find an estimated decrease of more than 11 points on the scale when the respondent learns the grant is smaller than average, relative to being informed that the grant is of average size ($p<0.01$). When subjects are informed that the grant is larger than average, favorability increases by 1.16 points, an increase that is not statistically distinct from zero.[7] This asymmetry in responsiveness is broadly consistent with research showing that people are particularly sensitive to negative information and that negative valence frames "stick in the mind" more than positively valanced frames (Boydstun et al. 2019; Soroka 2014). For example, Butler et al. (2019) show that when constituents are informed that their representative is a "highly effective" lawmaker, they are 10 to 20 percentage points more likely to approve of the representative's job performance, but when they learn that the representative is "highly ineffective," they are about 25 percentage points less likely to approve.[8]

[7] We find that these results hold regardless of round of response. Table A5 demonstrates the results for Round 1. Figure A1 plots the mean level of approval for each context treatment in each wave showing sizable differences between greater than average and less than average (a hypothesis test that the two states have different means confirms this difference). We also find asymmetries in sensitivity to *Context of Grant* between subjects being told they are "less than" and "greater than" average. Table A17 shows strong positive effects of the context measure when being told the grant is "less than average" and much weaker effects when it is "greater than average."

[8] We check for within-subject responsiveness across the different *Context of Grant* variables shown over the three rounds. Figure A2 demonstrates a positive relationship between the change in the context treatment and the respondent's evaluation, suggesting individual-level updating.

Conclusion

Taken together, our findings suggest that voters need a point of reference or comparison to evaluate the performance of their representative. When they are given a benchmark to help them put numbers into context, they become quite sensitive to the magnitudes in legislators' claims of **a**ccomplishment.[9] Information to help citizens grasp the relative size of a project is often unavailable to voters (Delli Carpini and Keeter 1997, Mettler 2011, Grimmer et al. 2012), but our experimental results suggest that if the media, challengers or other actors provided such information in a digestible form, constituents could make sense of it. Future research should examine whether this finding is robust to alternative experimental conditions, such as ones in which a legislator's claims are compared not to the size of the agency's average grant but to the performance of other lawmakers.

We also estimate fixed effects models with dummy variables for each respondent to identify within-subject change. Table A14 demonstrates within-subject effects for *Context* (Coefficient=6.27, SE=0.48). We find a significant positive effect when grant size is greater than average (Coefficient=3.42, SE=1.08). This effect's magnitude, however is not statistically distinct from that estimated in Column 3 of Table 1 and it is still dwarfed by the magnitude of and statistically distinct from the effect of announcing a grant that is less than average (Coefficient=-9.90, SE=1.17). We also investigated heterogeneity in response to grant size across education level, party identification, and ideology. We found college graduates, Republicans, and conservatives to be more responsive to grant size. See Table A15.

[9] See also Gerber et al. (2019) who find that citizens punish legislators for policies with negative returns, but reward legislators very little for projects that have a net positive impact.

Our results also contribute to research on how policy attributes influence citizens' policy preferences. In his book *The Logic of Congressional Action*, Arnold claimed that "The relative magnitude of a specific cost or benefit appears to be more important than its absolute magnitude" in determining whether a citizen would notice it and acquire an intense preference on the matter (1990, 28). Arnold supported this claim through a detailed analysis of taxation and other cases of domestic policymaking. Our survey experiment provides additional evidentiary support for this insight, and suggests that citizens' ability to develop policy preferences depends to a significant extent on the informational context in which both governance and political communication takes place, and whether citizens have a point of reference that enables them to understand the size of policy effects.

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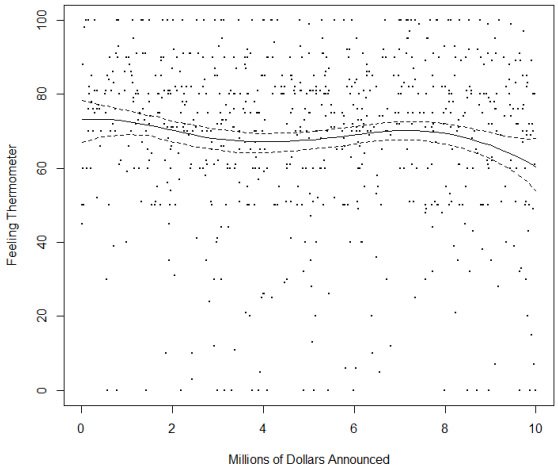
Tables and Figures

Figure 1. Larger Expenditures Do Not Generate More Support



The figure plots the size of the grant on the x-axis, with the evaluation of the legislator on the y-axis. The solid line is the mean for the evaluation across the possible domain of treatment values, as calculated using a nonparametric regression. The dotted line represents the nonparametric confidence bounds computed using bootstrapped standard errors.

Table 1. Relative, Not Absolute, Size Influences Subjects' Evaluations

	Replication	*Extension*	
Grant Amount (in Millions)	-0.480 (0.291)	0.083 (0.229)	0.069 (0.227)
Context of Grant		5.150*** (0.686)	
Less than Average Context			-11.092*** (1.401)
Greater than Average Context			1.163 (1.313)
Partisan Identification Match	2.803*** (0.987)	2.811*** (0.797)	3.089*** (0.791)
Second Round		-4.551*** (0.708)	-4.916*** (0.680)
Third Round		-3.977*** (0.759)	-4.143*** (0.732)
Constant	71.307*** (1.683)	60.087*** (1.512)	70.164*** (1.667)
Clusters		816	816
Observations	751	2,446	2,446
R^2	0.014	0.040	0.071

Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.10. Dependent Variable=Legislator Rating on 0 to 100 thermometer scale. *Context of Grant* variable is the size of the grant relative to the average grant awarded. The values range from 0.5 (i.e. "50% less than average") to 3 (i.e. "200% greater than average"). Column 1 presents the findings from our replication of Grimmer et al. (2015), while columns 2 and 3 present the results for the extension. In the extension each respondent was shown three scenarios, the second and third of which kept the partisanship of the legislator and *Grant Amount* in dollars the same as the first, but presented new random draws for the *Context of the Grant*. Thus, we have three possible observations for each respondent in the extension sample. We cluster the standard errors in these models by the respondent.

Appendix

Table A1
Measuring Constituent Responsiveness to the Dollar Amount Claimed: Replication of Grimmer, Messing and Westwood (2015)

Headline: Representative [redacted]: (D/R - | State) Secures |amount to Expand Local Police Force **Body:** Representative [redacted] (D/R - | State) secured |amount today to hire and train new police officers. The money, which is from the Edward Byrne Memorial Justice Assistance Grant Program, will help local police departments cope with recent budget cuts. When asked for comment, Representative [redacted] said "It is critical that we bolster our local police departments to maintain the safety of our community. I am pleased to announce |amount for local law enforcement."
Treatments **Money:** |amount **Party:** [D/R]

Table A2
Measuring Constituent Responsiveness to the Dollar Amount Claimed: Extension of Grimmer, Messing and Westwood (2015)

Headline: Representative [redacted]: (D/R - | State) Secures |amount to Expand Local Police Force

Body: Representative [redacted] (D/R - | State) secured |amount today to hire and train new police officers. The money, which is from the Edward Byrne Memorial Justice Assistance Grant Program, will help local police departments cope with recent budget cuts. When asked for comment, Representative [redacted] said "It is critical that we bolster our local police departments to maintain the safety of our community. I am pleased to announce |amount for local law enforcement."

The JAG program assists police departments across the country. The |amount grant secured by Representative [redacted] is |context the average award distributed by the JAG program this year.

Treatments
Money: |amount
Party: [D/R]
Grant Context: |context

Table A3. Size of Context Treatments

Context Treatments
“50% less than”
“25% less than”
“5% less than”
“the same amount as”
“5% more than”
“25% more than”
“50% more than”
“100% more than”
“200% more than”

Table A4. Follow-ups of Extension

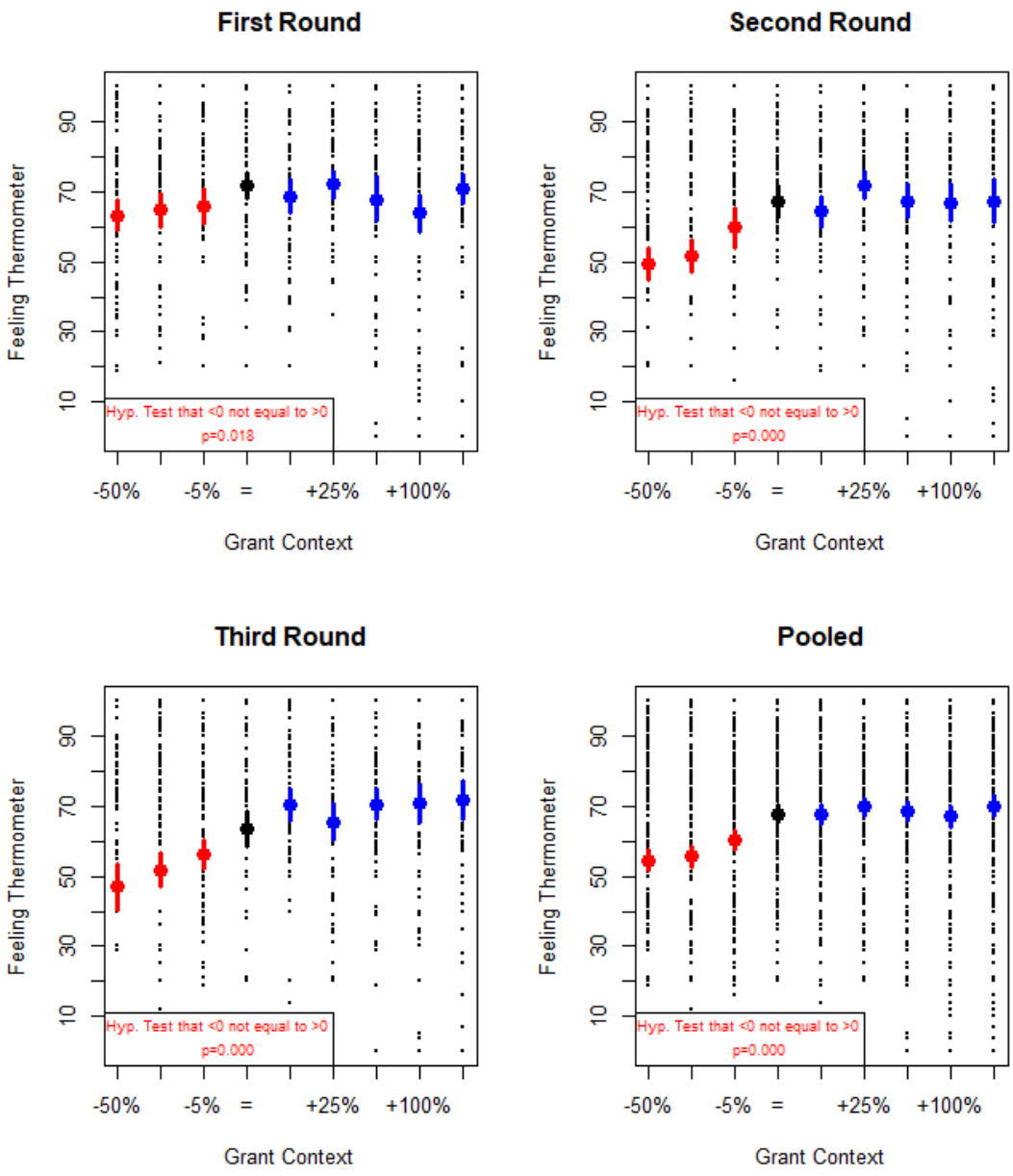
First Follow-up: Suppose we told you that instead of securing a grant for |amount that was |context the average award distributed by the JAG program this year, the |amount grant was in fact |context_2 the average award distributed by the JAG program this year.
Second Follow-up: Finally, suppose we told you that the |amount grant was in fact |context_3 the average award distributed by the JAG program this year.
Treatments **Context:** |context_2 **Context:** |context_3

Table A5
First Round Results

	(1)	(2)
VARIABLES	Rating	Rating
Grant Amount (in Millions)	-0.243	-0.237
	(0.259)	(0.257)
Context of Grant	1.535	
	(1.015)	
Lower than Average		-7.149***
		(2.512)
More than Average		-2.679
		(2.377)
Partisan Identification Match	3.075***	3.161***
	(0.910)	(0.908)
Constant	66.548***	72.413***
	(2.002)	(2.466)
Observations	815	815
R-squared	0.017	0.027

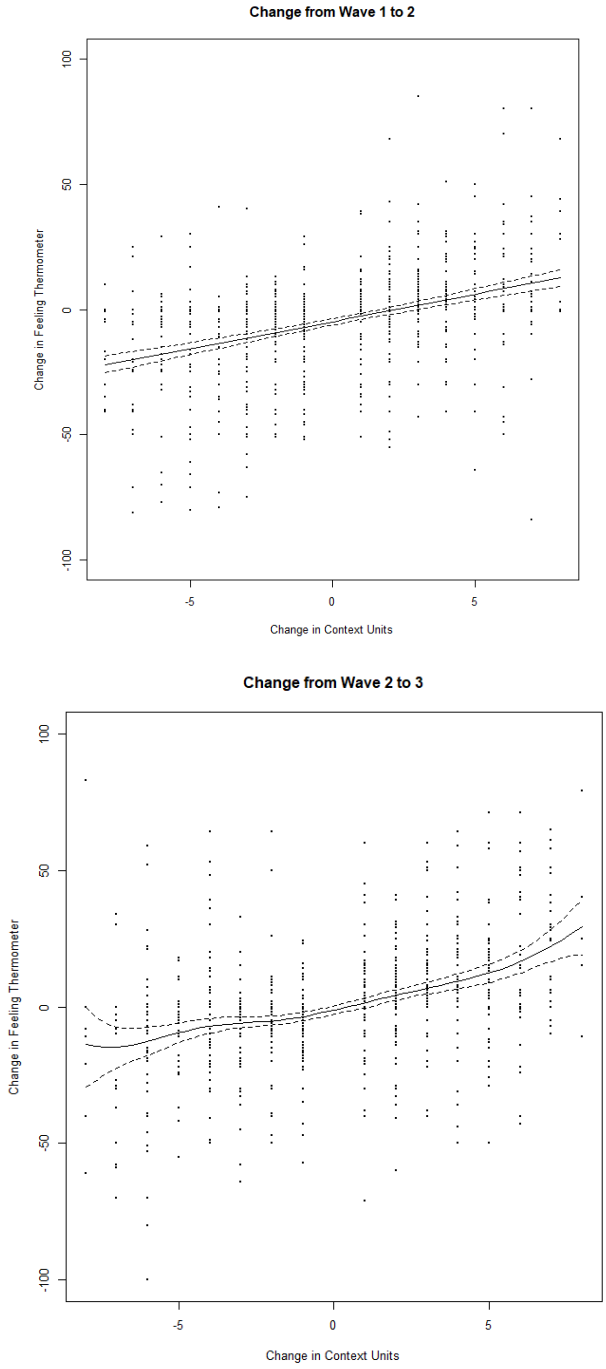
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Figure A1. Plotting Context Draw with Legislator Evaluation by Round



These plots display the grant context treatment each subject received in the given wave and their respective feeling thermometer evaluation of the relevant legislator. The panel in the bottom left corner pools all of the waves. The larger dots represent the geometric mean of each category. The red dots represent those scenarios in which the grant announced is less than the average grant awarded, the black dots represent grants that are equal to the average grant awarded, and the blue dots represent grants that are larger than the average grant awarded. In the lower right corner of each panel we report the p-value from a two-sided t-test that mean evaluation of those in the less than average treatment group is equal to the mean evaluation of those in the greater than average treatment group.

Figure A2. Change in Context with Change in Evaluation by Round



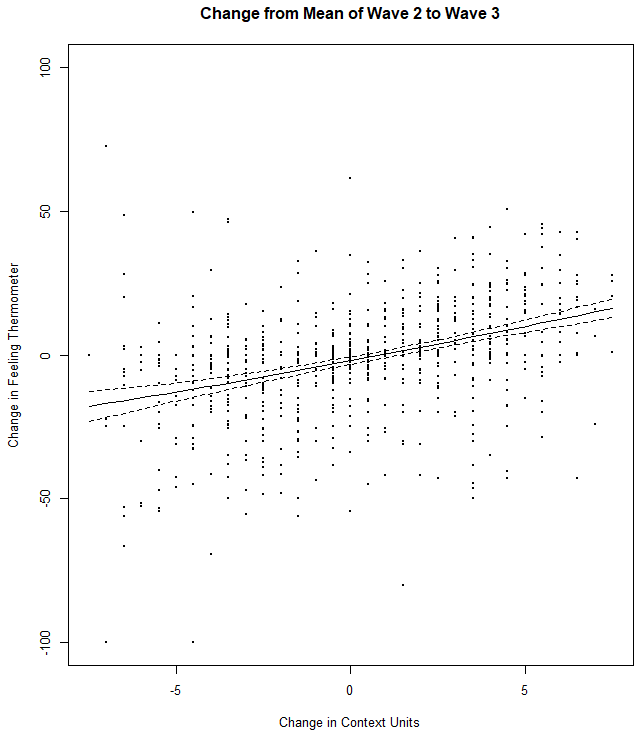


Figure A2 presents the individual's change in the context of the grant along the x-axis with the individual's change in their evaluation of the legislator from wave to wave. To calculate the change in context units we scored the possible treatment values shown in Table A3 in ascending order with discrete values from 1 to 9 and differenced the units from wave to wave. The third panel represents the change from the average evaluation and average context units in waves 1 and 2 to wave 3. The line represents the conditional mean for the evaluation across the possible domain of treatment values, averaged across the party identification of the legislator, as calculated using a nonparametric regression. The dotted line represents the nonparametric confidence bounds computed using bootstrapped standard errors.

Table A6
Relative, Not Absolute, Size Influences Subjects Evaluations with More PID Match Categories

	Replication	*Extension*	
Grant Amount (in Millions)	-0.383 (0.286)	0.089 (0.225)	0.073 (0.223)
Context of Grant		5.284*** (0.668)	
Less than Average Context			-10.922*** (1.383)
Greater than Average Context			1.147 (1.283)
Democrat Subject, Republican Legislator	-6.130** (2.405)	-5.785*** (2.181)	-6.350*** (2.167)
Independent Subject, Democratic Legislator	-2.484 (2.757)	-3.017 (2.430)	-3.599 (2.393)
Independent Subject, Republican Legislator	-7.480*** (2.708)	-5.710** (2.517)	-5.929** (2.516)
Republican Subject, Democratic Legislator	4.593 (2.871)	3.219 (2.132)	2.599 (2.129)
Republican Subject, Republican Legislator	8.676*** (2.921)	8.532*** (1.898)	8.486*** (1.894)
Second Round of Contextual Information		-4.543*** (0.708)	-4.911*** (0.679)
Third Round of Contextual Information		-3.979*** (0.759)	-4.147*** (0.731)
Constant	72.049*** (2.322)	60.775*** (1.913)	71.146*** (2.025)
Clusters		817	817
Observations	754	2,449	2,449
R^2	0.059	0.073	0.103

Standard errors in parentheses. We cluster the standard errors in the models in Columns 2 and 3 by respondent. *** p<0.01, ** p<0.05, * p<0.10. Dependent Variable=Legislator Rating on 101-point thermometer scale

Table A7. Interacting Partisan Match with Grant Amount

	Replication	*Extension*
Grant Amount (in Millions)	-0.5001 (0.291)	0.079 (0.232)
Context of Grant		5.152*** (0.686)
Partisan Identification Match	6.085*** (2.020)	2.527*** (1.515)
Grant Amount X PID Match	-0.661* (0.355)	0.059 (0.267)
Second Round of Contextual Information		-4.551*** (0.708)
Third Round of Contextual Information		-3.978*** (0.760)
Constant	71.443*** (1.682)	60.102*** (1.523)
Clusters		816
Observations	751	2,446
R^2	0.019	0.041

Table A8. Interacting Partisan Match with Grant Context

	I	*II*
Grant Amount (in Millions)	0.082 (0.229)	0.068 (0.227)
Context of Grant	5.152*** (0.686)	
Less than Average Context		-11.165*** (1.407)
Greater than Average Context		1.149 (1.315)
Partisan Identification Match	3.126** (1.256)	2.880* (1.465)
Context of Grant X PID Match	-0.285 (0.767)	
Less than Average X PID Match		1.001 (1.624)
Greater than Average X PID Match		-0.202 (1.539)
Second Round of Contextual Information	-4.548*** (0.709)	-4.918*** (0.681)
Third Round of Contextual Information	-3.977*** (0.760)	-4.131*** (0.7338)
Constant	60.081*** (1.513)	70.169*** (1.523)
Clusters	816	816
Observations	2,446	2,446
R^2	0.041	0.072

Table A9. Randomization Check: Correlations of Covariates with Experimental Treatments

	Grant Amount	Grant Context
7-point Ideology	0.017	0.015
College Graduate	0.000	-0.029
7-Point Party Identification	0.016	-0.004
White	0.002	0.031
Income	0.024	-0.025

Table A10. Alternative PID Match Approach

Relative, Not Absolute, Size Influences Subjects Evaluations with More PID Match Categories

	Replication	*Extension*	
Grant Amount (in Millions)	-0.376 (0.287)	0.094 (0.225)	0.079 (0.223)
Context of Grant		5.278*** (0.670)	
Less than Average Context			-10.952*** (1.383)
Greater than Average Context			1.458 (1.283)
Democratic Subject	2.632 (2.773)	2.948 (2.434)	3.516 (2.396)
Republican Subject	7.077** (3.083)	6.236** (2.546)	6.198** (2.505)
Republican Legislator	-5.000* (2.938)	-2.695 (2.878)	-2.332 (2.846)
Democratic Subject X Republican Legislator	-1.276 (3.812)	-3.021 (3.614)	-3.935 (3.583)
Republican Subject X Republican Legislator	9.084** (4.369)	8.006** (3.528)	8.219** (3.494)
Second Round of Contextual Information		-4.557*** (0.708)	-4.934*** (0.679)
Third Round of Contextual Information		-3.979*** (0.760)	-4.153*** (0.732)
Constant	69.532*** (2.521)	57.747*** (2.320)	67.547*** (2.433)
Clusters		816	816
Observations	751	2,446	2,446
R^2	0.060	0.073	0.103

Standard errors in parentheses. We cluster the standard errors in the models in Columns 2 and 3 by respondent. *** p<0.01, ** p<0.05, * p<0.10. Dependent Variable=Legislator Rating on 101-point thermometer scale

Table A11. Alternative PID Match Approach

Relative, Not Absolute, Size Influences Subjects Evaluations with More PID Match Categories

	Replication	*Extension*	
Grant Amount (in Millions)	-0.410 (0.286)	0.087 (0.225)	0.073 (0.223)
Context of Grant		5.263*** (0.672)	
Less than Average Context			-10.998*** (1.383)
Greater than Average Context			1.418 (1.286)
Democratic Subject	-1.078 (2.184)	-1.422 (2.201)	-1.586 (2.176)
Republican Subject	9.645*** (3.083)	7.582*** (2.546)	7.362*** (2.135)
Republican Subject, Republican Legislator	4.077 (3.234)	5.312*** (2.043)	5.889*** (2.028)
Democratic Subject, Democratic Legislator	6.288** (2.424)	5.716*** (2.184)	6.267*** (2.170)
Second Round of Contextual Information		-4.558*** (0.708)	-4.933*** (0.679)
Third Round of Contextual Information		-3.979*** (0.760)	-4.152*** (0.732)
Constant	67.129*** (2.092)	56.453*** (1.881)	66.447*** (2.078)
Clusters		816	816
Observations	751	2,446	2,446
R^2	0.056	0.072	0.103

Standard errors in parentheses. We cluster the standard errors in the models in Columns 2 and 3 by respondent. *** p<0.01, ** p<0.05, * p<0.10. Dependent Variable=Legislator Rating on 101-point thermometer scale

Table A12. Interacting PID Match Categories with Grant Size

	Replication	*Extension*	
Grant Amount (in Millions)	-0.755 (0.499)	0.034 (0.453)	-0.002 (0.449)
Context of Grant		5.239*** (0.670)	
Less than Average Context			-11.041*** (1.382)
Greater than Average Context			1.364 (1.281)
Democratic Subject, Democratic Legislator	8.548* (4.779)	4.535 (3.693)	4.958 (3.660)
Democratic Subject, Republican Legislator	-7.230 (4.428)	0.736 (4.011)	0.472 (3.954)
Republican Subject, Republican Legislator	9.352 (5.539)	11.321*** (3.460)	11.265*** (3.388)
Republican Subject, Democratic Legislator	5.924 (5.629)	3.188 (4.614)	2.719 (4.530)
Democratic Subject, Democratic Legislator X Grant Amount	-0.638 (0.800)	-0.051 (0.643)	-0.059 (0.641)
Democratic Subject, Republican Legislator X Grant Amount	1.238 (0.768)	-0.457 (0.702)	-0.436 (0.696)
Republican Subject, Republican Legislator X Grant Amount	0.892 (0.995)	0.315 (0.629)	0.399 (0.623)
Republican Subject, Democratic Legislator X Grant Amount	0.734 (0.987)	0.926 (0.768)	0.978 (0.753)
Second Round of Contextual Information		-4.558*** (0.709)	-4.932*** (0.680)
Third Round of Contextual Information		-3.977*** (0.761)	-4.149*** (0.733)
Constant	68.928*** (2.983)	56.750*** (2.708)	66.861*** (2.781)
Clusters		816	816
Observations	751	2,446	2,446
R^2	0.063	0.074	0.105

Standard errors in parentheses. We cluster the standard errors in the models in Columns 2 and 3 by respondent. *** p<0.01, ** p<0.05, * p<0.10. Dependent Variable=Legislator Rating on 101-point thermometer scale. Baseline Category is Independent respondent

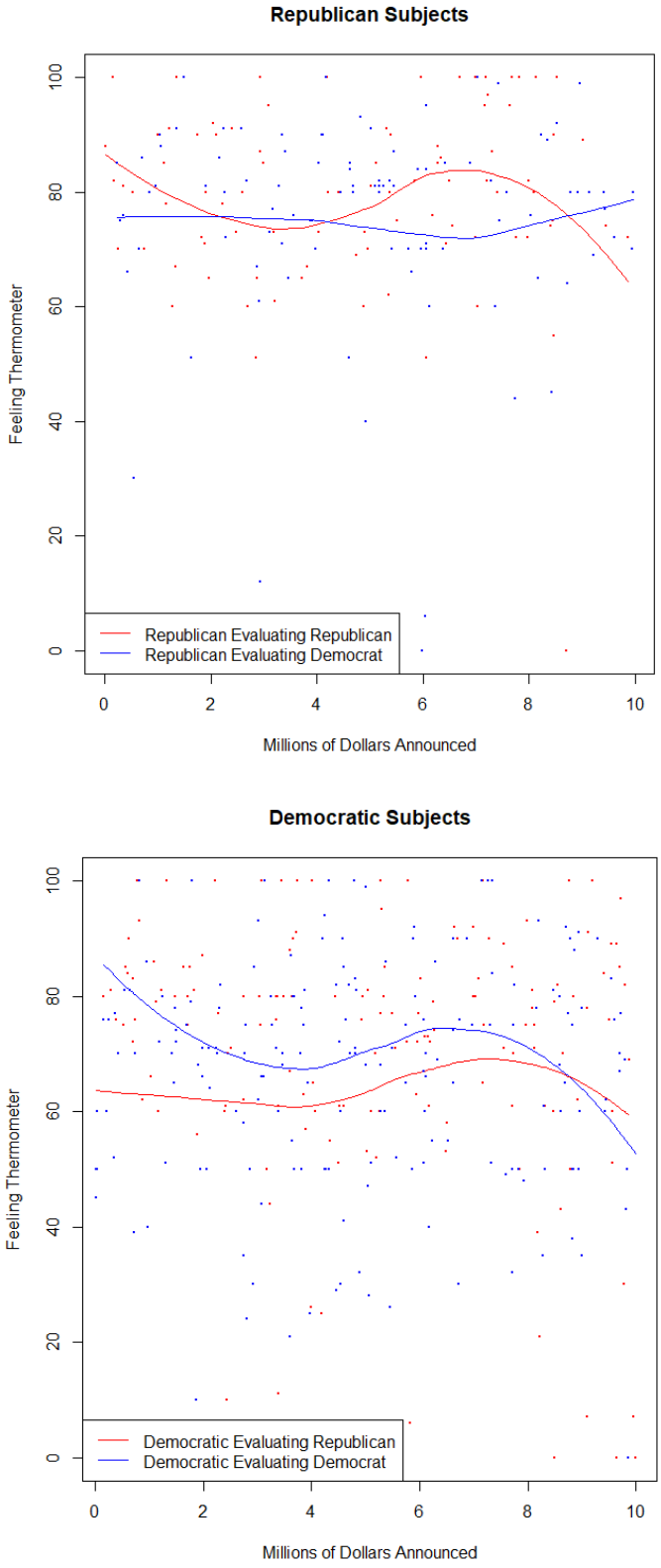
Table A13. Interacting Partisan Match with Grant Context

	I	*II*
Grant Amount (in Millions)	0.070	0.071
	(0.225)	(0.223)
Context of Grant	3.556**	
	(1.381)	
Less than Average Context		-11.974***
		(2.745)
Greater than Average Context		-0.544
		(2.483)
Democratic Subject, Democratic Legislator	3.060	2.600
	(3.032)	(3.521)
Democratic Subject, Republican Legislator	-2.883	-4.029
	(3.199)	(4.080)
Republican Subject, Republican Legislator	6.851**	11.235***
	(3.182)	(3.883)
Republican Subject, Democratic Legislator	0.673	5.914
	(3.435)	(3.870)
Democratic Subject, Democratic Legislator X Grant Context	0.897	
	(2.003)	
Democratic Subject, Republican Legislator X Grant Context	1.080	
	(2.057)	
Republican Subject, Republican Legislator X Grant Context	4.586**	
	(1.929)	
Republican Subject, Democratic Legislator X Grant Amount	5.072***	
	(1.935)	
Democratic Subject, Democratic Legislator X Less than Average Context		3.206
		(3.863)
Democratic Subject, Republican Legislator X Less than Average Context		2.413
		(4.360)
Republican Subject, Republican Legislator X Less than Average Context		0.126
		(4.211)
Republican Subject, Democratic Legislator X Less than Average Context		-1.921
		(4.482)
Democratic Subject, Democratic Legislator X Greater than Average Context		1.727
		(3.597)
Democratic Subject, Republican Legislator X Greater than Average Context		2.937
		(4.118)

Republican Subject, Republican Legislator X Greater than Average Context		3.686 (3.815)
Republican Subject, Democratic Legislator X Greater than Average Context		3.420 (3.891)
Second Round of Contextual Information	-4.547*** (0.710)	-4.896*** (0.682)
Third Round of Contextual Information	-4.054*** (0.757)	-4.131*** (0.732)
Constant	58.878*** (2.308)	67.871*** (2.767)
Clusters	816	816
Observations	2,446	2,446
R^2	0.075	0.105

Standard errors in parentheses. We cluster the standard errors in the models by respondent. *** p<0.01, ** p<0.05, * p<0.10. Dependent Variable=Legislator Rating on 101-point thermometer scale. Baseline Category is Independent respondent

Figure A3. Plotting Grant Size and Legislator Approval by Partisan Identification



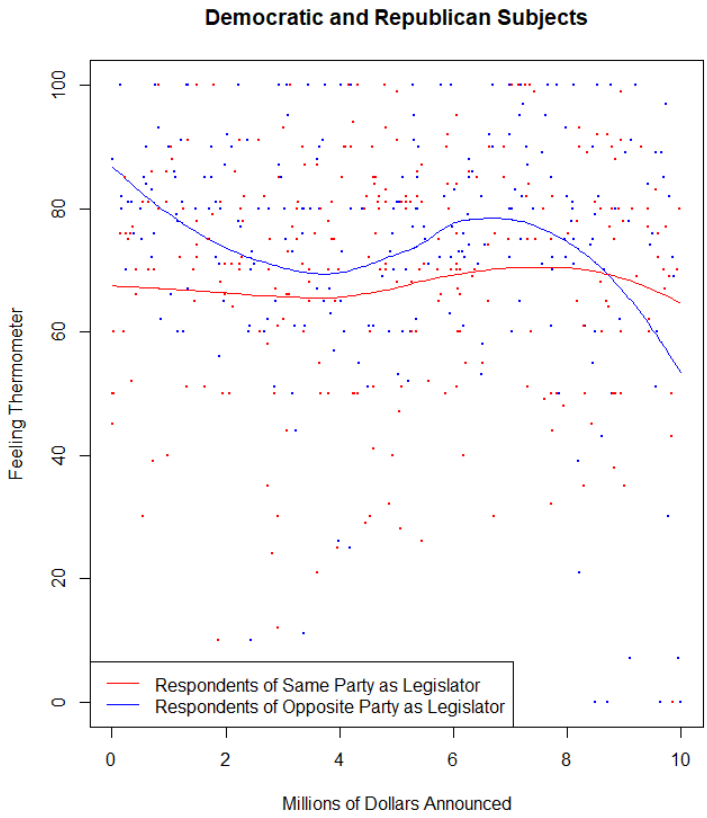


Figure A3 plots the grant size as the x-axis variable and the legislator rating as the y-axis variable. The plots are partitioned by the partisan identification of the response subject. In the first two panels, loess regression lines are shown for the respective bivariate regressions. Each line represents whether the legislator being evaluated is a Democrat (blue line) or a Republican (red line). In the final panel, we pool the Republican and Democratic respondents and estimate two non-parametric regressions for those who evaluated a member of the same party and those who evaluated a member of the opposite party.

Table A14. Respondent Level Fixed Effects

	I	*II*
Context of Grant	6.266*** (0.477)	
Less than Average Context		-9.901*** (1.169)
Greater than Average Context		3.417*** (1.083)
Second Round	-4.524*** (0.736)	-4.967*** (0.708)
Third Round	-3.994*** (0.737)	-4.216*** (0.708)
Constant	59.036*** (0.828)	68.944*** (1.049)
Groups	817	817
Observations	2,449	2,449
R^2	0.030	0.059

DV=Legislator Evaluation in a given wave. Fixed Effects included for respondents.

Table A15. Heterogeneity in Grant Context Effects

	I	*II*	*III*
Grant Amount (in	0.070	0.071	0.044
Millions)	(0.225)	(0.229)	(0.225)
Context of Grant	3.556**	3.510***	1.485
	(1.380)	(1.131)	(1.698)
Partisan Identification	2.816***	2.785***	2.770***
Match	(0.776)	(0.799)	(0.772)
Democrat	0.094		
	(2.630)		
Republican	3.766		
	(2.736)		
College Graduate		-2.324	
		(2.205)	
Conservatism			1.681***
			(0.633)
Context of Grant X	0.986		
Democrat	(1.736)		
Context of Grant X	4.832***		
Republican	(1.676)		
Context of Grant X		2.704*	
College Graduate		(1.420)	
Context of Grant X			0.998***
Conservatism			(0.379)
Second Round of	-4.547***	-4.546***	-4.605***
Contextual Information	(0.709)	(0.710)	(0.712)
Third Round of	-4.055***	-4.062***	-4.048***
Contextual Information	(0.756)	(0.764)	(0.760)
Constant	58.878***	61.602***	54.434***
	(2.307)	(2.034)	(2.753)
Observations	2,446	2,446	2,428
Clusters	816	816	810
R^2	0.075	0.043	0.094

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10. Dependent Variable=Legislator Rating

Table A16. Randomization Balance Check

	Below Median Grant Amount	Above Median Grant Amount	Below Median Context	Above Median Context
Ideology	3.525	3.604	3.550	3.584
College Grad	0.582	0.595	0.606	0.567
7-point Party ID	3.415	3.565	3.510	3.466
White	0.727	0.717	0.705	0.742
Income	2.595	2.671	2.664	2.595
Female	0.466	0.449	0.436	0.484

Cells present the mean value for key covariates for each partition of our key randomization variables. The means of all groups across the two variables are not distinct from one another.

Table A17. Investigating Differences in Intercept and Slope of Context Effect between Greater than Average and Less than Average Information

	(1) Less than Average	(2) Greater than Average	(3) Omit Equal to Average
Grant Amount in Millions	0.145	0.00426	0.0749
	(0.298)	(0.285)	(0.238)
Context of Grant	14.99***	0.519	0.345
	(4.193)	(0.872)	(0.874)
Less than Average Context			-21.01***
			(3.533)
Context of Grant X Less than Average Context			12.48***
			(4.245)
Party Identification Match	3.801***	2.633***	3.096***
	(1.067)	(0.947)	(0.821)
Second Round	-11.57***	-1.143	-5.054***
	(1.797)	(1.135)	(0.817)
Third Round	-12.82***	1.241	-3.926***
	(1.831)	(1.269)	(0.849)
Constant	52.70***	67.59***	70.66***
	(3.435)	(2.129)	(2.020)
Observations	781	1,390	2,171
Clusters	598	791	816
R-squared	0.091	0.011	0.077

Robust standard errors in parentheses. DV=Evaluation of legislator on 0 to 100 thermometer scale.

*** p<0.01, ** p<0.05, * p<0.1

Table A17 presents the results of three regressions intended to identify differences in the slope and intercept between subjects assigned to the less than average and the greater than average treatments for the *Context of Grant* treatment variable. In Table 1, Column 3, we re-classify *Context of Grant* into three categories (i.e. grant reported as "equal to average" [the baseline category], grant reported as "less than average", and grant reported as "greater than average"). The *Context of Grant* values for the “less than average” category are .5, .75, and .95 representing 50% less than average, 25% less than average, and 5% less than average. The *Context of Grant* values of greater than average are 1.05, 1.25, 1.5, 2, and 3 representing 5% greater than average, 25% greater than average, 50% greater than average, 100% greater than average, 200% greater than average. The *Context of Grant* value of 1 indicates the grant was reported as equal to average.

Column 1 Table A17 limits the model to those who are assigned to receive a “less than average” grant. Here we find a strong, positive, significant effect (Coefficient=14.99, SE=4.19) for the *Context of Grant* variable, suggesting that respondents informed that the grant is 50% less than

average are predicted to give a significantly worse evaluation than those informed that the grant is only 5% less than average. All else equal, the model predicts a difference in evaluations of 6.74 points. Column 2 in Table A17 limits the model to those who are assigned to receive a "greater than average" grant. Here we find a positive, but very weak and relatively imprecise effect for the *Context of Grant* variable (Coefficient=0.52, SE=0.87). This finding suggests a very different slope for the key treatment variable when we examine information that the *Context of Grant* is greater than average. For example, the predicted difference in evaluation between being told the grant is 5% greater than average and 200% greater than average is roughly 1 point on the 0 to 100 scale. Furthermore, the difference in intercepts across the two categories is also evident. The constant for the "less than average" model is approximately 52.70, while that of the "greater than average" model is approximately 67.59. In Column 3, we limit the sample to those who were informed the grant was "less than average" or "greater than average." That is, we simply omit those who were told their grant was equal to the average grant. In this model we interact a dummy variable that is coded as "1" if the *Context of Grant* is "less than average" and "0" if the *Context of Grant* is "greater than average" with the continuous *Context of Grant* variable. Once again, we confirm an asymmetry in slopes across the two conditions. The positive, significant interaction coefficient (Coefficient=12.48, SE=4.245), indicates the slope of the *Context of Grant* variable is much steeper and in the positive direction when the *Context of Grant* variable is "less than average." The base coefficient for *Context of Grant* is not much different from zero (Coefficient=0.35, SE=0.874), suggesting that the slope for when the *Context of Grant* is "greater than average" (i.e. the *Less than Average Context* dummy=0) is essentially flat.