

Appendix for Professor Favorability and Student Perceptions of Professor Ideology

Alternative Model: Ordered Probit

First, as mentioned in the findings section, we begin by reconsidering the models via ordered probit. As table A1 below reveal, the sign and significance of all of the estimated coefficients are the same as those presented in table 2.

Table A1: The Effect of Student Ideology and Professor Favorability on Student Assessment of Professor Ideology

	Model 1	Model 2	Model 3	Model 4
		Recommend	Quality of Instruction	Like Professor
Student Ideology	0.254*** (0.065)	-0.565 (0.350)	-0.380 (0.285)	-0.674 (0.583)
Recommend		-0.573* (0.263)		
Student Ideo.*Recommend		0.197* (0.084)		
Qual. Of Instruction			-0.192 (0.160)	
Student Ideo.*Qual. Of Instruction			0.104* (0.048)	
Like Prof.				-0.712** (0.234)
Student Ideo.*Like Prof.				0.241+ (0.125)
Professor A Dummy	0.127 (0.160)	0.143 (0.165)	0.176 (0.150)	0.228* (0.114)
Cut 1	-0.869*** (0.233)	-3.282** (1.061)	-2.049* (0.885)	-3.484** (1.164)
Cut 2	-0.209 (0.210)	-2.604* (1.085)	-1.388 (0.887)	-3.024** (1.131)
Cut 3	1.226*** (0.226)	-1.140 (1.084)	0.067 (0.893)	-1.447 (1.180)
Cut 4	2.313*** (0.261)	-0.044 (1.059)	1.168 (0.858)	-0.382 (1.156)
Log-Pseudolikelihood	-387.299	-382.723	-384.392	-185.811
N	307	307	307	153
Pseudo-R ²	0.022	0.034	0.029	0.040

Note: Ordered probit regression estimates. Dependent variable is student assessment of professor ideology (1=very conservative, 5=very liberal). Robust standard errors clustered by class in parenthesis. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$ (two-tailed).

Endogeneity

Next, in the robustness checks subsection, we mentioned the possibility of an endogenous relationship; specifically, we remarked “that perceived *professor ideology* predicts favorability, and not the other way around.” As briefly mentioned in the paper, in order to test for this, we needed to first find a valid instrument that predicts one or more of our favorability measures (*recommend*, *quality of instruction*, or *like professor*) that is unrelated to the variable of interest (*professor ideology*). Ultimately, we found that a student’s answer to a question we refer to as *course interest* (“taking this course increased my interest in the subject,” measured on a 1 to 5 scale, where 5 = strongly agree and 1 is strongly disagree) served this purpose. *Recommend* and *course interest* are correlated at .48 ($p < 0.001$), but *course interest* is not correlated with *professor ideology* ($r = 0.03$, $p = 0.60$).

We also ran two regressions to confirm the results of the correlation. In the first, *recommend* was the dependent variable and *course interest* was an independent variable. As expected, *course interest* was statistically significant and positively signed. In the second, *professor ideology* was the dependent variable and *course interested* was again an independent variable. In this instance *course interest* was not statistically significant, as expected.¹

Armed with an instrument, we can conduct a two-stage least squares analysis (2SLS) to purge the estimates of potential endogeneity, and to conduct post-estimation test for the presence of endogeneity. Table A2 below reports the results of the 2SLS regression, where column 1 displays the results of the first state, and column 2 are the results of the second stage.

Table A2: 2SLS Regression Using Course Interest as an Instrumental Variable

Dependent Variable	Recommend	Professor Ideology
	First Stage	Second Stage
Recommend		0.254 (0.714)
Student Ideology	-1.211*** (0.069)	0.462 (0.915)
Student Ideo.*Recommend	0.290*** (0.013)	-0.060 (0.218)
Course Interest	0.090*** (0.024)	
Professor A Dummy	-0.033	0.122

¹ We omitted these since the model tests conducted following two-state least squares regression make them redundant.

	(0.046)	(0.117)
Constant	3.837***	1.462
	(0.142)	(2.966)
N	307	307
R ²	0.899	0.025

Note: OLS regression estimates. Dependent variable (second stage) is student assessment of professor ideology (1=very conservative, 5=very liberal). Robust standard errors clustered by class in parenthesis. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$ (two-tailed).

Readers will notice that none of the variables in the second stage are statistically significant; this prompted us to investigate the strength of the instrument and to conduct post-estimation tests looking for the presence of endogeneity. Beginning with the strength of the instrument, *course interest* is statistically significant in the first stage, and post-estimation checks reveal a large Shea's partial-R² (0.901) and a statistically significant F-statistic (12.60, $p < 0.01$). Taken together, these suggest our instrument is performing quite well. Next, we conduct a Durbin Wu-Hausman (DWH) test, which produces $F = 1.536$ ($p = 0.233$), meaning we cannot reject the null that the variables are exogenous, i.e. it is unlikely endogeneity is present.

Political Knowledge

Finally, we also considered if our findings are conditional on political knowledge. To test for this, we ran supplemental models that included a political knowledge measure that was an index of six questions assessing general knowledge about politics. The six questions appear at the end of the appendix. Questions were recoded as 1 if correct, 0 if not and then averaged to create a political knowledge index, which we label *political knowledge*. The index ranged from 0 to 1, had an average of 0.749, and a standard deviation of 0.212. This is pretty large average, suggesting the questions may have been too easy or, as we suspect, many students may have simply cheated given the survey was conducted using Qualtrics (which is hosted on-line).

Table A3 (below) reports the results of the inclusion of the three-way interactions between political knowledge, student ideology, and the three measures of professor favorability, as well as constituent interactions. As the table reveals, the political knowledge variable and all interactions with this variable are not statistically significant; this holds true for all three model specifications.

Table A3: The Conditional Effect of Political Knowledge

	Model 1	Model 2	Model 3
		Quality of	Like
	Recommend	Instruction	Professor
Student Ideology	-1.615	-0.344	-0.673
	(1.247)	(0.414)	(0.363)
Qual. Of Instruction	-1.169		
	(0.688)		

Student Ideo.*Qual. Of Instruction	0.313 (0.217)		
Professor A Dummy	0.106 (0.119)	0.071 (0.135)	0.086 (0.105)
Political Knowledge	-7.153 (5.145)		
Qual. Of Instruction*Pol. Knowledge	1.320 (0.905)		
Student Ideo.*Pol. Knowledge	1.694 (1.597)	-0.200 (0.263)	0.178 (0.317)
Student Ideology*Quality Of Instruction*Political Knowledge	-0.296 (0.274)		
Recommend		-0.722* (0.282)	-0.820** (0.207)
Student Ideology*Recommend		0.168 (0.107)	0.261* (0.100)
Recommend*Political Knowledge		0.282 (0.196)	
Student Ideology*Recommend *Political Knowledge		0.001 (0.070)	
Like Professor*Political Knowledge			0.328 (0.222)
Student Ideology*Like Professor*Political Knowledge			-0.098 (0.090)
Constant	8.985* (3.877)	4.662*** (0.895)	4.814*** (0.753)
N	307	307	153
R ²	0.101	0.109	0.151

Note: OLS regression estimates. Dependent variable is student assessment of professor ideology (1=very conservative, 5=very liberal). Robust standard errors clustered by class in parenthesis. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$ (two-tailed).

Political Knowledge Questions

Who is the current Chief Justice of the United States Supreme Court?

- John Roberts (1)
- Thurgood Marshall (2)
- François Hollande (3)
- John Kerry (4)



What country's flag appears here (it may take a moment for the picture to load)?

- Kenya (1)
- Estonia (2)
- Germany (3)
- Brazil (4)



What country is indicated in the maps above (it may take a moment for the picture to load)?

- China (1)
- Afghanistan (2)
- Turkey (3)
- Madagascar (4)

Who is the current speaker of the U.S. House of Representatives?

- Paul Ryan (1)
- Hillary Clinton (2)
- Chuck Hagel (3)
- David Cameron (4)

*Note to readers, this questions was changed to include Paul Ryan after John Boehner stepped down as speaker.

The United States is a member of an organization called NATO. What does NATO stand for?

- North Atlantic Treaty Organization (1)
- Nautical Allied Territory Operations (2)
- New Alternative Territory Organization (3)
- Northern Arctic Trade Organization (4)



Finally, what organization does the flag represent (it may take a moment for the picture to load)?

- The Union of the Americas (1)
- NAFTA (North Atlantic Free Trade Agreement) (2)
- The EU (European Union) (3)
- ASEAN (Association of Southeast Asian Nations) (4)

Other survey questions (full survey available upon request)

stude_info First, we wanted to get some general information about you as a student. Your survey responses will be kept anonymous. What year are you in college?

- Freshman (1)
- Sophomore (2)
- Junior (3)
- Senior (4)
- Unsure/Something else (5)

If Unsure/Something else Is Selected, Then Skip To Great, now I want to ask you a few qu...

major Have you chosen your major?

- Yes (1)
- No (2)

Answer If Have your chosen a major? Yes Is Selected

polsci_maj Is political science your major, minor, or one of your dual majors?

- Yes (1)
- No (2)

pid1 Great, now I want to ask you a few questions about politics and your experiences in class. Generally speaking, do you usually consider yourself a Republican, a Democrat, an Independent, or something else?

- Republican (1)
- Democrat (2)
- Independent (3)
- Other (4)

Answer If Generally speaking, do you usually consider yourself a Re... Republican Is Selected

pid1_rep Would you call yourself a strong Republican or a not very strong Republican?

- Strong Republican (1)
- Not very strong Republican (2)

Answer If Generally speaking, do you usually consider yourself a Re... Democrat Is Selected

pid1_dem Would you call yourself a strong Democrat or a not very strong Democrat?

- Strong Democrat (1)
- Not very strong Democrat (2)

Answer If Generally speaking, do you usually consider yourself a Re... Independent Is Selected

Or Generally speaking, do you usually consider yourself a Re... Other Is Selected

pid1_ind Do you think of yourself as closer to the Republican or Democratic party?

- Closer to the Republican Party (1)
- Closer to the Democratic Party (2)
- Neither (3)

prof_pid What political party do you think your professor (Dr. < Professor Name >) is a member of?

- Republican (1)
- Democratic (2)
- Independent (3)
- No Affiliation/Other (4)

Answer If What political party do you think your professor (Dr. < Professor Name >) is a member of? Republican Is Selected

prof_repub Do you think your professor (Dr. < Professor Name >) identifies as a strong Republican, or not very strong?

- Strong Republican (1)
- Not very strong Republican (2)

Answer If What political party do you think your professor (Dr. < Professor Name >) is a member of? Democrat Is Selected

prof_dem Do you think your professor (Dr. < Professor Name >) identifies as a strong Democrat, or not very strong?

- Strong Democrat (1)
- Not very strong Democrat (2)

Answer If What political party do you think your professor (Dr. < Professor Name >) is a member of? Independent Is Selected

prof_D_R_I Do you think your professor (Dr. < Professor Name >) identifies as closer to the Democratic party, Republican party, or neither?

- Closer to Democratic party (1)
- Closer to Republican party (2)
- Close to neither (3)

Answer If What political party do you think your professor (Dr. < Professor Name >) is a member of? No Affiliation/Other Is Selected

pro_D_R_i2 Do you think your professor (Dr. < Professor Name >) identifies as closer to the Democratic party, Republican party, or neither?

- Closer to Democratic party (1)
- Closer to Republican party (2)
- Neither (3)

qual_instr Generally speaking, how would you rate the quality of instruction of Professor < Professor Name > in your course(s)?

- Extremely Good (1)
- Very Good (2)
- Good (3)
- Average (4)
- Poor (5)
- Very Poor (6)
- Extremely Poor (7)

prof_ideo Where do you believe your instructor is on the following ideological scale?

- Very Conservative (6)
- Somewhat Conservative (7)
- Moderate (8)
- Somewhat Liberal (9)
- Very Liberal (10)

self_ideo Where do you rate yourself on the following ideological scale?

- Very Conservative (6)
- Somewhat Conservative (7)
- Moderate (8)
- Somewhat Liberal (9)
- Very Liberal (10)

Class_ideo Where do you believe most of your classmates are on the following ideological scale?

- Very Conservative (6)
- Somewhat Conservative (7)
- Moderate (8)
- Somewhat Liberal (9)
- Very Liberal (10)

like_prof How would you describe your personal views about your professor?

- I very much dislike him (1)
- I somewhat dislike him (2)
- I neither like nor dislike him (3)
- I like him (4)
- I very much like him (5)

Recommend I would recommend this course to other students.

- Strongly Disagree (6)
- Somewhat Disagree (7)
- Neither Agree Nor Disagree (8)
- Somewhat Agree (9)
- Strongly Agree (10)

knowpol How knowledgeable would you say you are about politics?

- Not at all knowledgeable (1)
- Not too knowledgeable (2)
- Somewhat knowledgeable (3)
- Very knowledgeable (4)
- Extremely knowledgeable (5)

prev_class Have you ever taken a course with Professor < Professor Name > before this one?

- Yes (1)
- No (0)