THE EFFECT OF IMAGE-INDUCED EMOTIONAL STATE ON POLITICAL IDEOLOGY

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A Thesis

Presented to

The Faculty of the Department

of Political Science

University of Houston

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In Partial Fulfillment

Of the Requirements for the Degree of

Master of Arts

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By

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December, 2013

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An Abstract of "The Effect of Image-Induced Emotional State on Political Ideology"

In many ways, emotions affect one's day-to-day considerations and actions. Does a mood or feeling caused by something unrelated to politics affect a person's considerations about politics? This paper aims to show how non-political emotions can sway a person's ideology, at least to a small extent. Through the use of Amazon's Mechanical Turk, the full survey discussed in this paper examines how 1800 people respond to questions related to their political ideology after being shown an image intended to induce a particular emotion.

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Literature Review

Reason has long been heralded as the foundation of a well-functioning government. The classical Greek philosophers placed great importance on the principle of the rule of reason, where, by nature, that which was rational ruled over that which was irrational in almost any situation. (Aristotle 1981, I.13) Modern philosophers such as John Locke used this notion of the prevailing reason of man as a justification for the establishment of democratic government – because humans are reasonable, they are capable of self-rule and therefore do not need authoritarian regimes to save them from themselves. (Locke 2002, Par. 57) Rather, the only legitimate governments are those established with the consent of the governed. (Locke 2002, Par. 57) From these arguments emerged further democratic principles based on the idea of the rational citizen – "progress, justice, and greater democracy, which requires protection from the intrusive and destructive impulse of emotion." (Marcus 2002, 7) The incompatibility of emotion and reason – where emotion is fundamentally "bad" and reason is "good" – in public decision-making has been a longstanding assumption that individuals have only relatively recently begun to challenge.

Research into the way emotions affect public opinion and voting behavior has been presented by numerous political scientists and psychologists. In their paramount study on voting predictors, Campbell et al concluded that party identification is the major influence on a person's development of political opinion and their ultimate voting choices. (Campbell, Converse, Miller, and Stokes 1960, 146) Party ID is learned from parents and through socialization, which produce a psychological attachment to the party and strong partisan feelings. Though Campbell et al recognize that changes in party ID are possible, usually occurring from personal experience, they find that voters are generally uninformed about policy and only about 12% of the population

exhibits having a distinctive ideology. (Campbell, Converse, Miller, and Stokes 1960, 188) While many voters are able to logically describe why they have a particular opinion on a particular issue, this research indicates that at least to some extent, emotion rather than reason is the initial driving force behind political opinion.

It is no wonder then that politicians often tend to appeal to emotions over reason in a variety of ways – and it is usually the politicians who use emotion over reason in their appeals that are successful. (Westen 2008, 42) The use of political ads are one means by which politicians attempt to quickly strike a chord with the observer. Ted Brader discusses two notable types of appeals in such ads and their effects:

> "*Enthusiasm appeals* – featuring content and imagery associated with success and good times – should increase the desire to participate and the salience of prior beliefs in candidate choice. *Fear appeals* – featuring content and imagery associated with threat – should motivate a search for information, decrease the salience of prior beliefs, and encourage reconsideration of choices on the basis of contemporary evaluations." (Brader 2005, 391)

The study finds that these types of appeals in ads help produce "democratically desirable behavior" by nudging people to participate in political activities, inform themselves on issues and the issue positions of politicians, and eventually cast votes for their preferences. However, a well-known criticism of political ads is that they are "manipulative and poisonous to democratic decision-making," not only because of their appeal to emotion instead of reason, but also because of the lack of information – and often also integrity – in them. (Kamber 1997, 36)

In a similar preceding study, George Marcus looks to deter this criticism by demonstrating how "cognitive and emotional processes [are] mutually engaged and mutually

supportive rather than…antagonistic." (Marcus and Mackuen 1993, 672) Again using the emotions of anxiety and enthusiasm, they establish that these emotions not only play distinctive roles depending on the kinds of political events a person is attending, but also in individual voting decisions. They find, as Brader suggests, that anxiety motivates learning and searches for information while enthusiasm increases political involvement. These results, they argue, do not undermine the political process – rather they enhance it, because instead of relying on "habit" in political decisions, voters are pushed to "engage in meaningful political deliberation." (Marcus and Mackuen 1993, 672)

This optimistic view of emotion leading to information gathering also has some support from psychological literature. In one study where the emotions of anger, enthusiasm, and anxiety were induced, respondents claimed in all three situations that they would seek out political information. Though anger lessened the amount of information seeking, the other emotions increased it. In a second experiment, though only anxiety led to increased information seeking, the other emotions did not result in any change. (Valentino, Hutchings, Banks, and Davis 2008, 264) While emotions may not be directly beneficial to the political process, their instigation of self-education certainly is – and there are a number of other ways in which emotions caused by the political purview may result in a more involved and reasonable electorate. For example, "fear and anxiety serve to direct individuals' attention to threats and increase careful processing of information." (Isbell and Parker 2010, 78) (Of course, it is arguable that having a terrified electorate is not a worthwhile tradeoff for also having an informed electorate.)

These studies, and a number of others, all induced an emotion into respondents by providing them with political situations or issues that would make them angry, enthusiastic, or anxious. By doing so it was possible to motivate people into seeking out information about those

topics. But what kind of information was sought out, and more importantly, what kinds of opinions were formed about those topics once enough information was gathered? While the prospect of a terrorist attack would probably cause most respondents to be anxious, and perhaps also angry, the opinions they form on policies related to terrorism can be vastly different. Liberals are more likely to support policies that provide security against terrorism, while conservatives are more likely to argue that such policies are detrimental to civil liberties and retaining those freedoms is worth the risk. (Davis and Silver 2004, 40) On the other hand, liberals tend to believe that issues such as global warming are more important than the ongoing "war on terrorism" while conservatives hold the opposing view. (Dunlap and McCright 2010, 32) And in regards to how the threat of terrorism ought to be handled, Democrats tend to believe that diplomatic relations with other countries will foster peace, while Republicans tend to hold the view that overwhelming military strength is the best deterrent of terrorism. (Kull 2006, 12)

These differing opinions about policies exist, whether emotional reactions to certain scenarios are playing a significant role or not, due in large part to the aforementioned psychological attachment to party ID and the tendency of people to pick and choose what information they internalize and how they place it among other internal considerations. (Zaller 1992, 23) In particular, citizens who are more politically aware and more informed will usually fill their minds with considerations that "tend to be relatively more consistent with one another and with the citizen's predispositions." (Zaller 1992, 25) However, there are instances when emotions may be overwhelming enough that opinions will converge or diverge more extremely – for example, closely following a terrorist attack. In an opinion poll taken shortly after the September 11th attacks, both conservatives and liberals were much more willing to sacrifice civil liberties for greater security than in polls taken months or years later. (Davis and Silver 2004, 38)

The high levels of anxiety and fear for personal safety were the root cause of this opinion convergence, while relaxation of these fears later on led to a more partisan polarization of attitudes.

Though social science studies are usually not able to induce the same levels of emotional frenzy (at least not without some unethical practices), as with the Valentino study, it is possible to induce emotions to some extent and observe the resulting shifts in general opinion and reported voting behavior. Describing a situation that has political overtones is often enough to induce some emotion. In one study, participants were given two different descriptions regarding the case of a welfare recipient. One description used language that provoked anger, while the other provoked sadness. Relative to the amount of support offered by participants with neutral emotion, the respondents that experienced anger chose to offer much less support to the welfare recipient, whereas those that experienced chose to offer much more. (Small and Lerner 2008, 161) These results clearly indicate that "personal emotions carry over to shape preferences for public policies," and often in significant ways. (Small and Lerner 2008, 162)

Even a simple image or symbol with a political inclination is capable of inducing emotion and shifting a person's opinion one way or another. Media, such as photographs, that are created for the sole purpose of distorting the reality of a situation in such a way as to persuade the observer of a particular opinion has a well-known brand: propaganda. (O'Shaughnessy 2005, vi) But even media that is not intended as a form of propaganda can spark emotions. For example, photographs taken in war zones simply for the purpose of showing what is going on will cause people to feel sad or angry or frightened. On the other hand, photographs of leaders shaking hands may cause viewers to feel happy or proud or in some instances, more secure. Even when such photographs are shown at a speed of 3 to 5 per second, the visual brain is able to quickly

"sort stimuli for emotional impact" and reliably induce an emotion. (Junghöfer and Bradley 2001, 176) As such, even subtle effects on one's psyche may result in opinion shifts, however slight.

This thesis proposes to look at such seemingly fleeting emotional effects on political opinion. It is evident that emotions "endogenous" to politics – in other words, caused by images or information or social interactions that have to do specifically with politics – affect public opinion and voting behavior. But what about emotions "exogenous" to politics? That is to say, how does one's current mood, caused by dynamics that (at least as far as the conscious mind is concerned) are unrelated to politics, affect one's political opinions? Does being angry about excessive traffic put one in a more conservative mindset? Does being sad about a break up lead to liberal tendencies? Or are people able to maintain a complete separation between their feelings about personal daily issues and their feelings about political issues?

This paper uses data acquired from survey research, otherwise known as HITs, on Amazon's Mechanical Turk. By using images unrelated to politics to induce emotions in respondents and then having them answer twelve ideological questions, this paper will demonstrate how day-to-day feelings affect one's political choices.

Methods

Mechanical Turk and Compensation

The data for this paper was acquired through Amazon's Mechanical Turk, an Internet service "where prospective workers, who seek payment for the performance of short tasks, may be matched with prospective employers, who seek workers to perform these tasks." (Berinsky, Quek, and Sances 2012, 2) These tasks are referred to as Human Intelligence Tasks (or HITs). For this particular experiment, two HITs were used, which will be described in detail.

Prior to performing any research on Amazon's service, it was important to determine the reliability of data gathered from Mechanical Turk respondents. Though this data gathering tool has been around since 2005, it has reportedly only picked up in popularity among researchers since 2011. (Buhrmester, Kwang, and Gosling 2011, 3) The question of the service's validity, especially regarding representativeness, selection bias, and the bias of "repeated exposure to research methods" of its workers, has been tested numerous times with mixed results. (Kahan 2013)

Bloggers Sean Richey and Ben Taylor, guests on "The Monkey Cage" (a professional blog designed for the publication of personal political science research and analytical thought processing) performed a brief survey of 565 Mechanical Turk workers on Election Day 2012, asking about "vote choice, ideology, and demographics." (Monkey Cage 2012) The results of their survey can be described in no other way than "highly skewed": they found that 73% of the service's workers voted for Obama, compared with 15% for Romney and 12% for Other. These were not the only surprising results – they also found that 72% of the sample was between 18-29 years old (compared with 17% of the country as a whole), 34% were female (compared with nearly 51%), and that 86% of respondents had turned out to vote (compared to 60% nationwide).

The conclusion to be drawn from these results, the authors argue, is that Mechanical Turk does not provide anything remotely like a sample representative of the United States population, and more closely resembles "the image of who you might think would be online doing computer tasks for a small amount of money." (Monkey Cage 2012) It is possible that their poor data quality was a result of selection bias by respondents – their survey asked only 7 short questions and offered $.05 per completion. While five pennies may not seem like much, for some astute Mechanical Turk workers it would have been possible to complete the survey in 30 seconds or less. In theory, a rate of $.05 for 30 seconds of one's time would work out to $6 per hour – but the average Mechanical Turk worker makes between $2-3 an hour. (Wang, Norcie, and Cranor 2011, 147) Despite the low real benefit of doing the survey, more experienced workers (perhaps those with a quicker ability to analyze cost-benefit) – in other words, exactly those that would be the stereotypical young, poor, male, IT-savvy university students as described by the authors – would have been more likely to respond to this HIT, providing it with these incredibly skewed results. Essentially, it is possible that the design of the HIT itself led to such obvious selection bias, as opposed to the bias being inherent in the service as a whole.

The above analysis of Richey and Taylor's methods is, of course, mere speculation about what could have gone wrong. To date there has been little extensive research, amateur or professional, performed on the reliability of responses from Mechanical Turk based on the extrapolated hourly wage from a HIT. However, other research about the service's workers indicates that not only are they "more representative of the general population" relative to other political science convenience samples, they are also *not* "currently an excessively overused pool." (Berinsky, Huber, and Lenz 2012, 366) In examining participation across 7 experiments, Berinsky et al found that 70% of respondents participated in only one of these, 18% participated

in only two, and only 2% participated in 5 or more. (Berinsky, Huber, and Lenz 2012, 365) Moreover, when examining the habitual and non-habitual respondents separately, there was no substantive or statistical difference in the effects of their study. (Berinsky, Huber, and Lenz 2012, 365) One notable difference between their study and that of Richey and Taylor is that they for the most part offered between $.15-$.25 per survey advertised as averaging 3 minutes to take. (As an hourly rate, this comes out to between $3-$5 per hour, suggesting that this might be an ideal compensation rate.) In observing prior Mechanical Turk research, it was interesting to note that even a lower rate of payment seemed to provide a representative sample. While other factors certainly came into play for this paper's survey design to gather a more accurate sample – HIT length, question wording and ordering, answer ordering, the choice to have closed-questions and no "don't know" responses as a few examples – the aspect of offering just the "right" amount of monetary compensation was a novel one to take into consideration, especially since it is possible to argue that offering "too much" may result in extra selection bias. Alternative research also indicated that "payment levels do not appear to affect data quality," only data collection speed. (Buhrmester, Kwang, and Gosling 2011, 4) In that research, the maximum compensation offered was projected to an hourly rate of $6, with as little as a projected rate of 4 *cents* per hour being offered. For the 5-minute survey, 25 respondents at $.50 apiece were gathered in less than 40 minutes, whereas 25 respondents at $.02 apiece were gathered in 5 hours. Increased speed of data collection for higher levels of compensation is a clear indication of selection bias, as people are more likely to choose to answer surveys that pay them more, faster. While it should again be noted that the previously parenthetical idea – that offering compensation at around a rate of slightly less than half of minimum wage to Mechanical Turk workers is ideal for gathering representative, relatively speedy, and hopefully less biased data – is merely theoretical

speculation, it was part of the reasoning behind the length and compensation level of the two HITs described in this paper.

Preliminary Survey

Prior to posting a full survey on Mechanical Turk, it was important to determine whether the sample acquired would be representative of the United States population. An initial HIT of 10 demographic questions was created using basic HTML, with radio button options. Because these questions were very straightforward and asked for simple, factual information about the respondent, requiring minimal thinking, it was estimated that the survey would take at most between 2-3 minutes to complete. As such, the respondents were offered $.12 for completing the survey, a wage consistent with the ~$3/hour rate. The HIT remained active until around 300 responses were received and accepted (taking about 4 days). While Mechanical Turk allows the HIT creator to establish "qualifications" for the workers replying to the HIT, the only function used for this preliminary survey was "Worker_Adult" – requiring respondents to acknowledge that they were over 18 years of age.

Luckily, the service allows HIT creators to review the responses and manually accept or reject them prior to paying the workers. It quickly became clear that a small number of responses could not be considered legitimate – for example, when only the first or last answer to every single question was chosen. (By pure chance, the party ID question and the ideology question had been arranged so that the first answers were "Democrat" and "Strongly conservative" respectively. Needless to say, the importance of answer order became very evident in reviewing responses to this survey.) Another way of quickly determining whether a submission was legitimate was through the timestamps provided by the website for both when the worker accepted the HIT and submitted it. A few submissions had the timestamps only seconds apart,

indicating that perhaps someone had simply clicked randomly through the answers as fast as they could, or even that they had used a bot to complete the survey. A total of 27 responses were rejected (8.2% of the 327 responses received in all).

The results of this preliminary survey were then directly compared to data from the 2010 Census, the 2010 or 2006 GSS, and the 2012 ANES (either the pre- or post-election study) to determine representativeness. Tables 1-10 show in detail how the distribution of responses for each question in this survey compare with the distribution of responses for the same (or a similar) question in those popular data gathering tools.

Table 1 shows that the distribution of gender among Mechanical Turk workers is very similar to that of the general population. As is commonly expected of data collected through surveys, whether online or by other means, the female population is marginally higher than the male population. However, given the small differences between the results gathered here and the Census Bureau's most recent tally of gender distribution in the United States, this variable will not be weighted in the full survey.

The "other" option is offered for respondents who would not place themselves in traditional gender categories – a practice that has become more common in recent years when a question about gender is asked. (Califia 24)

TABLE 1

Sex

	Preliminary Survey	2010 US Census	
	What is your gender? (%)	What is this person's sex? (%)	Difference (%)
Male	47.7	49.2	-1.5
Female	52.0	50.8	1.2
Other	0.3	~	~

~ DATA OR CALCULATIONS NOT AVAILABLE.

Source: "Age and Sex Composition: 2010," 2010 Census Briefs. May 2011.

http://www.census.gov/prod/cen2010/briefs/c2010br-03.pdf

TABLE 2

Age

	Preliminary Survey	2010 General Social Survey	
	What is your age range? (%)	Date of Birth* (%)	Difference (%)
18-25	18.0	11.2	6.8
26-35	25.3	18.3	7.0
36-45	22.3	17.7	4.6
46-55	16.7	18.1	-1.4
56-65	12.3	16.7	-4.4
66+	5.3	18.0	-12.7

* GSS VARIABLE RECODED FOR COMPARABILITY.

Source: 2010 GSS Stata Dataset, acquired from http://www3.norc.org/GSS+Website/.

The Mechanical Turk population is conspicuously younger than the general population in Table 2. There are significantly more people under the age of 45 represented here, while the 66 and higher age range is severely underrepresented. This discrepancy could be due to a lack of computer or Internet use on the part of older members of society. In the full survey, respondents will be able to input their exact age in a numerical text box. The resulting data will be compiled into a range variable, which will then be weighted.

Interestingly, Table 3 shows that the Mechanical Turk is more "in the middle" than the general population as far as education is concerned. There are fewer people with a less than high school education or a graduate education represented, and more with a completed high school or at least some college education. Weights will be applied here as well.

The Mechanical Turk population has a notably lower income than the general population in Table 4. It is possible that some of the workers are even using this resource as a way of supplementing their income. This variable will be weighted in the full survey.

White respondents are clearly overrepresented in this sample according to Table 5, whereas Hispanics and Blacks are underrepresented. This discrepancy is most likely due to the addition of Hispanic as an option in the preliminary survey race question, as opposed to offering this option in a separate "yes or no" ethnicity question. Due to limited space this question has remained unchanged.

TABLE 3

Education

	Preliminary Survey		2010 General Social Survey		Difference (%)
	What is your highest level of education completed? (%)		Do you have any college degrees? (Code highest degree earned) (%)		
No high school	0.7			~	
Some high school	13.0	Less than high school	14.9		} -1.2
High school diploma	50.3	High school	49.0		1.3
Some college	10.7	Junior college	7.1		
Bachelor's/Associate's	18.0	Bachelor	18.4		} 3.2
Some graduate	1.7			~	
Graduate/Professional degree	5.7	Graduate	10.7		} -3.3

~ DATA OR CALCULATIONS NOT AVAILABLE.

Source: 2010 GSS Stata Dataset, acquired from http://www3.norc.org/GSS+Website/.

TABLE 4

Income

	Preliminary Survey	2006 General Social Survey	Difference (%)
	What is your yearly income? (%)	In which of these groups did your total family income, from all sources, fall last year – 2005 – before taxes, that is.* (%)	
$0-30k	39.3	37.2	2.1
$30-60k	28.6	26.5	2.1
$60-90k	15.7	16.8	-1.1
$90-120k	7.0	8.1	-1.1
$120-150k	3.7	5.1	-1.4
$150k+	5.7	6.4	-0.7

* GSS VARIABLE RECODED FOR COMPARABILITY.

Source: 2006 GSS Stata Dataset, acquired from http://www3.norc.org/GSS+Website/.

TABLE 5

Race/Ethnicity

	Preliminary Survey	2010 US Census	
	With which race/ethnicity do you usually identify? (%)	What is this person's race? (%)	Difference (%)
American Indian/Alaskan Native	1.3	0.9	0.4
Asian	4.3	4.8	-0.5
Black	8.3	12.6	-4.3
Hispanic	(6.7)*	(16.3)**	~
Native Hawaiian/Pacific Islander	0.3	0.2	0.1
White	79.0	72.4	6.6

~ DATA OR CALCULATIONS NOT AVAILABLE.

* HISPANIC WAS NOT INCLUDED AS A SEPARATE "YES OR NO" ETHNICITY QUESTION.

** HISPANIC WAS INCLUDED AS A SEPARATE "YES OR NO" ETHNICITY QUESTION.

Source: "Overview of Race and Hispanic Origin: 2010," 2010 Census Briefs. Mar 2011.

http://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf

TABLE 6

Religion

	Preliminary Survey		2010 General Social Survey
	With which religion do you usually identify? (%)		What is your religious preference? Is it Protestant, Catholic, Jewish, some other religion, or no religion? (%)
		Protestant	47.9
		Catholic	23.7
		Orthodox-Christian	0.4
Christianity	53.3	Christian	4.4
Judaism	2.0	Jewish	1.8
Buddhism	0.7	Buddhism	0.9
Hinduism	0.7	Hinduism	0.2
		Other Eastern	0.2
Islam	2.3	Moslem/Islam	0.5
		Native American	0.1
		Inter-nondenominational	1.0
Atheism/Agnosticism	22.7	None	17.9
Other	18.3	Other	1.0

Source: 2010 GSS Stata Dataset, acquired from http://www3.norc.org/GSS+Website/.

As Table 6 makes abundantly clear, religion is a very specific topic for most respondents. Due to the exceeding inconsistency in the data, the "difference" column is not shown since it would not provide any relevant information about the Mechanical Turk population. The options available for this question have been revised for the full survey.

The Mechanical Turk population in general tends to identify with a particular political party significantly more than the population as a whole in Table 7. This difference is probably due to the wording of the question and the options offered. Unlike the ANES question which specifically mentions only Democrat and Republican as possible party choices, the question provided in the preliminary survey allows the respondent to choose from a larger pool of considerations. The availability of "Green" and "Libertarian" as party ID options probably detract the most from respondents answering "Independent." Though the differences between this preliminary dataset and the ANES dataset are large, no weights will be applied later on because the format of the party ID question here allows for more accurate responses.

The Mechanical Turk workers lean somewhat toward the liberal end of the ideology spectrum in Table 8. For the full survey, ideology will definitely be weighted. For weighting purposes, the "haven't thought much" category will be added to the "moderate" category. (Except for questions about a person's health, it is preferable not to offer a "don't know"-type option.)

The large discrepancy between the two datasets is of course due to the lack of a "did not vote" option in the preliminary survey. Though the "difference" column is shown in Table 9, it does not provide very accurate data about the Mechanical Turk population. The answer options will be rectified in the full survey.

TABLE 7

Party ID

	Preliminary Survey		2012 ANES (Pre-Election Study)	Difference (%)
	With which political party do you usually identify? (%)		Generally speaking, do you usually think of yourself as a Democrat, a Republican, an Independent, or what? (%)	
Democrat	37.3	Democrat	34.6	2.7
Republican	32.7	Republican	27.1	5.6
Green	0.7		~	~
Libertarian	6.3		~	~
Independent	18.7	Independent	32.2	-13.5
Other	4.3	Other	3.3	1.0
		None/DK/Refused	2.8	~

~ DATA OR CALCULATIONS NOT AVAILABLE.

Source: 2012 ANES (Pre-Election Study) Stata Dataset, acquired from

http://www.electionstudies.org/studypages/download/datacenter_all_NoData.php.

TABLE 8

Ideology

	Preliminary Survey	2012 ANES (Pre-Election Study)	Difference (%)
	Where do you place yourself on a scale from strongly conservative to strongly liberal? (%)	Where would you place yourself on this scale, or haven't you thought much about this?	
Strongly conservative	2.0	3.7	-1.7
Conservative	13.3	17.3	-4.0
Slightly conservative	14.7	12.7	2.0
Moderate	38.0	37.1	0.9
Slightly liberal	15.0	11.0	4.0
Liberal	13.7	10.0	3.7
Strongly liberal	3.3	2.8	0.5
Haven't thought much	N/A	5.4	~

~ DATA OR CALCULATIONS NOT AVAILABLE.

Source: 2012 ANES (Pre-Election Study) Stata Dataset, acquired from

http://www.electionstudies.org/studypages/download/datacenter_all_NoData.php.

TABLE 9

2012 Vote

	Preliminary Survey	2012 ANES (Post-Election Study)	
	Who did you vote for in the last presidential election? (%)	For whom did you vote for president in 2012? (%)	Difference (%)
Barack Obama	46.0	36.8	9.2
Mitt Romney	44.7	31.8	12.9
Gary Johnson	1.0	~	~
Other	8.3	3.1	5.2
Did not vote	~	28.3	~

~ DATA OR CALCULATIONS NOT AVAILABLE.

Source: 2012 ANES (Post-Election Study) Stata Dataset, acquired from

http://www.electionstudies.org/studypages/download/datacenter_all_NoData.php.

TABLE 10

Attention to Politics

	Preliminary Survey	2012 ANES (Pre-Election Study)	
	How often do you pay attention to what's going on in government and politics? (%)	How often do you pay attention to what's going on in government and politics? (%)	Difference (%)
Never	4.7	2.7	2.0
Some of the time	17.3	27.8	-10.5
About half the time	33.3	21.6	11.7
Most of the time	37.0	31.3	5.7
Always	7.7	16.5	-8.8

Source: 2012 ANES (Pre-Election Study) Stata Dataset, acquired from

http://www.electionstudies.org/studypages/download/datacenter_all_NoData.php.

Mechanical Turk respondents report paying more attention to politics on the whole, though significantly less "always" than the U.S. population, according to Table 10. Though this variable provides interesting information about the respondents and will be retained in the full survey, it is likely that people tend to choose between the options indicating more attention to politics than not in a random manner. As such, no weights will be applied to this variable.

Generally, the results of these comparison tables indicate that the Mechanical Turk population is slightly younger, more liberal, a bit less wealthy, more in the middle on education, and significantly more secular than the US population as a whole. The discrepancies between some of these numbers can be accounted for quite simply by normal fluctuations in data, or question wording/answer choice error. In the following full survey, most of these demographic variables were left alone. However, for the variables of age, education, income, and ideology, weights based on the information provided by the US Census, GSS, and ANES were applied, as will be discussed. Additionally, two questions from the NHIS regarding health and smoking habits were added as a way of further ensuring the representativeness of the sample. These changes are discussed in more detail in the section discussing weighting and representativeness.

Emotion-Inducing Image Choice

The main goal of this experiment was to demonstrate how different moods in respondents results in trending differences in ideologies. In order to do this, respondents were shown one image prior to answering ideology questions in each of the 5 different picture versions of the full survey (which will be detailed in the following section). These images were chosen mainly based on scholarly psychology articles and texts, which suggested how a particular image may cause the person viewing it to feel a certain way.

The first of these pictures, shown in Figure 1, was intended to induce the emotion of happiness. The image shows a clearly cheerful puppy running on a background of green grass. The term "happiness," as some scholars note, is very subjective – it can mean "pleasure, life satisfaction, positive emotions, a meaningful life, or a feeling of contentment, among other concepts." (Diener, Scollon, and Lucas 2009, 68) For many psychologists, it is important to associate images with more specific positive emotions such as "awe," "amusement," "contentment," and "excitement." (Mikels, Frederickson, and Reuter-Lorenz 2005, 10) However, for the purposes of this study, such a detailed analysis of the respondents' emotions was neither feasible nor necessary.

FIGURE 1

Instead, the goal of this image was to cause respondents to have a general feeling of happiness – in this case, reduced simply to mean broad contentment, with some minor amusement. One study indicates that respondents report primarily feeling happy when viewing pictures of food, families, and babies, although more often by women than men. (Bradley, Codispoti, Sabatinelli, and Lang 2001, 312) Pictures of nature also evoked feelings of happiness,

coupled with freedom – in fact, freedom was more often the primary emotion reported, with happiness always closely associated. (Bradley, Codispoti, Sabatinelli, and Lang 2001, 312) Images of facial expressiveness indicating happiness (in particular definite laughter or smiling) also increased respondents' reports of feeling happy. (Lang, Greenwald, Bradley, and Hamm 1993, 268) These factors, combined with the indication that "mere observation of animals can result in reduced physiological responding to stressors, and in increased positive mood" were paramount in the choice of the "happy" picture. (Nicholas 124)

Figure 2 presents the image intended to induce the emotion of sadness in respondents. This picture shows an old woman with a cane, sitting on a bench with her head bowed, indicating that she is upset or tired. Unlike the term "happiness," "sadness" is a more specific negative emotion. Not only have studies shown that physical attributes such as "heart rate and finger temperature" can differentiate sadness from other basic emotions such as anger, fear, and disgust in participants of all demographics, (Levenson 2009, 218) the IAPS (International Affective Picture System) – a database of thousands of pictures used by psychologists to elicit a range of emotions – has also demonstrated that sadness is a discrete emotion which can be generated through the use of particular visuals. (Bradley, Codispoti, Sabatinelli, and Lang 2001, 315)

FIGURE 2
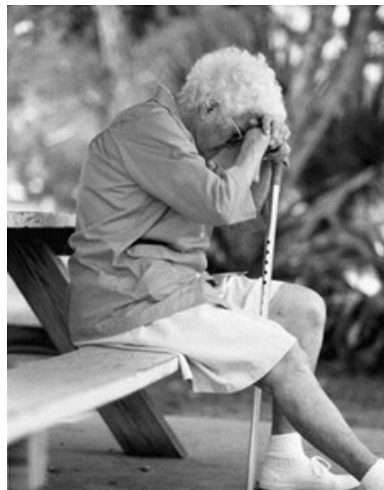
Markedly, "pictures of accidents, illness, and loss all elicited feelings primarily of pity and sadness from both men and women." (Bradley, Codispoti, Sabatinelli, and Lang 2001, 312) Sadness was also recorded as the primary response towards images representing vague relationships with death, such as hospitals and nursing homes, groups of people wearing black (especially a funeral gathering), and even cold or dark places. (Britton, Taylor, Sudheimer, and Liberzon 2006, 913) One study also noted that the use of the greyscale layer of an image (as opposed to the color version) may result in more unpleasant emotions if an image is already negatively "arousing." (Delplanque, N'diaye, Scherer, and Grandjean 2007, 149) Given these findings, it seemed appropriate to choose a greyscale image depicting old age, fatigue, and gloom, as this picture does. Additionally, in order to refrain from politicizing the image (however unlikely), no overtly health-related images – such as the aforementioned hospitals and nursing homes – were considered.

The image intended to induce anger in respondents, shown in Figure 3, is that of a seemingly endless traffic jam. It is true that this image may be more likely to result in feelings of irritation or frustration rather than full-blown anger for many respondents. Mikels notes that it is difficult to achieve actual anger in respondents merely by having them passively view "static images," because anger is "contingent upon appraisals of extreme unpleasantness, high effort, high certainty, and strong human agency" or "as involving a demeaning offense against the self." (Mikels, Frederickson, and Reuter-Lorenz 2005, 13) All of these are generally dynamic events.

FIGURE 3

However, though "anger" is considered a discrete, specific emotion by psychologists, the term does encompass a range of emotional intensities, "from mild irritation or annoyance to fury and rage." (Spielberger, Jacobs, Russell, and Crane 1983, 162) Also, not only does persistent annoyance often cause an escalation in feelings of anger towards a particular subject, but respondents are usually fuzzy about when feelings of mere irritation turn into stronger feelings of anger. (Pruitt, Parker and Mikolic 1997, 261) Pictures that usually elicit anger are those of "human threat," while images of "contamination and pollution" elicit annoyance. (Bradley, Codispoti, Sabatinelli, and Lang 2001, 312) While these descriptions provide a more minimal indication of what images would be best for evoking anger, the chosen image certainly fits into all of these criteria. Table 11 demonstrates how this image, and all others, performed in bringing up the expected emotion. Here, 80% of respondents to this version of the survey reported feeling angry as opposed to happy, sad, scared, or sympathetic, and 60% of those respondents reported feeling either angry or very angry.

TABLE 11	Images & Emotion	
	How [emotion] would you say this picture makes you feel? (%)	Which of the following most accurately describes how this picture makes you feel? (%)
Happy		87.0
Very happy	28.0	26.7
Happy	40.0	38.3
In the middle	20.7	17.3
Not very happy	8.7	4.3
Not at all happy	2.7	0.3
Sad		72.7
Very sad	23.7	18.0
Sad	38.3	33.0
In the middle	23.3	14.3
Not very sad	9.0	5.0
Not at all sad	5.7	2.3
Angry		80.0
Very angry	29.0	24.3
Angry	39.0	35.7
In the middle	20.0	15.0
Not very angry	9.7	4.3
Not at all angry	2.3	0.7
Scared		73.7
Very scared	20.3	17.0
Scared	35.7	31.0
In the middle	28.0	19.0
Not very scared	10.0	4.0
Not at all scared	6.0	2.7
Sympathetic		54.7
Very sympathetic	16.3	10.3
Sympathetic	32.0	19.7
In the middle	30.0	17.7
Not very sympathetic	12.3	4.0
Not at all sympathetic	9.3	3.0

The emotion of fear was perhaps the most difficult for which to select a picture. Figure 4 shows the image of a tornado making its way through a city. Images of devastating weather events, in particular those affecting large amounts of people, are known to be direct stimuli of fear in respondents. (Britton, Taylor, Sudheimer, and Liberzon 2006, 911) However, these images are not as effective as others – for example, pictures of weapons (especially guns), human mutilation, and threatening animals tend to be significantly more effective at producing fear.

FIGURE 4

The use of a gun image was of course out of the question, given the current polarizing political context surrounding guns. An image of mutilation was also simply not appropriate – not only due to ethical considerations, but because such images tend to elicit "disgust" as a primary emotion rather than fear. (Bradley, Codispoti, Sabatinelli, and Lang 2001, 317) While images of a snake, spider, or dog baring its teeth were considered, some studies indicate interesting results for these images – though many people are fearful, some indicate feelings of contentment when viewing these images, perhaps due to experience with these animals as pets. (Delplanque,

N'diaye, Scherer, and Grandjean 2007, 147) The tornado image seemed to be the most suitable choice, especially since it is directly named as an example image in the category of fear for the IAPS. (Mikels, Frederickson, and Reuter-Lorenz 2005, 9)

The last emotion chosen for the purposes of this survey was sympathy. Figure 5 exhibits a little girl whose ice cream has fallen from her ice cream cone. Psychology literature indicates much debate over which emotions are considered "basic" and which are the more complex developments of these emotions – or if there are any "basic" emotions to begin with (a discussion best left for the experts). Most literature indicates that happiness, sadness, anger, and fear are definitely distinct and primal emotions. A highly popular article on universal facial expressions argues that "disgust" and "surprise" are the two other basic emotions. (Ekman, Friesen, and Ancoli 1980, 1132) But other theorists include emotions such as "love," "desire," "guilt," "anticipation," and even so-called "tender-emotion" in this basic category. (Ortony and Turner 1990, 316) The basis for including these emotions ranged from studies on biological processes to neural firings to simply the argument that these are "hardwired" emotions. (Ortony and Turner 1990, 316)

For the purposes of this study, since three "negative" emotions had already been chosen (sadness, anger, and fear), it was important to choose one other "positive" emotion that could be unmistakably distinguished from happiness. While it may have been more accurate to choose an emotion such as "love" or "desire," these were nixed due to the difficulty involved in choosing an image that would evoke such an emotion across all demographics of people. In particular, images that affect love, desire, or even eroticism for women notoriously do *not* have as much effect on men, and the other way around. (Bradley, Codispoti, Sabatinelli, and Lang 2001, 301) "Sympathy" is a relatively encompassing, positive emotion that all types of people, including

both genders, tend to express about similar things – although, it should be noted, usually only when these things are brought to a respondent's attention. (Dickert and Slovic 2009, 303) Because this study is at its base about political ideology, sympathy likewise was the most relevant and interesting choice for the last emotion.

FIGURE 5

It was important that the chosen image was not of a situation where the elements involved could be divided into "victim" and "criminal," which could be construed as political. Images of children tend to elicit more sympathy than images of adults. (Berman 1980, 678) Pictures that have striking facial or gestural expressions are often used to elicit sympathy, both in negative and positive ways. (Eisenberg and Strayer 1987, 296) Notably, the little girl in the image is not crying, which may have caused respondents to feel sad instead of sympathetic. Rather, her face is a confused mixture of disappointment and comedy, which should cause viewers of this image to have, as Yano refers to it, an "aww moment." (Yano 2011, 25) Though this phrase encompasses a wide variety of situations, generally it refers to a viewer's feeling of

positive sympathy, especially for something "cute" (i.e. with infantile physical features) as this "motivates caretaking behavior" in adults – certainly a reaction consistent with feeling sympathy. (Glocker, Langleben, Ruparel, Loughead, Gur, and Sachser 2009, 260)

In each of the five versions of the survey including an image, the question "Which of the following most accurately describes how this picture makes you feel?" was asked, with the five emotions discussed provided as options – "happy," "sad," "angry," "scared," or "sympathetic." A second question asking respondents "How [intended emotion] would you say this picture makes you feel?" was also asked, with answers ranging from "very [intended emotion]" to "not at all [intended emotion]." Responses to these questions, demonstrating how accurate the images were in inducing the intended emotions, are displayed in Table 11 above.

In hindsight, more accurate results may have been generated had all five questions about the level of each particular feeling been asked in all versions of the survey, rather than having these divided up among 300 respondents each. Also, the first question might be better designed as an open-ended, one-word response box rather than just offering five preset choices. These changes to the survey might result in a more precise "emotion thermometer," both for how people feel about a particular picture and also for how these feelings affect ideology.

On the other hand, too many questions about these highly subjective concepts may merely result in confusing respondents, or in having them design responses that "fit" together logically (for example, a person would be mindful of not answering that they are feeling both "very angry" and "very happy" towards an image) even if they are not representative of the actual feelings that occur. Hopefully, the adage "less is more" applies for the format of this part of the survey. A discussion of the remaining aspects of the survey design follows.

Full Survey Design

The experience with Mechanical Turk during the preliminary survey was certainly a learning opportunity, resulting in some notable changes for the second, much larger survey – which, as discussed, was comprised of six separate survey versions. Basic HTML was again used for these HITs, with radio button options used for every question except the one asking about a respondent's age. In this instance, a numerical textbox was used, where respondents were able to type any age from 18-99. (The highest response was 83 in this case.)

As mentioned, six versions of the survey were conducted. One of these was a base survey asking 24 questions – 12 demographic questions (the same ten asked previously, along with the two NHIS questions) and 12 questions related to political ideology. The remaining five surveys included the same 24 questions; however, prior to the 12 ideology questions, one of the emotion-inducing images (discussed at length in the previous section) was shown and two questions about the respondent's emotional reaction to the picture were asked.

Unfortunately, though this survey was estimated to take between 8-10 minutes to complete due to its increased length and thought requirement, funds only permitted an offer of $.35 per completion, which put the compensation rate closer to ~$2/hour. Also, in order to significantly reduce the amount of rejections, two qualifications were added using the functions "Worker_PercentAssignmentsApproved" and "Worker_NumberHITsApproved." The former function allows only workers who have a particular percent of responses approved (as opposed to rejected) to answer the HIT. For this survey, it was set at 90% – pretty low for the Mechanical Turk population. However, for workers with a small number of assignments completed, this percentage is "statistically meaningless" – if a worker has only completed one HIT and had it approved, that approval rating of 100% may not be indicative of how the worker will respond to

other HITs. The latter function indicates the actual number of HITs that a worker has had approved. For this survey it was set at 9, meaning that a worker must have had at least 9 prior HITs approved and at least 90% of his or her total HITs approved in order to respond to this survey.

These surveys were each set to gather 300 responses, for a total of 1800 – however, in order to prevent the same worker from replying to multiple surveys, they were posted one at a time. After each response was accepted and paid for and the response gathering was finished for a particular survey, each "WorkerID," the unique set of numbers and letters assigned to each Mechanical Turk worker, was blocked to prevent further replies to other surveys. While this method was a rather crude and inefficient way of avoiding replies to multiple surveys, my limited knowledge of HTML and other programming languages prevented a more sophisticated way of dealing with this issue. But despite being time-consuming, the task was not infeasible and it was a reliable method of preventing the relevant issue. Given these various factors, it took about 42 days to gather all 1800 legitimate responses. Notably, only 19 responses had to be rejected – barely 1% of the 1819 received.

Representativeness and Weighting

The demographic data acquired in the full-length survey was generally congruent with that acquired in the preliminary survey. Of note was the religion variable – when options more closely resembling those of the GSS were offered, the portrait of the Mechanical Turk population became more diverse and slightly less secular. The revised responses are compared to the GSS data in Table 12 and indicate that the religion variable does not need weighting.

The results for the two NHIS questions added for this survey are also compared for representativeness to the NHIS statistics, shown in Tables 13 and 14. Both of these indicate

results that are very much on par with the national statistics, further demonstrating the representativeness of the Mechanical Turk population.

Though comparison tables for the remaining demographic questions will not be shown so as to avoid too much redundancy, it should once again be noted that the age, education, income, and ideology variables are atypical compared with national statistics and were weighted for the analysis of this data.

For this purpose, the "survwgt" add-on was installed in Stata. Base variables for *agerange*, *educ*, *income*, and *ideology* were generated, with all values set to 1. Weighted variables for each of these were also created, with all values set to missing. Using the 2010 GSS data for age and education, the 2006 GSS data for income, and the 2010 ANES (pre-election study) data for ideology that had been previously compared to the preliminary survey data, weights were created for each value. Tables 15 shows an example of the newly weighted data in this study for age compared with the results of the national study to which it was previously compared. As the table shows, the actual number of people saying they are a certain age has been changed so that the percentages are equivalent to the GSS data percentages.

TABLE 12

Religion

	Full Survey		2010 General Social Survey	
	With which religion do you usually identify? (%)		What is your religious preference? Is it Protestant, Catholic, Jewish, some other religion, or no religion? (%)	Difference (%)
Protestantism	46.8	Protestant	47.9	-1.1
Catholicism	17.8	Catholic	23.7	-5.9
Other Christianity	4.0	Orthodox-Christian	0.4	}
		Christian	4.4	-0.8
Islam	2.2	Moslem/Islam	0.5	1.7
Hinduism	0.9	Hinduism	0.2	0.7
Judaism	2.1	Jewish	1.8	0.3
Buddhism	0.7	Buddhism	0.9	-0.2
Atheism or Agnosticism	20.6	None	17.9	2.7
Other	5.0	Other	1.0	4
		Inter-nondenominational	1.0	~
		Native American	0.1	~
		Other Eastern	0.2	~

~ DATA OR CALCULATIONS NOT AVAILABLE.

Source: 2010 GSS Stata Dataset, acquired from http://www3.norc.org/GSS+Website/.

TABLE 13

Cigarettes

	Full Survey	2000 NHIS	
	Have you smoked at least 100 cigarettes in your entire life? (%)	Have you smoked at least 100 cigarettes in your entire life? (%)	Difference (%)
Yes	40.6	42.8	-2.2
No	56.7	56.5	0.2
No Response	2.7	0.7	2.0

Source: 2012 NHIS Data, acquired from http://www.cdc.gov/nchs/nhis/nhis_questionnaires.htm.

TABLE 14	Health		
	Full Survey	2000 NHIS	
	Would you say your health in general is...? (%)	In general, would you say your health is: (%)	Difference (%)
Excellent	25.9	29.3	-3.4
Very good	26.0	24.8	1.2
Good	21.8	20.6	1.2
Fair	12.9	14.3	-1.4
Poor	3.0	3.2	-0.2
No Response	10.3	7.8	2.5

Source: 2012 NHIS Data, acquired from http://www.cdc.gov/nchs/nhis/nhis_questionnaires.htm.

TABLE 15	Age (Range)		
	Respondent Frequency	Weighted Data (%)	2010 GSS Data (%)
18-25	201.6	11.2	11.2
26-35	329.4	18.3	18.3
36-45	318.7	17.7	17.7
46-55	325.8	18.1	18.1
56-65	300.6	16.7	16.7
66+	324.0	18.0	18.0

Determination of Ideology

The goal behind asking 12 specific ideology-related questions in the survey was to use the responses to these questions to create an ideology scale that would be able to accurately assess the ideological leanings of the respondent at the time of the survey. In order to create this scale, several steps were taken.

First, using the *xi i.[variable]* command, four dummy variables were created for each of the 12 questions. These dummy variables were then regressed against the weighted ideology variable to determine the general direction of the responses. Table 16 exemplifies this process using the responses to the question regarding offshore oil drilling, under the *qoil* variable. As the table shows, in general people who chose the "strongly favor" option tended to have the most comparatively conservative ideology, and as the answers progressed towards "strongly oppose," the respondent ideology became more liberal.

TABLE 16

ideology	Coef.	t	P>|t|
_Iqoil_2	0.361	4.34	0.00
	(0.083) **		
_Iqoil_3	1.100	13.33	0.00
	(0.083) **		
_Iqoil_4	1.653	17.81	0.00
	(0.093) *		
_Iqoil_5	1.587	17.46	0.00
	(0.091) *		
Cons.	2.989	52.98	0.00
	(0.056) *		
	Prob > F =	0.000	
	R^2 =	0.229	
	Adj. R^2 =	0.227	

OLS Regression of qoil dummy variables for ideology direction

(Indicates standard error.)

*/** indicates significance of coefficient at the 95/90% level.

For some questions, the opposite was true. This difference was due simply to question wording and answer ordering. To create an ideology scale, it was important that the progression in ideology was the same for each of the question variables. As such, for those variables where option 1 tended to be the more liberal choice and option 5 the more conservative one, the responses were recoded so as to have a uniform valence.

Also for the purpose of valence equivalency in creating the ideology scale, the responses to the ideology variable were consolidated into 5 options rather than 7 by creating the *ideol5* variable. This consolidation was done by putting the responses for "strongly conservative" and "strongly liberal" into the "conservative" and "liberal" categories respectively. The other categories were left untouched. Notably, the partyID variable was not included in the creation of the ideology scale. Though literature shows that one's reported ideology as well as responses to ideology questions are often dependent on party identification, it was important to prevent excessive colinearity.

After ensuring that each of the relevant variables had an equivalent valence, the index variable *newideol* was generated by adding the response value of each of the 12 questions as well as the response value of the *ideol5* variable and dividing by 13. Figure 6 shows a stata snippet of the tabulated *newideol* variable. Values range from 1.15 to 4.85, with the lowest values indicating the strongest conservative ideology and the highest values indicating the strongest liberal ideology.

However, the *newideol* index only crudely indicates a respondent's ideology. Responses to some of the ideology questions are stronger indications of a respondent's ideology than others. The Cronbach's alpha test was performed on this *newideol* index to determine how much importance should be given to each variable, shown in Table 17. Through the values generated

under the item-test correlation section, each question variable was "weighted" and a new variable was generated. For example, the *qoil* variable was multiplied by .5575 in all cases and the *qoilw* variable was created.

Once again, these twelve new "weighted" variables along with the original *ideol5* variable were added together and divided by 13 to generate the new index variable *newideolw*. Figure 7 shows a small part of this index. Scores ranged from .63 to 2.71 and again, the lowest values indicated the strongest level of conservatism while the highest values indicated the strongest levels of liberalism. However, now each respondent was provided with a very specific ideology value, tailored to their exact responses.

The Cronbach's alpha test was performed on this index as well, this time to demonstrate the increased accuracy. Table 18 shows that not only did the alpha score increase as a whole, but it also increased on each separate variable, indicating that the "weighted" index shows a more accurate respondent ideology.

FIGURE 6

```
 newideol   |    Freq.     Percent      Cum.
------------+--------------------------------
  1.153846  |       1        0.06        0.06
  1.230769  |       4        0.22        0.28
  1.307692  |       2        0.11        0.39
  1.384615  |       6        0.33        0.72
  1.461538  |      11        0.61        1.33
  1.538462  |       7        0.39        1.72
  1.615385  |      15        0.83        2.56
  1.692308  |       9        0.50        3.06
  1.769231  |      19        1.06        4.11
  1.846154  |      47        2.61        6.72
  1.923077  |      37        2.06        8.78
         2  |      38        2.11       10.89
  2.076923  |      43        2.39       13.28
  2.153846  |      25        1.39       14.67
  2.230769  |      33        1.83       16.50
  2.307692  |      33        1.83       18.33
  2.384615  |      39        2.17       20.50
  2.461539  |      34        1.89       22.39
  2.538461  |      34        1.89       24.28
  2.615385  |      48        2.67       26.94
```

TABLE 17 Cronbach's Alpha test of newideol variable

Item	Item-Test Correlation	Item-Rest Correlation	Average Interitem Covariance	Alpha
ideol5	0.8243	0.7748	0.4135	0.7623
qhealth	0.4856	0.3692	0.4762	0.7957
qmoney	0.3951	0.2803	0.4969	0.8020
qterror	0.5010	0.3857	0.4728	0.7943
qgaym	0.5271	0.4106	0.4655	0.7923
qabortion	0.6597	0.5574	0.4316	0.7787
qdeathpen	0.3027	0.1706	0.5135	0.8115
qgunbuy	0.6741	0.5795	0.4317	0.7769
qimmigrant	0.4904	0.3762	0.4758	0.7950
qrace	0.6221	0.5260	0.4485	0.7825
qschoolsp	0.5675	0.4488	0.4531	0.7891
qoil	0.5575	0.4472	0.4599	0.7891
qwaterb	0.4716	0.3526	0.4788	0.7971
Test Scale			0.4629	0.8032

FIGURE 7

newideolw	Freq.	Percent	Cum.
.6320308	1	0.06	0.06
.6371923	1	0.06	0.11
.6464308	1	0.06	0.17
.6492077	1	0.06	0.22
.6868923	1	0.06	0.28
.6900846	1	0.06	0.33
.6930846	1	0.06	0.39
.7000692	1	0.06	0.44
.7040231	1	0.06	0.50
.7160462	1	0.06	0.56
.7301692	2	0.11	0.67
.7555692	1	0.06	0.72
.7586	1	0.06	0.78
.7652077	2	0.11	0.89
.7664923	1	0.06	0.94
.7807846	2	0.11	1.06
.7809154	1	0.06	1.11
.7818846	2	0.11	1.22
.7884923	1	0.06	1.28
.7912846	1	0.06	1.33
.7947615	1	0.06	1.39
.8025077	1	0.06	1.44
.8036538	1	0.06	1.50
.8081692	1	0.06	1.56
.8102923	1	0.06	1.61
.8107615	1	0.06	1.67
.8246539	1	0.06	1.72

TABLE 18   Cronbach's Alpha test of newideolw variable

Item	Item-Test Correlation	Item-Rest Correlation	Average Interitem Covariance	Alpha
ideol5	0.8554	0.7759	0.1256	0.7730
qhealthw	0.4508	0.3545	0.1788	0.8138
qmoneyw	0.3637	0.2877	0.1865	0.8175
qterrorw	0.4930	0.3969	0.1757	0.8111
qgaymw	0.5423	0.4427	0.1710	0.8078
qabortionw	0.6908	0.5834	0.1520	0.7953
qdeathpenw	0.2407	0.1734	0.1926	0.8222
qgunbuyw	0.6985	0.5956	0.1520	0.7941
qimmigrantw	0.4723	0.3782	0.1776	0.8123
qracew	0.6496	0.5540	0.1606	0.7986
qschoolspw	0.5709	0.4593	0.1662	0.8065
qoilw	0.5574	0.4552	0.1692	0.8068
qwaterbw	0.4439	0.3492	0.1796	0.8148
Test Scale			0.1683	0.8189

Results

Model and Significance

After much discussion, the models used to demonstrate the relationship between mood and ideology in this study are relatively simple. It should be noted that even though the variable *newideolw* is not numerical, but rather has distinct ordinal categories, there are too many for an ordinal logistic regression. As such, a regular multiple regression using this variable was performed, while an ologit regression using the simple *ideol5* variable was performed. Both of these regressions, along with anova and brant significance tests respectively, were performed on each of the separate survey versions – the five picture versions as well as the non-picture version. The results are detailed in Tables 19-24, and a discussion follows. (Note that an increase in option number for the images means a decrease in the intended emotion being reported by the respondent for that image.)

These results indicate a few things. First, ideology is most strongly influenced by party identification. As Table 19 demonstrates, only party identification has a statistically significant sway over a respondent's calculated ideology. No other demographic variable, such as sex, income, or religion has a significant influence over this estimation. A couple of explanations exist: foremost, that unless respondents had strong opinions already formed about the subject of a particular ideology question, most of the time the respondents reverted to the answer that was familiar to them as falling along their party's lines. While other demographic variables such as age or education may play an important role in the respondent's initial selection of a party identification (which, as discussed, is almost a subconscious action), these variables are not taken into consideration when quickly responding to political questions with clear support or opposition from each party. Another possibility for the lack of significance of the other variables

is simply the number included – the regressions are somewhat cluttered. However, there is no obvious variable that should be removed from the equation.

TABLE 19 Ideology m-regression for non-image version

newideolw	Coef.	t	P>|t|	ANOVA
sex	0.003 (0.021) **	0.13	0.894	$F(2, 94) = 0.32$, p > 0.726
age	0.000 (0.001) **	0.00	0.997	$F(63, 94) = 0.70$, p > 0.966
educ	-0.004 (0.008) **	-0.55	0.580	$F(6, 94) = 1.70$, p > 0.118
income	0.000 (0.008) **	-0.04	0.966	$F(5, 94) = 1.93$, p > 0.087
race	-0.004 (0.008) **	-0.60	0.550	$F(5, 94) = 0.42$, p > 0.837
religion	-0.003 (0.003) **	-0.99	0.322	$F(8, 94) = 0.64$, p > 0.741
partyID	-0.063 (0.006) **	-10.06	0.000	$F(5, 94) = 92.71$, p > 0.000
Cons.	1.935 (0.076) *	25.36	0.000	
Prob > F =	0.000			
R^2 =	0.054			
Adj. R^2 =	0.051			

Ideology ologit for non-image version

ideol5	Coef.	z	P>|z|	Brant Test
sex	0.026 (0.087) **	0.30	0.761	$chi^2 = 4.17$, p > 0.243
age	0.000 (0.003) **	0.08	0.932	$chi^2 = 7.27$, p > 0.064
educ	-0.017 (0.033) **	-0.51	0.611	$chi^2 = 0.22$, p > 0.975
income	0.010 (0.031) **	0.31	0.758	$chi^2 = 0.83$, p > 0.843
race	-0.022 (0.033) **	-0.68	0.498	$chi^2 = 5.53$, p > 0.137
religion	-0.018 (0.014) **	-1.24	0.216	$chi^2 = 0.06$, p > 0.996
partyID	-0.255 (0.026) **	-9.93	0.000	$chi^2 = 28.72$, p > 0.000
LR chi^2 =	103.220			Parallel regression assumption violated.
Prob > chi^2 =	0.000			
Psuedo R^2 =	0.019			

(Indicates standard error.)

* Indicates significance at the 95% level. **Indicates no significance.

TABLE 20 Ideology m-regression for "happy" image version

newideolw	Coef.	t	P>|t|	ANOVA
pichappy	0.020	0.8	0.426	F(4, 94) = 0.41, p
	(0.025) **			> 0.804
picfeel	-0.033	-1.35	0.177	F(4, 94) = 1.40, p
	(0.024) **			> 0.234
sex	-0.024	-0.53	0.599	F(2, 94) = 0.04, p
	(0.046) **			> 0.960
age	0.000	-0.19	0.853	F(55, 94) = 0.96,
	(0.002) **			p > 0.561
educ	0.002	0.09	0.928	F(6, 94) = 1.47, p
	(0.018) **			> 0.188
income	0.010	0.58	0.564	F(5, 94) = 2.37, p
	(0.018) **			> 0.0.40
race	-0.003	-0.20	0.840	F(5, 94) = 1.22, p
	(0.017) **			> 0.298
religion	0.006	0.9	0.371	F(8, 94) = 0.76, p
	(0.008) **			> 0.640
partyID	-0.095	-6.61	0.000	F(5, 94) = 17.87,
	(0.014) *			p > 0.000
Cons.	1.988	11.5	0.000	
	(0.173) *			
	Prob > F =	0.000		
	R^2 =	0.154		
	Adj. R^2 =	0.127		

Ideology ologit for "happy" image version

ideol5	Coef.	z	P>|z|	Brant Test
pichappy	0.427	0.37	0.715	chi^2 = 0.24, p >
	(0.115) **			0.970
picfeel	-0.204	-1.71	0.088	chi^2 = 7.89, p >
	(0.120) **			0.048
sex	-0.166	-0.78	0.435	chi^2 = 1.82, p >
	(0.213) **			0.610
age	0.001	0.17	0.865	chi^2 = 2.59, p >
	(0.007) **			0.460
educ	-0.019	-0.23	0.820	chi^2 = 5.38, p >
	(0.085) **			0.146
income	0.108	1.32	0.187	chi^2 = 1.62, p >
	(0.082) **			0.654
race	-0.067	-0.87	0.382	chi^2 = 1.52, p >
	(0.076) **			0.677
religion	0.048	1.33	0.184	chi^2 = 2.16, p >
	(0.036) **			0.540
partyID	-0.404	-5.78	0.000	chi^2 = 5.28, p >
	(0.070) *			0.152
	LR chi^2 =	49.280		Parallel
	Prob > chi^2 =	0.000		regression assumption
	Psuedo R^2 =	0.053		violated.

(Indicates standard error.)

* Indicates significance at the 95% level. **Indicates no significance.

TABLE 21 Ideology m-regression for "sad" image version

newideolw	Coef.	t	P>|t|	ANOVA
picsad	-0.060 (0.022) **	-2.69	0.008	$F(4, 91) = 1.40$, p > 0.237
picfeel	0.010 (0.022) **	0.43	0.671	$F(4, 91) = 0.98$, p > 0.419
sex	0.260 (0.050) **	0.52	0.602	$F(1, 91) = 0.83$, p > 0.363
age	-0.001 (0.002) **	-0.33	0.740	$F(54, 91) = 0.92$, p > 0.634
educ	0.001 (0.018) **	0.06	0.951	$F(6, 91) = 1.21$, p > 0.301
income	0.038 (0.018) **	2.13	0.034	$F(5, 91) = 2.33$, p > 0.0.44
race	0.022 (0.021) **	1.08	0.279	$F(4, 91) = 1.26$, p > 0.287
religion	-0.005 (0.008) **	-0.67	0.506	$F(8, 91) = 1.25$, p > 0.272
partyID	-0.035 (0.014) *	-2.46	0.014	$F(5, 91) = 13.85$, p > 0.000
Cons.	1.740 (0.195) *	8.91	0.000	
Prob > F =	0.017			
R^2 =	0.067			
Adj. R^2 =	0.038			

Ideology ologit for "sad" image version

ideol5	Coef.	z	P>|z|	Brant Test
picsad	-0.21 (0.095) **	-2.22	0.026	$chi^2 = 2.04$, p > 0.564
picfeel	0.022 (0.099) **	0.22	0.823	$chi^2 = 2.41$, p > 0.492
sex	0.281 (0.219) **	1.28	0.200	$chi^2 = 2.97$, p > 0.396
age	-0.004 (0.007) **	-0.49	0.623	$chi^2 = 6.22$, p > 0.102
educ	0.020 (0.077) **	0.26	0.792	$chi^2 = 3.00$, p > 0.391
income	0.127 (0.082) **	1.55	0.121	$chi^2 = 4.83$, p > 0.185
race	0.042 (0.087) **	0.49	0.627	$chi^2 = 4.90$, p > 0.179
religion	-0.043 (0.035) **	-1.23	0.217	$chi^2 = 5.09$, p > 0.165
partyID	-0.220 (0.061) *	-3.63	0.000	$chi^2 = 3.67$, p > 0.299
LR chi^2 =	25.610			Parallel regression assumption violated.
Prob > chi^2 =	0.002			
Psuedo R^2 =	0.027			

(Indicates standard error.)

* Indicates significance at the 95% level. **Indicates no significance.

TABLE 22 Ideology m-regression for "angry" image version

newideolw	Coef.	t	P>|t|	ANOVA
picangry	-0.003 (0.027) **	-0.10	0.924	$F_{(4, 98)} = 0.28$, p > 0.891
picfeel	0.031 (0.038) **	0.82	0.415	$F_{(4, 98)} = 0.81$, p > 0.522
sex	-0.045 (0.057) **	-0.79	0.429	$F_{(2, 98)} = 1.47$, p > 0.233
age	0.002 (0.002) **	1.32	0.187	$F_{(59, 98)} = 0.77$, p > 0.884
educ	0.001 (0.022) **	0.06	0.952	$F_{(6, 98)} = 0.75$, p > 0.607
income	-0.015 (0.021) **	-0.71	0.480	$F_{(5, 98)} = 1.24$, p > 0.290
race	0.018 (0.022) **	0.83	0.409	$F_{(5, 98)} = 0.62$, p > 0.684
religion	0.002 (0.009) **	0.24	0.810	$F_{(8, 98)} = 0.62$, p > 0.763
partyID	-0.019 (0.016) *	-1.18	0.238	$F_{(5, 98)} = 4.33$, p > 0.001
Cons.	1.450 (0.253) *	5.71	0.000	
Prob > F =		0.640		
R^2 =		0.020		
Adj. R^2 =		-0.011		

Ideology ologit for "angry" image version

ideol5	Coef.	z	P>|z|	Brant Test
picangry	0.036 (0.104) **	0.35	0.725	$chi^2 = 9.30$, p > 0.026
picfeel	0.13 (0.142) **	0.92	0.36	$chi^2 = 5.41$, p > 0.144
sex	-0.049 (0.220) **	-0.22	0.822	$chi^2 = 7.77$, p > 0.051
age	0.007 (0.007) **	1.08	0.281	$chi^2 = 8.15$, p > 0.043
educ	0.033 (0.082) **	0.40	0.686	$chi^2 = 0.87$, p > 0.833
income	-0.019 (0.079) **	-0.24	0.808	$chi^2 = 3.32$, p > 0.345
race	0.080 (0.082) **	0.98	0.326	$chi^2 = 3.27$, p > 0.351
religion	0.004 (0.033) **	0.13	0.898	$chi^2 = 3.55$, p > 0.315
partyID	-0.085 (0.061) *	-1.38	0.166	$chi^2 = 0.58$, p > 0.901
LR chi^2 =		5.450		Parallel regression assumption violated.
Prob > chi^2 =		0.793		
Psuedo R^2 =		0.006		

(Indicates standard error.)

* Indicates significance at the 95% level. **Indicates no significance.

TABLE 23   Ideology m-regression for "scared" image version

newideolw	Coef.	t	P>|t|	ANOVA
picscared	0.000 (0.024) **	0.00	0.999	F(4, 93) = 1.21, p > 0.310
picfeel	-0.027 (0.031) **	-0.88	0.382	F(4, 93) = 0.92, p > 0.454
sex	0.042 (0.054) **	0.77	0.441	F(1, 93) = 0.52, p > 0.472
age	0.000 (0.002) **	0.22	0.824	F(56, 93) = 0.90, p > 0.680
educ	-0.031 (0.019) **	-1.64	0.102	F(6, 93) = 2.62, p > 0.018
income	0.002 (0.018) **	0.12	0.908	F(5, 93) = 0.75, p > 0.588
race	0.000 (0.022) **	-0.01	0.992	F(4, 93) = 0.17, p > 0.955
religion	-0.010 (0.009) **	-1.07	0.287	F(8, 93) = 0.96, p > 0.466
partyID	-0.067 (0.016) *	-4.22	0.000	F(5, 93) = 12.42, p > 0.000
Cons.	2.014 (0.245) *	8.22	0.000	
Prob > F =	0.007			
R² =	0.075			
Adj. R² =	0.046			

Ideology ologit for "scared" image version

ideol5	Coef.	z	P>|z|	Brant Test
picscared	-0.02 (0.099) **	-0.20	0.841	chi² = 1.35, p > 0.718
picfeel	-0.074 (0.126) **	-0.58	0.559	chi² = 8.03, p > 0.045
sex	0.276 (0.219) **	1.26	0.208	chi² = 1.68, p > 0.642
age	-0.002 (0.007) **	-0.38	0.702	chi² = 2.72, p > 0.438
educ	-0.194 (0.083) **	-2.34	0.019	chi² = 4.80, p > 0.187
income	0.031 (0.073) **	0.42	0.673	chi² = 0.06, p > 0.997
race	-0.006 (0.086) **	-0.07	0.941	chi² = 0.03, p > 0.999
religion	-0.038 (0.037) **	-1.03	0.302	chi² = 0.49, p > 0.921
partyID	-0.293 (0.066) *	-4.47	0.000	chi² = 10.20, p > 0.017
LR chi² =	28.410			Parallel regression assumption violated.
Prob > chi² =	0.001			
Psuedo R² =	0.031			

(Indicates standard error.)

* Indicates significance at the 95% level. **Indicates no significance.

TABLE 24 Ideology m-regression for "sympathetic" image version

newideolw	Coef.	t	P>|t|	ANOVA
picsymp	-0.002	-0.10	0.920	F(4, 95) = 0.11, p
	(0.023) **			> 0.977
picfeel	-0.035	-2.06	0.040	F(4, 95) = 3.02, p
	(0.017) **			> 0.019
sex	-0.002	-0.04	0.966	F(2, 95) = 0.74, p
	(0.054) **			> 0.480
age	0.000	-0.25	0.806	F(58, 95) = 0.93,
	(0.002) **			p > 0.619
educ	0.016	0.80	0.423	F(5, 95) = 0.49, p
	(0.021) **			> 0.784
income	-0.023	-1.14	0.255	F(5, 95) = 1.04, p
	(0.020) **			> 0.398
race	-0.031	-1.61	0.108	F(4, 95) = 1.43, p
	(0.019) **			> 0.225
religion	-0.009	-1.06	0.290	F(8, 95) = 1.33, p
	(0.009) **			> 0.229
partyID	-0.085	-5.26	0.000	F(5, 95) = 14.18,
	(0.016) *			p > 0.000
Cons.	2.380	11.80	0.000	
	(0.202) *			
	Prob > F =	0.000		
	R^2 =	0.119		
	Adj. R^2 =	0.092		

Ideology ologit for "sympathetic" image version

ideol5	Coef.	z	P>|z|	Brant Test
picsymp	-0.041	-0.45	0.65	chi^2 = 1.32, p >
	(0.090) **			0.725
picfeel	-0.082	-1.21	0.225	chi^2 = 1.37, p >
	(0.068) **			0.712
sex	-0.260	-1.21	0.225	chi^2 = 7.31, p >
	(0.214) **			0.063
age	0.001	0.21	0.832	chi^2 = 7.67, p >
	(0.007) **			0.053
educ	0.045	0.56	0.576	chi^2 = 1.28, p >
	(0.081) **			0.735
income	-0.151	-1.90	0.057	chi^2 = 2.46, p >
	(0.080) **			0.483
race	-0.067	-0.89	0.375	chi^2 = 4.81, p >
	(0.075) **			0.186
religion	-0.037	-1.03	0.305	chi^2 = 9.28, p >
	(0.036) **			0.026
partyID	-0.291	-4.50	0.000	chi^2 = 7.12, p >
	(0.065) *			0.068
	LR chi^2 =	30.600		Parallel
	Prob > chi^2 =	0.000		regression
	Psuedo R^2 =	0.034		assumption violated.

(Indicates standard error.)

* Indicates significance at the 95% level. **Indicates no significance.

Second, in looking through the results for the picture versions of the survey, it is pretty evident that there is little connection between the supposed mood or emotion that an image induces and the political leanings of a respondent, except in a few cases. For the image intending to induce happiness, the ologit scores for *pichappy* and *picfeel* are 0.427 and -0.204 respectively. Though not statistically significant, these numbers at first glance indicate that happiness has a greater influence over ideology than any other emotion presented here. However, the answer choices for *pichappy* were numbered 1-5, where 1 indicated the greatest happiness and 5 the least, while the choices for *picfeel* listed "happy" as the first option. It is confusing, then, that one variable is essentially saying that as a person signifies more happiness, they tend to lean more towards the conservative end of things, while the other variable is saying that as a person signifies being "happy" at the picture, they will tend to lean towards the liberal end of the spectrum. The most likely explanation for this conflict is not that being happy will cause respondents to lean towards one end of the spectrum or the other, but rather that being happy will result in more acquiesance bias, causing respondents to answer a question simply by choosing the first available option.

Third, the results for the version with the picture intending to induce sadness had the only significant results for a correlation between an emotion and a respondent's ideology – the Table 21 m-regression demonstrates a very slight (-0.060) but significant (with a t-score of -2.69) leaning towards a liberal ideology when a respondent felt sad. The ologit points to a slightly stronger influence (-0.210) in this direction. However, of particular note in this table is the sudden significant influence of income as well – a greater income leads to a more conservative ideology here, while a lower income leads to a more liberal ideology. Perhaps there is some

relationship that can be explored further on between sadness, a lower income, and a liberal ideology.

Fourth, though the *picsymp* variable itself had absolutely no influence or significance for ideology, the *picfeel* variable for the "sympathetic" version of the survey was in fact significant. The coefficient of -0.035 implies that there is a very, very minute leaning towards the liberal end of the spectrum as one chooses lower-numbered options from the *picfeel* question – where 1 is happy and 2 is sad, interestingly. This influence may simply be an echo of the aforementioned acquiesance bias or the influence of sadness on a tendency to lean liberal.

Oddly, neither anger nor fear resulted in any significant correlations between mood and ideology. It is possible that even though respondents claimed to experience some anger or fear when looking at the pictures intending to respectively induce those emotions, there was no elevated heart-rate or any other similar symptoms of anger or fear. Though it is possible for images to induce certain emotions in respondents, they may not be the ideal way of learning about how one's mood affects one's political ideology.

Conclusion

Generally speaking, respondent mood (at least that induced through a simple image) does have some slightly significant effects on how a person will respond to ideology questions in a survey. Though it would go far beyond the scope of this study to extrapolate these results to the voting booth, for example, there are several conclusions that can be drawn from these results.

In particular, though pictures may not be the ideal way to influence a respondent's mood, especially for emotions that require more "action" such as fear and anger, there is some evidence of emotion affecting political ideology. Most notably, this study has demonstrated that increased sadness is related to a tendency to lean more liberally.

It would be excellent if this matter were explored further. In the future, some suggestions for a better study design would be as follows: first, a more comprehensive examination of the mood of the respondent would greatly assist in providing more accurate results. Two questions about this matter were simply not enough to determine how exactly a respondent was feeling. Of course, in order to prevent a questionnaire from becoming excessively long due to questions determining mood, it may be preferable to analyze how a person is feeling through other means – for example, by taking their pulse, or through other known scientific methods.

Short videos (at most two or three minutes) would also be a worthy replacement for images, and may result in deeper emotions being experienced by the respondent. Especially for some of the negative emotions, this would probably have a more remarkable effect on a respondent's ideology. Lastly, including more specific emotions such as "disgust" or "desire" may also provide some interesting influences on ideology.

Though this study may have only established some very minor relationships between a person's mood and their effective political ideology, it has certainly laid a foundation for continuing research.

Full Survey Questions and Answers

(*Variable name included in parentheses after question.*)

What is your gender? *(sex)*

1. Male
2. Female
3. Other

What is your age? *(age)*

Textbox with input ranging from 18-99.

What is your highest level of education completed? *(educ)*

1. No high school
2. Some high school
3. High school diploma
4. Some college
5. Bachelor's/Associate's
6. Some graduate
7. Graduate/Professional degree

With which race/ethnicity do you usually identify? *(race)*

1. American Indian or Alaskan Native
2. Asian
3. Black or African American
4. Hispanic
5. Native Hawaiian or Pacific Islander
6. White

What is your yearly income? *(income)*

1. 0-30k
2. 30k-60k
3. 60k-90k
4. 90k-120k
5. 120k-150k
6. 150k+
7.

With which religion or belief system do you usually identify? *(religion)*

1. Protestantism
2. Catholicism
3. Other Christianity
4. Islam
5. Hinduism
6. Judaism
7. Buddhism
8. Atheism/Agnosticism
9. Other

With which political party do you usually identify? *(partyID)*

1. Democrat
2. Republican
3. Green
4. Libertarian
5. Independent
6. Other

Where do you place yourself on a scale from strongly conservative to strongly liberal? *(ideology)*

1. Strongly conservative
2. Conservative
3. Slightly conservative
4. Independent/moderate
5. Slightly liberal
6. Liberal
7. Strongly liberal

Who did you vote for in the last presidential election? *(vote2012)*

1. Barack Obama
2. Mitt Romney
3. Gary Johnson
4. Other
5. Did not vote

How often do you pay attention to what's going on in government and politics? *(polatten)*

1. Never
2. Some of the time
3. About half the time
4. Most of the time
5. Always

Have you smoked at least 100 cigarettes in your entire life? *(cig100)*

1. Yes
2. No
3. No response

Would you say your health in general is…? *(health)*

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor
6. No response

[Image here in versions 2-6]

(Following two questions only in versions 2-6)

Which of the following most accurately describes how this picture makes you feel? *(picfeel)*

1. Happy
2. Sad
3. Angry
4. Scared
5. Sympathetic

How [intended emotion] would you say this picture makes you feel? *(pichappy, picsad, picangry, picscared,* or *picsymp)*

1. Very [intended emotion]
2. [Intended emotion]
3. In the middle
4. Not very [intended emotion]
5. Not at all [intended emotion]
6.

(Answers to the following 12 questions changed in numbering during the data analysis – the changed version of answer orders is shown here.)

How strongly do you favor or oppose the health care reform law passed in 2010? This law requires all Americans to buy health insurance and requires health insurance companies to accept everyone. *(qhealth)*

1. Strongly oppose
2. Oppose
3. Neither favor nor oppose
4. Favor
5. Strongly favor

How strongly do you favor or oppose the government being able to place limits on how much money corporations and unions can give to a political candidate? *(qmoney)*

1. Strongly oppose
2. Oppose
3. Neither favor nor oppose
4. Favor
5. Strongly favor

How strongly do you favor or oppose the following as a means of preventing terrorist attacks in the United States: detaining someone who is not a U.S. citizen indefinitely if that person is suspected of belonging to a radical Muslim organization? *(qterror)*

1. Strongly favor
2. Favor
3. Neither favor nor oppose
4. Oppose
5. Strongly oppose

How strongly do you favor or oppose the legalization of marriage for gay and lesbian couples? *(qgaym)*

1. Strongly oppose
2. Oppose
3. Neither favor nor oppose
4. Favor
5. Strongly favor

How strongly do you support or oppose the following statement: by law, a woman should always be able to obtain an abortion as a matter of personal choice? *(qabortion)*

1. Strongly oppose
2. Oppose
3. Neither support nor oppose
4. Support
5. Strongly support

How strongly do you favor or oppose the death penalty for persons convicted of murder? *(qdeathpen)*

1. Strongly favor
2. Favor
3. Neither favor nor oppose
4. Oppose
5. Strongly oppose

How strongly do you support or oppose the federal government making it more difficult for people to buy a gun than it is now? *(qgunbuy)*

1. Strongly oppose
2. Oppose
3. Neither favor nor oppose
4. Favor
5. Strongly favor

How strongly do you support or oppose the following statement: the policy of the United States government towards unauthorized immigrants should that all unauthorized immigrants should be considered felons and be sent back to their home country? *(qimmigrant)*

1. Strongly support
2. Support
3. Neither support nor oppose
4. Oppose
5. Strongly oppose

How strongly do you favor or oppose allowing universities to increase the number of black students studying at their schools by considering race along with other factors when choosing students? *(qrace)*

1. Strongly oppose
2. Oppose
3. Neither favor nor oppose
4. Favor
5. Strongly favor

How strongly do you favor or oppose increasing federal spending for public schools? *(qschoolsp)*

1. Strongly oppose
2. Oppose
3. Neither favor nor oppose
4. Favor
5. Strongly favor

How strongly do you favor or oppose increased offshore drilling for oil and natural gas in U.S. waters? *(qoil)*

1. Strongly favor
2. Favor
3. Neither favor nor oppose
4. Oppose
5. Strongly oppose

In recent years, the government has sometimes used a technique known as waterboarding on terrorist suspects in an effort to gain information about threats to the United States. How strongly do you favor or oppose the use of waterboarding? *(qwaterb)*

1. Strongly favor
2. Favor
3. Neither favor nor oppose
4. Oppose
5. Strongly oppose

Single Ideology Question Regressions

The following Stata data output in Tables 25-29 shows regressions run on independent question variables. Only regressions with statistically significant output have been included here, though regressions on all individual ideology question variables were run for each different induced-emotion version of the survey.

Table 25: Regression of Terrorism Question and "Angry" Survey Version

```
regress qterror picangry picfeel sex age educ income race partyID
```

Source	SS	df	MS		Number of obs =	300
					F(8, 291) =	0.88
Model	13.4543386	8	1.68179233		Prob > F =	0.5352
Residual	557.292328	291	1.91509391		R-squared =	0.0236
					Adj R-squared =	-0.0033
Total	570.746667	299	1.90885173		Root MSE =	1.3839

qterror	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
picangry	-.1657309	.0800193	-2.07	0.039	-.3232209	-.0082409
picfeel	-.0659343	.111875	-0.59	0.556	-.2861211	.1542524
sex	.1015857	.165533	0.61	0.540	-.2242081	.4273795
age	.0029426	.0052275	0.56	0.574	-.0073459	.0132311
educ	-.0129589	.0636317	-0.20	0.839	-.1381955	.1122777
income	.0212619	.0611286	0.35	0.728	-.0990483	.1415722
race	.0309994	.0643393	0.48	0.630	-.09563	.1576287
partyID	-.0153738	.0478136	-0.32	0.748	-.1094781	.0787305
_cons	2.916779	.7380224	3.95	0.000	1.46424	4.369317

Table 26: Regression of Abortion Question and "Sad" Survey Version

```
regress qabortion picsad picfeel sex age educ income race partyID
```

Source	SS	df	MS
Model	32.358251	8	4.04478138
Residual	623.678416	291	2.1432248
Total	656.036667	299	2.19410256

Number of obs = 300
F(8, 291) = 1.89
Prob > F = 0.0617
R-squared = 0.0493
Adj R-squared = 0.0232
Root MSE = 1.464

qabortion	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]
picsad	-.1674089	.0782262	-2.14	0.033	-.3213697 -.0134481
picfeel	.1192931	.079275	1.50	0.133	-.036732 .2753181
sex	.0168379	.1740308	0.10	0.923	-.3256808 .3593566
age	-.0084085	.0059073	-1.42	0.156	-.0200348 .0032179
educ	-.0074454	.0642994	-0.12	0.908	-.1339963 .1191055
income	.1427694	.0633907	2.25	0.025	.0180069 .2675319
race	.1058734	.0726935	1.46	0.146	-.0371983 .2489451
partyID	-.026629	.0501388	-0.53	0.596	-.1253097 .0720518
_cons	2.396813	.6760097	3.55	0.000	1.066325 3.727302

Table 27: Regression of Race as a Consideration Question and "Sad" Survey Version

```
regress qrace picsad picfeel sex age educ income race partyID
```

Source	SS	df	MS
Model	24.7320793	8	3.09150991
Residual	531.414587	291	1.82616697
Total	556.146667	299	1.8600223

Number of obs = 300
F(8, 291) = 1.69
Prob > F = 0.0996
R-squared = 0.0445
Adj R-squared = 0.0182
Root MSE = 1.3514

qrace	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]
picsad	-.144831	.0722085	-2.01	0.046	-.2869481 -.0027138
picfeel	.0483782	.0731766	0.66	0.509	-.0956444 .1924008
sex	.2091518	.1606433	1.30	0.194	-.1070182 .5253218
age	.0023289	.0054528	0.43	0.670	-.0084031 .0130609
educ	-.0010781	.0593531	-0.02	0.986	-.1178939 .1157377
income	.1143175	.0585143	1.95	0.052	-.0008474 .2294825
race	.0605964	.0671015	0.90	0.367	-.0714693 .1926622
partyID	-.0855344	.0462818	-1.85	0.066	-.1766239 .0055552
_cons	2.882449	.6240068	4.62	0.000	1.654311 4.110588

Table 28: Regression of School Spending Question and "Sad" Survey Version

```
regress qschoolsp picsad picfeel sex age educ income race partyID
```

Source	SS	df	MS			Number of obs =	300
						F(8, 291) =	1.10
Model	18.7132225	8	2.33915281			Prob > F =	0.3640
Residual	619.536777	291	2.12899236			R-squared =	0.0293
						Adj R-squared =	0.0026
Total	638.25	299	2.13461538			Root MSE =	1.4591

qschoolsp	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
picsad	-.1556417	.077966	-2.00	0.047	-.3090905	-.0021929
picfeel	-.018282	.0790113	-0.23	0.817	-.1737881	.1372241
sex	-.1556447	.173452	-0.90	0.370	-.4970243	.1857348
age	.0013727	.0058876	0.23	0.816	-.010215	.0129604
educ	.0006412	.0640856	0.01	0.992	-.1254888	.1267712
income	-.0009549	.0631799	-0.02	0.988	-.1253024	.1233926
race	.0819058	.0724518	1.13	0.259	-.0606901	.2245017
partyID	-.0685512	.0499721	-1.37	0.171	-.1669037	.0298014
_cons	3.568775	.6737614	5.30	0.000	2.242712	4.894838

Table 29: Regression of Offshore Oil Drilling Question and "Sad" Survey Version

```
regress qoil picsad picfeel sex age educ income race partyID
```

Source	SS	df	MS			Number of obs =	300
						F(8, 291) =	1.63
Model	23.505548	8	2.9381935			Prob > F =	0.1166
Residual	525.464452	291	1.80571977			R-squared =	0.0428
						Adj R-squared =	0.0165
Total	548.97	299	1.83602007			Root MSE =	1.3438

qoil	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
picsad	-.1882176	.0718031	-2.62	0.009	-.3295369	-.0468982
picfeel	-.023141	.0727658	-0.32	0.751	-.166355	.1200731
sex	-.0016223	.1597414	-0.01	0.992	-.3160172	.3127727
age	.0058805	.0054222	1.08	0.279	-.0047913	.0165522
educ	-.0113626	.0590199	-0.19	0.847	-.1275226	.1047974
income	.1100029	.0581858	1.89	0.060	-.0045155	.2245213
race	.0521601	.0667248	0.78	0.435	-.0791642	.1834844
partyID	-.0382818	.046022	-0.83	0.406	-.12886	.0522964
_cons	2.854473	.6205035	4.60	0.000	1.633229	4.075717

Table 25 indicates that as respondents indicated feeling more angry, they were more likely to strongly favor "detaining someone who is not a U.S. citizen indefinitely if that person is

suspected of belonging to a radical Muslim organization" – the most conservative option available.

Tables 26-29 show a different story, however. As respondents indicated feeling more sad, for the questions on abortion, race as a consideration for acceptance into schools, school spending, and offshore drilling for oil, they also were more likely to choose the most conservative option available. Though the general trend of respondents is to lean in a more liberal direction on the whole when feeling sad, the opposite is true for these particular questions.

Stata Do-Commands

Weighting

```
drop if respondent >=1801
ssc install survwgt
gen baseagerange=1
gen baseeduc=1
gen baseincome=1
gen baseideology=1
gen agerangew = .
replace agerangew=.112 if agerange==1
replace agerangew=.183 if agerange==2
replace agerangew=.177 if agerange==3
replace agerangew=.181 if agerange==4
replace agerangew=.167 if agerange==5
replace agerangew=.180 if agerange==6
gen educw = .
replace educw=.007 if educ==1
replace educw=.142 if educ==2
replace educw=.490 if educ==3
replace educw=.070 if educ==4
replace educw=.184 if educ==5
replace educw=.017 if educ==6
replace educw=.090 if educ==7
gen incomew =.
replace incomew=.372 if income==1
replace incomew=.265 if income==2
replace incomew=.168 if income==3
replace incomew=.081 if income==4
replace incomew=.051 if income==5
replace incomew=.063 if income==6
gen ideologyw=.
replace ideologyw=.037 if ideology==1
replace ideologyw=.173 if ideology==2
replace ideologyw=.127 if ideology==3
replace ideologyw=.425 if ideology==4
replace ideologyw=.11 if ideology==5
replace ideologyw=.10 if ideology==6
replace ideologyw=.028 if ideology==7
survwgt rake baseagerange baseeduc baseincome baseideology, by(agerange educ
income ideology) totvar(agerangew educw incomew ideologyw) stem (wgt)
tab agerange [aweight=wgt1]
```

Scale/Index Creation

```
xi i.qhealth
reg ideology _Iqhealth_2 _Iqhealth_3 _Iqhealth_4 _Iqhealth_5 [aweigh=wgt1]
tab qhealth
recode qhealth 1 = 5 2 = 4 3 = 3 4 = 2 5 = 1
tab qhealth
xi i.qmoney
reg ideology _Iqmoney_2 _Iqmoney_3 _Iqmoney_4 _Iqmoney_5 [aweigh=wgt1]
tab qmoney
recode qmoney 1 = 5 2 = 4 3 = 3 4 = 2 5 = 1
```

```
tab qmoney
xi i.qterror
reg ideology _Iqterror_2 _Iqterror_3 _Iqterror_4 _Iqterror_5 [aweigh=wgt1]
**no need to recode qterror**
xi i.qgaym
reg ideology _Iqgaym_2 _Iqgaym_3 _Iqgaym_4 _Iqgaym_5 [aweigh=wgt1]
tab qgaym
recode qgaym 1 = 5 2 = 4 3 = 3 4 = 2 5 = 1
tab qgaym
xi i.qabortion
reg ideology _Iqabortion_2 _Iqabortion_3 _Iqabortion_4 _Iqabortion_5
[aweigh=wgt1]
tab qabortion
recode qabortion 1 = 5 2 = 4 3 = 3 4 = 2 5 = 1
tab qabortion
xi i.qdeathpen
reg ideology _Iqdeathpen_2 _Iqdeathpen_3 _Iqdeathpen_4 _Iqdeathpen_5
[aweigh=wgt1]
**no need to recode qdeathpen**
xi i.qgunbuy
reg ideology _Iqgunbuy_2 _Iqgunbuy_3 _Iqgunbuy_4 _Iqgunbuy_5 [aweigh=wgt1]
tab qgunbuy
recode qgunbuy 1 = 5 2 = 4 3 = 3 4 = 2 5 = 1
tab qgunbuy
xi i.qimmigrant
reg ideology _Iqimmigran_2 _Iqimmigran_3 _Iqimmigran_4 _Iqimmigran_5
[aweigh=wgt1]
**no need to recode qimmigrant**
xi i.qrace
reg ideology _Iqrace_2 _Iqrace_3 _Iqrace_4 _Iqrace_5 [aweigh=wgt1]
tab qrace
recode qrace 1 = 5 2 = 4 3 = 3 4 = 2 5 = 1
tab qrace
xi i.qschoolsp
reg ideology _Iqschoolsp_2 _Iqschoolsp_3 _Iqschoolsp_4 _Iqschoolsp_5
[aweigh=wgt1]
tab qschoolsp
recode qschoolsp 1 = 5 2 = 4 3 = 3 4 = 2 5 = 1
tab qschoolsp
xi i.qoil
reg ideology _Iqoil_2 _Iqoil_3 _Iqoil_4 _Iqoil_5 [aweigh=wgt1]
**no need to recode qoil**
xi i.qwaterb
reg ideology  _Iqwaterb_2  _Iqwaterb_3  _Iqwaterb_4  _Iqwaterb_5
[aweigh=wgt1]
**no need to recode qwaterb**
gen ideol5 = .
replace ideol5 = 1 if (ideology <=2)
replace ideol5 = 2 if (ideology >=3) & (ideology <=3)
replace ideol5 = 3 if (ideology >=4) & (ideology <=4)
replace ideol5 = 4 if (ideology >=5) & (ideology <=5)
replace ideol5 = 5 if (ideology >=6)
gen newideol = (ideol5 + qhealth + qmoney + qterror + qgaym + qabortion +
qdeathpen + qgunbuy + qimmigrant + qrace + qschoolsp + qoil + qwaterb)/13
tab newideol
alpha ideol5 qhealth qmoney qterror qgaym qabortion qdeathpen qgunbuy
qimmigrant qrace qschoolsp qoil qwaterb, i
```

```
gen qhealthw = qhealth*.4856
gen qmoneyw = qmoney*.3951
gen qterrorw = qterror*.5010
gen qgaymw = qgaym*.5271
gen qabortionw = qabortion*.6597
gen qdeathpenw = qdeathpen*.3027
gen qgunbuyw = qgunbuy*.6741
gen qimmigrantw = qimmigrant*.4904
gen qracew = qrace*.6221
gen qschoolspw = qschoolsp*.5675
gen qoilw = qoil*.5575
gen qwaterbw = qwaterb*.4716
gen newideolw = (ideol5 + qhealthw + qmoneyw + qterrorw + qgaymw + qabortionw
+ qdeathpenw + qgunbuyw + qimmigrantw + qracew + qschoolspw + qwaterbw +
qoilw)/13
tab newideolw
alpha ideol5 qhealthw qmoneyw qterrorw qgaymw qabortionw qdeathpenw qgunbuyw
qimmigrantw qracew qschoolspw qoilw qwaterbw, i
```

Model

```
regress newideolw sex age educ income race religion partyID
anova newideolw sex age educ income race religion partyID
ologit ideol5 sex age educ income race religion partyID
brant, detail
regress newideolw pichappy picfeel sex age educ income race religion partyID
anova newideolw pichappy picfeel sex age educ income race religion partyID
reg newideolw pichappy picfeel partyID
anova newideolw pichappy picfeel partyID
ologit ideol5 pichappy picfeel sex age educ income race religion partyID
brant, detail
regress newideolw picsad picfeel sex age educ income race religion partyID
anova newideolw picsad picfeel sex age educ income race religion partyID
regress newideolw picsad picfeel income partyID
anova newideolw picsad picfeel income partyID
ologit ideol5 picsad picfeel sex age educ income race religion partyID
brant, detail
regress newideolw picangry picfeel sex age educ income race religion partyID
anova newideolw picangry picfeel sex age educ income race religion partyID
ologit ideol5 picangry picfeel sex age educ income race religion partyID
brant, detail
regress newideolw picscared picfeel sex age educ income race religion partyID
anova newideolw picscared picfeel sex age educ income race religion partyID
ologit ideol5 picscared picfeel sex age educ income race religion partyID
brant, detail
regress newideolw picsymp picfeel sex age educ income race religion partyID
regress newideolw picsymp picfeel partyID
anova newideolw picsymp picfeel sex age educ income race religion partyID
ologit ideol5 picsymp picfeel sex age educ income race religion partyID
brant, detail
```

Bibliography

Aristotle. *The Politics*. Trevor J. Saunders. New York: Penguin Books, 1981.

Berinsky, Adam, Gregory Huber, and Gabriel Lenz. "Evaluating Online Labor Markets for Experimental Research: Amazon.com's Mechanical Turk." *Political Analysis*, Vol. 20. P. 351-368. Mar 2012.

Berinsky, Adam, Kai Quek, and Michael Sances. "Conducting Online Experiments on Mechanical Turk." *Newsletter of the APSA Experimental Section*, Vol. 3, No. 1. P. 2-6. 2012.

Berman, Phyllis W. "Are women more responsive than men to the young? A review of developmental and situational variables." *Psychological Bulletin*, Vol. 88, No. 3, P. 668-695. Nov 1980.

Brader, Ted. "Striking a Responsive Chord: How Political Ads Motivate and Persuade Voters by Appealing to Emotions." *American Journal of Political Science*, Vol. 49, No. 2, P. 388-405. Apr 2005.

Bradley, Margaret M., Maurizio Codispoti, Dean Sabatinelli, and Peter J. Lang. "Emotion and Motivation II: Sex Difference in Picture Processing." *Emotion*, Vol. 1, No. 3, P. 300-319. 2001.

Britton, Jennifer C., Stephan F. Taylor, Keith D. Sudheimer, Israel Liberzon. "Facial expressions and complex IAPS pictures: Common and differential networks." *NeuroImage*, Vol. 31, No. 2, P. 906-919. Jun 2006.

Buhrmester, Michael, Tracy Kwang, and Samuel D. Gosling. "Amazon's Mechanical Turk: A New Source of Inexpensive, Yet High-Quality, Data?" *Perspectives on Psychological Science*, Vol. 6, No. 1, P. 3-5. 2011.

Campbell, Angus, Phillip E. Converse, Warren E. Miller, and David E. Stokes. *The American Voter*. Chicago: University Of Chicago Press, 1960.

Davis, Darren W., Brian D. Silver. "Civil Liberties vs. Security: Public Opinion in the Context of the Terrorist Attacks on America." *American Journal of Political Science*, Vol. 48, No. 1, P. 28-46. Jan 2004.

Delplanque, Sylvain, Karim N'diaye, Klaus Scherer, Didier Grandjean. "Spatial frequencies or emotional effects? A systematic measure of spatial frequencies for IAPS pictures by a discrete wavelet analysis." *Journal of Neuroscience Methods,* Vol. 165, P. 144-150. 2007.

Dickert, Stephan, Paul Slovic. "Attentional mechanisms in the generation of sympathy." *Judgment and Decision Making*, Vol. 4, No. 4, P. 297-306. Jun 2009.

Diener, Ed., Christie Scollon, and Richard Lucas. "The Evolving Concept of Subjective Well-Being: The Multifaceted Nature of Happiness." *Social Indicators Research Series*, Vol. 39. P. 67-100. 2009.

Dunlap, Riley E., Aaron M. McCright. "A Widening Gap: Republican and Democratic Views on Climate Change." *Environment: Science and Policy for Sustainable Development*, Vol. 50, No. 5, P. 26-35. Aug 2010.

Eisenberg, Nancy and Janet Strayer. *Empathy and Its Development.* New York: Cambridge University Press. 1987.

Ekman, Paul, Wallace Friesen, and Sonia Ancoli. "Facial Signs of Emotional Experience." *Journal of Personality and Social Psychology*, Vol. 39, No. 6, P. 1125-1134. 1980.

Glocker, Melanie L., Daniel D. Langleben, Kosha Ruparel, James W. Loughead, Ruben C. Gur, Norbert Sachser. "Baby Schema in Infant Faces Induces Cuteness Perception and Motivation for Caretaking in Adults." *Ethology*, Vol. 115, No. 3, P. 257-263. Mar 2009.

Kamber, Victor. Poison Politics. New York: Insight Books. 1997.

Isbell, L.M., M. T. Parker. "How I vote depends on how I feel: The differential impact of anger and fear on political information processing." *Psychological Science*, Vol. 4, P. 548-550. 2010.

Junghöfer, Markus, Margaret M. Bradley. "Fleeting Images: A New Look at Early Emotion Discrimination." *Psychophysiology*, Vol. 38, No. 2, P. 175-178. Mar 2001.

Kull, Steven. "Americans Assess US International Strategy." *World Public Opinion Poll*. Dec 2006.

Lang, PJ, MK Greenwald, MM Bradley, and AO Hamm. "Looking at pictures: affective, facial, visceral, and behavorial reactions." *Psychophysiology*, Vol. 30, No. 3, P. 261-273. May 1993.

Levenson, Robert W. "Autonomic Specificity and Emotion." In R. J. Davidson et al: *Handbook of affective sciences.* P. 212-224. New York: Oxford University Press, 2009.

Locke, John. *The Second Treatise Of Government, And, A Letter Concerning Toleration*. Mineola, New York: Dover Publications, 2002.

Marcus, George E., Michael B. Mackuen. "Anxiety, Enthusiasm, and the Vote: The Emotional Underpinnings of Learning and Involvement During Presidential Campaigns." *American Political Science Review*, Vol. 87, No. 3, P. 672-685. Sep 1993.

Marcus, George E. *The Sentimental Citizen: Emotion in Democratic Politics*. Pennsylvania State University Press, 2002.

Mikels, Joseph A., Barbara L. Frederickson, and Patricia A. Reuter-Lorenz. "Emotional category data on images from the International Affective Picture System." *Behavioral Research Methods*, Vol. 37, No. 4, P. 626-630 (shown as 1-19). Nov. 2005.

Monkey Cage. "How Representative Are Amazon Mechanical Turk Workers?" by Sean Richey and Ben Taylor. Dec. 2012. http://themonkeycage.org/2012/12/19/how-representative-are-amazon-mechanical-turk-workers/

Ortony, Andrew, Terence Turner. "What's Basic About Basic Emotions?" *Psychological Review*, Vol. 97, No. 3, P. 315-331. 1990.

O'Shaughnessy, Nicholas J. *Politics and Propaganda: Weapons of Mass Seduction.* University of Michigan Press. 2005.

Pruitt, Dean G., John C. Parker, Joseph M. Mikolic. "Escalation as a Reaction to Persistent Annoyance." *International Journal of Conflict Management.* Vol. 8, No. 3, P. 252-270. 1997.

Small, Deborah A., Jennifer S. Lerner. "Emotional Policy: Personal Sadness and Anger Shape Judgments About a Welfare Case." *Political Psychology*, Vol. 29, No. 2 P. 149-168. Apr 2008.

Spielberger, C. D., G. Jacobs, S. Russell, and R. S. Crane. "Assessment of Anger: The State-Trait Anger Scale." In James Butcher et al: *Advances in Personality Assessment, Volume 2.* P. 161-201. Hillsdale: Lawrence Erlbaum Associates, Inc. 1983.

Valentino, Nicholas A., Vincent L. Hutchings, Antoine J. Banks, Anne K. Davis. "Is a Worried Citizen a Good Citizen? Emotions, Political Information Seeking, and Learning Via the Internet." *Politicial Psychology*, Vol. 29, No. 2, P. 247-273. Apr 2008.

Wang, Yang, Gregory Norcie, and Lorrie Faith Cranor. "Who is Concerned about What? A Study of American, Chinese, and Indian Users' Privacy Concerns on Social Network Sites." *Trust and Trustworthy Computing: 4th International Conference, TRUST 2011*. P. 146-153. June 2011.

Westen, Drew. *The Political Brain: The Role Of Emotion In Deciding The Fate Of The Nation*. Public Affairs, 2008.

Yano, Christine R. "Reach Out and Touch Someone: Thinking Through Sanrio's Social Communication Empire." *Japanese Studies*, Vol. 31, No. 1, P. 23-36. May 2011.

Zaller, John. *The Nature and Origins of Mass Opinion*. Cambridge: Cambridge University Press, 1992.