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# How Do College Classes Matter? Political Knowledge, Attitudes, and Engagement

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Education predicts a variety of politically-relevant psychological variables, but there are competing hypotheses to explain why. We conducted a panel study of students enrolled in either a political science or a non-political psychology course, measuring their political knowledge, attitudes and engagement at the beginning and end of the semester. Political knowledge increased for both groups. Attitudes and engagement remained stable. After accounting for pre-existing differences between the students, course content was never a significant predictor of knowledge, attitudes or engagement. The study suggests that explicitly learning about politics does not drive the relationship between education and political-psychological variables.

*Keywords:* attitudes, political knowledge, education, ideology

Democracies depend upon the participation of their citizens, yet the United States is consistently low in both general political interest and voting turnout (Patterson, 2015) compared to other democratic countries. The college campus is an important place to look as we strive to understand why this is the case. Many studies indicate that the most highly educated people are also the most politically participatory (e.g., Delli Carpini & Keeter, 1996; Martin, Tankersley, & Ye, 2012). The better educated are found to be more interested in politics than their less educated cohorts, and they follow politics more and vote more than less educated peers. Their political attitudes are more ideologically constrained (Federico, Deason, & Fisher, 2012). Controlling for other demographic factors, they also tend to be slightly more liberal (e.g., Martin et al., 2012).

The literature clearly indicates that attending college correlates with a variety of political variables, but it is less clear *why* that correlation exists. It may be that college changes people politically, or that certain classes cause these changes but not others, or that people who are already higher on variables associated with political knowledge, engagement, and liberal attitudes choose to attend college and enroll in politically-relevant classes at a higher rate. In this paper, we will specifically be investigating whether and how college class choice affect outcomes on these variables.

We compare students in political science classes with those in psychology classes, which do not cover political content. Students who choose to enroll in political science classes might be more politically interested and more politically knowledgeable due to selection biases, and they may also learn more class content that is relevant to political knowledge, attitudes and engagement. Comparing these students shows us the extent to which class choice influences political outcomes. Importantly, this study uses a panel design to allow us to control for preexisting differences in political interest, knowledge and attitudes, and to see whether the course content relates to changes in such variables.

### *Political Knowledge*

It is possible that course content does not systematically affect changes in political knowledge. Research on the connection between education and political sophistication finds that those with college degrees have more knowledge than those without (Delli Carpini & Keeter, 1996; Verba, Schlozman, & Brady, 1995), yet many people graduate college without ever taking a political science class. Highton (2009) finds that most of the differences in sophistication between the college educated and those with less education can be explained by the end of high school. Factors such as general cognitive ability and interest in civic engagement predict both political knowledge and attending college, suggesting that the relationship between education and political knowledge is not directly causal. Because of this, we might predict that class content will not directly predict political knowledge.

On the other hand, there are reasons to predict increases in knowledge for those who take political science classes. Perhaps most obviously, a political science class directly and explicitly deals with political content. Martin, Tankersley, and Ye (2012) have indeed found increases in political knowledge for students taking political science courses. Enrolling in a political science course would indicate at least some interest in politics, and interest is one major motivator for learning political information (e.g. Luskin, 1990). However, Baument

and colleagues (2006) also found that political knowledge increased as a result of classes, with significantly larger increases in knowledge for students who were less interested in the first place. Based on this line of reasoning, we may expect to see greater increases in political knowledge for students in those classes that explicitly cover politics.

### *Attitudes, Ideology, & Values*

There are many reasons to expect stability in political ideology. For many Americans, ideology is a symbolic identification (Federico et al., 2012; Stimson, 2004). People feel connected to others who hold the same ideology and identify with the group. Because such symbolic ideologies do not always correspond with more specific attitudes about political issues (Converse, 1964; Federico et al., 2012; Stimson, 2004), we distinguish between such ideological self-placement and political policy attitudes. Attitudes also tend to be stable (Eagly & Chaiken, 1993). Social and political attitudes tend to crystallize in young adulthood (approximately ages 18–25; Alwin & Krosnick, 1991), after which they do not shift much over the lifespan. Values that drive ideology like traditionalism and egalitarianism also tend to be quite stable (Jost et al., 2003, 2009). Thus, there is theoretical support for hypotheses predicting stable ideological attitudes.

On the other hand, persuasion could shift attitudes, so whether student attitudes are likely to change over the semester may depend on how their classes are presented. Martin et al. (2012) present data suggesting that overall ideology does not change easily as a result of college classes. As they conclude "...courses may serve to reinforce existing core beliefs, while stimulating critical thought and eventually evolving opinions – regarding specific issues about which students may have previously been unaware or uninformed" (2012, p. 212). Recent data suggest that more professors are liberal than conservative, although most professors still believe in the best practice model of not sharing their own political views in class (Woessener & Kelly-Woessener, 2009). Thus, political science students may be as likely to encounter information that could bolster their existing ideological attitudes as they are to learn information supporting an opposing one. Psychology classes are less likely to explicitly address such ideological information in the classroom, so persuasion should not be a factor in whether psychology students' political attitudes change or not. This study allows us to test competing hypotheses with regards to the presence or absence of shifts in students' ideological identification, issue-specific political attitudes, and core values.

### *Attitudinal Constraint*

The study design allows us to explore a concept related to both political attitudes and sophistication: the level of attitudinal constraint. Citizens differ in how ideologically consistent their positions are (Converse, 1964). Whether we consider vertical constraint (i.e., the degree to which one's attitudes about specific political issues align with one's broad ideological identification) or horizontal constraint (i.e., the degree to which one's specific issue attitudes are consistently on the conservative, liberal or moderate part of the spectrum), most evidence suggests that people with more political knowledge also tend to have more constrained political attitudes (Converse, 1964; Federico et al., 2012; Judd & Krosnick, 1989; Zaller, 1992). Attitudinal constraint, therefore, could increase among political science students due to the information that they learn in class: as they gain more sophistication about the political context, they start to realize which positions "go together." Alternatively,

if political attitudes and ideology crystalize before a student enrolls in a political science course, then we would not observe changes in constraint due to the course content. changes in constraint due to the course content.

### *Interest and Engagement*

We expect political interest is more likely to be a predictor of class choice than the reverse. Students in political science courses have higher interest in politics than those in other classes at the beginning of the term (Esaiasson & Persson, 2014). More generally, interest in politics serves as a motivation to gain knowledge about it (Luskin, 1990), with class selection being one way for a student to act on this motivation. Some evidence suggests that classroom discussions of political current events can motivate voting and other civic behaviors (Pritzker, Springer, & McBride, 2015), which would support the hypothesis that political science students would be more politically engaged after the class.

### *Overview of the Current Study*

In this study, we focus on the political versus non-political content of the classroom experience, and how this aspect of education is connected to political knowledge, attitudes, and engagement. We compare students in introductory political science classes to students in introductory psychology classes using a panel design. We began with baseline measures taken at the beginning of the semester, then followed up with the students once the course was complete. Because data collection took place during the fall 2014 semester, our surveys also serve as pre- and post-studies with regards to the U.S. national midterm elections.

By comparing political science students with psychology students, we are able to examine whether individual differences in these political variables are best understood as a direct effect of studying political science, or whether they reflect preexisting psychological variables. In other words, do people become more politically interested, knowledgeable and participatory because of their experiences with education? Must they explicitly discuss political content in their classes to experience these changes? Or are knowledge, attitudes, and engagement set prior to course enrollment and do they remain stable over the course of the semester? As discussed above, there are theoretical reasons to expect that any of these outcomes could be the case.

## **Method**

### *Procedure*

In early September 2014 researchers visited each of the introductory political science and psychology classes offered at a Northeastern liberal arts college. Students in these classes were invited to participate in a two-part research study. Participants completed the questionnaires at the end of the class period. They received a survey packet containing the measures described below plus demographic items. To preserve anonymity, participants generated a numerical code to link their responses across time points. In late November 2014, researchers returned to administer the second survey.

### *Participants*

All students in the classes were invited to participate. 369 students did so: 233 students from nine sections of political science courses, and 157 students from five sections of psychology classes. 22 students were simultaneously enrolled in psychology and political science courses; they were analyzed as part of the political science group. Most participants were first-years (49%) or sophomores (41%). The sample was predominately White (85%) with some respondents identifying as Black (5%), Hispanic (7%), or Asian (7%). There was a proportional gender split (51% women).

In November, 322 of those participants completed the second survey, for an 85% retention rate. However, 64 participants failed to provide a numerical code that matched one from the prior survey, leaving 258 participants with useable data from both time points. Attrition analysis indicated that there were no differences in retention rates based on race, gender, class year, or course.

### *Measures: September Survey*

**Attitudes about political issues.** Eight items asked participants to indicate their attitudes about specific political issues (e.g., “Some people feel that the government should not restrict a woman’s right to an abortion and that women should be able to have them whenever they choose. Others feel that abortion is always wrong and should not be allowed under any circumstances. Many others have opinions that fall in between. What is your opinion?”; Federico et al., 2012) Participants responded to each item on a seven-point scales, with 1 indicting the most liberal position and 7 indicating the most conservative position for each issue. The mean of these items is referred to as the Average Issue Position,  $\alpha = .68$ .

**Attitude constraint.** We also used these issue items to calculate measures of attitudinal constraint, a construct that tends to correlate with political knowledge. *Horizontal Constraint* was computed by calculating the standard deviation of each participant’s responses, rescaling to a 0–1 range, and subtracting the result from 1. It indicates how consistently liberal, moderate, or conservative positions were across all eight issues. *Vertical Constraint* was computed by summing the responses that “matched” the participant’s ideology (e.g., for conservative participants, how often did the issue position fall on the conservative side of the rating scale? See Federico et al., 2012, for more details.)

**Political knowledge.** Nine items asked participants to select the correct response to a factual question about U.S. politics. (e.g., “Who is currently the U.S. Secretary of State?”). Correct responses were summed.

**Ideology.** Two items asked participants to indicate their “political outlook with regard to economic [social] issues” on a seven-point scale, 1 = very liberal to 7 = very conservative. The mean of their responses was computed.

**Political Interest.** A single item asked “how interested would you say you are in politics?” Participants responded on a four-point scale, 1 = not at all to 4 = extremely.

**News media exposure.** Participants reported how frequently they sought political or campaign news, with six response options, ranging from 1 = never to 6 = several times per day.

**Egalitarianism.** Endorsement of egalitarian values was measured with the six-item scale used in the American National Election Studies (ANES, 2012),  $\alpha = .79$ .

**Traditionalism.** Support for traditional moral values was measured with the four-item ANES (2012) scale,  $\alpha = .51$ .

*Measures: November Survey*

All of the measures described above were repeated in the November survey. We also included an item assessing whether or not participants had voted in the 2014 midterm elections.

## Results

### *Descriptive Analyses*

Table 1 presents the mean levels of each variable at the September time point, along with the correlations between the variables. Engagement and attitudinal variables tend not to correlate with each other, although both political interest and frequency of news consumption are positively correlated with vertical constraint. These data also show a consistent pattern indicating that more liberal ideologies and attitudes relate to more constrained attitudes.

We calculated the difference scores between the September and November time points and conducted one-sample *t*-tests to compare these difference scores to zero. Political knowledge increased between the two surveys ( $M = .43$ ,  $t = 4.06$ ,  $p < .001$ ) and horizontal constraint decreased slightly ( $M = -.03$ ,  $t = 2.75$ ,  $p = .006$ ). No other variables significantly increased or decreased.

**Table 1.** *September Means and Correlations*

	Mean (SD)	1.	2.	3.	4.	5.	6.	7.	8.
1. Average Issue Position <sup>a</sup>	3.39 (0.92)								
2. Horizontal Constraint <sup>b</sup>	0.48 (0.17)	-.30*							
3. Vertical Constraint <sup>b</sup>	0.51 (0.27)	-.33*	.28*						
4. Political Knowledge <sup>c</sup>	5.05 (2.03)	.01	.03	.16*					
5. Ideology <sup>a</sup>	3.66 (1.47)	.72*	-.21*	-.44*	-.04				
6. Political Interest <sup>d</sup>	2.53 (0.86)	-.04	.08	.19*	.40*	-.01			
7. Frequency of News Consumption <sup>e</sup>	3.50 (1.43)	.01	-.03	.11*	.32*	.01	.50*		
8. Egalitarianism <sup>d</sup>	3.55 (0.74)	-.69*	.23*	.29*	.05	-.57*	-.01	-.05	
9. Traditionalism <sup>d</sup>	3.55 (0.59)	.45*	-.02	-.17*	-.14*	.42*	-.05	-.06	-.39*

<sup>+</sup> $p < .05$ , <sup>\*</sup> $p < .01$ , <sup>a</sup>Scale range 1-5, <sup>b</sup>Scale range 0-1, <sup>c</sup>Scale range 0-9, <sup>d</sup>Scale range 1-5, <sup>e</sup>Scale range 1-6.

### Comparisons between Political Science and Psychology Students

To test for preexisting differences, we compared the political science and psychology students' scores on each of the variables at the September time point. Table 2 presents these mean scores and MANOVA results comparing the means for the two groups of students. Political science students scored higher in political knowledge, were more interested in politics, and sought political news more frequently than psychology students did. Psychology students were more egalitarian in their values, but the groups did not differ in traditionalism. The two groups did not differ in their ideology, issue positions, or in either type of attitudinal constraint.

The November data indicates that political science students were more likely to have voted (21.5% of whom did so) in the 2014 midterm elections than psychology students (11.4%;  $\chi^2 = 5.66, p = .02$ ).

### Regression Analyses

To test our main hypotheses, we conducted a series of regression analyses. All regressions used OLS modeling, except for voting which used a logistic regression model due to the dichotomous outcome variable. Each model included the knowledge, attitudes, values, and engagement variables measured in September, and the department in which students were enrolled (1 = political science, 0 = psychology), as predictors of a November measure. We also controlled for gender, family income, and race in each model.

Table 3 presents results of seven regression models. All variables have strong and significant stability coefficients (i.e., their levels in September are the strongest predictor of November responses). Notably, coefficients for the class dummy variable never reached significance. We find one marginal effect, in that political science students had slightly less vertical constraint in November than psychology students did ( $\beta = -.105, t = 1.73, p = .09$ ) – which is in the opposite direction of what political sophistication research would predict (e.g. Federico et al., 2012). Thus, class content did not significantly alter students' political knowledge, their attitudes, or their engagement.

**Table 2.** Political Science and Psychology Comparisons at Time 1

	Political Science	Psychology	F
Average Issue Position <sup>a</sup>	3.51 (0.99)	3.30 (0.88)	2.93
Horizontal Constraint <sup>b</sup>	0.48 (0.18)	0.50 (0.17)	0.73
Vertical Constraint <sup>b</sup>	0.51 (0.28)	0.54 (0.26)	0.88
Political Knowledge <sup>c</sup>	5.52 (2.04)	4.67 (1.88)	10.99**
Ideology <sup>a</sup>	3.74 (1.44)	3.47 (1.43)	2.24
Political Interest <sup>d</sup>	2.81 (0.74)	2.17 (0.84)	38.74**
Frequency of News	3.81 (1.31)	2.99 (1.52)	20.12**
Consumption <sup>e</sup>			
Egalitarianism <sup>d</sup>	3.45 (0.74)	3.69 (0.73)	6.73*
Traditionalism <sup>d</sup>	3.59 (0.60)	3.46 (0.61)	2.83

<sup>+</sup> $p < .05$ , <sup>\*</sup> $p < .01$ , <sup>a</sup>Scale range 1-5, <sup>b</sup>Scale range 0-1, <sup>c</sup>Scale range 0-9, <sup>d</sup>Scale range 1-5, <sup>e</sup>Scale range 1-6.

**Table 3.** Standardized regression coefficients predicting November outcome variables

	Knowledge Score	Average Issue Position	Vertical Constraint	Horiz. Constraint	Ideology	Egalitarianism	Traditionalism	Political Interest	Follow Campaign News	Vote <sup>a</sup>
<i>Predictor Variables (September)</i>										
Department (POL=1)	.028	-.062	-.105	.048	-.029	.006	.001	.054	-.026	.786
Knowledge Score	.476**	-.048	.003	-.102	-.084	.010	-.162**	.020	.065	1.06
Average Issue Position	-.135	.666**	.131	-.060	.204*	-.204**	.200*	-.015	-.053	.604
Vertical Constraint										
Horizontal Constraint	.113	-.089*	.400**	.104	-.024	.047	.050	.178**	.104	3.64
Ideological Self-placement	.023	.035	.164*	.549**	.066	-.050	.019	-.066	-.016	.747
Egalitarianism	.137	.064	-.321**	.052	.556**	-.095	-.005	.013	.037	1.17
Traditionalism	.020	-.113*	-.071	.116	-.047	.588**	.019	.003	-.087	.554
Political Interest	-.047	.048	-.017	.002	.035	.015	.606**	-.061	-.057	.918
Frequency of news consumption	.131	.038	.125	.004	-.026	.009	-.051	.638**	.404**	2.51**
Gender (female = 1)	.126*	-.086*	.106	.108	.007	-.042	.104	.024	.162*	1.06
Race (White = 1)	-.170**	-.019	-.017	-.009	-.092	.053	.029	-.032	-.095	.879
Family Income	.023	.007	-.161*	-.113	.048	.022	-.043	-.012	.042	.452
	.030	.109**	.068	.017	.010	-.071	.074	.126*	.066	1.02
R <sup>2</sup>	.509**	.774**	.436**	.440**	.672**	.721**	.531**	.577	.370**	pseudo R <sup>2</sup> = .152**

\* $p < .05$ , \*\* $p < .01$ , + $p < .08$  (marginal) <sup>a</sup>logistic regression, odds ratios reported

The regression models are the most conservative test of our hypotheses, because they account for potential class effects over and above the effects of any variables that covary with class choice. However, for an alternative way of testing the hypotheses, we also conducted independent-sample *t*-tests with each of the change score variables, to see if political science and psychology students differed in the amount of change they experienced between the time points. None of these tests were significant (all *t*'s < 1.43, all *p*'s > 0.15).

## Discussion

Previous research indicates that general education correlates with political attitudes and participation (e.g., Delli Carpini & Keeter, 1996). In other words, more educated people tend to vote more, follow the news more, and have more constrained political attitudes, than their less educated counterparts (Federico et al., 2012; Prior, 2010). This study supports this model in that political knowledge increased across the sample between September and November. Our data suggest that some of this learning process may be attributed to the college atmosphere in general, rather than to the specific content of a class, as those participants who were not studying politics still showed increases in knowledge.

The most consistent finding, and that which is central to our research question, is that class choice was not a significant predictor of any other variables with appropriate controls included in the models. Whether a student enrolled in a political science class or not provides no information to predict political knowledge, attitudes, or engagement. These results challenge the generalizability of findings suggesting that such students do have greater increases in knowledge and engagement than control groups do (Esaiasson & Persson, 2014; Martin et al., 2012; Pritzker et al., 2015), as such effects are not replicated in our study. Our results provide some support for accounts such as Highton's (2009), who



argues that the effects of political science classes can be attributed to psychological and demographic variables which were present prior to attending college.

Despite the consistent results across outcome variables, we acknowledge that the study has limitations. A small sample of students at a liberal arts college is not representative of college students everywhere. Moreover, a single semester in a student's first or second year of college may not be enough time to see significant changes. Interpreting null results is complicated and does not allow one to definitively rule out the possibility of finding an effect in other circumstances. Despite limitations, the current data gives us some confidence that political class content does not cause changes in knowledge, attitudes or engagement beyond those that might occur in the general college setting. It appears that most differences between political science students and others were present before taking the introductory course. Self-selection into educational experiences, due to pre-existing psychological variables, may be a more important explanation for why education correlates with political variables.

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