

## **Team A : A Political Survey of the CMU Community**

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### **Introduction**

We had many motivations for conducting our proposed project on the political attitudes of members of the CMU community. The two major questions we wanted to answer were if we could predict a CMU student or faculty member's political affiliation or election behavior based on information on their demographic, such as their race, religion, gender, age, etc. We also wanted to answer the question of how representative the CMU community's voting tendencies were of the voting tendencies of other populations in the United States.

To create our survey, we examined several existing surveys to see the nature of their results as well as any paradigms of survey methodology that are particularly effective/ineffective for political surveys. The ANES site (The American National Election Studies 2012) provided us with example survey designs/questions and their results from the past 50 years of elections. Most surveys attempt to correlate demographics with political attitudes (Gage et al. 2012) or analyze changes in political attitudes or voting tendencies over time (Marklein 2012). Other surveys, like the Harvard University Institute of Politics Survey of Young Americans' Attitudes toward Politics and Public Service (Perez et al. 2012), attempt to compare attitudes of populations during the same time frame. Our survey combines the attempt to correlate demographics with political attitudes and the IOP survey's attempt to compare attitudes of different populations at the same time.

The reason we felt that this survey was important to conduct was that this is an election year. This means people will be very interested in people's political tendencies in order to get a better idea of what the outcome of this election could be as well as how to possibly sway the votes. In addition, a lot of people consider the youth to be the deciding factor in the election, which means that many people want to know the tendencies of college students, who are often new to voting. Many also believe that there is apathy among people who have just reached voting age (Meyer et. al 2006). The information from this research could provide important insight that could give ideas of how to increase voter participation in the presidential election.

We were seeking to investigate whether several stereotypes that commonly exist about college communities hold true for CMU. We wanted to look at whether the campus appears to lean left, which is supported by the results from the Harvard study (Perez & Volpe 2012). We felt there would be differences between Faculty/Staff and Students. We thought that within students there would be differences between years--perhaps students would grow more liberal over time if the notion that schools are indoctrinating students is true. Specific to CMU we hypothesized that Tepper would be more conservative than the rest of the schools and that CFA would be more liberal.

Our findings generally support our hypotheses and were mostly unsurprising. Carnegie

Mellon leans left, with Tepper being less liberal than the rest of the school. Students were the most liberal in their social views and more moderate in economic views. There were significant differences between faculty and students as well as between colleges. There did not appear to be major differences between undergraduates of different years.

## **Methodology**

### *Sampling*

The target population is all of the students, faculty, and staff from the Pittsburgh campus of CMU. We do not intend to generalize to a greater population such as all US universities. Our sampling frame is all faculty, students, and staff that can be accessed using emails from the C-Book. We sampled every tenth person in the C-Book, skipping ineligible units such as our group members or nonhuman entries (such as CMU Emergency Medical Services). We expect to have some coverage error because C-Book does not include email addresses for everyone in our target population. However, since the vast majority of students and faculty have school-provided email addresses, we can cover most of our population using this frame. There will also be slight error due to the fact that our sampling is not a true simple random sample because not everyone had an equal chance of being sampled. For example, students with the same last name had virtually no chance of both being sampled. Additionally, human error (misspelling email addresses) could contribute to a small percentage of error.

The students chosen to be sampled were emailed a link to our online survey via SurveyMonkey. We expected a significant amount of nonresponse error due to students ignoring our email. We attempted to minimize this error by re-contacting those who did not respond to the survey after our first contact. There is also the potential for selection bias because those who feel very strongly about politics would be more likely to respond.

We are also aware of the possibility of measurement error if students are unwilling to disclose their political beliefs or perhaps even QPA. In order to minimize this error, we assured the respondents that the results will be kept anonymous. We protected their privacy by giving each respondent a unique ID number. The ID number was entered at the beginning of the survey and was only be used to keep track of who had not completed a survey in order to recontact them.

There are 10,266 units in our target population. Since many of our questions are binary, we assumed a standard deviation of .5, hoping for a margin of error of .05. In this case, we did a calculation for a sample size without replacement using the standard formula for finding a sample size  $((1.96^2) * (SD^2) / (ME^2))$ , then multiplying it by the population size and dividing that by the population size plus the calculated sample size.

$$(1.96^2) * (0.5^2) / (0.05^2) = 384.16$$
$$384.16 * 10266 / (10266 + 384) = 370$$

Because we expect a response rate of between 20% to 30%, we decided to sample about

1000 units. Sampling every tenth person in C-Book gave us 1102 people in our sample. After contacting and recontacting all 1102, we received 230 responses. We consider any survey with more than two questions unanswered a “nonresponse”, unless the respondent answer “no” to question 12 and skipped questions 13 and 14 (see Appendix A). In order to achieve our desired sample size, we resampled our population, sampling every fifth person instead. We did not recontact the second sample. In total, 308 people responded to the survey.

We utilized the technique of Anchoring vignettes for one of our questions. Anchoring vignettes help control for personal interpretation of scales. They do this by having a person rank their own behavior and then rank the behavior of several other hypothetical individuals, whose behavior falls within the range of possible ratings. For each individual their self-rating is compared to how they rated the other scenarios and adjusted. This allows for the rater to control for a person who would rate all respondents relatively low or high. We chose to use this method for our question regarding how much an individual has been following the primary. This allows us to get a more accurate idea of how much individuals are following the primaries, since it is difficult to get a standardized measure of a person’s engagement in the primary otherwise.

The survey had

- 10 demographic questions
- 11 Likert questions of which 4 were anchoring vignettes
  - The anchoring vignettes were meant to gauge the respondent’s response to the previous question “How much have you been following the Republican primaries?”
  - Other Likert questions included questions asked respondents to rate their views on economic issues on a scale from very pro-government regulation to very pro-unregulated private views on social issues from very liberal to very conservative political preferences from strong to weak central government
- 2 multiple choice
- 1 ranking in which the respondent was asked to rank the candidates in the order that he/she would vote for them
- 1 free response in which the respondent was asked to name the candidate for the Republican nomination

## **Results**

Of the 10,266 members of the CMU community we sent surveys to 1102. 169 respondents started the survey. This means our response rate is 15% before recontacting. After recontacting and sampling more members of the community we received 308 responses. We removed 20 responses because of missingness, leaving us with 288 responses to analyze. Faculty responded at a much higher rate than students (both Undergraduate and Graduate). Freshmen and Sophomores responded at a higher rate than Seniors and Juniors,

but all categories of 'Status at CMU' (Undergraduate year, Grad student, Faculty or Staff) had a sufficient number of responses that we were not concerned about one category being too sparse.

Our respondents were 60.5% male and 39.5% Female, which is close to the actual population ratio (we couldn't find this number for Faculty/Staff, but it is 63% male for students). Our respondents primarily reported themselves as being either Atheist or Agnostic, with judeo-christian religions being the next most prominent. The majority of those who took the survey were white, with Asian being the most frequent other race. 234 of our respondents were US citizens, this ratio of US citizens to international students (19%) is lower than that in reality (closer to 30%), but we felt comfortable working with this shortcoming in our data. The number of international students very closely conforms with the number of individuals who are eligible to vote (82% eligible). We wanted to see the political beliefs of those who are ineligible to vote, because we felt that they make up an important part of the CMU community. However, this did cause some problems as they were ineligible to answer several of our questions.

To compare our population data we used weighted means (procedure described below). To compare the conditional distributions of our data we primarily used anova and t-tests to compare the means across groups and demographics.

#### *Post Survey-Stratification*

Based upon the demographic makeup of our responses, we found it necessary to stratify our data. The proportion of respondents by department and the proportion of faculty vs students were both far enough away from the true population values that we felt it necessary to stratify. The stratification values and the method of stratification are included in the appendix. The values ended up being fairly extreme due to the fact that faculty responded about three times as frequently as undergraduates.

We found that there were too many departments that were reported by our respondents for us to be able to really draw meaningful findings from the responses. To account for this we grouped similar departments with one another, which led to the creation of 11 different groups (Note: one group was library staff, which had only 4 responses and comprises a very small portion of the University community, but couldn't be combined into another category).

Using this definition of area at CMU along with the distinction of being a student versus being a member of the faculty or staff we calculated 21 weights for these different categories (there was no library category for students). After calculating these weighted means we then found Taylor series estimates of the variance for each mean, which allowed us to construct confidence intervals (see appendix D).

#### *Coding Anchoring Vignettes*

We used the method of anchoring vignettes to try and get a true measure of just how much an individual was following the Republican Primaries. We had the individual rank how

much they had been following the primaries and then had to rank 4 other hypothetical individuals based on how much they thought those individuals were watching the primary (see question 20-24 in Appendix A). Based on how the respondent ranked the individuals in the given scenarios we then adjusted their self rating.

There was an intentional order to these scenarios and the majority of the respondents ranked these scenarios in the correct order. If this happened we gave the respondent their original rating. In the case that respondents did not use the order that we intended we adjusted their score based on how their ordering differed. If they ranked all the scenarios lower than we intended we lowered their personal rating. If they ranked the scenarios higher then we increased their personal rating.

### *General Findings*

The majority of our findings suggest that the Carnegie Mellon community tends to be more liberal, although the extent that this is true depends on the given variables. The majority of our respondents were Democrats (63%) with 13% being Republicans and 20% being Independents. We had variables that measured an individual's leanings in terms of their Political, Religious, Economic and Social views. In every case the respondents had more liberal answers, but Political and Economic views (3.72 and 4.00 on a 7 point scale, with 1 being very liberal and 7 being very conservative) were much more moderate than social and religious views (2.24 and 2.74 respectively).

Abortion policy was more important to Democrats than to Republicans (t.test p.value = .025, 6 vs. 4.6), as were healthcare policy (p.value = .021, 8.35 vs. 7.2), alternative energy research (p.value = .001, 7.8 vs. 5.9), employment issues (p.value = .036, 7.9 vs. 6.9), and environmental policy (p.value = .0017, 7.8 vs. 5.9). There were no other significant differences between Democrats and Republicans.

After adjusting the mean through anchoring vignettes, respondents rated themselves a 2.44 out of 4 for how intensely they have been watching the primaries. There was a significant difference between students and faculty in terms of how much they have been following the primaries (t.test  $p < .000$ ), The faculty mean is 3.0 and the student mean is 2.4, which means that faculty and staff are following the primaries more closely. Respondents in the social sciences were found to be following the primary significantly more than other majors (t.test  $p = .051$ , 2.88 vs. 2.50). Males were also found to follow the primaries more than females (t.test p value = .001 2.69 for Males, 2.33 for Females). There was no significant difference in level of following between Democrats and Republicans or other demographics.

Our respondents were asked to rank the candidates in the order that they would vote for them in this coming election, with 1 being the candidate they were most likely to vote for and 5 being least likely. Barack Obama was the clear favorite of the community with a score of 1.81. There were no significant demographic differences for favoring Obama. Mitt Romney was the second more favored candidate with a score of 3. Members of the business school favored Romney more than the other candidates (t.test  $p = .027$ , 2.48 vs 3.07), no other significant demographic differences were found. Ron Paul was the next most favored

at 3.16. Students favored Ron Paul significantly more than faculty (t.test p-value=.005, 3.17 vs 3.74). An Anova test found that the support for Ron Paul varied by department (p.value =.014). The most significant difference between majors was between Arts and CS majors-- arts majors favored Paul much less than those in CS IS (2.97 vs 3.89, t.test p value=.0049). Newt Gingrich received a 4.23 (there were no significant demographic effects) and Santorum was the least favored candidate with a score of 4.71 (again, no significant demographic effects).

We found that survey takers felt that the US Education System was somewhat ineffective at preparing students for college and the workforce (2.34 out of 5 scale of effectiveness, with 204 of the values falling between very ineffective and moderately ineffective). The only significant demographic difference for this variable was that arts majors were slightly more likely to feel that the education system was slightly more effective than other majors (t.test p.value = .043, 2.8 vs 2.4). Respondents also felt that there was insufficient research being done on Alternative Energy (1.91 out of 5). There were no significant demographic differences for this variable.

Finally, we asked our respondents to rank which political issues were the most important to them from a list of major issues. Healthcare was the most important (7.97 out of 10), then education (7.97) and the national debt (7.92). These values were closely followed by Unemployment issues, science and technology research, foreign policy, environmental issues and alternative energy research. The remainder of the variables ranked as only moderately important, with the legalization of drugs being the least important. A full list of the variables means as well as confidence intervals can be found in Appendix D.

#### *Comparison to the US Population*

We examined our coded responses and compared them to those of the Spring 2012 Harvard University Institute of Politics (IOP) survey. Some of the questions it asks are similar to ours, but its results are aggregated in two groups: 18-29 year olds, and the subset of those that are in a 4-year college. A statistical analysis was not possible due to time constraints, but our results were overall similar in most categories, and more similar to those of 4-year college students than the entire age range:

In the 2012 IOP survey, Obama is described as being ahead of Romney and is predicted to be re-elected in the upcoming election. In our survey, Obama was the clear winner, with a higher proportion in favor of Obama than in the IOP survey.

Issues from the IOP Issues Matchup Chart reflected views similar to ours. The chart matches issues against each other issue and details the percentage of how often the issue in each row was rated as more important than the issue in each column. The breakdown roughly resembles our prioritization, with less emphasis on education and a higher emphasis on education.

The top issue in the IOP was the economy, and our results do not contradict this with the respondents' rankings of employment and financial worry, as well as the importance of national debt and employment issues. Similarly, education is ranked lower in the IOP.

The overall mood of the generation is described as sour, but improving. Our measurements of worry and effectiveness would indicate agreement with this result.

## Discussion

We see this survey as serving two large purposes--letting us get an idea of the CMU community's political informedness and their leanings. Both of these questions seem to be answered to some extent by the data we have received. There are some concerns that exist about the representativeness of our sample. Undergraduates, specifically, freshmen and sophomores, are overrepresented in our respondents. We did not see large differences in our results between these categories however, so we felt that the stratification by department and faculty vs student was sufficient.

From the results that we have received our community members tend to be more on the liberal end of the scale in a number of measures including self rated party identification and candidate preference. For example, we see that 63% of members of the community self identify as Democrats, though they tended to consider themselves more moderate on political and economic issues than in social and religious issues, where they tended to rank themselves as more liberal. Attitudes towards the government are generally pessimistic and the majority of our respondents do not feel like the government is doing enough to serve them effectively. Additionally respondents did not tend to think of themselves as particularly well informed of the current primaries or political race. Students were significantly less likely to be following the primaries than were faculty and staff and, interestingly, women believed themselves to be following the primaries less than did men. It is interesting that women are not at least equally as likely to be following the elections as men, especially with the somewhat heavy emphasis of late on women's issues. This could point to a disconnect between women and the methods by which political candidates interact with Americans.

We measured the issues that individuals felt were most important and found health care policy, education, and the national debt to be the most important issues. The least important issue by far was Marijuana legalization. However, Democrats were more likely to find healthcare, abortion, employment, environmental policy, and alternative energy to be important than did Republicans.

Though there did tend to be some adherence to stereotypical beliefs (such as the campus being more liberal as a whole), we also found that the differences between students and schools within CMU were less extreme than initially believed.

One area where our survey is very strong is in its breadth, it covers a lot of topics and gives a broad picture of the political landscape of CMU. Because of this there is a definite tradeoff

in terms of depth--we do not investigate enough issues in enough detail and some of the questions may capture different ideas because these large concepts can be interpreted various ways. However, even without this depth, we are able to find similar results to larger studies performed (Perez & Volpe 2012), as well as some interesting results that seem to be somewhat unique to the Carnegie Mellon campus.

We believe that the results of this survey will help to reveal which issues are most important to the students at Carnegie Mellon as well as pointing out some statistically significant trends in voter beliefs and interests that may be generalizable to the public or to members of other college campuses.

## References

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## Appendix

### A. Questionnaire

#### Background Questions:

1. What year were you born?
  - a. (drop down with 1900-2005)
2. Please specify your race/ ethnicity (check all that apply):
  - . American Indian
    - a. Asian
    - b. Black or African American
    - c. Native Hawaiian or Other Pacific Islander

- d. White
  - e. Hispanic and/or Latino
  - f. Other (please specify)\_\_\_\_\_
3. What is your religious affiliation? (randomize order on survey)
- . Catholic
    - a. Protestant
    - b. Jewish
    - c. Muslim
    - d. Atheist
    - e. Agnostic
    - f. Buddhist
    - g. Unitarian/ Universalist
    - h. Hindu
    - i. Other (please specify)\_\_\_\_\_
4. What is your gender?
- . Male
    - a. Female
    - b. Other
5. What is your primary major/ department? (If you are a student, choose the department which represents most closely your primary major. If you are faculty or staff, choose the department of your primary appointment.)
- . (Drop down list of possibilities with "other" to write in)
6. What is your current status at CMU?
- . 1st year undergraduate student (freshman)
    - a. 2nd year (sophomore)
    - b. 3rd year (junior)
    - c. 4th year (senior)
    - d. 5th + year
    - e. Master's Student
    - f. PhD Student
    - g. Post Doctoral student
    - h. Faculty/teaching
    - i. Staff/administration
7. What is your approximate GPA? (students only)
- . (drop down with 2 digits)
8. Are you a US Citizen?
- . Yes/No
9. In which US state have you spent the majority of your life?
- . (drop down with US states, and a choice of outside the US)
10. How often have you worried about financial issues in the past year (think of tuition, housing costs, travel, etc...)?
- 
- Daily                      Occasionally                      Never

11. How often have you worried about employment issues in the past year (think of post graduate employment, job security, etc...)?

Daily                      Occasionally                      Never

Political Questions:

12. Are you eligible to vote in the US?

a. Yes/No

13. (If you answered yes to 12) Have you previously voted in a US presidential election?

. Yes/No

14. (If you answered yes to 12) Who did you vote for in the 2008 presidential election?

. Abstained from voting

a. Barack Obama

b. John McCain

c. Ralph Nader

d. Other (please specify)\_\_\_\_\_

15. What political party do you most strongly associate with?

. Democrat

a. Republican

b. Independent

c. Green Party

d. Other (please specify)\_\_\_\_\_

16. Where on the following scale would you place your political preferences?

Strong                      Moderate                      Weak  
central- government                      central-government

17. How much do your religious views impact your everyday life?

Not at                      Moderate                      Very  
all                      much

18. Where on the following scale would you place your economic views?

Very                      Moderate                      Very  
pro-government regulation                      pro-unregulated private

19. Where on the following scale would you place your views on social issues (such as abortion, gay marriage, immigration, gun control, etc)?

                   

Very socially liberal                      Moderate                      Very socially conservative

20. How much have you been following the Republican primaries?

       

Not at all   A little   Some   A lot

(randomize order of and names contained in the following four anchoring vignettes).  
Answer choices are:

       

Not at all   A little   Some   A lot

21. Tom has watched the majority of the Republican debates and actively follows election news by reading articles every day. How would you rank the amount that Tom has been following the Republican primaries?

22. Betty reads articles about the candidates about once a week, knows the major issues, and has watched one or two of the Republican debates. How would you rank the amount that Betty has been following the Republican primaries?

23. Bob knows the candidates' names, and has heard a little bit about the issues, but hasn't watched any debates and does not keep up to date with the political news. How would you rank the amount that Bob has been following the Republican primaries?

24. Susy doesn't know who's running for the Republican party or what the major issues are. How would you rank the amount that Susy has been following the Republican primaries?

25. List the candidates who are currently in the running for Republican nomination.

a. open answer

26. Rank the following candidates in the order you would vote for them in the 2012 presidential elections if given the chance: If you are not planning on voting, do not rank any.(order randomized for each survey)

. Barack Obama

a. Rick Santorum

b. Mitt Romney

c. Newt Gingrich

d. Ron Paul

e. Other\_\_\_\_(please specify)

27. How effective do you feel the US Public K-12 Education System is at preparing students to attend college and enter the workforce?

Not Very                                      Moderately                                      Very
   
 Sure Ineffective                                      Effective                                      Effective

28. How do you feel about the state of alternative energy research (e.g. solar, wind, geothermal, biofuel)?

                    
  
 Not Sure   Poor                                      Adequate                                      Excellent

29. How representative of the average person do you think the interests of Congress are?

                 
  
 Not Very                                      Moderately                                      Very
   
 Representative                                      Representative                                      Representative

30. How would you rank the importance of each of the following issues on a scale from 1 to 10 with 10 being the most important. If you do not feel an issue is important, mark it as 0. (order randomized in survey)

- a. Abortion/ contraception policy
- b. Health care policy
- c. Same-sex marriage
- d. War in the Middle East
- e. Immigration policy
- f. Web Censorship policy
- g. Education Reform
- h. Separation of church and state
- i. Military Spending
- j. Alternative energy research
- k. Environmental policy
- l. Drug law (decriminalizing or legalizing marijuana)
- m. Employment/Unemployment issues
- n. Foreign Policy
- o. Government spending/ National Debt
- p. Scientific/ Technical Research

**B Contact Letters**

Original Email Request

Hello (First Name) ,

We're students in 36-303 (Sampling, Surveys, and Society) and we're conducting a brief survey about politics and the CMU community. You have been randomly selected from the CMU community to take our survey. We'd really appreciate your response and it will only

take a few minutes. Your responses will be kept confidential and will not be linked to your name. You can access the survey at:  
<https://www.surveymonkey.com/s/CMUCommunityPolitics> Thank you again for your time and consideration.

At the start of the survey, please enter your ID Number. This information is not linked to your name and only is used to track responses to the survey. If you have any questions please contact us by replying to this email or email our Professor, Brian Junker, at [brian@stat.cmu.edu](mailto:brian@stat.cmu.edu)

Your ID # is: (ID number)

Sincerely,  
Dev Doshi, Emily Gehrels, Will Weiner, Crystal Wray and Pavan Yalamanchili

#### Recontact Email

Dear (Student),

We recently sent you an invitation to participate in a brief survey for 36-303 (Sampling, Surveys, and Society). We would really appreciate if you could take a few minutes to respond. You can access the survey at:  
<https://www.surveymonkey.com/s/CMUCommunityPolitics> Thank you again for your time and consideration.

At the start of the survey, please enter your ID Number. This information is not linked to your name and only is used to track responses to the survey. If you have any questions please contact us by replying to this email or email our Professor, Brian Junker, at [brian@stat.cmu.edu](mailto:brian@stat.cmu.edu)

Your ID # is: (ID number)

Sincerely,  
Dev Doshi, Emily Gehrels, Will Weiner, Crystal Wray, and Pavan Yalamanchili

#### **C Informed Consent Statement**

Thank you for taking our survey! This should only take a few minutes and will provide valuable information about the political makeup of CMU in this election year.

Participation in this survey is voluntary and you may quit at any time.

#### **D Results and Analysis**

Table 1: Demographic Information

<b>What Year Were You Born</b>	
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Mean	1982
Median	1988
Std Dev	14.1
<b>Race/Ethnicity</b>	
American Indian	1
Asian	64
Black	9
Hispanic	9
Mixed	8
White	197
<b>Religion</b>	
Athiest/Agnostic	129
Catholic	36
Christian	9
Protestant	43
Unitarian/Universalist	2
Hindu	13
Jewish	23
Mormon	2
Muslim	2
None	14
Other	5
unknown	10
<b>Gender</b>	
Male	173

Female	113
Male %	60.50%
Female %	39.50%
<b>Department</b>	
Arts	43
Business	30
CS	49
Engineering	65
HCI	4
IS	16
Libraries	2
Sciences	42
Social	27
Statistics	6
unknown	4
<b>Status</b>	
Freshman	40
Sophomore	44
Junior	23
Senior	26
Fifth Year	1
Masters	46
PhD	33
Post Doc	4
Faculty	64

Staff	4
<b>GPA</b>	
Average	3.49
St.dev	0.45
<b>US Citizen</b>	
Yes	234
No	52
<b>Political Party</b>	
Democrat	158
Republican	35
Independent	50
Green	7
Other	17
None	16

Table 2: Sample Weight Calculations

	Faculty /Staff (sample )	Prop	Faculty/Staf f (population)	Prop	Faculty /Staff Weights	Student (sample )	Prop	Student (population )	Propo	Student Weight s
IS	2	0.67 %	4	0.03 %	0.04736 6	15	5.02%	285	2.26%	0.449
Engineerin g	11	3.68 %	178	1.41 %	0.38323 7	56	18.73 %	3319	26.29 %	1.403
Sciences	15	5.02 %	249	1.97 %	0.39314 1	25	8.36%	1019	8.07%	0.965
CS	12	4.01	242	1.92	0.47761	40	13.38	1308	10.36	0.774

		%		%	1		%		%	
Business	7	2.34 %	168	1.33 %	0.56839 6	24	8.03%	2542	20.13 %	2.508
Arts	10	3.34 %	286	2.27 %	0.67733 9	36	12.04 %	2185	17.31 %	1.437
unknown	4	1.34 %	4	0.03 %	0.02368 3	1	0.33%	1	0.01%	0.023
Social	8	2.68 %	77	0.61 %	0.22795	21	7.02%	443	3.51%	0.499
HCI	1	0.33 %	35	0.28 %	0.82891 1	3	1.00%	121	0.96%	0.955
Libraries	2	0.67 %	5	0.04 %	0.05920 8	N/A	N/A	N/A	N/A	N/A
Statistics	1	0.33 %	30	0.24 %	0.71049 5	5	1.67%	124	0.98%	0.587

Table 2: Weighted Sample Means

The weights were calculated using the above formulas. The variance was then calculated using the time-series method and code provided by Professor Junker for class. The confidence intervals were then calculated based on our variance and sample size information

Variable	Weighted Mean	Variance (TS)	95% CI(Lower)	CI(Upper)
Financial Worries	4.26	0.04	4.2369011	4.283099
Employment Worries	4.33	0.035	4.3083930	4.351607
Eligible to Vote	82.42%	0.22%	81.88%	82.96%
Political Views (Scale of 1 to 7, 1 meaning very liberal, 7 meaning very conservative)	3.72	0.0077	3.7098654	3.730135
Religious Views	2.74	0.06	2.7117098	2.76829
Economic Views	4	0.021	3.9832633	4.016737
Social Views	2.24	0.022	2.2228694	2.257131
Following Primaries	2.44	0.012	2.4273482	2.452652

Obama (Scale of 1 to 6 in order of voting preference)	1.81	0.029	1.7903320	1.829668
Santorum	4.71	0.022	4.6928694	4.727131
Romney	3	0.035	2.9783930	3.021607
Gingrich	4.23	0.036	4.2080865	4.251913
Paul	3.16	0.041	3.1366142	3.183386
Other	3.15	0.014	3.1363345	3.163665
Education (Scale from 1 to 10; from low to high importance)	2.34	0.012	2.3273482	2.352652
Energy	1.91	0.0067	1.9005464	1.919454
Congress	1.9	0.0052	1.8916716	1.908328
Abortion	5.57	0.21	5.5170739	5.622926
Health Care	7.99	0.081	7.9571298	8.02287
Same Sex Marriage	5.61	0.24	5.5534196	5.66658
War in middle East	6.77	0.038	6.7474860	6.792514
Immigration Policy	6.01	0.079	5.9775381	6.042462
Web Censorship	5.33	0.2	5.2783494	5.381651
Education	7.97	0.075	7.9383706	8.001629
Separation of Church and State	6.2	0.41	6.1260476	6.273952
Military Spending	6.68	0.076	6.6481604	6.71184
Alternative Energy	7.14	0.047	7.1149614	7.165039
Environment	7.28	0.074	7.2485822	7.311418
Drugs	4.72	0.15	4.6752693	4.764731

Employment	7.83	0.017	7.8149414	7.845059
Foreign Policy	7.57	0.061	7.5414750	7.598525
Spending and the Debt	7.92	0.059	7.8919465	7.948053
Science and Technology	7.78	0.078	7.7477442	7.812256

Table 3: Statistical Tests

Test	Test	p-value	Interpretation
Social Views by Department	Anova	0.49	
Social Views by Status	Anova	0.56	
Social Views by Gender	t.test	0.31	
Following Primaries by Department	Anova	0.36	
Following Primaries by Status	Anova	0	
Following Primaries Social Sciences vs Not Social Sciences	t.test	0.05	Social Science Students Follow more (0,.76)
Following Primaries (Students vs Faculty/Staff)	t.test	0	Faculty Following More Difference(.36,.83)
Following Primaries (Gender)	t.test	0.001	Males Following More difference (-.57,-.14)
Favor Obama by Status	Anova	0.13	
Favor Obama by Department	Anova	0.12	
Favor Obama by Gender	t.test	0.78	
Favor Santorum by Department	Anova	0.48	
Favor Santorum by Status	Anova	0.23	
Favor Santorum by Gender	t.test	0.84	
Favor Romney by Business vs Non-Business	t.test	0.027	Business favor Romney (-1.12,-.07)

Favor Romney by Status	Anova	0.4	
Favor Romney by Gender	t.test	0.54	
Favor Gingrich, Business vs Non Business	t.tes	0.12	Business favor Gingrich (-.04,1.16)
Favor Gingrich Status	Anova	0.39	
Favor Gingrich by Gender	t.test	0.7307	
Favor Paul by Major	Anova	0.014	
Favor Paul (CS/IS vs Arts)	t.test	0.0049	CS/IS Favor Paul (-1.54,-.289)
Favor Paul Status	Anova	0.072	
Favor Paul Faculty vs Students	t.test	0.0051	Students Favor Paul over Faculty(.188,1.03)
Favor Paul by Gender	t.test	0.87	
Education Views by Major	Anova	0.42	
Education Views by Status	Anova	0.14	
Education by Gender	t.test	0.066	Males think education is worse than Females(-.017,.537)