

Speak to Us: How to Get Millennials to Vote

by  
Gabriel Shepherd

A THESIS

submitted to  
Oregon State University  
Honors College

in partial fulfillment of  
the requirements for the  
degree of

Honors Baccalaureate of Science in Industrial Engineering  
(Honors Scholar)

Presented May 30, 2018  
Commencement June 2018

## AN ABSTRACT OF THE THESIS OF

Gabriel Shepherd for the degree of Honors Baccalaureate of Science in Industrial Engineering presented on May 30, 2018. Title: Speak to Us: How to Get Millennials to Vote

Abstract approved: \_\_\_\_\_

Christopher Stout

It is often noted that young adults tend to be apathetic towards involvement in the political process. The aim of this study is to scratch the surface of this phenomena and, in a scientific fashion, begin to discover if this can be changed. In the study, press releases from members of the House of Representatives are analyzed and the topics of these press releases (Environmental Issues, Education, and Social Justice) are compared to the turnout of young, Millennial voters. Using computer software (Excel, R, and Stata) and a regression analysis it was determined that voters age 18 – 38 see an increase in voter turnout the more a representative speaks about Environmental Issues. The same is true for 18 year old voters and Education.

Key Words: voting, Political Science, Millennials, elections, environment, education, social justice

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I understand that my project will become part of the permanent collection of Oregon State University, Honors College. My signature below authorizes release of my project to any reader upon request.

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Gabriel Shepherd, Author

# **Speak to Us: How to Get Millennials to Vote**

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## **Abstract**

It is often noted that young adults tend to be apathetic towards involvement in the political process. The aim of this study is to scratch the surface of this phenomena and, in a scientific fashion, begin to discover if this can be changed. In the study, press releases from members of the House of Representatives are analyzed and the topics of these press releases (Environmental Issues, Education, and Social Justice) are compared to the turnout of young, Millennial voters. Using computer software (Excel, R, and Stata) and a regression analysis it was determined that voters age 18 – 38 see an increase in voter turnout the more a representative speaks about Environmental Issues. The same is true for 18 year old voters and Education.

## Introduction

Young voters have the lowest turnout among any age group in America. In 2014 the Census Bureau (CB) released a report that documented voter turnout amongst the voting age population for presidential elections from 1964–2012. Even with just a cursory glance it is easy to see that, while young voters have been trending more towards one side of the political spectrum, their turnout rates have been dropping tremendously. In 1964 the turnout for voters 18-24 was at 50.9%.<sup>1</sup> The trendline ends in 2012 with only 38.0% of their youngest category of voters turning out to vote. All of this can be compared to other age groups during the same time-period. For 2012, that same CB report has those age 25-44 at 49.5% turnout, 45-64 at 63.4%, and 65 and older at 69.7%. Those age 18-24 turned out at the lowest rate for the entire graph. If the turnout is instead calculated from registered voters, the numbers are slightly higher but not too much better: 18-29 (45.0%), 30-44 (59.5%), 45-64 (67.9%), 65 and older (72.0%) (File, 2014).

A second comprehensive CB report released after the 2016 election tells a similar story. This report states that voters age 18-29 had a 46.1% turn out rate in 2016. This is a 1.1% increase on the 45.0% the same age group turned out in 2012. Interestingly, this age group was the only group with an increase between the two elections. However, they still lagged far behind the other age groups. 30-44 year olds turned out at a rate of 58.7%, 45-64 year olds at 66.6%, and 65 and older at 70.9% (File, Voting in America: A Look at the 2016 Presidential Election, 2017).

Today's young voters are the Millennial age group, defined by this paper as those born from 1980-2000. There are at least three reasons this demographic is important. First, there is a mythos surrounding young voters. They are the mythical, typically untapped, voting bloc that is

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<sup>1</sup> As one might recall, the federal voting age did not drop from 21 to 18 until 1971, so realistically that turnout statistic was mostly for those age 21-24. When the trendline approached 1971 the line dropped, adding in new voters age 18, 19, and 20 who had just received their right to vote.



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the voice of tomorrow. To win the vote of the future sounds appealing and is a good pitch for any candidate. Second, Millennials are the fastest growing voting demographic in America and are expected to pass Baby Boomers, the current largest generation, by 2019 (Fry, 2018). This will create a large and powerful voting bloc for candidates who can tap it. Third, Millennials have been particularly reliable for Democratic candidates. Young voters backed Hillary Clinton by a 55% to 37% rate in the 2016 presidential election and President Obama at a 60% to 37% rate in the 2012 election (Galston & Hendrickson, 2016). In fact, the Center for Information & Research on Civic Learning and Engagement (CIRCLE) suggests that the Democratic nominee Hillary Clinton's performance among young voters kept some key states (Nevada, Michigan and New Hampshire) competitive in 2016 (CIRCLE, 2016). Moreover, even a small increase in Millennial voting in key states across the country would almost certainly have changed the results of the 2016 presidential election and elected Hillary Clinton.

If it is true that the Millennial voter bloc is the fastest growing voter demographic, and if it is true that Millennial voter turnout is so low, the question becomes: how does a candidate get out the vote of this important and powerful group? Dr. Martin Wattenberg covers the topic of young voter turnout in his 2002 book *Where Have All the Voters Gone?* In his chapter about "The New Generation Gap" he states the following:

"As long as young people have low rates of participation in the electoral process, then they should expect to be getting relatively little of whatever there is to get from government. Yet until they start showing up in greater numbers at the polls, there will be little incentive for politicians to focus on programs that will help them...why should [politicians] worry about young nonvoters..." (Wattenberg, 2002, pp. 98-99).

He goes on to describe the relationship between political candidates and young voters as a relationship of neglect (Wattenberg, 2002). Wattenberg seems to be describing a self-perpetuating cycle that says, since young voters don't turnout, politicians won't talk about their

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issues, since politicians won't talk about or promote any programs for young demographics, they have little incentive to turnout.

It seems that any candidate that can get Millennials to turn out at the same rate as older voters, or suppress Millennial voter turnout even more, may just swing most any election in their favor. This is where this paper steps in: how to get Millennial voters to turn out.

If the importance of the Millennial vote is established and the goal of a candidate is to encourage Millennial voter turnout, how does a candidate do so? The answer: not easily. These series of studies confirm a universal knowledge in politics: younger voters turn out at consistently lower rates than older voters. However, if a politician specifically targets the issues that Millennial voters care about the most, to break Wattenberg's cycle, perhaps that would increase these dreadful turnout numbers.

The broad hypothesis is that the more that a member of Congress talks about an issue that Millennial voters support, shown through their press releases, the greater the Millennial voter turnout will be in their district. This paper will be focusing on three major categories that contain specific issues: Social Justice, Environmental Issues, and Education. A candidate does not have to be in support of an issue for it to be counted as talking about an issue. For example, a representative denying climate change would still be classified under Environmental Issues.

The press release data type was chosen since press releases can be considered to be an unbiased (no *media* bias) source of a representatives' views on certain issues (Druckman, Kifer, & Parkin, 2009). These press releases give us insight into how a representative thinks and the policy issues that they care about. It is also reasonable to assume that press releases would be a predictor for what the representative says in speeches, at rallies, and on the campaign trail; times when a voter is more likely to hear candidates' positions. This is because representatives have

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complete control of what they discuss in their press releases. Therefore, the issues they highlight are issues that they deem important and would likely surface in other venues as well (Militia et. al., 2014).

Each of the categories was made up of smaller, more specific issues. The Environmental Issues category includes press releases related to green energy, climate change, fossil fuels, and wilderness preservation. The Education category includes press releases related to funding for higher education, college debt, and educator's pay. Finally, the Social Justice category includes press releases related to civil rights, LGBTQ rights, abortion rights, and economic inequality.

Press releases were scraped from the websites of members of the 114<sup>th</sup> Congress. They each were coded to denote that they belonged to one of the three broad categories, "1", or not "0". A regression analysis was then run, controlling for potentially interfering factors such as partisan lean of district and ethnicity or gender of the voter. The results of the regression analysis showed a connection between Environmental Issues and Millennial voter turnout, a connection between Education and turnout for traditionally college age Millennials, and no correlation between Millennial turnout and Social Justice. These results seem to imply that Millennials have some core issues (Environmental Issues and Education) that, if spoken to, can increase the turnout of this powerful voter block.

## Literature Review

When the premise of the study, examining press releases and comparing them to turnout data, was solidified the question then became what topics and press releases would be examined. Essentially, what issues are thought to motivate Millennials. I started by establishing some common generalizations, whether true or not, that are often made about Millennials: they are social justice warriors, they want college to be free, and they believe everything should be easy and given to them. From there, I then looked at studies, reports, and polls to see if there was any hard data that backed up any of these claims. What I found generated three hypotheses about Millennials attitudes toward the world and what issues that would likely motivate them.

First, it was found that Millennials care greatly about climate change and other environmental issues. Second, Millennials seem to believe that racial, economic, and social inequality are important social justice issues. Third, Millennials have a stake in the education market and are highly interested in funding education and making it cheaper. The next few pages will examine each hypothesis in greater detail.

When it comes to climate change, it seems that Millennials believe in its validity and advocate for change. In an extensive report compiled by Pew Research Center in March of 2018, Millennials<sup>2</sup> had the highest percent of people (81%) out of any other generation believe that there is “solid evidence of global warming.” They also had the highest number (65%) believe that it was caused by human activity. This trends downwards as age increases until it reaches the Silent generation<sup>3</sup> of whom 63% say there is solid evidence for global warming and 40% say it is

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<sup>2</sup> Pew Research Center defines Millennials as those born from 1981 through 1996

<sup>3</sup> Pew Research Center defines the Silent Generation as those born from 1928 through 1945

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caused by human activity (Pew Research Center, Mar 2018). An instinctual question forms: does this strong Millennial belief in climate change and its human origins translate into policy views?

Another earlier report released by Pew in January of 2018 says that it does. Pew found that global climate change was a policy priority (56%) for those age 18-29 and (51%) for those age 30-49. This was in comparison to the 37% of older adults age 65+ who thought global climate change was a policy priority. This means that the older-younger spread is 19 points, the highest of all of the policy priorities and, according to Pew, the only priority where the percentage of younger voters is significantly higher than that of older voters. (Pew Research Center, Jan 2018)

Why might Millennials see global warming as such an important issue? It makes sense that Millennials would care more about the environment and the planet since they are likely to live on it the longest out of any voting age group. This belief gap might also spawn from somewhere deeper in the psyche, an educated and more science oriented mind. Millennials seem to be on track to become the most educated generation ever (Fry, Igielnik, & Patten, 2018) and, as established before, one of the most Democratic leaning generations. Both these factors are predictors for a high and strong beliefs in the effects of climate change (Funk, 2017).

The second hypothesis suggested that social justice might be a motivating factor for Millennials to vote. This includes issues such as racial and economic inequality, abortion rights, and marriage rights. According to the March Pew report Millennials had the highest percent of any generation agree that “our country needs to continue making changes to give blacks equal rights with whites” at 68%. This only dropped 7 points to 61% among specifically white millennials. They also had the highest percentage agreeing with the statement that “racial discrimination is the main reason why many black people can’t get ahead these days” at 52%.

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This was the only generation with a majority responding in agreement and is a massive 24 points above the Silent generation's responses. (Pew Research Center, Mar 2018)

Millennials also agreed the most with the statement that “immigrants today strengthen our country because of their hard work and talents” at 79%, 13 points higher than the next youngest generation. Millennials also have the highest number of people “favor allowing gays and lesbians to marry legally” with 73% responding in favor. This is an 8-point difference with the next youngest generation and a 32-point spread from the oldest. Lastly, Millennials lead the pack again, this time only slightly, in saying that “abortion should be legal in all/most cases” (62%) (Pew Research Center, Mar 2018).

Why do Millennials feel this way about social issues? The answer to that large question isn't definitive and might be found in a range of issues. Many Millennials came of age during an era of reform and of change in America. They became politically conscious during a time when a black man was running against a woman for the first major party nomination of either demographic. One argument is that social justice and equal rights are engrained in those who came of age with a black man as president. Another argument might be found in the increasing polarization of our time. It was established earlier that Millennials lean strongly Democratic or at least liberal. It may be that they have simply taken on the views that their side of the political spectrum has with their whole heart.

The last hypothesis relates to Millennials, the American school system, and the rising price of higher education. Millennials are a generation riddled with debt. According to a poll by GenForward only 22% of those age 18-34 report having no personal debt. That number is tiny. It is also significantly less than the 36% that report having student loan debt (GenForward, 2018). As mentioned before Millennials are on track to be the most educated generation ever and, with

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high college prices, that is going to cost. Another GenForward report from 2017 shows just how strongly Millennials currently feel about higher education. The report states that 50% of adults age 18-34 strongly support free tuition at public colleges and 28% somewhat support it. This is a staggering 78% supporting the idea (GenForward, 2017).

None of this should come as a shock after the 2016 presidential election. Sen. Bernie Sanders' campaign for the Democratic nomination drew massive support from young voters with one of his core tenants being free public, higher education. Education is a personal issue for many Millennials, one that has both tangible and intangible costs attached.

All these opinions and all these polls point towards what could be considered a generational consciousness. In essence, they suggest that Millennials have core issues as a generation, even sometimes across the political spectrum, that they believe in fervently. Even Millennial Republicans and Millennials who lean Republican say that climate change is having some effect on The United States (59%) and their local communities (45%). This is 11 and 12 points higher, respectively, than the Boomer and older generations (Funk & Hefferon, 2018). Over and over throughout the data, one can see that Millennials are differentiating from other generations, even from the close in age and similarly minded Generation X. They seem to be carving out a space for themselves in the realm of environmental management and social justice issues as well as leading an ideological shift in how the country views education.

One possible explanation for this consolidation of ideas and in-group feeling of Millennials is rampant discrimination and condescension that are prevalent in conversations and news media. You need not look far to find articles that disparage Millennials. The words lazy, narcissistic and delusional, occur often. They are mocked and called the "Me Generation" and disparaged for what others see as a self-centered attitude and lackadaisical approach toward work

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and effort in general. When a group is targeted as much as this, a bond can be formed. This shared suffering can create a consciousness and, if left unchecked, potential in group and out group thinking and behavior.

Feeling like you're part of the in group can also apply to how a person views a representative. This study embraces that idea and expands upon it, developing the argument for a generational consciousness for Millennials and theorizing that when representatives tap into this consciousness, whether in support of it or against it, Millennials voters will be more driven to vote.



## Hypotheses

### Social Justice

H<sub>0</sub>: A representative releasing press releases pertaining to Social Justice has no discernable effect on Millennial voter turnout in their district.

H<sub>1</sub>: A representative releasing press releases pertaining to Social Justice increases Millennial voter turnout in their district.

### Environmental Issues

H<sub>0</sub>: A representative releasing press releases pertaining to Environmental Issues has no discernable effect on Millennial voter turnout in their district.

H<sub>1</sub>: A representative releasing press releases pertaining to Environmental Issues increases Millennial voter turnout in their district.

### Education

H<sub>0</sub>: A representative releasing press releases pertaining to Education has no discernable effect on Millennial voter turnout in their district.

H<sub>1</sub>: A representative releasing press releases pertaining to Education increases Millennial voter turnout in their district.

## **Data Collection and Analysis**

This project required an excessive amount of press releases to be gathered from the websites of members of the House of Representatives. To collect these press releases, the website of each member of Congress had to be manually accessed and the URL of their press releases page had to be retrieved. It was then run through WebHarvy, a scraping algorithm. This algorithm retrieved information that contained the member of Congress, their state and district, the date the statement was released, and the text of the statement itself.

These were all saved in a comma delimited file that was opened in Microsoft Excel. After over 43,781 statements were retrieved and moved into individual Excel files, operators manually cleaned the data.

The cleaning process involved restructuring the text data so that it could be read and coded by R. This process was long and involved multiple steps for each individual representative. The step by step process is included in Appendix A.

Once all the text was cleaned and the press releases were organized, I then copied all the rows of press releases and then pasted them into a master file. This master file contained all of the press releases from all of the representatives and had columns that include the representative's name, their state, their district, the press release, the press release title, and the day the release was published.

The next step in the process was the binary coding of the press releases. Each press release from the master document was given a randomly generated seven-decimal number that ranged from 0.00 to 1.00. These were used to randomize the order of the press releases and were sorted in ascending order. I then coded 1,500 press releases, starting from the lowest numbers.

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I would then read the first 150 words of the press release and decide if it fit with any of the three categories. I chose to use the first 150 words of the press releases, over the entire press release or just the title, because it sat well in the middle of the two other options. Using the first 150 words instead of the entire press release reduced the amount of excess words that were not related to any of the categories that could have confused the algorithms that were used to code the rest of the data. I chose to use a larger amount of text than just the title because I felt like there was a chance that a short enough title would not have enough key words to trigger the coding algorithms. I chose the specific number of 150 because it is a good, round number and a press release should have conveyed most, if not all, of its main points before the 150-word mark.

All three of the examined categories (Social Justice, Environmental Issues, and Education) were broad and encompassed many different issues and multiple viewpoints. For example, the Social Justice contains press releases related to LGBTQ rights, civil rights, economic inequality, and abortion (both pro-life and pro-choice statements). Environmental Issues included press releases about renewable resources, fossil fuels, and climate change. These included statements both affirming and denying climate change, as well as statements lauding and condemning both fossil fuel companies and renewable resources. The final issue of Education encompassed both primary and secondary education. Any time student loan debt, teacher salary, or school quality was mentioned, the release was considered to pertain to Education.

If I believed that the press release related to a category they would put a “1” in that category’s column. If it did not, I would put a “0”. For example, if a press release talked about an upcoming town hall in the district, all of the columns would have “0”; however, if the press release mentioned a new bill the representative sponsored devoting funding to clean energy

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research it would have a “1” in Environmental. Press releases could have a “1” in multiple categories, for example talking about providing equal access to higher education for disadvantaged youth could be considered both Education and Social Justice.

Some examples are as follows. On April 28<sup>th</sup> in 2016, Rep. Goodlatte from VA-6 released a statement referring to undocumented immigrants and Immigration and Customs Enforcement (ICE). This statement contained keywords for the Social Justice category such as “criminal aliens” & “ICE” that key the reader into the Immigration subcategory of Social Justice. A currently hot topic. From the other side of the aisle Rep. Crowley from NY-14 released a statement on May 2<sup>nd</sup>, 2016 that also dealt with immigration. His statement included key phrases such as “Temporary Protected Status” that allow the reader to understand the fact that it references immigration.

For Environmental issues, Rep. Flores of TX-17 released a statement on September 17<sup>th</sup>, 2015 that contained words and phrases such as “oil”, “crude oil”, and “energy”. The prevalence of these words in this release makes it an easy one to identify as pertaining to Environmental Issues. Another, less easy release is a release from Rep. Pallone of NJ-6 from December 18<sup>th</sup> of 2015. Pallone’s release included phrases such as “Free Waters” implying that there was cleaning and maintenance of waters involved, “Energy” which is a common key word for environmental issues, and “environment”, a word that speaks for itself.

Education examples are a little more straightforward with their keywords. One release from Rep. Reed of NY-23 from February of 2016 is filled with phrases and words such as: “cost of college”, “student loans”, “Unfair Costs of Education”, “college costs”, “school”, and “tuition”. All these phrases have direct links to the Education category. Another, simply understood press release would be one by Rep. Chu of CA-27 from December of 2015. This

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statement has words such as “graduate students”, “Subsidized Loans”, “school administration”, and “students”.

Two quick examples of press releases that doesn't fit any of these categories would be one by Rep. Costello of PA-6 from December of 2015 when he talks about Veterans Affairs staffing and budget and one by Rep. DelBene of WA-1 from October of 2016 when she mentions a trip to a bicycle factory and a declaration of Manufacturing Day.

The utilized first 150 words of each press release can be found in Appendix B.

I coded 1,500 such press releases and, once finished, I re-integrated the press releases into the excel master list.

The next step involved the use of R. The newly coded data was used to teach text algorithms in R how to identify whether a specific release fit into any of the three specific categories. Much of the code and information that was used was adapted from a journal article written by the developers of RTextTools (Jurka, Collingwood, Boydstun, Grossman, & Atteveldt, 2013). I then used this R code, found in Appendix C, to learn the text patterns in the manually coded press releases and apply those algorithms to the rest of the releases. This application uses seven different algorithms to look at clusters of words. Each algorithm uses a different method or has a different threshold for using the data that the user input to determine whether enough words in the text qualify this specific text to be coded as a “1”. RTextTools allows for coding many different text samples in a very short amount of time.

To get started, I needed to ensure that RTextTools was downloaded, activate it, and then pull the master list with all of the uncoded and user coded press releases.

The next step was to use the attach command and create a matrix. The operator then specified the use of the column that held the first 150 words of all of the press releases, the same

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column that was used for the manual coding, and designated the language as English. Three commands were used to parse out unnecessary data. First, the “removeNumbers” command eliminated numerical values from the selected column. Second, the “stemWords” command reduced words to their roots, eliminating prefixes such as “un-” and suffixes such as “-ed”. Lastly, the command “removeSparseTerms” eliminated words that occurred in more than 99.8% of the press releases. Words like “the” and “and.” All these eliminations were intended to rid the press releases of words or symbols that didn’t have any effect of the meaning and make the algorithms’ task simpler with a smaller matrix to process (Jurka, Collingwood, Boydston, Grossman, & Atteveldt, 2013).

The next step was to create the container that will hold the column of ones and zeros for each of the categories. The whole process was run three times, once for each category, and “categoryname”, the column name like “Social Justice,” was changed for each run. The “trainSize” was the selection of releases that was manually coded. All of the manually coded releases were brought to the top of the master sheet so that the “starttrainrow#” was 1. The value for “endtrainrow#” was then the number of the last row that has manually coded values. The values for “testSize” run from the first virgin (not manually coded) press release to the last release in the file.

Seven different algorithms were then used to analyze the press releases, all of which were found in the RTextTools file. Those algorithms read through the first 150 words of each press release and determined if the press releases should be assigned a “1” for any of the three categories.

At the end, some final code was used to create a summary document that contained all of the press releases and each algorithm’s decision on whether or not the press release pertained to

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the category. If the majority of algorithms (at least four of the seven) concluded that a press release deserved a “1” then the press releases were assigned a “1”.

This code was used three times, once for each major category, and the separate summary files were combined back into a new master file that contained all of the press releases and the codes for each category for each press release.

The last stage of the project began with the selecting of the method to search for correlation between variables. The natural choice for such a situation is a regression analysis. However since the data is discrete (voted or not voted) a logit regression must be used. Such an analysis develops a regression table, “Table A”, and cannot be interpreted without marginal effects, or, the average effect of each separate variable (Environmental Issues, Social Justice, and Education) on turnout across ages.

The main independent variable for this analysis is voter age. This variable also interacts with the three categories; this is because I expected the effect of the topics are uniquely influenced by the age of the voters. These combined independent variables are then run against the dependent variable: voter turnout. Voter turnout is measured in a discrete binary way, either a voter turned out for the election “1” or they did not “0”. The data is also vote validated. This means that the 2016 Cooperative Congressional Election Study, or CCES, not only gathered interview data, but also went through and checked that the respondents to the survey actually voted when they said they did and did not vote when they said they did not. To avoid the effects of third variables, the logit regression controlled for different voter demographics.

I used Stata to run the logit regression analyses for all three categories. First using Stata to develop a total count of how much each representative talked about each category and then develop a global mean from all the representatives for each category. The information was then

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merged with voter turnout and information data collected by the CCES (Ansolabehere & Schaffner, 2017).<sup>4</sup>

I then ran a logit regression for each of the three categories. The code that was used can be found in Appendix D. The logit regression controlled for different descriptors of individual voters such as race/ethnicity (given in the code as black, latino), gender (female, 1 if so, 0 if not), income (income), education (education), voter party affiliation (democrat, republican), party membership of the representative (democratrep), and the partisan makeup of the district (pvi).

I controlled for gender because, no matter the age group, women are more likely to be Democrats than men, and thereby be affected more by what some may deem more liberal issues. For the same reason I also controlled for race/ethnicity (Newport, 2009). I controlled for education since the higher education that an individual has, the more likely they are to lean Democratic (Pew Research Center, 2015). I controlled for income even though income is no longer a strong indicator of party affiliation (Pew Research Center, 2016). I finally controlled for voter party affiliation, party membership of the representative, and the partisan makeup of the district, so that the findings would be able to be generalized beyond the two-party system and how much one voter or representative feels about certain issues.

Graphs showing final results from these regressions are Figures 1-3 in the Findings section.

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<sup>4</sup> It is worth noting that the CCES has reported an error in validating their voter turnout data. With that in mind, the choice was made to continue using the data they provided.



## **Findings**

The tabular results from all the regression analyses stratified by age can be found in Appendix E.

If a value is statistically significant its confidence interval will not intersect with zero. Upon examining the tables in Appendix E and the graphs below, one can notice that some values do show statistical significance. For 18-year olds', Education seems to positively influence voter turnout. The same is true of Environmental Issues for those who are 18 through 38. This means that the null hypotheses for Environmental Issues and Education will be rejected but the null hypothesis for Social Justice will not be.

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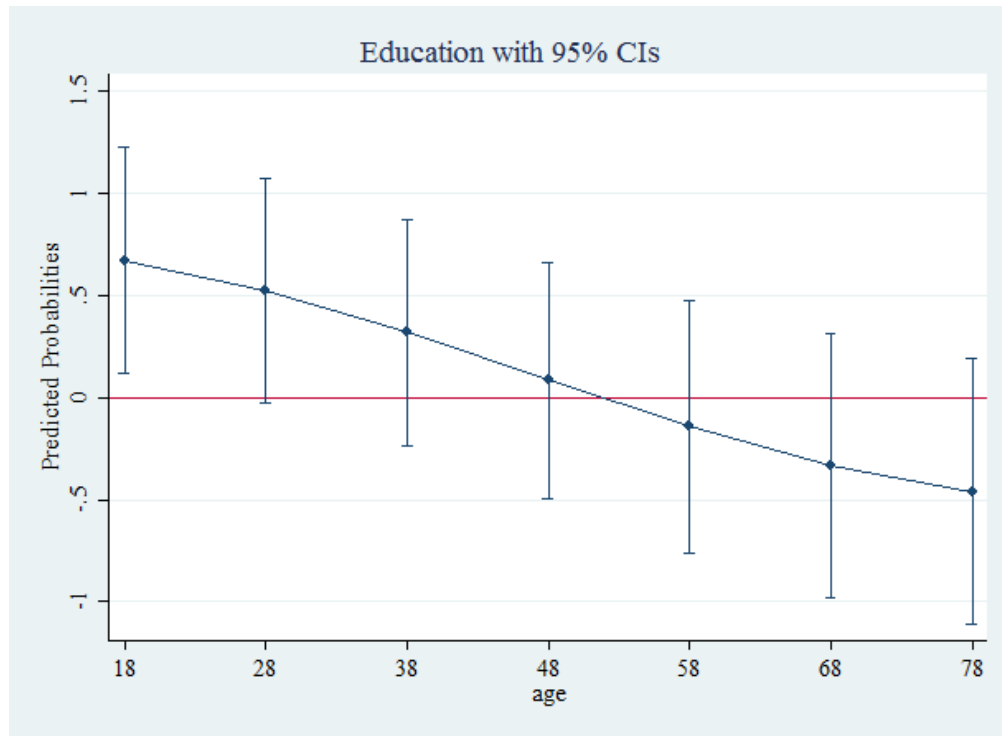
Table A: Logit Regression Predicting Voter Validated Turnout

	Social Justice Model	Education Model	Environmental Model
Social Justice	1.63* (0.92)		
Social Justice*Age	-0.03* (0.02)		
Education Issue		4.98*** (1.81)	
Education Issue*Age		-0.10*** (0.04)	
Environmental Issues			7.63*** (2.14)
Environmental Issues*Age			-0.11*** (0.04)
Age	0.03*** (0.00)	0.04*** (0.00)	0.04*** (0.00)
Black	-0.18*** (0.04)	-0.18*** (0.04)	-0.17*** (0.04)
Latino	-0.37*** (0.04)	-0.38*** (0.04)	-0.37*** (0.04)
Female	0.09*** (0.02)	0.09*** (0.02)	0.09*** (0.02)
Income	0.00** (0.00)	0.00** (0.00)	0.00** (0.00)
Voter's Education	0.12*** (0.01)	0.12*** (0.01)	0.13*** (0.01)
Democrat	0.37*** (0.03)	0.37*** (0.03)	0.37*** (0.03)
Republican	0.40*** (0.03)	0.40*** (0.03)	0.40*** (0.03)
Democrat Rep.	-0.15 (0.09)	-0.15 (0.09)	-0.17* (0.09)
Partisan Voter Index	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Constant	-2.19*** (0.08)	-2.19*** (0.08)	-2.21*** (0.08)
N	47,343	47,343	47,343

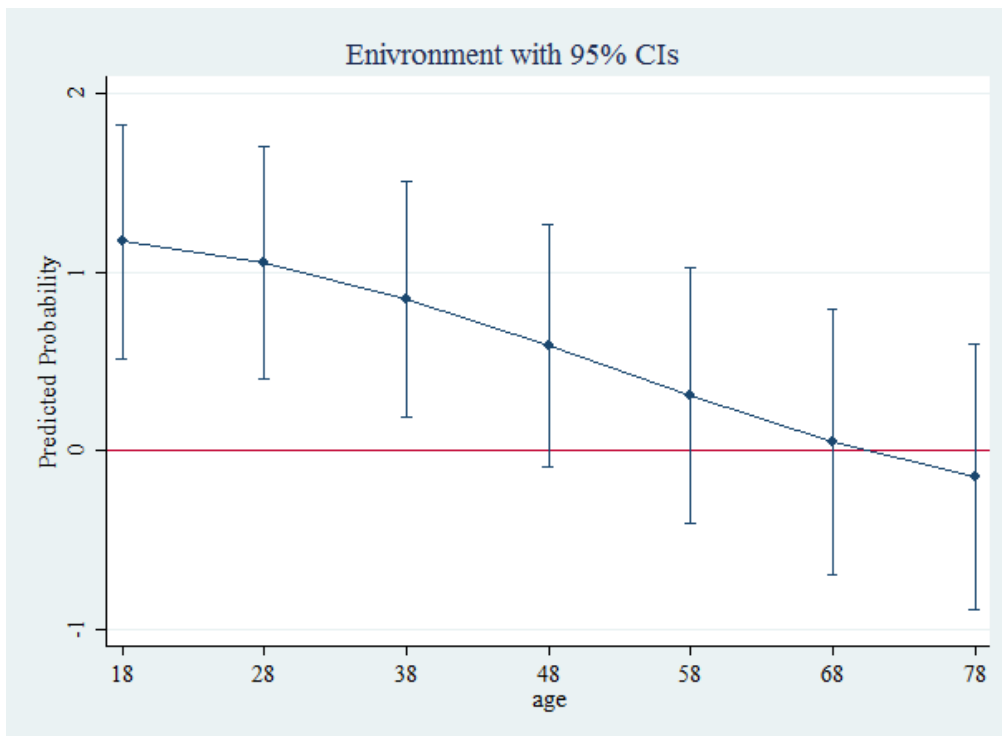
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1, Robust Standard Errors in Parentheses.

Source: 2016 Cooperative Congressional Election Study

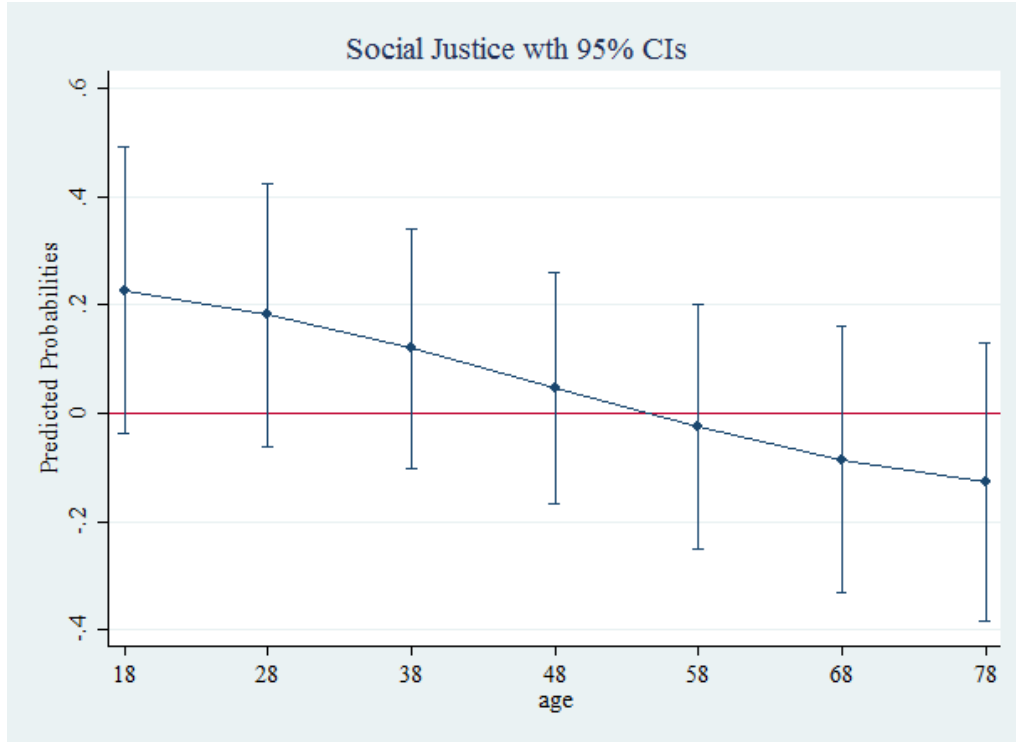
**Figure 1: Education**



**Figure 2: Environmental Issues**



**Figure 3: Social Justice**



What do these numbers mean? Take for an example an 18 or 19-year-old Millennial voter. If that voter's representative talks about Education in their press releases, these findings show that the voter is around 69.4% more likely to turn out and vote in that election. That same demographic of voter would be about 130.3% more likely to turnout their vote if their representative referenced Environmental Issues. This massive increase in voter likelihood could seriously impact the results of House races across the country. As stated before, Millennial voters continue to back Democratic candidates by large margins. Any significant increase in voter turnout could tip the balance of elections in favor of Democratic candidates in districts with any significant portion of Millennials.

It is also worthwhile to note the trends that appear. Figures 1-3 show that all three categories seem to follow a negative trend. Starting with higher influence on young voter turnout

and moving down to a negative effect on the turnout of older voters. Though this downward trend is obvious, most of the values are not statistically significant.

## **Conclusions**

This paper tested the idea that press releases from members of the United States House of Representatives would have an effect on Millennial voter turnout. I used Excel, R, and Stata to clean the press releases, code the press releases, and run a logit regression analysis with the data and the CCES report. The results of the analyses led to the conclusion that when a representative talked about Environmental Issues and Education it led to an increase in Millennials voter turnout in their district; 18-38 year old's for Environmental Issues and just 18 year old's for Education. Speaking about Social Justice issues did not have any effect. This has implications for how young voters will turnout in the future and how candidates can try and reach out to them.

## **Potential Applications and Implications of Research**

The question is now: how should this knowledge be applied? Firstly, if you are a high-ranking member of a political party or of the National Committee and you are looking to boost Millennial voter turnout, examine your party's platform. If you truly care about decisively winning the Millennial vote, it seems that you must be not only willing to oppose fossil fuel companies and support green energy and laws that protect and preserve the environment, but also campaign on those issues as well. Those are generational issues that Millennials cling to and if you campaign hard on those issues, with the opposition part running against them, you are going to get that Millennial support you are looking for. The risk is not that high. If a party is worried about losing the vote of older generations, which do consistently turnout at higher rates than

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Millennials, then they should know that the Millennial source they are tapping into will increase its turnout if they speak to these issues and, if it is the DNC, at a higher rate towards your party than any other generation. Without directly addressing climate change, a party has little hope of winning over Millennials.

If you are a candidate and you hope to boost Millennial voter turnout in your district. See how you can use your position to speak about climate change, to act in an environmentally friendly way, or, if relevant, to develop policy that can address climate change head on. Essentially, if the goal is more Millennial voter participation, talk more about environmental issues.

If you are a political scientist reading this article and wondering what contributions it can make to the host of information already available to scholars, I would like to once again note that there has been little published Political Science work done on Millennials as a generation and the generational consciousness they have developed. This article gives a quick glimpse into the minds of those whose support and whose business is so coveted.

## **Limitations of the Study**

This study does have a few limitations. It does not take into consideration how well established a representative is in their district; i.e. it does not factor in incumbency. The general rule of thumb for an election is that it is very hard to vote out an incumbent so Millennials might not even try. The study also does not control for the location of voters (urban v. rural) which may impact the results. One need only to look at the Democratic primary for the 2016 election to notice the impacts of this divide. Senator Sanders, who turned out massive amounts of Millennials in the primaries, tended to win more rural states while Secretary Clinton won the more urbanized and populated states.

The study also does not consider press releases made by candidates who ran against representatives and lost; candidates whose press releases may have affected the voter turnout. The driving idea behind this paper is if talking about certain issues will get Millennials to turn out at higher rates. If, in a district, a candidate from the opposing major party heavily emphasizes what have been decided to be Millennial issues, that might increase Millennial voter turnout without the incumbent representative needing to mention such issues at all. While this may sound like a fatal flaw, it actually may not be as important as it seems. In any race it would make sense that most challenger's arguments would likely come from past public statements released by the incumbent. This would mean that for a challenger to complain about, say, the incumbent's stance on Environmental Issues, that incumbent would have very likely already made many public statements and released many press releases pertaining to Environmental Issues. This essentially means that there would be very few, if any, races where Environmental Issues were a centerpiece of a challenger's campaign and the incumbent didn't mention it at all.

## **Recommendations for Future Research**

I recommend that, at the very least, this study be repeated for the 115<sup>th</sup> Congress and the two studies be compared. The American political world went through massive changes with the election of President Trump, the “#Resistance”, the “#MeToo” movement, and the growth of the progressive wing of the democratic party so it would be interesting to measure any change in a seemingly more politically active young demographic of Millennials and Post-Millennials. It might also be prudent to run this test for an election that does not have a president on the ballot to try and limit the impact that election would have on the races down ballot.

I also hope that future studies include both general categories (the Environmental Issues category) and more specific categories (LGBTQ rights, Black Lives Matter, Economic Inequality, etc.) to see if more specific issues can increase young voter turnout. There also might be other issues that Millennial voters will be motivated by in the future that should be measured, for instance gun control. It might also be interesting to take issues that people say Millennials aren't generally motivated by, for instance health care, and see what impact that might have on turnout.

One last recommendation would be to stratify the results for future studies by gender and ethnicity. This would allow a more complete breakdown of where certain Millennial demographics stand on certain issues and allow for more specific and detailed targeting of Millennial voters.

No matter how this research is or is not continued this study provides a unique and significant contribution to the understanding of voting behavior and the generational effects that exist within it.



## References

- Ansolabehere, Stephen; Schaffner, Brian F., 2017, "CCES Common Content, 2016"  
<https://doi.org/10.7910/DVN/GDF6Z0>, Harvard Datavers, V4,  
UNF:6:WhtR8dNtMzReHC295hArcg==
- CIRCLE. (2016, November 9). *An Estimated 24 Million Young People Voted in 2016 Election*. Retrieved from The Center for Information & Research on Civic Learning and Engagement:  
<https://civicyouth.org/an-estimated-24-million-young-people-vote-in-2016-election/>
- Druckman, J. N., Kifer, M. J., & Parkin, M. (2009, August). Campaign Communications in U.S. Congressional Elections. *American Political Science Review*, 103(3), 343-366.
- File, T. (2014). *Young-Adult Voting: An Analysis of Presidential Elections, 1964-2012*. Census Bureau. Retrieved from <https://www.census.gov/prod/2014pubs/p20-573.pdf>
- File, T. (2017, May 10). *Voting in America: A Look at the 2016 Presidential Election*. Retrieved from Census Blogs: [https://www.census.gov/newsroom/blogs/random-samplings/2017/05/voting\\_in\\_america.html](https://www.census.gov/newsroom/blogs/random-samplings/2017/05/voting_in_america.html)
- Fry, R. (2018, March 1). *Millennials projected to overtake Baby Boomers as America's largest generation*. Retrieved from Pew Research Center: <http://www.pewresearch.org/fact-tank/2018/03/01/millennials-overtake-baby-boomers/>
- Fry, R., Igielnik, R., & Patten, E. (2018). *How Millennials today compare with their grandparents 50 years ago*. Pew Research Center.
- Funk, C. (2017). *How much does science knowledge influence people's views on climate change and energy issues?* Pew Research Center.
- Funk, C., & Hefferon, M. (2018). *Many Republican Millennials differ with older party members on climate change and energy issues*. Pew Research Center.
- Galston, W. A., & Hendrickson, C. (2016, November 21). *How Millennials voted this election*. Retrieved from Brookings: <https://www.brookings.edu/blog/fixgov/2016/11/21/how-millennials-voted/>
- GenForward. (2017). *July 2017 Toplines*. Chicago: University of Chicago.
- GenForward. (2018). *March 2018 Toplines*. Chicago: University of Chicago.
- Jurka, T. P., Collingwood, L., Boydston, A. E., Grossman, E., & Atteveldt, W. v. (2013, June). RTextTools: A Supervised Learning Package for Text Classification. *The R Journal*, 5/1, 6-12.
- Milita, Kerri, John Barry Ryan and Elizabeth N. Simas. 2014. "Nothing to Hide, Nowhere to Run, or Nothing to Lose: Candidate Position Taking in Congressional Elections." *Political Behavior*, 36(2): 427-449.v

## Speak to Us: How to Get Millennials to Vote

Newport, F. (2009, June 12). *Women More Likely to Be Democrats, Regardless of Age*. Retrieved from Gallup: <http://news.gallup.com/poll/120839/women-likely-democrats-regardless-age.aspx>

Pew Research Center. (2015). *A Deep Dive Into Party Affiliation: Sharp Difference by Race, Gender, Generation, Education*.

Pew Research Center. (2016). *2016 Party Identification Detailed Tables*.

Pew Research Center. (Jan 2018). *Economic Issues Decline Among Public's Policy Priorities*.

Pew Research Center. (Mar 2018). *The Generation Gap in American Politics*.

Wattenberg, M. P. (2002). *Where Have All the Voters Gone?* Cambridge: Harvard University Press.

## Appendix A

I opened a representative's file, saved as a .csv, in Excel. I then began by using the CLEAN function in Excel to remove unprintable characters and long line breaks. The press releases would need to then be copied as text to another column. Occasionally the press releases had a string of nonsensical numbers or letters before or after the actual text. Other times they all began with the same phrase that ended in "Comments 0" or an error occurred during download and the press release was blank. Most of these errors could be solved by using the following process. If the nonsense was at the beginning of the press release, I then used the find and replace function to find a key word that was at the end of the nonsense. If it was at the end of the release, I made that key word at the beginning of the nonsense. The key word would be replaced with a unique character that would not appear in the main text of the press releases. I settled on the idea of using the carrot, ^ , as the symbol since it is rare to find that symbol in a non-mathematical format. The next step to remove the unnecessary characters was to use the Text to Columns function under Data Tools in the Excel Data tab. I would choose the delimited option, select only the "Other" option and enter in the carrot symbol "^" to be the delimitator. Since this function splits the press releases into two columns, and not all the press releases belonging to a certain representative had the same issues, the columns would then have to be consolidated. I developed a method using VBA coding that would only delete the column where the nonsense text was if and only if the text had been split into two columns. This prevented the loss of data and greatly shortened consolidation time.

## Appendix B

### **Ryan Costello PA-6 (12/2/2015)**

Washington, DC ? On Tuesday, Congressman Ryan Costello (PA-06) added his name as an original cosponsor of H.R. 4138, legislation that would grant the Department of Veterans Affairs Secretary the discretion to recoup any relocation expenses paid to any corrupt VA employee. H.R. 4138 is retroactive and would recoup the \$274,000 in payments issued to former Philadelphia VA Regional Office Director Diana Rubens during her relocation from Washington, DC to Philadelphia. As a result of the September 28, 2015 Inspector General report, in which a criminal referral was made, the VA demoted Rubens and transferred her to the Houston VA Regional Office. After cosponsoring the legislation, Congressman Costello released the following statement: ?We cannot - and will not - be afraid to take action to recoup thousands of taxpayer dollars in relocation benefits doled out to these individuals who have failed our veterans. For months, the VA has refused to

Social Justice: 0          Environment: 0          Education: 0

### **Bob Goodlatte VA-6 (4/28/2016)**

The House Judiciary Committee has obtained detailed information about the criminal aliens released by the Obama Administration during Fiscal Year 2015. This new information shows that U.S. Immigration and Customs Enforcement (ICE) released thousands of criminal aliens convicted of offenses involving dangerous drugs, assault and domestic violence, stolen vehicles, robbery, sex offenses, sexual assault, kidnapping, voluntary manslaughter and other homicide-related offenses. According to information provided by ICE to the House Judiciary Committee, the agency released 19,723 criminal aliens with a total of 64,197 convictions in Fiscal Year 2015. ICE often claims that the Supreme Court's decision in *Zadvydas v. Davis* forces it to release aliens that it would otherwise detain. However, the total number of convicted criminal aliens released based on the *Zadvydas* decision totaled 2,166 in Fiscal Year 2015, representing only 11% of the releases. In addition, officials at the Department of Homeland Security have refused to support legislation,

Social Justice: 1          Environment: 0          Education: 0

### **Joe Crowley NY-14 (5/2/2016)**

Today, Rep. Joe Crowley (D-Queens, the Bronx), Vice Chair of the Democratic Caucus and whose district includes a large Ecuadorian community, sent a letter signed by 32 Members of the House of Representatives urging Department of Homeland Security Secretary Jeh Johnson and Secretary of State John Kerry to grant Temporary Protected Status (TPS) to Ecuadorian nationals currently residing in the United States, so that they are not forced to return home to harmful and potentially unsafe conditions. In the days following the earthquake, Crowley introduced a resolution in support of the people of Ecuador and has continued to engage with the Ecuadorian community in New York and in D.C. ?There is no question that in the wake of this terrible tragedy the road to recovery will be long and difficult - but we will continue to stand with the Ecuadorian people every step of the way until they are back

Social Justice: 1          Environment: 0          Education: 0

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### **Suzan DelBene WA-1 (10/7/2016)**

WOODINVILLE ? On Manufacturing Day, Congresswoman Suzan DelBene (WA-01) visited local manufacturer, Sportworks, which has been designing and making bicycle products for more than two decades. ?Washington?s First District is home to some of the most innovative and productive manufacturers in the world. And Manufacturing Day provides us with an important opportunity to recognize the manufacturing industry?s contributions to the growth and prosperity of our economy,? DelBene said. ?It was wonderful spending the day with Sportworks and their employees, who are making it easier for commuters to bike.? DelBene is a cosponsor of legislation that would designate the first Friday of October as Manufacturing Day, which this year takes place on Oct. 7. Manufacturers contribute more than \$2 trillion to the economy and support more than 18 million U.S. jobs. Sportworks employs nearly 100 workers and manufactures bike racks for buses and stationary use, supplying to more than 500 municipalities

Social Justice: 0          Environment: 0          Education: 0

### **Bill Flores TX-17 (9/17/2015)**

Today, the House Energy and Commerce Committee approved H.R. 702, a bill to lift the ban on crude oil exports. U.S. Representative Bill Flores (R-Texas) issued the following statement regarding its passage out of committee: ?The decades-old ban on crude oil exports was put in place during an era of scarcity. The American energy revolution has dramatically improved our energy security. The United States is now the number one producer of oil and gas in the world. By lifting the ban on crude oil exports we are modernizing our energy policies to reflect this new era of abundance. Increased energy trade improves our geopolitical standing and helps our allies across the world stand up to Russian and Iranian aggression. The benefits of opening up the crude export market are clear. Lifting the ban brings lower energy prices, job creation and greater economic security for hardworking American families. I look forward

Social Justice: 0          Environment: 1          Education: 0

### **Garret Graves LA-6 (6/14/2016)**

Rep. Tom Graves (R-GA-14) issued the following statement after voting to disapprove of any plan to implement a carbon tax in the United States and the Obama administration?s proposed \$10 tax on every barrel of oil: ?President Obama?s dream of a carbon tax and his proposed \$10 tax on every barrel of oil would have serious consequences for Georgia families. A carbon tax would result in higher utility bills, fewer energy jobs and slower economic growth. The new oil tax the president proposed could cause gas prices to spike as much as 25 cents per gallon. ?These proposals are bad for families, bad for the economy and bad for our energy future. I hope the president will listen to the People?s House, drop these plans, and focus on making energy more affordable for families and businesses across the country.? Both resolutions passed the House

Social Justice: 0          Environment: 1          Education: 0

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### **Frank Pallone NJ-6 (12/18/2015)**

Pallone Bill to Ban Microbeads in Cosmetics Passes Senate, Advances to President's Desk Dec 18, 2015  
Legislation Will Protect Nation's Waterways WASHINGTON, DC ? In a major victory for U.S. waterways and the environment, the Senate today unanimously passed Congressman Frank Pallone, Jr.'s (D-NJ-06) Microbead-Free Waters Act of 2015, sending the legislation to the President for his signature. Pallone, the Ranking Member of the House Energy and Commerce Committee, introduced the bill earlier this year with Committee Chairman Fred Upton (R-MI-06). It would prohibit the manufacture and sale of personal care products that contain plastic microbeads. These small bits of plastic, used as exfoliants in personal care products like face wash, soap, and toothpaste, can slip through water treatment

Social Justice: 0      Environment: 1      Education: 0

### **Judy Chu CA-27 (12/10/2015)**

Today, Rep. Judy Chu (CA-27) introduced the Protecting Our Students by Terminating Graduate Rates that Add to Debt (POST GRAD) Act. The bill would once again make graduate students eligible to receive Federal Direct Subsidized Loans. That eligibility was ended by the Budget Control Act of 2011. Rep. Chu released the following statement: "It's estimated that between 2010 and 2020, 2.6 million new and replacement jobs are expected to require an advanced degree. These are in demand careers like mental health services, school administration, and health care professions that are becoming unattainable due to the high cost of borrowing. The Budget Control Act of 2011 ? the same bill that brought us the Sequester ? also cut a major means of support for students looking to take the next step towards entering these fields. By adding thousands of dollars in interest payments over the life of a loan, the Budget

Social Justice: 0      Environment: 0      Education: 1

### **Tom Reed NY-23 (2/29/2016)**

Tom Reed continued to fight for working families by sponsoring a series of bills aimed at bringing the cost of college down, in part by forcing colleges to be more transparent. "Having over \$100,000 in student loans when we graduated from school, we understand the burden so many kids and families are carrying today from too high college costs," said Reed. "It is simply unfair to allow another generation to labor under this kind of debt." Reed continues to revise his Reducing Excessive Debt and Unfair Costs of Education (REDUCE) act, which requires colleges with endowments larger than \$1 billion to distribute a portion of the profits earned from this money as tuition relief for students from working middle class families. If colleges fail to offer this amount of financial aid, colleges will face heavy tax penalties, up to and including losing their tax exempt status. Following Reed's initial legislative

Social Justice: 0      Environment: 0      Education: 1

## Appendix C

```
library(RTextTools)
filename<read.csv("//filelocation", head=TRUE)
attach(matrixname)
doc_matrix <- create_matrix(matrixname$first150wordscolumn, language="english",
removeNumbers=TRUE, stemWords=TRUE, removeSparseTerms=.998)
container <- create_container(doc_matrix, matrixname$categoryname,
trainSize=starttrainrow#:endtrainrow#, testSize=starttestrow#:endtestrow#,
virgin=TRUE)
SVM <- train_model(container,"SVM")
MAXENT <- train_model(container,"MAXENT")
SLDA <- train_model(container,"SLDA")
BOOSTING <- train_model(container,"BOOSTING")
BAGGING <- train_model(container,"BAGGING")
RF <- train_model(container,"RF")
TREE <- train_model(container,"TREE")
SVM_CLASSIFY <- classify_model(container, SVM)
MAXENT_CLASSIFY <- classify_model(container, MAXENT)
SLDA_CLASSIFY <- classify_model(container, SLDA)
BOOSTING_CLASSIFY <- classify_model(container, BOOSTING)
BAGGING_CLASSIFY <- classify_model(container, BAGGING)
RF_CLASSIFY <- classify_model(container, RF)
TREE_CLASSIFY <- classify_model(container, TREE)
analytics <- create_analytics(container, cbind(SVM_CLASSIFY, SLDA_CLASSIFY,
BOOSTING_CLASSIFY, BAGGING_CLASSIFY, RF_CLASSIFY,
TREE_CLASSIFY, MAXENT_CLASSIFY))
summary(analytics)
topic_summary <- analytics@label_summary
alg_summary <- analytics@algorithm_summary
ens_summary <-analytics@ensemble_summary
doc_summary <- analytics@document_summary
write.csv(analytics@document_summary, "//savelocation/summaryfilename.csv")
margins, at(age=(18(10)78)) dydx(categorymean)
marginsplot, yline(0)
```

## Appendix D

```
regress verified_voter_2016_general c.categorymean##c.age black latino female income  
education democrat republican democratrep pvi, cluster(statedist)
```



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Appendix E

Table 1: Environmental Issues

		Delta-method				
		dy/dx	Std. Err.	t	P> t	[95% Conf. Interval]
environmentalawarenes~n						
_at						
For all three tables 1=18 year-olds 2=28 year-olds 3=38 year-olds etc.	1	1.303243	.3896027	3.35	0.001	.537095 2.069391
	2	1.058871	.348082	3.04	0.003	.3743727 1.743369
	3	.8144984	.3243756	2.51	0.012	.1766188 1.452378
	4	.5701262	.322437	1.77	0.078	-.0639411 1.204193
	5	.325754	.3426358	0.95	0.342	-.3480341 .9995421
	6	.0813817	.3814717	0.21	0.831	-.6687766 .8315401
	7	-.1629905	.4339697	-0.38	0.707	-1.016385 .6904043

Table 2: Social Justice

		Delta-method				
		dy/dx	Std. Err.	t	P> t	[95% Conf. Interval]
socialjusticemean						
_at						
	1	.2449664	.1502649	1.63	0.104	-.0505272 .5404599
	2	.1799846	.1254968	1.43	0.152	-.0668031 .4267722
	3	.1150027	.1080769	1.06	0.288	-.0975289 .3275343
	4	.0500209	.101848	0.49	0.624	-.1502617 .2503034
	5	-.0149609	.1087504	-0.14	0.891	-.228817 .1988951
	6	-.0799428	.1266551	-0.63	0.528	-.3290082 .1691226
	7	-.1449246	.1517156	-0.96	0.340	-.4432711 .1534219

Table 3: Education

		Delta-method				
		dy/dx	Std. Err.	t	P> t	[95% Conf. Interval]
collegedebtededucationm~n						
_at						
	1	.6943272	.3184424	2.18	0.030	.0681152 1.320539
	2	.4931611	.2862719	1.72	0.086	-.0697882 1.05611
	3	.291995	.2722817	1.07	0.284	-.2434428 .8274329
	4	.0908289	.2792181	0.33	0.745	-.4582492 .639907
	5	-.1103372	.3056596	-0.36	0.718	-.7114121 .4907377
	6	-.3115033	.3471779	-0.90	0.370	-.9942234 .3712167
	7	-.5126694	.3990951	-1.28	0.200	-1.297484 .2721449