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Analyzing Politics

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A6 Assignment: The Emotional Foundations of Opinion Polarization

Introduction – Research Question

In this assignment, I attempt to explain the degree of variation in **polarization among American political elites**. There are so many different effects that can be used for this reason, including the ideology of partisans, the issue stances of partisans, the vote concentrations in Republican and Democratic states etc. The main purpose of this research paper is to look at the importance of **emotions** toward political objects. Emotions are important in motivating information processing and information search. More specifically in political science, work on emotions has focused on four types: hope, pride, anger and fear. In addition to emotions, **government ideology** is another big factor that can potentially affects opinion polarization, as views about direction of the government matter when selecting candidates for elections. Therefore, my research question is three-folded: **“What types of emotions drive opinion polarization? What factors affect the emotions towards politics? And how are such emotions correlated with political ideologies?”**

Hypotheses

Under my discretion, the four types of emotions can be separated into two categories: the positive emotions – with hope and pride and the negative emotions – with anger and fear. I will arbitrarily pick the positive emotions. I assume that the more positive a person feels about a candidate, the more polarized that person will lean toward that candidate for political election.

To see what factors affect positive emotions towards politics, I look at: (1) people's views about government spending on tech, education, and the environment, (2) people's views about government's policy goals on global issues, and (3) their level of opinion. I assume that the more a person cares about these things, the more positive he feels about a candidate. There will be some interesting findings since it looks like these are uncorrelated variables. Regarding the relationship between emotions and ideologies, I assume that the more positive a person feels about a candidate, the stronger he is liberal or conservative. Therefore, my three hypotheses of what shapes the degree of variation in polarization among political elites follow:

- (1) People who have more hopeful and proud feeling about a candidate will be more likely to have stronger polarized opinions leaning toward that candidate.
- (2) Opinionated people who care about government's policy goals on global issues and who favors government spending on areas of tech, education and the environment will be more likely to have more positive emotions towards the candidates.
- (3) People who have more hopeful and proud feeling about a candidate will be more likely to be either very liberal or very conservative.

Research Design

To answer the research question, I use the **ANES Time Series Study** conducted in 2008, which contains questions about electoral participation, voting behavior, public opinion, media exposure, cognitive style, and values and predispositions. The use of half-sampling was used throughout the study to "splice" core or standard questions alongside revised versions. To reduce social desirability pressures, a section of questions on select topic was self-administered.

Multiple **interviews** have been conducted pre- and post- the 2008 election, with the implementation of the Affect Misattribution Procedure (AMP) – a method, to measure implicit

attitudes. In specific, 2,322 US citizens were sampled for the pre-election study and 2,102 people were sampled for the post-election study. For my focus, this paper uses the **dependent variable** as people's opinion polarization about the candidates in the election; while the **independent variables** include partisan affiliation, positive emotions, government ideology, political knowledge, education, and gender. In addition to that, I also use several **other controls** to test the positive emotions, including people's views about government's spending on certain issues, government's global policies, as well as the people's level of having strong opinions. The study used **ratio measurements** to measure the polarization thermometer people feel about the candidates pre- and post- the 2008 election and the number of educational grades they have been through. The study used **ordinal measurements** to measure the rest of the independent variables. With that being said, the only **limitation** to this time-series study is that both of the interviews were so long: Pre-election interviews 73 minutes and post-election interviews 91 minutes in length. This could lead to satisficing. Besides from that, this is a reasonable design and the results were gathered at the right time (before and after the 2008 presidential election).

Dependent Variable

To illustrate the political polarization variable, I use a graphical representation (**Figure 1** in the back) that displays **the polarization thermometer under the effects of partisan affiliation**. There are 7 different level of partisan affiliations, going from Strong Democrats to Strong Republicans. The polarization thermometer ranges from 20 to 60. Note that there are two lines in the graph, one with pre-election results and one with post-election results. The statistics show that for both lines, there exists very **strong correlation** between partisanship and polarization. People who identify as Independent have lowest polarization value in the thermometer (24 pre-election and 27 post-election). Then that value increases as partisan

affiliation becomes more extreme. For example, people who identify as Strong Democrats have polarization value of 55 pre-election and 54 post-election, while people who identify as Strong Republicans have polarization value of 50 pre-election and 39 post-election. Overall, it looks like for the Democrats, polarization value is higher at post-election than at pre-election; while for the Republicans, polarization value is higher at pre-election than at post-election. These results bring out important implications on the effects that our independent variables have on the level of polarization among political elites. Lastly, because the polarization graphs of pre- and post-election are mostly similar, I will only use the pre-election polarization values for my regression testing and inferential statistics.

Independent Variables / Correlation Matrix

The construction of the independent variables is essential in my research. As I mentioned a bit above in the research design section, here are my explanation for all the variables I use from the study and how I combine them into more significant variables, regarding their effects on polarization. The first IV is **Partisan Affiliation**, which is already mentioned in the description of the DV above, showing that **the stronger a person's partisanship is, the more polarized he thinks about a candidate**. The second IV is definitely the most important one, **Positive Emotions**, which is combined from the Hope and Proud variables, essentially seeing whether a person is hopeful and/or proud about any of the candidates from the election. The intuition for this combination is essentially **my first hypothesis**. The third IV is also super important, **Government Ideology**, which is combined from Government Size, Gay Marriage, and Welfare Spending variables. **Table 1** shows the correlation matrix between these ideology variables: These correlation values are reasonably high enough in order for the variables to be interchangeable. The intuition for government ideology **follows**:

- 1> People who think the government is bigger because it is too intrusive into private lives of U.S citizens are likely to be more liberal, while people who think the government is bigger because the problems are bigger are likely to be more conservative.
- 2> People who think gay marriage should be allowed are likely to be more liberal, while people who think gay marriage should not be allowed are likely to be more conservative.
- 3> People who favors increased welfare spending are likely to be more liberal, while people who favors cutting out the budget.

The fourth IV is **Office Recognition**, which is combined from four different variables asking whether a person is familiar with: (1) the Speaker of the House, (2) the Vice President, (3) the Prime Minister of England, and (4) the US Supreme Court Chief Justice. **Table 2** shows the correlation matrix between these office recognition variables: These correlation values are reasonably high enough in order for the variables to be inter-changeable. The intuition for this is that **people who is familiar with political officials are more likely to feel strongly polarized about political candidates**. The fifth IV is **Parties Knowledge**, which is combined from four different variables asking if the person knows: (1) the party with most members in the House before election, (2) the party with most members in Senate before election, (3) whether one of the parties is more conservative, and (4) which party is more conservative. **Table 3** shows the correlation matrix between these Knowledge about Parties variables: These correlation values are reasonably high enough in order for the variables to be interchangeable. The intuition for this is that **people who have more knowledge about political parties are more likely to feel strongly polarized about political candidates**. The sixth and seventh IV are, respectively, **education** and **gender**, some of the variables that have already been coded from the A5 assignment that I found might be valid for this research. The intuition is simple:

- 1> People with higher education are more likely to have stronger polarization.
- 2> Males are likely to be more conservative, while females are likely to be more liberal.

On the other hand, I have four other controls to test the positive emotions variable, as I indicated in my research design section. All these four variables are used to supplement **my second hypothesis**. The eighth IV is **U.S Policy Goals on Global Issues**, which is combined from three different variables asking the person's views of U.S policy goals on: (1) bringing democracy to the world, (2) promoting market economies abroad, and (3) combating international terrorism. **Table 4** shows the correlation matrix between these U.S Policy Goals variables: These correlation values are reasonably high enough in order for the variables to be interchangeable. The intuition here **follows**:

- 1> People who thinks U.S policy goals on bringing democracy to the world is very important are more likely to feel positive about politicians.
- 2> People who thinks U.S policy goals on promoting market economies abroad is very important are more likely to feel positive about politicians.
- 3> People who thinks U.S policy goals on combating international terrorism is very important are more likely to feel positive about politicians.

The ninth IV is **Increase/Decrease Spending on Areas**, which is combined from three different variables asking the person's views on government spending on: (1) science and technology, (2) public school, and (3) the environment. **Table 5** shows the correlation matrix between these Increase/Decrease Spending variables: These correlation values are reasonably high enough in order for the variables to be interchangeable. The intuition here **follows**:

- 1> People who think the government should increase spending on science and technology are more likely to feel positive about politicians.
- 2> People who think the government should increase spending on public schools are more likely to feel positive about politicians.
- 3> People who think the government should increase spending on environmental issues are more likely to feel positive about politicians.

The tenth and eleventh IVs refer to the **level of opinionated-ness** a person withholds, in particular **the extent of success in defending opinions** and simply **having more opinions** than others. The intuition here is that **people who is more opinionated are more likely to feel positive about politicians**. This might not be the best intuition but I'd love to see the correlation between seemingly very disparate variables as such.

Inferential Statistics / Regression Model

I/ First Hypothesis:

Figure 2 shows the estimate effects of positive emotions on opinion polarization (with 95% confidence intervals). The blue line is the strength of positive emotions, while the orange line and grey line are confidence interval low and high respectively. The graph clearly shows that as number of positive emotions increases, polarization value also increases. For example, a person with no positive emotions score 22.4 on the polarization thermometer, while a person with one and two positive emotions score 37.8 and 51.7 respectively. Therefore, **my first hypothesis has been confirmed**.

II/ Second Hypothesis:

Table 6 is the regression model with all the variables I input in this research. The first column has all the variable names I coded, the second column has the regression values of all these variables towards opinion polarization, and the third column has the regression values of these same variables minus the controls for positive emotions. To show the effects of these controls on positive emotions, I'll compare the strength of the regression values across the second and third column (before and after effect) to see if there're any significant change. After putting on the effect, the strength of positive emotions decreases from 15.13 to 14.66, the strength of government ideology decreases from 0.77 to 0.33, the strength of partisan affiliation stays quite the same, the strength of political knowledge decreases from 0.29 to 0.01, the strength of education decreases significantly from 1.19 to 0.01, the strength of gender (for Male specifically) increases from 1.32 to 2.52. These changes are not significant enough to make a big effect onto opinion polarization. Thus, we can see the effect from the 4 control variables onto the positive emotions are not substantive. Therefore, **my second hypothesis has been rejected.**

III/ Third Hypothesis:

Figure 3 shows the relationship between positive emotions and government ideologies. Looking at this figure, you can tell that there exists no correlation between these two variables. The results are scattered throughout the graph. For example, people who have no positive emotions can be more conservative but also very liberal at the same time. Or people who are less conservative and people who are more liberal can both have two positive emotions. Therefore, **my third hypothesis has been rejected.**

Conclusion

So to summarize the findings after testing my hypotheses:

- (1) People who have more hopeful and proud feeling about a candidate will be more likely to have stronger polarized opinions leaning toward that candidate.
- (2) There is no correlation between people's positive emotions about candidates and their level of opinions, views on government's spending and government's policy goals on global issues.
- (3) There is no correlation between people's positive emotions about candidates and their government ideology.

These results suggest Americans have pretty strong opinion polarization about the 2008 presidential candidates, and that positive emotions such as hope and pride are the main drive for their overall feelings. There are many factors that might be able to affect such emotions, but certainly those factors will not be the ones considering people's views on governmental policies / governmental spending. The disconnection between emotions and ideology can be seen as a surprise, therefore we need to come up with better control for the emotions variable. In conclusion, the results obtained from this time-series study did a nice job in exploring variations in opinion polarization as well as showing some implications about emotions in American politics.

Appendix

Table A.1: Descriptive Statistics for Model Variables

Variable Name	Mean	Std Dev	Min (#)	Min Label	Max (#)	Max Label
Opinion Polarization	39.61515	28.96157	0	Polarization Thermometer Minimum Value	100	Polarization Thermometer Maximum Value
Partisan Affiliation	2.863195	1.029711	1	Independent	4	Strong Democrats or Strong Republicans

Hope	.6391042	.4803638	0	No Hope for both candidates	1	Have Hopes for both candidates
Proud	.5525409	.4973389	0	No Pride for both candidates	1	Have Prides for both candidates
Government Size	1.622169	.484962	1	Government is bigger because it's too involved with private lives	2	Government is bigger because the problems are bigger
Gay Marriage	2.734896	1.565891	1	Should be allowed	5	Should not be allowed to marry but should be allowed to live together
Welfare Spending	3.885022	1.769557	1	Increased a great deal	8	Cut out entirely
Recognize Speaker of the House	2.537583	1.946272	1	Yes	5	No
Recognize Vice President	3.523311	1.930782	1	Yes	5	No
Recognize Prime Minister of England	2.05804	1.764708	1	Yes	5	No
Recognize the US Supreme Court Chief Justice	2.400571	1.908512	1	Yes	5	No
Know party with most members in House before election	2.897987	1.998067	1	Democrats	5	Republicans
Know party with most members in Senate before election	2.943033	1.999958	1	Democrats	5	Republicans
Know if one party is more conservative	1.576577	1.405295	1	Yes	5	No
Know which party is more conservative	3.946122	1.762581	1	Democrats	5	Republicans
U.S Policy Goal on Bringing Democracy to the World	2.947669	1.488372	1	Very Important	5	Not Important At All
U.S Policy Goal on Promoting Market Economies Abroad	2.706946	1.635441	1	Very Important	5	Not Important At All
U.S Policy Goal on Combating International Terrorism	1.520457	1.129969	1	Very Important	5	Not Important At All

Increase/Decrease Spending on Science and Technology	2.813304	1.541557	1	Increased a great deal	8	Cut out entirely
Increase/Decrease Spending on Public School	1.912575	1.791749	1	Increased a great deal	8	Cut out entirely
Increase/Decrease Spending on Environment	2.47465	1.518366	1	Increased a great deal	8	Cut out entirely
Extent of Success in Defending Opinions	3.006953	1.163931	1	Extremely Successfully	5	Not Successfully At All
Having More Opinions	2.344762	.8974031	1	Almost Everything	4	Very Few Things
Education Level	1.752595	.804166	1	No Education	3	Post-Graduate
Gender	.4302326	.4952152	0	Female	1	Male

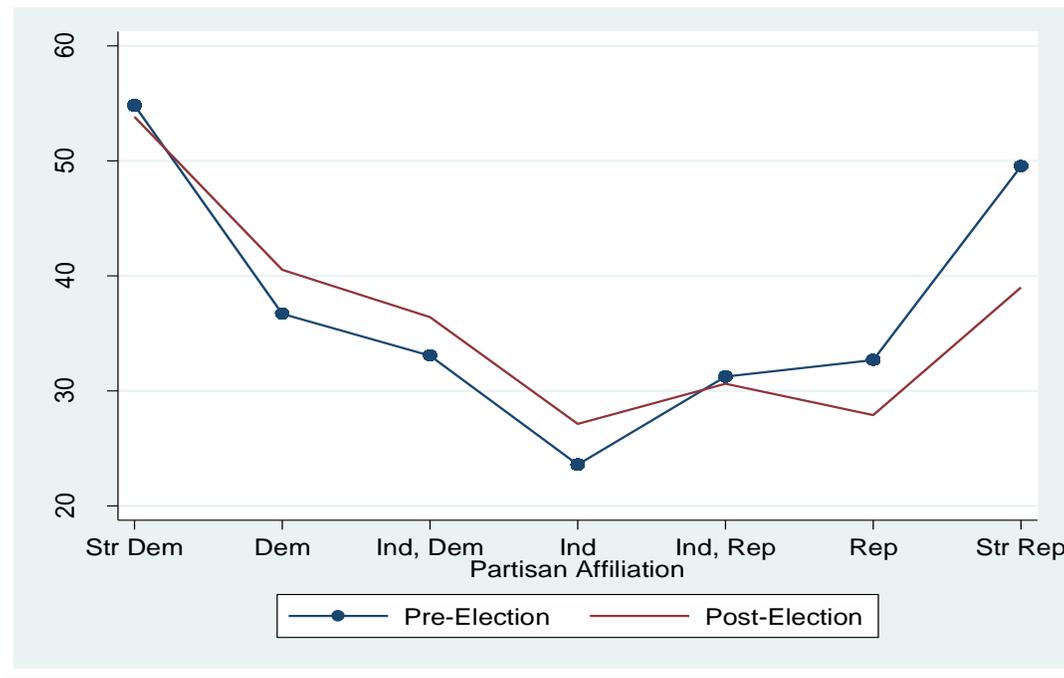


Figure 1 – Descriptive Statistics of Opinion Polarization across Partisan Affiliation

Ideology Variables	Government Size	Gay Marriage	Welfare Spending
Government Size	1		
Gay Marriage	-0.1118	1	

Welfare Spending	-0.2347	0.113	1
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Table 1 – Correlation between different “Ideology” variables

Office Recognition	Speaker of the House	Vice President	Prime Minister of England	US Supreme Court Chief Justice
Speaker of the House	1			
Vice President	0.4728	1		
Prime Minister of England	0.1957	0.2487	1	
US Supreme Court Chief Justice	0.2811	0.3073	0.4439	1

Table 2 – Correlation between different “Office Recognition” variables

Parties Knowledge	Party with most members in House before election	Party with most members in Senate before election	If one of the parties is more conservative	Party that is more conservative
Party with most members in House before election	1			
Party with most members in Senate before election	0.6616	1		
If one of the parties is more conservative	0.073	0.0861	1	
Party that is more conservative	0.1363	0.1189	.	1

Table 3 – Correlation between different “Parties Knowledge” variable

U.S Policy Goals On Global Issues	Bringing Democracy to the World	Promoting Market Economies Abroad	Combating International Terrorism
Bringing Democracy to the World	1		
Promoting Market Economies Abroad	0.2432	1	
Combating International Terrorism	0.2245	0.1331	1

Table 4 – Correlation between different “U.S Policy Goals on Certain Issues” variables

Increase/Decrease Spending on Areas	Science and Technology	Public School	Environment
Science and Technology	1		
Public School	0.1504	1	
Environment	0.2947	0.3026	1

Table 5 – Correlation between different “Increase/Decrease Spending on” variables

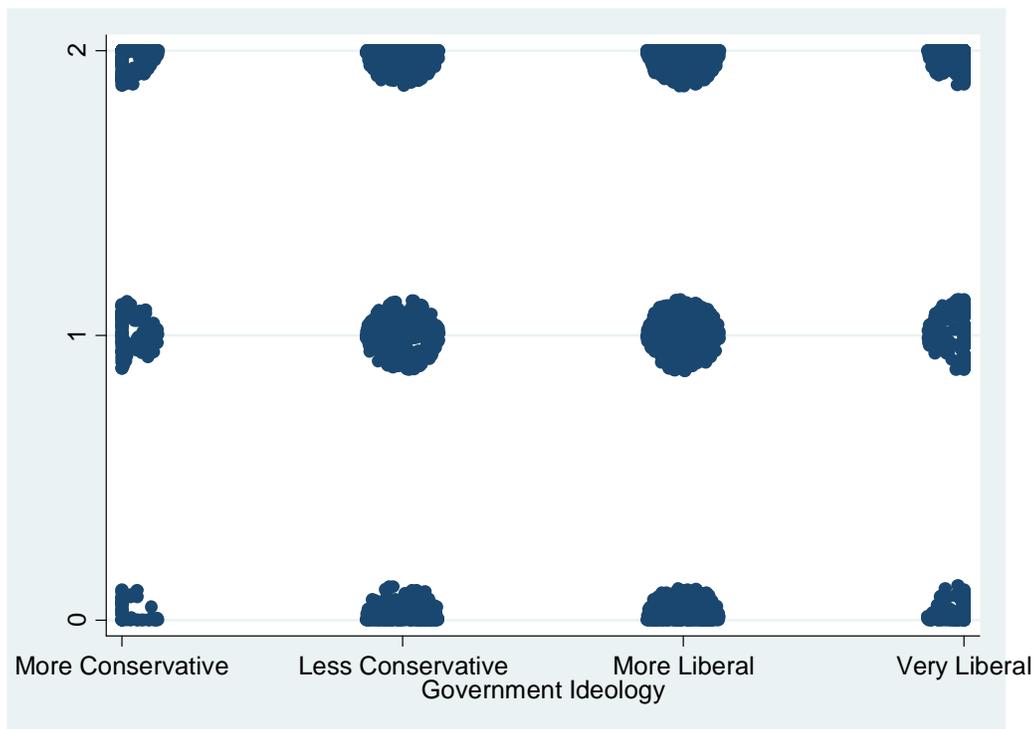
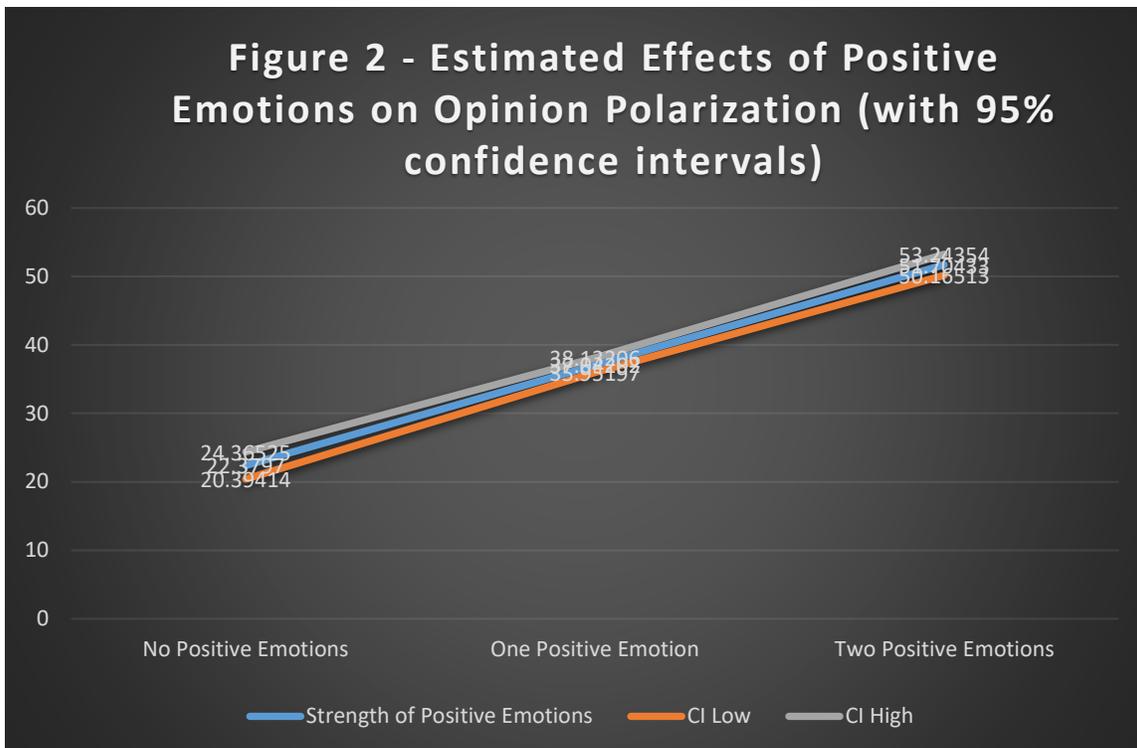


Figure 3 – Relationship between Positive Emotions and Government Ideologies

VARIABLES	(1) Opinion Polarization	(2) Opinion Polarization
Positive Emotions	14.66*** (0.72)	15.13*** (0.69)
Government Ideology	0.33 (0.61)	0.77 (0.57)
Partisan Affiliation	6.75*** (0.55)	6.74*** (0.53)
Political Knowledge	0.01 (0.35)	0.29 (0.27)
Education	-0.01 (0.69)	1.19* (0.65)
Male	-2.52** (1.11)	-1.32 (1.06)
Increase Spending	1.24** (0.59)	
Global Policies	-2.57*** (0.82)	
Successfully Defend Opinions	-1.69*** (0.48)	
Have More Opinions	-2.98*** (0.63)	
Constant	19.67*** (4.17)	-1.85 (2.42)
Observations	2,001	2,217
R-squared	0.31	0.28

Table 6 – Regression Model

[Note the standard errors in parentheses (*** p<0.01, ** p<0.05, * p<0.1)]