

Online Appendix for:

Sex and Ideology:

Liberal and Conservative Responses to Scandal

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Appendix A: Supplementary Tables and Figures (pp. 1-11)

Appendix B: Survey Experiment Design and Descriptive Statistics (pp. 12-14)

Table A1. Responses Across Treatments

<i>Percent Reporting Unlikely/Very Unlikely to Vote for Representative</i>					
Male Corruption	Female Corruption	Male Sex	Female Sex	Male Control	Female Control
93%	93%	86%	82%	38%	39%
N=216	N=245	N=241	N=240	N=241	N=233

Note: Chi2 test for average effects significant at $p < .001$. Responses represent percentage of participants “unlikely” or “very unlikely” to vote for the representative.

A series of pair-wise t-tests indicate that each corruption treatment is significant from each of the sex scandal treatments, as well as the controls.

Table A2. Effect of Political Ideology by Scandal Type, Ordered Logit & OLS Models

	Ordered Logit		OLS	
	Model 1	Model 2	Model 3	Model 4
Corruption Scandal	2.95*** (.15)	2.76*** (.36)	1.11*** (.05)	1.05*** (.13)
Sex Scandal	1.98*** (.14)	1.45*** (.33)	.77*** (.05)	.55*** (.12)
Liberal-Conservative	.12* (.06)	.03 (.08)	.04* (.02)	.01 (.03)
Lib-Con X Corruption		.07 (.12)		.02 (.04)
Lib-Con X Sex		.19^ (.11)		.08* (.04)
Religiosity	.00 (.04)	.01 (.04)	-.00 (.01)	-.00 (.01)
Female Respondent	.06 (.11)	.06 (.11)	.01 (.04)	.01 (.04)
Education	.01 (.04)	.01 (.04)	.00 (.02)	.00 (.02)
Age	.01 (.00)	.01 (.00)	.00 (.00)	.00 (.00)
Income	-.02 (.02)	-.02 (.02)	-.00 (.01)	-.00 (.01)
Work Fulltime	-.00 (.14)	-.01 (.14)	-.01 (.05)	-.01 (.05)
Work Part time	.12 (.18)	.12 (.18)	.06 (.07)	.06 (.07)
Student	-.04 (.30)	-.06 (.30)	-.04 (.11)	-.05 (.11)
Hostile Sexism	-.07^ (.04)	-.07^ (.04)	-.03^ (.01)	-.03* (.01)
Benevolent Sexism	-.01 (.04)	-.01 (.04)	-.01 (.01)	-.01 (.01)
cut1	-2.15*** (.36)	-2.41*** (.40)		
cut2	.64^ (.33)	.38 (.38)		
cut3	2.80*** (.34)	2.54*** (.39)		
Constant			2.32*** (.12)	2.43*** (.14)
Observations	1332	1332	1332	1332
(Pseudo) R ²	.15	.15	.30	.31

Table A2 Notes: ^ p<.10, * p<.05, ** p<.01, *** p<.01 (standard errors). Ordered Logit and OLS regression coefficients. DV is likelihood of voting for the hypothetical candidate (1= “Very likely” to 4= “Very unlikely”). The dummy variables for the “control” treatment “not working” are excluded as reference categories. Results in Table A2, Model 2 are used to calculate the predicted probabilities plotted in the top panel of Figure 2 in the main text.

Table A3. Effect of Political Ideology by Scandal Type and Candidate Sex

	Ordered Logit		OLS	
	Model 1	Model 2	Model 3	Model 4
Female Corruption	.09 (.19)	-1.17* (.53)	.03 (.07)	-.34^ (.19)
Male Sex	-.86*** (.19)	-1.72*** (.51)	-.30*** (.07)	-.61*** (.18)
Female Sex	-.99*** (.19)	-2.21*** (.52)	-.36*** (.07)	-.76*** (.18)
Male Control	-2.94*** (.20)	-3.16*** (.53)	-1.11*** (.07)	-1.10*** (.19)
Female Control	-2.86*** (.21)	-3.67*** (.53)	-1.08*** (.07)	-1.36*** (.18)
Liberal-Conservative	.12* (.06)	-.13 (.13)	.04* (.02)	-.03 (.04)
Lib-Con X Female Corruption		.45* (.17)		.13* (.06)
Lib-Con X Male Sex		.30^ (.16)		.11^ (.06)
Lib-Con X Female Sex		.43* (.17)		.14* (.06)
Lib-Con X Male Control		.07 (.17)		-.01 (.06)
Lib-Con X Female Control		.28 (.17)		.10 (.06)
Religiosity	.00 (.04)	-.00 (.04)	-.00 (.01)	-.00 (.01)
Female Respondent	.06 (.11)	.07 (.11)	.01 (.04)	.01 (.04)
Education	.01 (.04)	.01 (.04)	-.00 (.02)	.00 (.02)
Age	.01 (.00)	.00 (.00)	.00 (.00)	.00 (.00)
Income	-.02 (.02)	-.02 (.02)	-.00 (.01)	-.00 (.01)
Work Full-time	-.00 (.14)	-.02 (.14)	-.01 (.05)	-.01 (.05)
Work Part-time	.12 (.18)	.11 (.18)	.06 (.07)	.05 (.07)
Student	-.04 (.30)	-.08 (.30)	-.04 (.11)	-.07 (.11)
Hostile Sexism	-.07^ (.04)	-.08^ (.04)	-.03^ (.01)	-.03* (.01)
Benevolent Sexism	-.01 (.04)	-.01 (.04)	-.01 (.01)	-.01 (.01)
cut1	-5.04*** (.39)	-5.84*** (.52)		
cut2	-2.25*** (.36)	-3.05*** (.50)		
cut3	-.09 (.35)	-.87^ (.49)		

Constant			3.42*** (.13)	3.66*** (.17)
Observations	1332	1332	1332	1332
R^2	.15	.15	.31	.31

Table A3 Notes: ^ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .01$ (standard errors). Ordered Logit and OLS regression coefficients. DV is likelihood of voting for the hypothetical candidate (1= “Very likely” to 4= “Very unlikely”).

The dummy variables for the “male corruption” treatment “not working” are excluded as reference categories. Results in Table A3, Model 2 are used to calculate the predicted probabilities plotted in Figures 1 and the bottom panel of Figure 2 in the main text.

Table A4. Effect of Political Ideology by Scandal Type, Generalized Ordered Logit/Partial Proportional Odds Model

	Baseline Models			Interactive Models		
	DV=1	DV=2	DV=3	DV=1	DV=2	DV=3
Corruption Treatment	1.97*** (.50)	3.18*** (.22)	2.70*** (.19)	1.73 (1.13)	3.80*** (.61)	1.66*** (.49)
Sex Scandal Treatment	1.11*** (.40)	2.14*** (.16)	1.72*** (.19)	.74 (.95)	1.78*** (.42)	.46 (.49)
Liberal-Conservative	.19 (.14)	.08 (.07)	.07 (.06)	.11 (.16)	.05 (.09)	-.30* (.15)
Lib-Con X Corruption				.11 (.40)	-.21 (.19)	.38* (.18)
Lib-Con X Sex Scandal				.14 (.33)	.13 (.14)	.46*** (.17)
Religiosity	-.26*** (.10)	-.03 (.05)	.04 (.04)	-.25* (.10)	-.03 (.05)	.04 (.04)
Female Respondent	-.31 (.32)	-.11 (.15)	.29* (.13)	-.33 (.32)	-.11 (.15)	.30* (.13)
Education	-.05 (.12)	.06 (.06)	-.00 (.05)	-.04 (.12)	.07 (.06)	-.00 (.05)
Age	-.01 (.01)	.01^ (.01)	.00 (.01)	-.01 (.01)	.01^ (.01)	.00 (.01)
Income	.05 (.05)	-.02 (.02)	-.03 (.02)	.05 (.05)	-.02 (.02)	-.03 (.02)
Work Fulltime	-.28 (.38)	-.21 (.18)	.21 (.17)	-.27 (.38)	-.21 (.19)	.20 (.17)
Work Part time	.50 (.60)	.50^ (.26)	-.05 (.22)	.45 (.60)	.51* (.26)	-.06 (.22)
Student	.01 (.85)	-.14 (.39)	.07 (.37)	-.04 (.85)	-.13 (.39)	.04 (.37)
Constant	3.25*** (.91)	-1.04* (.42)	-2.82*** (.39)	3.37*** (.93)	-.95* (.45)	-1.78*** (.53)
Observations		1332			1332	
Pseudo R ²		.1635			.1729	

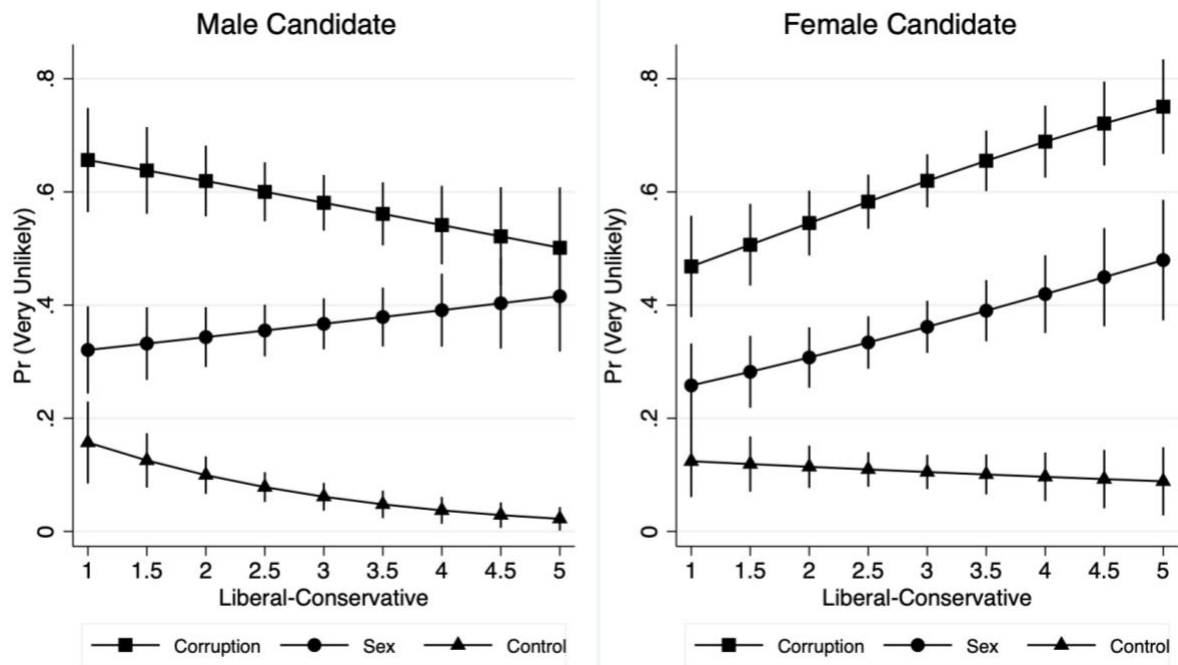
^ p<.10, * p<.05, ** p<.01, *** p<.01 (standard errors). Generalized Ordered Logit Coefficients estimated in Stata 15.2 using the “*gologit2*” command. “DV=4 Very Unlikely” is the baseline category. In the model, the “control” treatment dummy is excluded as a reference category.

Table A5. Effect of Political Ideology by Treatment, Generalized Ordered Logit

	Baseline Models			Interactive Models		
	DV=1	DV=2	DV=3	DV=1	DV=2	DV=3
Female Corruption	.01 (.94)	.14 (.39)	.08 (.20)	.76 (2.14)	-1.52 (1.14)	-1.25* (.55)
Male Sex	-.69 (.88)	-.76* (.34)	-.91*** (.20)	-1.57 (1.88)	-2.69*** (1.04)	-1.68*** (.54)
Female Sex	-1.01 (.86)	-1.16*** (.33)	-.95*** (.20)	-.04 (1.89)	-3.04*** (1.02)	-2.13*** (.56)
Male Control	-1.74* (.77)	-3.17*** (.31)	-2.86*** (.29)	.25 (1.73)	-4.53*** (.98)	-1.98*** (.71)
Female Control	-2.16*** (.76)	-3.05*** (.31)	-2.48*** (.26)	-2.40 (1.56)	-4.79*** (.98)	-2.69*** (.73)
Liberal-Conservative	.18 (.14)	.09 (.07)	.07 (.06)	.35 (.58)	-.45^ (.26)	-.16 (.13)
Lib-Con X Female Corrupt				-.35 (.79)	.54 (.35)	.47*** (.18)
Lib-Con X Male Sex				.35 (.77)	.64* (.31)	.27 (.17)
Lib-Con X Female Sex				-.42 (.70)	.62* (.31)	.41* (.18)
Lib-Con X Male Control				-.72 (.65)	.44 (.29)	-.36 (.26)
Lib-Con X Female Control				.04 (.62)	.57* (.29)	.07 (.25)
Religiosity	-.26*** (.10)	-.03 (.05)	.04 (.04)	-.25* (.10)	-.04 (.05)	.03 (.04)
Female Respondent	-.32 (.32)	-.11 (.15)	.30* (.13)	-.31 (.32)	-.11 (.15)	.34* (.13)
Education	-.06 (.12)	.06 (.06)	-.00 (.05)	-.05 (.13)	.07 (.06)	-.01 (.05)
Age	-.01 (.01)	.01^ (.01)	.00 (.01)	-.01 (.01)	.01^ (.01)	.00 (.01)
Income	.05 (.05)	-.02 (.02)	-.03 (.02)	.07 (.05)	-.02 (.02)	-.03 (.02)
Work Fulltime	-.34 (.39)	-.20 (.19)	.20 (.17)	-.17 (.40)	-.21 (.19)	.18 (.17)
Work Part time	.40 (.61)	.53* (.26)	-.06 (.22)	.62 (.63)	.54* (.26)	-.11 (.22)
Student	-.01 (.85)	-.14 (.39)	.05 (.37)	.05 (.87)	-.15 (.39)	.02 (.37)
Constant	5.33*** (1.16)	2.06*** (.49)	-.17 (.39)	4.69*** (1.75)	3.70*** (.98)	.58 (.51)
Observations		1332			1332	
R ²		.1635			.1729	

^ p<.10, * p<.05, ** p<.01, *** p<.01 (standard errors). Generalized Ordered Logit Coefficients estimated in Stata 15.2. “DV=4 Very Unlikely” is the baseline category. In the model, the “control” treatment dummy is excluded as a reference category.

Figure A1 Effect of Ideology on Voters' Willingness to Punish Scandals, Generalized Ordered Logistic Regression with Partial Proportional Odds Models



Note: Point estimates are predicted probabilities from the Generalized Ordered Logistic Regression/Partial Proportional Odds models in Table A5 (Model 4-6). Models were estimated in Stata 15.2 using the “*gologit2*” command. Bars are 84 percent confidence intervals. When 84 percent confidence intervals overlap, we cannot rule out the null hypothesis that predicted means are not statistically different at $p < .05$ (Julious 2004).

Results here show that our findings in Figure 1 of the main text are robust to either ordered logit or *gologit2* specifications. In both figures, we observe the following. The triangle plots in Figure 1 (the control groups) indicate the predicted “punishment” for both male and female candidates is low and consistent across the range of ideology. Next, it is clear that even though participants tend to care less about sex scandals than corruption, they nevertheless punish incumbents for engaging in sex scandals relative to the control group. Still, responses vary by candidate sex.

Turning first to the “male candidate” panel in Figure A1 (and Figure 1 of the main text), liberals are significantly less likely to punish men for sex scandals than corruption scandals. Conservatives, by comparison, punish male candidates for sex scandals on par with corruption scandals. With respect to female candidates, the left panel in Figure (A)1 shows that liberal participants punish women candidates less for sex scandals than for corruption. And, the same is true for conservatives—they too punish women candidates less for sex scandals than for corruption. Importantly, however, this is not because conservatives do not care about sex scandals. Indeed, conservative participants are more likely than liberals to punish both men and women for sex scandals. Rather, it is because conservatives are significantly more likely – by about 24 percentage points – to punish women than men for a corruption scandal (see Figure A4 in the Appendix).

Figure A2: The Effect of Ideology on Voter's Response to Scandals, Generalized Ordered Logit Results

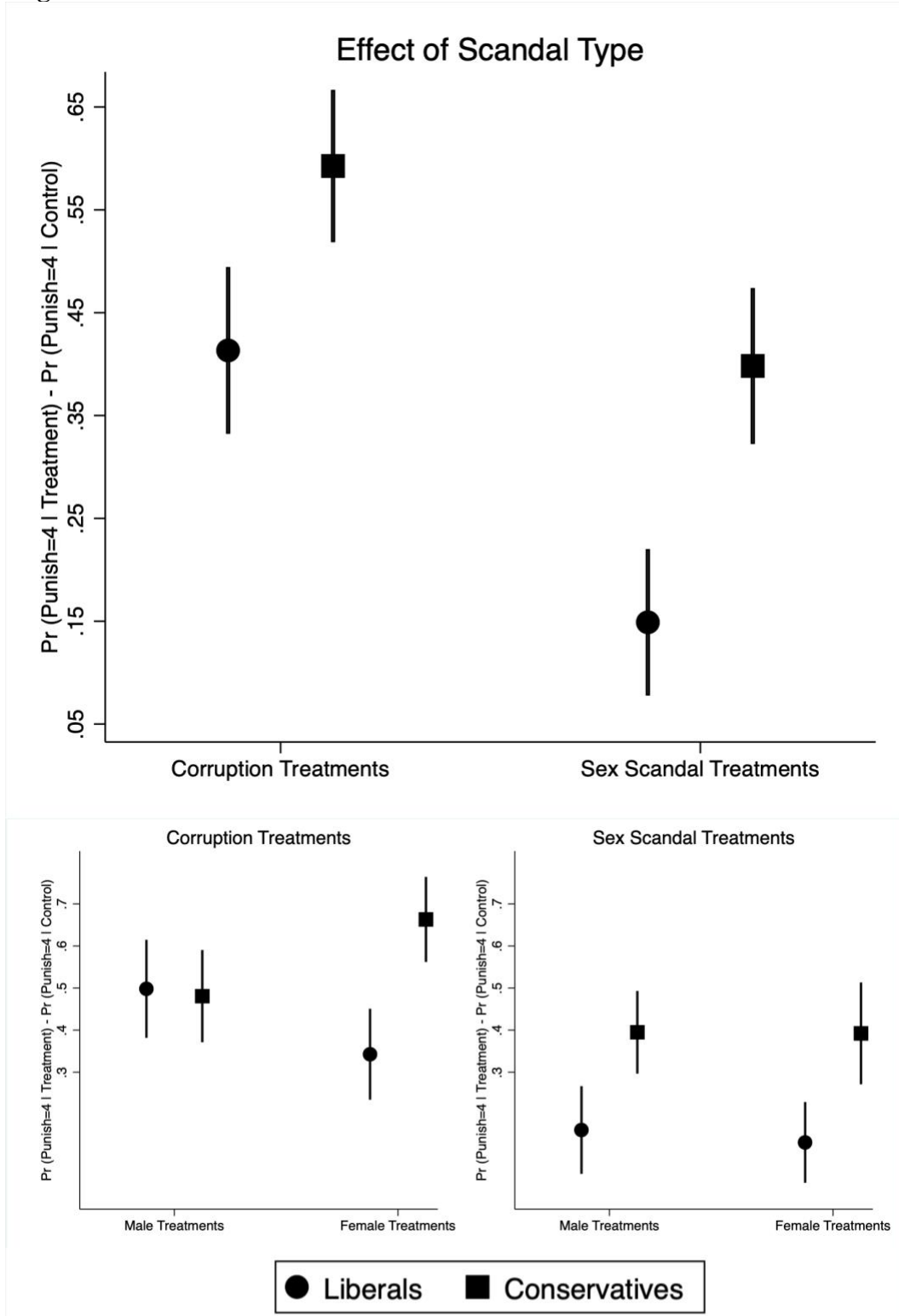


Figure A2 Note: Figure A2 uses the results in Tables A4 (top panel) and A5 (bottom panels) to show the difference between the control and treatments, by scandal type (top) and candidate sex (bottom). Point estimates were calculated using the “margins contrast” command in Stata 15.2. Bars represent 84 percent confidence intervals. When 84 percent confidence intervals around predicted means overlap, we cannot rule out the null hypothesis that there are no significant differences ($p < .05$) between estimates (Julious 2004).

We use the results from a Generalized Ordered Logistic Regression with Partial Proportional Odds model (Williams 2006) as an additional test of our hypothesis because it relaxes the ordered logit proportional odds assumption (i.e., that the effect of X on Y is the same for each ordered outcome).¹ Oftentimes when ordered logit models are used, this assumption is violated. This is not the case, however, with our data (tested using the *geologit2* program in Stata 15). Since we do not violate the proportional odds / parallel lines assumption, we report the ordered logit results in the main text.

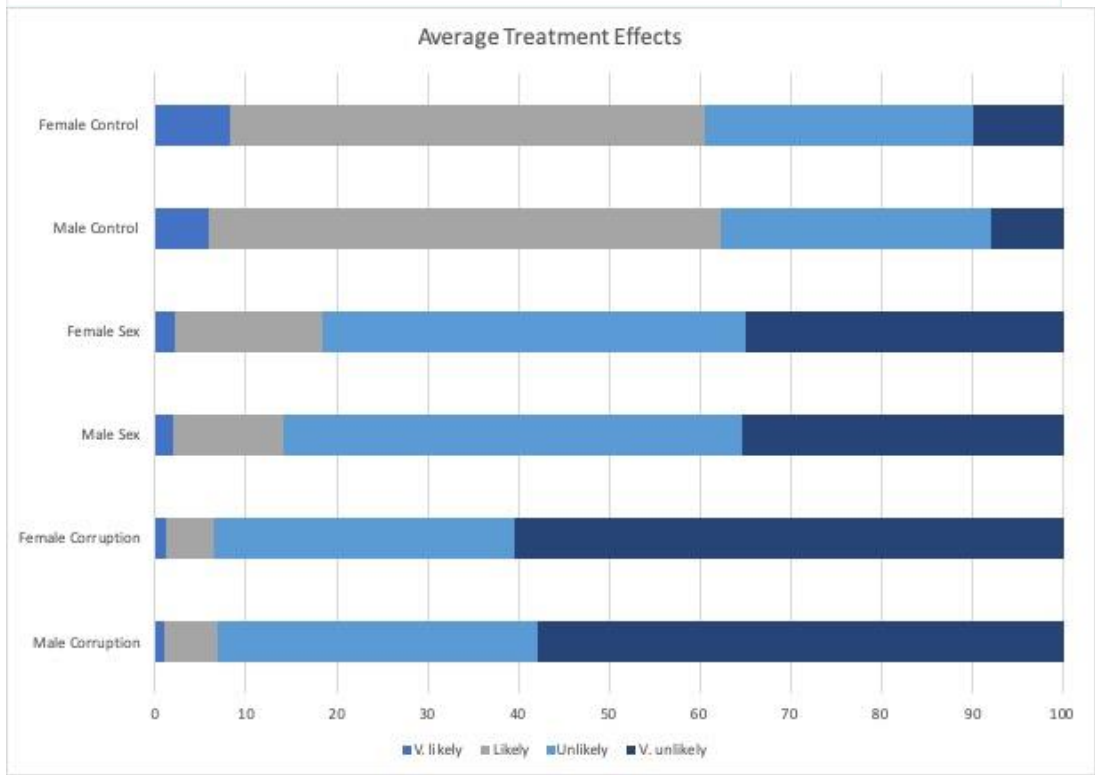
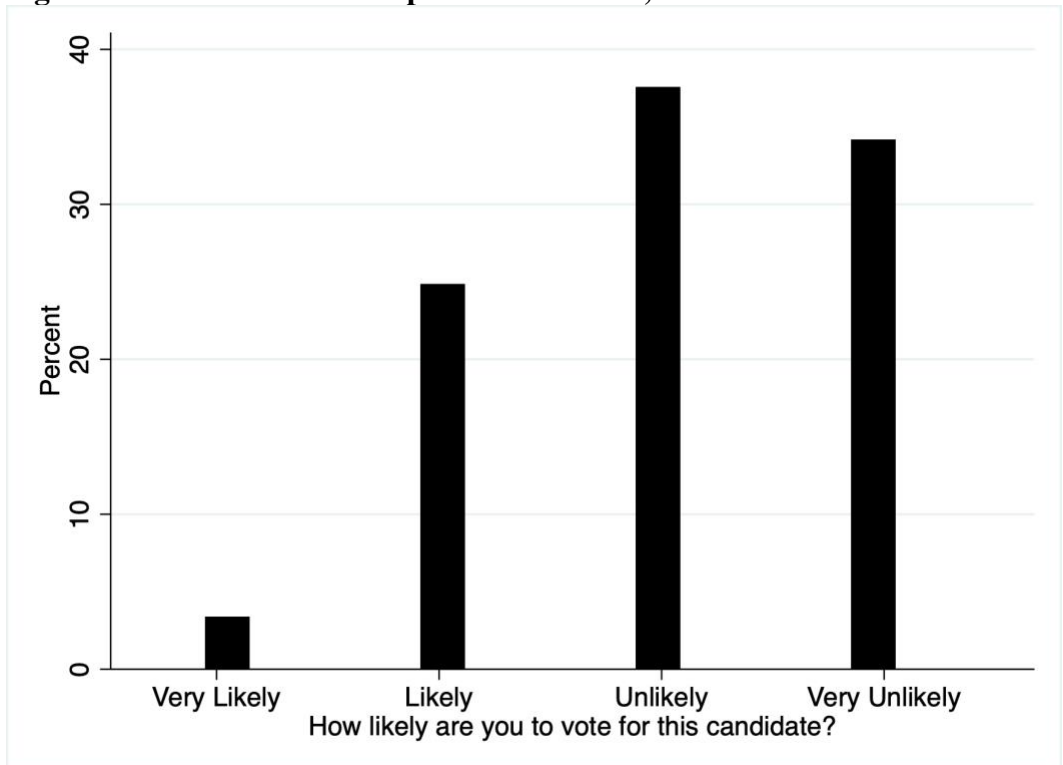
Results from both the ordered logit and the generalized ordered logistic regression with partial proportional odds models are largely consistent. Regardless of the model specification, our main findings are robust. We find support for H1 – conservatives are more likely than liberals to punish sex scandals. We also find support for H2a and H2b – conservatives are more likely than liberals to punish women for *either* type of scandal. One difference that emerges in Figure A2 is that conservatives are also more likely than liberals to punish men for sex scandals when we use the Generalized Ordered Logit model. We observe this general pattern using an ordered logit model in the main text, but there, the difference in contrasts between the control and treatment groups for liberals and conservatives is only significant at the 90 percent confidence level.

Although OLS models produce coefficients that are easier to interpret, and are thus sometimes preferred, we have chosen not to present our results using OLS for a number of reasons. First, using OLS on a four-category ordered dependent variable, such as ours, violates the Best Linear Unbiased Estimates (BLUE) assumptions of OLS. For one, our dependent variable is not normally distributed, but instead is skewed heavily toward the “very unlikely” end of the response outcome scale (see Figure A3). Although some econometricians have said that the differences between OLS and ordered logit models are trivial, OLS models do not take floor and ceiling effects into account like ordered logit models. (Lu 1999).² Moreover, the “trivial” differences are generally when the ordered outcome has more than five categories and is normally distributed. Although the OLS coefficients in Table A2 and A3 are more straightforward to interpret than the corresponding ordered logit coefficients, we believe it is inappropriate to use these models to test our hypotheses.

¹ Williams, Richard. “Generalized Ordered Logit / Partial Proportional Odds Models for Ordinal Dependent Variables.” *The Stata Journal* 6(1): 58-82.

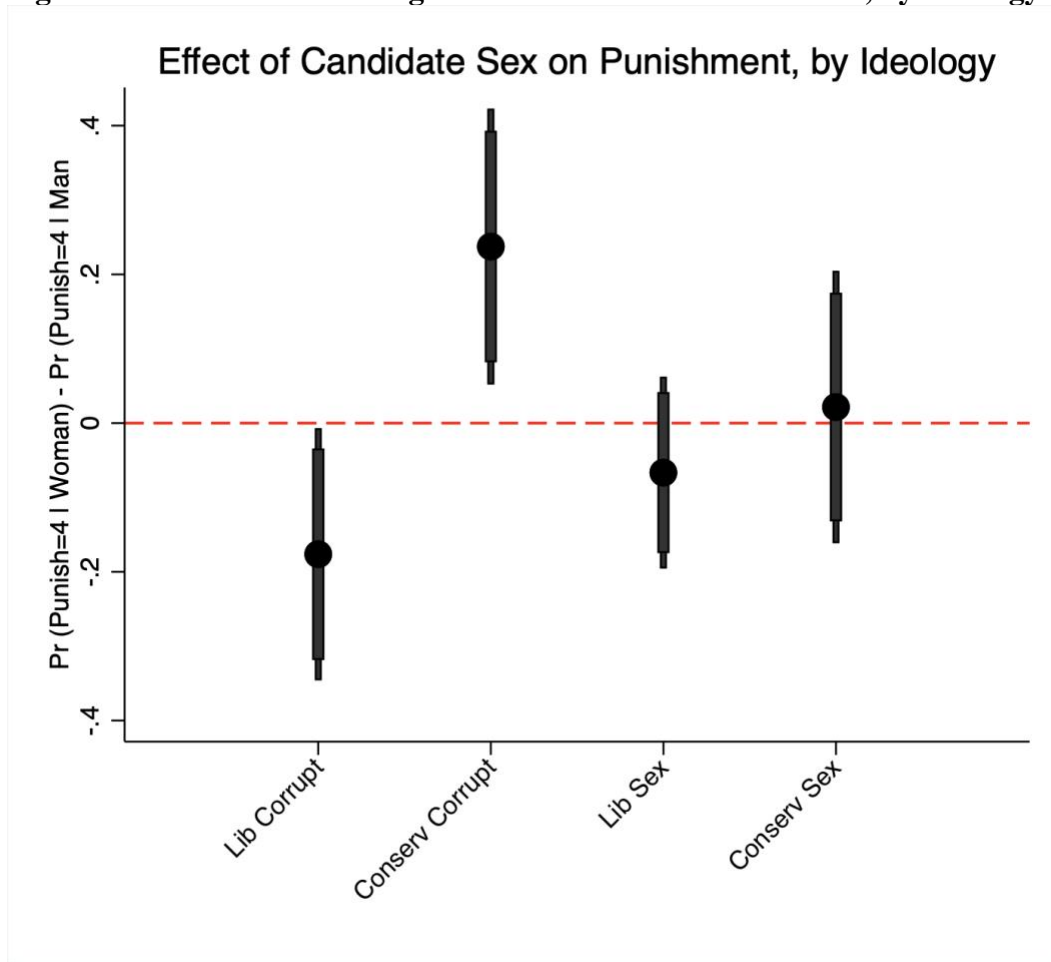
² Lu, Max. 1999. “Determinants of Residential Satisfaction: Ordered Logit vs. Regression Models.” *Growth and Change* 30 (Spring 1999): 264-287.

Figure A3. Distribution of Dependent Variable, Vote Likelihood



Note: Figure A3 (top) shows the distribution of our DV across treatment groups. Responses are heavily right skewed, and thus OLS is an inappropriate estimation strategy. The bottom panel of figure A3 shows the distribution of our DV for each treatment and control group.

Figure A4. The Effect of Being a Woman on Voter Punishment, by Ideology



Point estimates represent the difference in the predicted probability of the being “very unlikely” for vote for the candidate, between female and male candidates, for each type of scandal, among the most liberal (coded 1) and conservative (5) respondents. Bars indicate whether differences are statistically different from 0 at the 90% (thick) and 95% (thin) confidence level. Differences calculated using the results in Table A3, Model 2

Figure A4 Note: Although we are interested in explaining different reactions to political scandals by political ideology (e.g., how liberals and conservatives respond to a woman implicated in a sex scandal), we also investigate whether *among* liberals and *among* conservative voters, there is an effect of candidate sex. Results in Figure A4 show that among the most liberal (ideology=1) and the most conservative (ideology=5) participants in our experiment, candidate sex only matters for corruption scandals. Conservatives are more likely to punish women (than men) for corruption, and liberals are slightly more likely to punish men for corruption (difference significant $p < .05$). Similar differences do not emerge for sex scandals. In other words, although conservatives are more likely than liberals to punish women implicated in sex scandals (H2b), the most conservative voters punish men and women for sex scandals at similar rates. As we explain in the main text, however, we cannot adjudicate here whether it is liberals’ or conservatives’ attitudes about men or women driving the observed results in Figure A4.

Table B.1. Sample Characteristics

	Male Corrupt	Female Corrupt	Male Sex	Female Sex	Male No Scandal	Female No Scandal	Full Sample
Ideology	2.90	2.79	2.81	2.77	2.86	2.75	2.81
Religiosity	2.26	2.45	2.41	2.34	2.39	2.52	2.40
Education	3.40	3.48	3.39	3.30	3.56	3.41	3.42
Age	40.30	38.39	40.05	39.61	39.68	40.87	39.80
Female	.62**	.52	.51	.55	.52	.48	.53
Income	7.54	7.46	7.17*	7.80	7.80	7.74	7.58
Work Full-time	.60	.61	.56	.56	.61	.56	.58
Work Part-time	.11	.16	.14	.18*	.14	.10	.14
Student	.04	.04	.05	.03	.05	.05	.04

Note: T-tests with equal variance comparing each group average to the rest of the sample.

*p<.05, **p<.01.

Table B.2. Multinomial Logit: Predict Treatment Group

	Female Corrupt	Male Sex	Female Sex	Male No Scandal	Female No Scandal
Liberal-Conservative	-0.139 (0.091)	-0.148 (0.091)	-0.156 (0.092)	-0.082 (0.091)	-0.247** (0.093)
Religiosity	0.117 (0.067)	0.112 (0.067)	0.073 (0.068)	0.075 (0.067)	0.169* (0.067)
Female Respondent	-0.404* (0.203)	-0.485* (0.201)	-0.390 (0.204)	-0.440* (0.202)	-0.676** (0.204)
Education	0.032 (0.075)	0.017 (0.074)	-0.091 (0.076)	0.058 (0.075)	-0.006 (0.076)
Age	-0.008 (0.008)	0.001 (0.008)	-0.003 (0.008)	0.001 (0.008)	0.005 (0.008)
Income	-0.011 (0.032)	-0.031 (0.031)	0.043 (0.032)	0.017 (0.031)	0.028 (0.032)
Work Fulltime	0.179 (0.256)	-0.034 (0.249)	-0.049 (0.251)	0.127 (0.254)	-0.396 (0.244)
Work Part time	0.558 (0.345)	0.391 (0.337)	0.645 (0.331)	0.448 (0.347)	-0.288 (0.359)
Student	0.027 (0.562)	0.262 (0.532)	-0.234 (0.605)	0.343 (0.544)	-0.126 (0.557)
Constant	0.545 (0.557)	0.629 (0.548)	0.626 (0.553)	-0.088 (0.561)	0.630 (0.553)
	Observations: N=1332		Pseudo R ₂ =.01		

* p<.05, ** p<.01 (standard errors).

Table B3. Experimental Vignettes

Condition	Vignette
1. Male Control	A U.S. Representative is up for reelection this year. If this were your representative, how likely would you be to vote for him in the upcoming election?
2. Female Control	A U.S. Representative is up for reelection this year. If this were your representative, how likely would you be to vote for her in the upcoming election?
3. Male Corruption	A U.S. Representative is up for reelection this year. During his last term he was embroiled in a major corruption scandal. If this were your representative, how likely would you be to vote for him in the upcoming election?
4. Female Corruption	A U.S. Representative is up for reelection this year. During his last term he was embroiled in a major corruption scandal. If this were your representative, how likely would you be to vote for her in the upcoming election?
5. Male Sex	A U.S. Representative is up for reelection this year. During his last term he was embroiled in a major sex scandal. If this were your representative, how likely would you be to vote for him in the upcoming election?
6. Female Sex	A U.S. Representative is up for reelection this year. During his last term he was embroiled in a major sex scandal. If this were your representative, how likely would you be to vote for her in the upcoming election?

After being randomly assigned to read one of the vignettes in Table B3, participants were all presented with the following response options:

- 1) Very unlikely
- 2) Unlikely
- 3) Likely
- 4) Very likely

Responses in the analysis were reverse coded such that high values correspond to a higher propensity to punish the scandal-hit candidate.