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2008 U.S. Presidential Election: Persuasive YouTube Interactions About War, Health Care, and the Economy

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2008 U.S. PRESIDENTIAL ELECTION: PERSUASIVE YOUTUBE APPEALS ABOUT

WAR, HEALTH CARE, AND THE ECONOMY

by

LINDSEY ZIMMERMAN

Under the Direction of Lisa P. Armistead

ABSTRACT

Persuasive appeals posted to United States presidential candidates' YouTube videos were coded

using a grounded theory mixed-methods design. 37,562 comments about education, energy, Iraq,

health care, the economy, and the presidential debates were randomly collected by date and time

for three studies using coding analysis: pilot, presidential primaries, and the presidential election.

Seven argument types were identified and theoretically refined according to dual process models

of persuasion: reason-based, candidate-based, emotion-based, endorsements, enthusiasm-

heuristic, other-interest and self-interest. Theoretical comparisons and hypothesis testing of

argument types were conducted by issue and election event. Consistent with impression

involvement, reason-based appeals were more frequent during the primaries, whereas consistent

with value and outcome involvement, emotion- and candidate-based appeals were more frequent

during the election.

INDEX WORDS: Persuasion, Dual process models, Internet, Agenda-setting, Media, United
              States, Psychology, Politics, Iraq war, Economy, Health care, Reason,
              Emotion, Self-interest, Altruism, YouTube, Grounded theory

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ABOUT WAR, HEALTH CARE, AND THE ECONOMY

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LINDSEY ZIMMERMAN

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CHAPTER 1.

GENERAL INTRODUCTION

"Social science needs an integration of psychology, sociology, and cultural anthropology into an instrument for studying group life. Modern society demands a deeper understanding and a more efficient and less prejudicial handling of group problems. I am persuaded that this need is particularly acute and particularly essential in a democracy."

(Kurt Lewin, 1945)

Conventional wisdom suggests that there are two subjects to avoid discussing with family and friends: religion and politics. Yet, a significant number of people do discuss politics with family, neighbors, coworkers, and friends (Mutz & Martin, 2001; Mutz & Mondak, 2006). Individuals encounter the most crosscutting views with coworkers, over neighbors and family, and with television news above interpersonal interactions (Mutz & Mondak, 2006). Introducing a middle ground between mass media and interpersonal communication, the video-sharing website YouTube was created in December 2005. By July 2007, the site launched "YouChoose 2008," an organization of official United States presidential candidate videos. Individuals could now anonymously discuss political views across party, ideological, generational, and other societal divides. Interactions were publicly posted online, providing the psychologist the opportunity to unobtrusively observe their content. However, despite widespread Internet behaviors, methods to theoretically classify their psychological underpinnings have yet to be established.

Grounded Theory Methodology: Three Preliminary Studies

The present investigation comprised a grounded theory mixed-methods framework to code pilot, primary election and election debate YouTube interactions. Grounded theory designs emphasize culturally created meanings shaped through social interactions in natural contexts (Glaser, 1992). Behavioral prediction is based on theoretical sampling, comparative qualitative analysis, and theoretical elaboration of quantitative data (Glaser & Strauss, 1967). Thus, mixed-

methods analysis includes the benefits of both depth and breadth. We approached the YouTube data case-by-case, interpreting the comments in their interactive context. This report presents three empirical studies of social interaction on YouTube during the 2008 United States election and concludes with a general discussion of the findings and recommendations for future research.

Politics on YouTube

The innovation of YouTube has been widely acknowledged. In 2006, YouTube was TIME magazine's invention of the year, and the *person* of the year issue cover was a mirrored computer monitor to suggest that "You" were the person of the year because of YouTube (Grossman, 2006). By fall 2007, all the candidates for the democratic and republican parties had official YouTube channels and were regularly posting video content, encouraging others to join in and "be heard" by the candidates. This lead to extensive interchanges between posters and generated widespread interest in how the video-sharing website may impact the upcoming United States presidential election. For example, CNN conducted a CNN/YouTube democratic debate in July 2007, and a republican debate in November 2007, where the questions came from YouTube participants. Rosenberg and Leyden (2007), asserted that this cultural shift was akin to the introduction of radio to the 1932 presidential election. Supporting their argument, Rosenberg and Leyden (2007) referenced how in 1980 over 50 million people watched the network evening news on any given night. By 2005 that number was down to 27 million. In contrast, YouTube has re-ignited interest in a shared media source. Estimates are that since 2006, 100 million videos are being downloaded from YouTube every day (Alexa.com). If the top two search engines, Google and Yahoo are excluded, YouTube is the most visited website in the world (Alexa.com). Candidate participation, incorporation with television news, and increasing broadband access, all

suggest that persuasion on YouTube and similar user-generated forums may become an increasingly important agenda setting medium in United States elections (Guadagno & Cialdini, 2002; Miller, 2007).

The belief that YouTube is a website primarily visited by the young may reflect early adoption of the technology but is not supported by the data. Nielsen/Netratings reports from January 2006 to March 2008 indicated that the most represented age groups on YouTube have consistently been those over 35 years old, ranging from 59% of total users in 2006 to 63% in 2008. YouTube proudly states on its page targeting advertisers that its users' demographics "closely mirrors the demographics of the US online population." Moreover, Internet researchers report that social networking websites have become "age neutral" (Stroud, 2008). Relevant to the present investigation, recent Nielsen data demonstrate that 82% of the participants on YouTube are of voting age (YouTube, 2008).

As the societal role of YouTube developed, the researchers began a programmatic inquiry to inform a broad understanding of web interaction. YouTube data about immunization had already been used to inform the medical field about widely held beliefs and available information (Keelan, Pavri-Garcia, Tomlinson, & Wilson, 2007). In relation to the 2008 election, the PEW Internet and American Life Project (Smith & Rainie, 2008) found that by June 2008, 46% of Americans had used the Internet to get political news and discuss the presidential campaign, which was more activity than in the entire 2004 election-year. The most common activity, reported by 35% of a randomly selected sample (N = 2,251), was watching online videos related to presidential campaigns.

To access presidential candidate videos on YouTube, participants could go to the main "YouChoose" organization page, which from July 2007 until February 2008 included the eight

democratic and eight republican candidates. There, participants on YouTube found five political issue links to candidate videos about Iraq, energy, the economy, health care, and education. Clicking on a candidate video to view his/her stance exposed YouTube participants to geographic regions and social groups beyond typical boundaries (e.g., home, work, neighborhoods). These interactions occurred from the security of home, providing a new scientific opportunity.

CHAPTER 2

STUDY 1: PILOT

Introduction: Theoretical Sampling and Open Coding

In study 1, we qualitatively identified a coding scheme using pilot data. NVivo 8 is a software program frequently used for grounded theory research and it was used for the present investigation. NVivo can be used for coding text and other media for qualitative and quantitative analysis. The first aim of the pilot study was to identify social behaviors on YouTube. The second aim of the pilot study was to refine the operational definitions of behaviors observed on YouTube with a delayed literature review. After consulting the literature, the research team applied the dual process models of persuasion to online interactions. The result of the pilot study was a data-driven codebook for the persuasive appeals with robust reliability.

Theoretical Sampling

Using the randomization function of Microsoft Excel, the researchers selected one date and time during the first month of the presidential primaries (January 18) for data collection. The principal investigator collected responses to the videos of the top four candidates of each party (defined by web "traffic" or the total views of the candidate's YouTube videos and subscribers to their YouTube Channel; see Table 1, page 6): McCain, Romney, Paul, Huckabee, Obama, Clinton, Edwards, and Kucinich. Although he was the third most viewed and subscribed to republican candidate on YouTube on January 16, no comments were posted to Guiliani videos. Therefore, responses to McCain and Huckabee videos were included instead for analysis. Random collection of data by date and time ensured that every comment in response to YouTube candidate videos during the first month of the primary had an equally likely chance of being selected for coding.

Table 1
YouTube Candidate Channel Traffic – Views and
Subscribers - January 16, 2008

Republican	Views	Subscribers
Ron Paul	11,711,526	45,467
Mitt Romney	960,458	3,817
Rudy Giuliani[1]	823,318	3,141
John McCain	573,613	2,164
Mike Huckabee	427,529	3,603
Democrat		
Barack Obama	6,721,903	17,517
Hillary Clinton	1,254,434	8,391
John Edwards	764,365	5,183
Dennis Kucinich	669,167	5,701

Note. [1]Subscribers choose to receive updates any time the candidate posts a new video. [2]No comments were posted to Guiliani videos.

The researchers randomly selected YouTube comments by date and time during the primaries. Based on the structure of the website, candidate videos focused on five political issues. Responses about education and energy comprised the *pilot* dataset (the other three issues are described in study 2). Initially, the researchers incorporated a meaning-based perspective to identify what social need the posters were trying to meet. Through open coding of the pilot data, it became clear that the majority of the comments included attempts to persuade others.

The political issues and events discussed on YouTube were enlisted to inform a broad understanding of persuasion across Internet interactions. The researchers recognized that YouTube posters perceived the interactions as part of a public forum to discuss politics.

Approaching these data with this recognition is consistent with Bronfenbrenner's (1977) definition of ecological validity, which asserts that ecological validity is present when the researcher accurately perceives the research context the way that participants perceive it. The focus on the 2008 political context sought to be consistent with the assertion of Krosnick & McGraw (2002), who stated:

> "Because the goal of psychology is *generalizations* about human nature, scholars engaged in political psychology "true to its name" (Krosnick, in press) would *not* be primarily interested in identifying and explaining relationships that hold only in the political context, but rather would make use of the political context to generate more general principles that are pancontextual." (p. 80)

The purpose of using psychological coding of political content according to historical event and issue was to use YouTube to provide an ecological understanding of social interaction online. The researchers used random selection of the comments - not the posters - by date and time. Therefore any comments posted to candidate videos during the first month of the primaries or posted to the third presidential debate during the last month of the election had an equally likely chance of being selected for analysis. The causes and conditions of the persuasive behavior remained intact: the participants responded to the actual presidential candidates' videos about their actual issue stances, as well as to other real participants, in real time, in response to historical events.

Open Coding

Given the emphasis on demographic characteristics to investigate political attitudes and opinions in polls, the researchers examined whether individuals used their social identities to lend credibility to their attempts to persuade others. Use of NVivo to query for the following terms: white/black, man/woman, Christian/Muslim, Democrat/Republican, Liberal/Independent/Conservative returned a sum total of less than 6% of the words in the

dataset. These NVivo queries clarified that YouTube persuaders primarily interacted without enlisting their social identities. To the authors' knowledge, this is the first study of how anonymous people use an online forum to persuade during U.S. elections.

Naturalistic Observation

Anonymity benefits the source of a persuasive message (Rains, 2007), who may feel more comfortable stating their true opinions and beliefs without revealing their identity. Relevant to U.S. political history, the American Revolution persuasive tracts *Common Sense* and *The Federalist Papers* were both written with pseudonyms to protect the authors' identities (Rains & Scott, 2007). The protective benefit of anonymity to the generators (sources) of YouTube appeals contributes novel data to the canon of persuasion research by reducing social desirability bias. Social desirability bias is the tendency for research participants to adjust their actions in research settings to fit their estimation of what the researcher will deem socially desirable (Tourangeau & Yan, 2007). In the case of this study, which relies on naturalistic observation of online behavior, participants self-selected for YouTube not research. The researchers unobtrusively coded persuasive behaviors that are typically only studied via observation in the laboratory (Carstensen, Gottman, & Levenson, 1995; Floyd, O'Farrell, & Goldberg, 1987; Gottman, & Levenson, 1992). In addition, the high accessibility of YouTube at home and work, combined with use computers, as opposed to paper-and-pencil (Tourangeau & Yan, 2007), alters threats to external validity that are unavoidable during laboratory, survey, or interview research. Without any researcher influences on the YouTube behaviors (see Miller, 1999), evidence of key theoretical constructs such as reason, self- and other-interest, and emotion, informs theory development. Internet observation generalizes persuasion research beyond self-reported attitude change to *how people persuade*.

Pilot Study Literature Review

Persuasive Behavior

Perhaps the most influential treatise on how people persuade is Aristotle's *On Rhetoric*. Aristotle defined three means of persuasion: 1) appeals based on the credibility of the source of the message (*epieikeia/ethos*), 2) appeals based on emotion (*pathos*), and 3) appeals based on the use of logical arguments (*logoi*) (Aristotle/Kennedy, 2007). The first three argument types identified in the YouTube data were consistent with Aristotle's observations that three principal means of persuasion include reason-based arguments, emotion-based arguments, and arguments about the source of the message (i.e., the political candidate).

Previous Persuasion Research

Unfortunately the large body of persuasion research provided little empirical guidance about how an average person attempts to persuade another. The majority of research on persuasion focuses on the impact of persuasive messages using expert-generated messages and laboratory or survey methods with college student samples (Kumkale & Albarracin, 2004). When researchers examined persuasion, aspects of the message, source, and/or audience, were all controlled (Stiff & Mongeau, 2003). Typically, researchers manipulated either the message content or "cues," such as the credibility of the source, to determine the impact on the audience (e.g., Barker, 2005; Cobb & Kuklinski, 1997; Gross, 2008).

Dual Process Models of Persuasion

In the present investigation, constructs were theoretically refined based on the processing continuum proposed by the Elaboration Likelihood (ELM; Petty & Cacioppo, 1986) and Heuristic Systematic (HSM; Chaiken, 1980) models of persuasion, which are frequently called "dual process models." The ELM and HSM suggest that a persuasive communication is

processed along a continuum of effort from highest (called the elaborative/central route or systematic route) to lowest (called the peripheral route or heuristic route).

The diverse sources of user-generated persuasive messages highlight the novel application of dual process models to the Internet. Message recipients may filter out face-to-face or media-based arguments that conflict with their values or ideology (Petty, Wegener, & Fabricar, 1997; Zaller, 1992). However, the PEW Internet and Family Life Project found that "wired" Americans hear more points of view about candidates and issues than other citizens, and "Internet use predicts exposure to arguments that challenge their views" (Horrigan, Garrett, & Resnick, 2004). Moreover, in a series of studies, Harkins and Petty (1987) demonstrated that information presented by multiple sources invokes higher level processing, particularly when the information contains dissimilar perspectives, and written (textual) persuasive messages are more highly scrutinized than audio or video messages where communicator cues are more salient (Chaiken & Eagly, 1983). Thus, YouTube data in the current study were generated under conditions likely to lead to effortful processing, because anonymous strangers posted crosscutting appeals in text.

When the source of the argument is unknown and the argument textual, the message (the argument quality/strength) becomes the principal force of the persuasive appeal (Chaiken & Eagly, 1983). Typical social emotional cues (e.g., body language), which can provide processing shortcuts (heuristics), are absent. Therefore, based on the ELM and HSM, processing of textual Internet arguments should be effortful, primarily driven by the central or systematic processing route.

In a recent review article, Petty and Brinol (2008) suggest that the primary focus of the ELM and HSM is to explicate underlying psychological processes that account for how *any*

variables, such as credible sources or a person's emotions, can produce attitude change. Although their focus is on the recipient of a persuasive message, Petty and Brinol (2008) carefully point out that any one variable could lead to different persuasive effects based on the psychological processes involved. When individuals find low personal relevance in a persuasive communication, the likelihood of more effortful thinking is also low. In this low-involvement case, the expertise of the message source may serve as a simple cue to the hearer. In contrast, expertise of the message source can instead be systematically evaluated as an argument when the hearer has high involvement/motivation to process systematically. After 30 years of persuasion research, Petty concluded that any persuasive content can be processed by the *hearer* in multiple ways depending on the context. Therefore, it is particularly useful that the present investigation consists of a single real-world context (Petty & Brinol, 2008), where the involvement level of the *persuaders* is not induced artificially and is believed to be uniformly high.

Pilot Study Method

Procedure: Coding with NVivo 8

Coder Training

Two undergraduate coders were trained to use NVivo via 20 weekly training sessions. YouTube posters' responses to candidate videos about education and energy on January 18, 2008 comprised the pilot dataset used to conduct the open coding. Initially the coders worked qualitatively to identify observable constructs in the pilot dataset. Once the identifiable types of persuasive behaviors were determined to be exhaustive, the focus of the investigation became the classification of the emergent persuasive argument types. Ultimately, seven argument types were identified: reason-based, candidate-based, emotion-based, endorsements, enthusiasm-heuristic, self-interested and other-interested. The most sophisticated, effortful YouTube appeals often

comprised more than one argument type. Therefore, the argument types could overlap if a comment met the threshold for coding one argument type from the codebook (e.g., reason) in one pass and met the threshold for another type (e.g., other-interest) during another pass. Therefore, the coding procedure allowed for the presence of overlapping types while still meeting the assumptions of Cohen's kappa.

Coder Observation Reliability: Cohen's Kappa

Reliability is presumed to set the cap on the validity of code operation. Observer agreement is commonly used to assess the reliability of a coding scheme. The purpose of measuring intercoder reliability is to address how well the coding reflects the constructs under investigation. For coding analysis, the two coders worked separately, and both coded 100% of the data. The coding measure in the present study is coder-agreement assessed with kappa. Cohen's kappa (κ) is a more robust measure of agreement between coders than simple percent agreement because it uses marginal values to compute a corrective term to reduce the influence of agreement due to chance (Bakeman, 2000; Cohen, 1960). NVivo 8 computes kappa using characters as the unit of analysis. The numerator of the formula is comprised of the total percent agreement, where coder A and coder B both *agreed* the argument type *was* present. The numerator is corrected by the percent that coder A and coder B *agreed* the argument type *was not* present. The denominator of the formula is comprised of the total percent that the coders *disagreed* that the argument type was present. In sum, the values for kappa in Appendix A (p. 63; pilot study overall $\kappa = .77$) are very robust and require "substantial" coding agreement as defined by qualitative assessments of kappa values (Landis & Koch, 1977).

In order to achieve these kappa values, coder training included reading articles about the argument types in previous dual process model research to better refine the operational

definitions. The principal investigator and the coders met weekly throughout the piloting process to refine the codebook. First, the coders would focus on a particular argument type in the research literature and at the weekly meeting discuss the application of key concepts in the articles to the YouTube data. Then, the following week, the coders would code a section of pilot data focused on the argument type just reviewed in the literature. Once the seven nodes had been finalized and adequate coding kappas were reached, members of the coding team worked independently to code in a step-wise fashion (one argument-type at a time) to meet the assumptions of Cohen's kappa: dichotomous categories (i.e., a single type is present or it isn't), and mutually exclusive decision-making (i.e., types/categories do not depend on one another). The coders were blind as to how the data had been coded by the other coder.

Persuasion Constructs Identified Online

Two of the first types of persuasion identified were appeals using reasons and appeals based on the candidate in the YouTube video (see Figure 1, p. 14). The third type of persuasion identified in the pilot data was emotion-based appeals (see Figure 2, p. 15). These three types of arguments had high face validity and were readily identified in the pilot data. Other types of attempts to influence others were also observed. For example, the heuristic processing component of the ELM and HSM specifies low-involvement situations when cognitive engagement with persuasive material is distinguished by minimal mental effort. Individuals commonly use processing shortcuts (i.e., heuristics) for social decision-making (Tversky & Kahneman, 1974), and many social behaviors are not fully conscious, but rather operate implicitly or automatically (Greenwald & Banaji, 1995). In the present dataset evidence of minimal effort constructing an appeal to influence others was coded as cues to enthusiasm, such as "Mitt is it!" This positively-valenced type of appeal was called the "enthusiasm-heuristic" (see Figure 2, p. 15).

Reason-based	Candidate
EDUCATION: *"Yes, we need vouchers at the K-12 level. In fact we already have vouchers for the college level. It's called "grants" and each student can take his Pell grant to any accredited college. It has worked well at the college level for decades, and it could work well at the k-12 level."* *"An educated population is critical of all political candidates and holds them to a higher standard. An educated population is not easy to deceive. To see the state of our education we need to look no further than our government. We are growing ever dependant on it. Before long it will be too late. We must protect and reward good teachers by giving students choice! There is hope. RON PAUL 2008!"* *"OK... if she's elected, she has no direct approach on how to change education. she said she'd fund the schools, but for what? teachers? equipment? buildings? i'd like to know what the money of the US citizens is going to be used for specifically before i choose a candidate"*	*EDUCATION:* *"Thanks for your recognition of Obama and what he has to offer to this country. He is truly dynamic. He is not merely well-educated, but a seasoned intellectual. He is a college law professor that specializes in constitutional law. He truly has mastered the workings of the American government from the inside out. I'm not sure we've ever had a presidential candidate as impressive."* *"finally, a human being is running for president."* *"I don't particularly like Mitt Romney, but I agree on his purposal on education. I think the bigger of the two questions is where are all of these teacher bonus' going to come from? We are so far in debt from the war that we don't have that kind of money to spend. Especially because if Romney does get elected, he doesn't plan on releasing out troops from Iraq. So my question to Gov. Romney is where is this money going to come from? Frankly, I just don't trust the guy."* *"I hope you reconsider your support for Hillary Clinton. Hate What George Bush has done to our country here and abroad? Well, Hillary voted for it. Hillary Clinton, unfortunately, more of the same."*
ENERGY: *"I don't care about green house gases (carbon dioxide). I only care about smog (NOX, CO, VOC), which cause real problems today and are measurable. The problem with cars is the fairness issue - people with less money still want cars. They do not want to pay 20,000$ for a clean car. This comes from a go v t in spector."* *"This is a mistaken notion - that government is not responsible to change an industry. Government has been the catylyst for social and industrial change since the beginning of time. We can't leave this up to the whims of consumers. The whims of consumers have brought us to the brink with lust for bigger, faster, gas guzzlers. These will become museum pieces as they become obsolete -- through voluntary action or government action."*	*ENERGY:* *"Great speech by Sen. Obama.* *I took a lot away from this, but one thing merits special mention. Sen. Obama believes government can do something positive for all Americans. That's a welcome relief. I'm sick of being led by politicians who see government as a mechanism for satisfying special interests."* *"hello hillary,* *a very nice innovative plan to make the country energy independent and utilising the alternative resources of energy,well madam you are right,thats the call for the current scenario when oil prices are reaching sky high limits.this is a very nice policy,i must say that you are a true visionary,have a nice day madam.looking forward to see you as the president.* *your fan* *anks"*

Figure 1

Argument Type Examples Identified During Open Coding: Reason-based and Candidate-based

Note. Arguments are reprinted exactly as they were posted on YouTube (with the exception of profanity, which is indicated with dashes).

Emotion-based	Enthusiasm-heuristic	Endorsement
EDUCATION: "What is with all the IGNORANT Ron Paul people who think that you can illiminate funding for public education without ELIMINATING the middle class?! Then, we can watch them all go up, the crime rate,murder rate, unemployment rate, poverty rate, dru-addiction rate! Woohoo...we'll be almost as uneducated as a third world country!!! I thought Ron Paul was okay until all his supporters started saying we should stop educating our people. ARE YOU GUYS STUPID??!!" "You dumb, dumb, DUMB American. Go take a look at Norway, we're drowning in Taxes (I'm paying 35% Tax at the moment), and I can assure you that I get a lot more money than you into my pocket. But guess what, the government pays for our education and ensures that we have healthcare and choice in what we want to do. Go research before you open your dumb mouth. Perhaps you should download SiCKO through a torrent site." "Dead educated children,that's the Kucinich plan.Loot the military and fund socialism;it's Osama Bin Laden approved! "Liberalism is a mental disorder!" Michael Savage."	EDUCATION: "Go-bama! " "Yay for Kucinich!" "You Go, Sister!"	EDUCATION: "AH!! I hope he wins, I'll be voting for him in the primary and donating what little money I have." "Hillary you are great. You got my vote." "If you're voting Democrat, then cast your vote for John Edwards. He wants to give a break to all Americans regardless of their financial means. I would like to know his mind on matters of the Bible, Jesus Christ, and his own moral values based upon those important topics. "As a man believes in his heart, so shall he be." "This is exactly why I love Dennis. In my mind, my tax money is much better spent ensuring that the children, who are the future of our country, get a full education, regardless of their socio-economic status. Children who attend preschool are more prepared when they enter elementary school. Preschool also gives educators an opportunity to introduce children to the arts, music, and other creative ventures that so often get left behind in elementary school."
ENERGY: "I hope social justice actually does well this election rather than being bought down by morons who wouldn't vote for anything that seems like "socialism" who would actually be able to gain from said proposals."	ENERGY: "I hope he gets in!"	ENERGY: "Indeed - what's needed is a smaller government that doesn't get in the way of what people and businesses ought to be doing: making money. I agree. Ron Paul is the way to go" "If Obama doesn't win the primary, the USA will be shamed even further. It is obvious from looking at the ratings of his YouTube videos that he is the most popular candidate among YouTube users... so please, if you are 18 or older, register to vote and help this man win the primary. Our future depends on it."

Figure 2

Argument Type Examples Identified During Open Coding: Emotion-based, Enthusiasm-heuristic, Endorsement

Note. Arguments are reprinted exactly as they were posted on YouTube (with the exception of profanity, which is indicated with dashes).

Social cues, such as endorsements, can be highly persuasive when they come from an expert or likable source (see Chaiken & Trope, Eds., 1999). YouTube posters rarely preferred to identify themselves or their level of expertise. However, they would sometimes state their agreement with a candidate or poster. In the present study, this type of appeal was called "endorsement" (see Figure 2, p. 14)

Two constructs often examined in relation to political behaviors were observed: self-interest and other-interest (see Figure 3, p. 17). Most people believe that other's attitudes and behaviors are highly influenced by material and other personal considerations (i.e., self-interest) (Miller & Ratner, 1998). But, previous research on the role of self-interest in political behaviors has been equivocal. For example, in their study of attitudes toward the Vietnam War, Lau, Brown, and Sears (1978) defined self-interest based on participants' friends' and relatives' military service, and found that self-interest did not impact attitudes toward Vietnam War policies. In the current study, self-interest was coded in appeals referring to maximizing personal benefits and minimizing harms to an individual. Other-interest is a complex social-emotional orientation consisting of both a cognitive and affective neural-activation dichotomy (Shamay-Tsoory, Aharon-Peretz, & Perry, 2008). Other-interest was coded in appeals made from the standpoint of maximizing universal or public benefits for others.

Self-Interest	Other-Interest
EDUCATION: *"psh. Quality public schools. I'd like to know what he was doing when he visited those schools, not asking "those kids" what they thought about the education system. No Child Left Behind is penalizing the smart kids who actually want to learn, if kids don't want to go to school, they can go to a trade school and go straight into the work force. Why make them do something they dont' want to do, and simulateously penalize the kids who do want to learn. Man, this is crazy."* *"Brother, you ARE paying for it, through taxes. You think school is for free? Education is a human right indeed, and it should be left up to YOU and NOT THE GOVT to run your child's mind. Take responsibility for your children."*	*EDUCATION:* *"If there is any One thing I am behind. Its Education. When I lived in ATL, There was a lady who didn't know what the CDC was. It was a block down the road. I realized there were a lot of other things she did not know. I went home and cried. I really think we should have the best education in the world."* *"School vouchers,remember them?They would allow innercity resident parents to send their children to superior private schools!How much better are private schools than the sewers that are public schools? Well the Clintons sent Chelsea to private schools as do all elites!Why can't the poor do likewise?"*
ENERGY: *"wow youre "drowning in taxes"! well good for you. You see, unlike yourself, I don't WANT to depend on the government for my existance. I can do MUCH better making MY OWN decisions as to how I want to spend MY money. I received a fine education WITHOUT government intervention, and I can recieve WONDERFUL healthcare WITHOUT government intervention. mr moore is more interested in telling truth than pushing a socialist/communist agenda. the government doesnt pay for ANYTHING, taxpayers do."*	*ENERGY:* *"before you bash socialism educate yourself on it. a government for everybody to help everybody. the government we live in today is only beneficial if you make more than 97,500 dollars a year. that is only 6% of America."*

Figure 3

Argument Type Examples Identified During Open Coding: Self-Interest and Other-Interest

Note. Arguments are reprinted exactly as they were posted on YouTube (with the exception of profanity, which is indicated with dashes).

Pilot Study Results

Persuasive Appeals Codebook

The seven emergent argument types were refined based on dual processing models of persuasion, which posit that processing of a persuasive communication exists along a continuum of effort from high to low. Each argument type was conceptually independent and was coded if it was present. A threshold for coding was determined for each argument type, and the final argument codebook is described below.

Reason-based. One of the emergent argument types identified was reason-based appeals, which was defined as posters' attempts to use reasonable links between a statement of stance and a statement of support as a strategy to influence others. The poster may explain the stance with another statement, a fact, or a reference to another source or statistic. The accuracy of the posts' logic was not assessed. The minimum evidence required to code a reason-based appeal was that the post contained evidence that the poster was trying to influence others by explaining why he/she thought the way he/she did. Based on the dual process models of persuasion, these comments were believed to represent the highest level of processing of the issue stance in the candidate's video or of the candidate his/her self.

Candidate-based. Candidate-based appeals were defined as posters' attempts to use arguments about the candidate in the video and not the video's issue stance. The minimum evidence required to code a candidate argument was the inclusion of a statement in the comment indicating that the poster was arguing about the candidate in the video and not the issue stance.

Endorsements. Endorsements were defined as posters' attempts to influence others by stating his/her agreement with the issue stance or candidate in the video. The minimum evidence required to code an endorsement was a clear statement of agreement with the candidate, issue stance *or* another poster in the interaction stream.

Emotion-based. Emotion-based appeals were defined as posters' attempts to influence others by appealing to emotions through the use of fear, name-calling, sarcasm, guilt or sadness.

Enthusiasm heuristic. The enthusiasm-heuristic comments were defined as posters' attempts to influence others by "weighing-in" their support with a brief statement of positive-emotional valence, e.g. "Go Hillary!" Therefore, heuristic cues to enthusiasm could be differentiated from other emotional appeals or from statements of agreement (endorsement). The

minimum evidence required to code enthusiasm was that the comment was brief, positively valenced, and indicative of minimal processing of the candidate or issue.

Self-interested. A self-interested comment was defined as posters' attempts to influence others by appealing to maximizing benefits or minimizing harms to the individual *Self*. The minimum evidence required to code a self-interested argument was a statement indicating that the standpoint from which the argument was made emphasized individual-level gains or reduced individual-level losses.

Other-interested. Other-interest was defined as posters' attempts to influence others by appealing to other-interest, public-regard, or collective welfare, often described as altruism. The minimum evidence required to code an other-interested argument was a *should* statement referring to universal application or benefit.

Pilot Study Discussion

Initial open coding during the pilot study clarified that the comments posted on YouTube in response to the presidential candidates' videos primarily comprised persuasive appeals intended to influence others. The second determination was that the interactions were comprised of candidate-based, reason-based, emotion-based, endorsement, enthusiasm-heuristic, self-interested, and other-interested appeals. These types of arguments represent constructs frequently studied in psychology and in relation to the political issues of war, economy, and health care - albeit, assessed via other methodologies. Despite the diversity of posters to YouTube these seven argument types were coded reliably using stringent coding procedures, conveying that the codebook of argument types had adequate construct validity.

The research team decided to focus on the political context in order to inform Internet interactions in other contexts as well. The political events of the 2008 election made YouTube

data an ecologically interpretable online context. By translating the dual process models from their primary evaluation in the laboratory to a more ecologically derived dataset, the present naturalistic observation qualitatively distinguished theoretical constructs in the "real world" for classification.

CHAPTER 3

STUDY 2: PRIMARY ELECTION

Introduction: Primary Election Issue Videos

Grounded theory research engages in comparative qualitative analysis. To this end, the purpose of Study 2 was to determine the proportion that they seven argument types were enlisted on YouTube in response to the political issues of health care, the economy, and the war in Iraq during the presidential primaries. Although attitudes about war (Lau, Brown, & Sears, 1987; Gaines, Kuklinski, Quirk, Peyton, & Verkuilen, 2007), economy (Downs, 1957; Feldman, 1982; Lewis-Beck & Paldam, 2000), and health care (Berk, Gaylin, & Schur, 2006; Blendon & Altman, 2006; Blendon, Altman, Deane, Benson, Brodie, & Bhur, 2008) have been examined extensively, research participants rarely generated arguments about the issues (Forgas, 2007). All of the videos that comprised the Primary Election Study were candidates describing their stances on the issues, typically in a speech to a community group. Tables 2, 3, and 4 (pgs. 22, 23, & 24), list the description of the videos posted by the candidates and the search terms associated with the video. The search terms indicate what words typed into YouTube or Google would return that particular video, which provided the researchers with information about how YouTube participants could find the candidate videos as well as frame the issue and the candidate's stance using web searching technology.

Table 2
YouTube Posted Video Descriptions and Search Terms – Iraq - January 18, 2008

Republican Candidate Videos

- Governor Romney On Iraq (2-13-07)
  Search terms: mitt romney mittromney iraq terror mission strength

- Congressman Ron Paul and Michael Scheuer educate Rudy Giuliani on American foreign policy (May 24, 2007)
  Search terms: ron-paul rudy-giuliani michael-scheuer foreign-policy presidential-candidate

- John McCain's speech at VMI on April 11, 2007
  Search terms: John McCain Senator War Iraq VMI Speech

- Mike Huckabee speaks on national security
  Search terms: Huckabee White House President 08 campaign

Democrat Candidate Videos

- Barack Obama opposed this war before it even began. Watch clips of his opposition before and after the war as well as his plan for moving forward.
  Search terms: barack obama iraq war

- When Others Were Silent Dennis Kucinich's stand against the war 2002-2004
  Search terms: vegas puppetgov infowars 911 Impeach Bush protest peace war Lies Iraq rumsfeld colin kucinich

- John Edwards answers a question at a community meeting in Tama, Iowa on June 15, 2007
  Search terms: john edwards democrat president election candidate 2008 iraq democrats congress bill funding war troops iowa caucus

- Hillary sits down with a group of Iowans to talk about the best way to end the Iraq war. Hear what they have to say about Hillary's plan for bringing our troops home
  Search termss: Hillary Clinton

Table 3

YouTube Posted Video Descriptions and Search Terms – Health Care - January 18, 2008

Republican Candidate Videos

- The health care system in this country is irrevocably broken, in part because it is only a "health care" system. We don't need universal healthcare mandated by federal edict or funding through ever-higher taxes. We do need to get serious about preventive health care instead of chasing more and more dollars to treat chronic disease that is often avoidable. The result is that we'll be able to deliver better care where and when it's needed.
    Search terms: Huckabee White House President 08 campaign

- This is Day 3 of our YouChoose '08 Spotlight week. Throughout this week we will be featuring a new video every day of presidential candidate Ron Paul talking about different issues. Please submit your questions, comments or your positions on the issues by posting your video comments on our video pages.
    Search terms: ron-paul presidential candidate

- Governor Romney On Healthcare (3-1-07)
    Search terms: mitt romney mittromney healthcare

Democrat Candidate Videos

- Hillary introduced the Children's Health First Act to make quality, affordable health care coverage available to every child in America
    Search terms: Hillary Clinton 2008 President Election Democrat Health Care Healthcare Children Kids

- John Edwards speaks about health care during the CNN/YouTube Democratic debate, July 23, 2007
    Search terms: John Edwards health care healthcare debate campaign election Democrat candidate president

- Thank you, Dennis, for offering REAL health care reform
    Search terms: Dennis Kucinich health care reform presidential candidates election 2008

- Barack Obama discusses his healthcare plan, and tells the personal story of a supporter in Iowa City on May 29, 2007
    Search terms: barack obama iowa healthcare

Table 4
YouTube Posted Video Descriptions and Search Terms – Economy - January 18, 2008

Republican Candidate Videos

- I believe federal tax policies should be family friendly, starting with making the 2001 and 2003 Bush tax cuts permanent. As President, I will also push for elimination of the marriage penalty
    Search terms: Huckabee White House President 08 campaign

- From The Economic Club of Memphis
    Search terms: mccain economic memphis speech mccain200

- This is Day 7 of our YouChoose '08 Spotlight week. Throughout this week we have featured a new video every day of presidential candidate Ron Paul talking about different issues. Please submit your questions, comments or your positions on the issues by posting your video comments on our video pages
    Search terms: ron-paul presidential candidate

- Governor Romney On The Economy (4-3-07)
    Search terms: mitt romney mittromney debt budget spending

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Democrat Candidate Videos

- Hillary outlined her vision for economic growth with fairness and restoring a strong middle class
    Search terms: Hillary Clinton

- John Edwards speaks about economic inequality at The Cooper Union in New York, NY on June 21, 2007
    Search terms: john edwards democrat president election candidate 2008 new york cooper union economic inequality two americas fairness

- The Works Green Administration
    Search terms: The Works Green Administration

- Obama speaks with a group at Mt. Moriah Baptist Church in Spartanburg, SC
    Search terms: barack obama economy families

As is evident in Tables 2, 3, and 4, the videos varied little other than the issue stance of

the candidate and the candidate-speakers themselves. All of the videos were listed in the

YouTube category, "News and Politics," and were posted by the candidates (or their staff) to their official candidate YouTube channels. The primary election traffic data (see Table 5; p. 25) showed that YouTube *viewers* were equally likely to view a democrat video (50.2 percent of views), as they were to view a republican video (49.8 percent of views), indicating no systematic partisan bias among YouTube participants in seeking out and viewing republican or democratic candidate media.

Table 5
YouTube Primary Issues Traffic Percentages by Party: January 18, 2008

Issue	Party	Videos	Comments	Views	Participation
				(%)	
Iraq	Republican	50	59.6	40.7	0.67
	Democrat	50	40.4	59.3	0.31
	Total (n)	8	2,807	614,252	
Health Care	Republican	42.86	68.2	54	0.84
	Democrat	57.14	31.8	46	0.46
	Total (n)	7	2,400	358,664	
Economy	Republican	50	75.5	76.9	0.49
	Democrat	50	24.5	23.1	0.53
	Total (n)	8	755	150,991	
Issues Combined	Republican	47.83	65.1	49.8	0.69
	Democrat	52.17	34.9	50.2	0.37
	Total (n)	8	5,962	1,123,907	

Note. Participation = comments/views.

Although participants posted more comments in response to republican candidate videos, because the videos of candidates from each party were viewed equally, there was no reason to

assume that the comments posted to the republican candidate videos disproportionately represented opposing democratic or supportive republican stances.

Study 2 Method

Split-half Randomization and Coding

Data for study 2 were collected at the same day and time as the pilot study, but the responses were about different issues: Iraq, Health Care, and the Economy. The candidate video stimuli collected on January 18 (8 videos for the economy, 8 for Iraq, and 7 for health care) were randomly split in half to derive two datasets for coding (note that John McCain did not have a posted video for health care leading to n = 11 videos for the first dataset and n = 12 for the second). Split-half randomization of the primary dataset provided an assessment of the stability of the coding proportions within an argument type and between argument types. By randomizing the videos and not the comments, the interactions in response to a given video remained intact. The responses to the candidate videos were collapsed across candidates and parties and randomly assigned to one of two datasets for coding. Random assignment of candidate videos eliminated any systematic partisan errors influencing the observed proportions of persuasive appeals.

The two undergraduate coders trained during the pilot study worked independently to code in a step-wise fashion (one argument-type at a time) to meet the assumptions of Cohen's kappa: dichotomous decisions and mutually exclusive categories. The coders used the seven argument types from the codebook created in the pilot study. Both coded 100% of the data and were blind to how the data had been coded by the other coder. The coding measure in the present study is coder-agreement assessed with kappa (see Appendix A; p. 62). In sum, the values for kappa in Appendix A (primary study 2 overall κ = .86) are very robust and require "near identical" coding agreement as defined by qualitative assessments of kappa values (Landis &

Koch, 1977). Figures 4, 5, and 6 (pgs. 27, 28, & 29) display examples of each of the seven

argument types identified during coding.

Reason-based	Candidate-based
ECONOMY: *"You say you will cut it, but you never seem to mention what you are going to cut. It's easy to make broad claims, but you show nothing that show you mean what you say."* *"...You should check out Dennis' monetary reform policy. He is aware of the Fed, the problem that it has created, and has a solution. Dennis is a huge supporter of the Constitution and will get ride of the IRS too as it is unconstitutional :-)"*	*ECONOMY:* *"OMG what a plastic politician. You want someone who knows monetary policy and the economy and who has a 20 year record to prove it? House Finance Services Committee member and ranking member in MonetAry Policy and Trade Subcommittee...YOUTUBE RON PAUL/ECONOMY."* *"Ron Paul is a failed Congressmen that is really a Libertarian in Republican clothes."* *"Look at his record. He is constantly raising taxes. Vote for Ron Paul!"*
HEALTHCARE: *"I'm from Canada and I believe our system is 10x better than that of the US system. Sanjay Gupta is deceiving the public and Larry King is so far up his a—it's not funny. The US health care system is pathetic. Privatization has destroyed equality of basic health coverage for the American citizen with no insurance. The US government cannot even take care of it's own people but they are funding an immoral war and the occupation of many countries globally. Very disfunctional."*	*HEALTHCARE:* *"do what? He never gave HIS plan. All fluff and no substance, just all the other categories, never any answers of substance."* *"I never read political books, but a friend bought me "The Audacity of Hope" for a present. I'm on pg. 166, and Obama really reminds me of Abraham Lincoln, before he was President. Obama just has a great sense of right and wrong, no matter what the party lines stances are. Obama in '08"*
IRAQ: *"At today's current cost, it would take about $2trillion to retrofit every home in America with wind and/or solar power. If it were done on such a massive scale it'd probably cost less. Contrast that with the $trillion+ cost of the war and hey, take your pick. Dennis, this is a personal freedom issue! Freedom from utility bills! Universal Health means freedom to work where you want! It's all about freedom man!"*	*IRAQ:* *"If Edwards were double-jointed he's never come out of the house. What a narcissistic pantywaist. Gomer Pyle without the intellect."*

Figure 4
Primary Election Coded Argument Types: Reason-based and candidate-based examples
Note. Arguments are reprinted exactly as they were posted on YouTube (with the exception of profanity, which is indicated with dashes).

Emotion-based	Enthusiasm-heuristic	Endorsement
ECONOMY: "The same old tired FOX Bullet points…i know…i know…equitable and just societies are for sissies. Everybody is stealing from you…you rugged individualist you…my bet is you'll be the one whimpering the loudest when life smacks you down…your type are all alike…I'll bet you're the type that'll charge your kids rent when they turn 18 or kick them out for their own good. Yeah, I got ya pegged…what I hear is 'why should I share…nobody ever shared with me."	ECONOMY: "he's amazing. Best candidate." "Sign me up, Dennis!" "Wonderful ideas! You've got my vote." "Go Edwards!"	ECONOMY: "Nice, makes sense, the tax and spend liberals don't seem to get Romney's vision. Mitt is it 08!" "I couldn't agree more! Dennis is saying everything I think about too!" "Exactly right, strategy minded! And exactly why we need John Edwards to fight for a return to that dream of being able to get ahead by working hard."
HEALTHCARE: "You are so right, I mean Geiko, Safe Auto, and Allstate don't compete at all. None of them try to provide low prices and better service for car insurance customers, and neither would the health insurance industry. (Can you feel the sarcasm dripping?)"	HEALTHCARE: "please win" "heck yeah! Go obama! Whoot!" "OBama '08 BABY. ALL THE WAY" "You rock, a president for the people."	HEALTHCARE: "Hillary health care and your fights to make it better in this country is one of many reasons I support you." "Obama has a good plan and I hope that we can all help him get the word out so that he has the opportunity to prove it!"
IRAQ: "For those who don't know, Ron Paul is a huge libertarian. He wants no UN, NATO, taxes, gun control, abortion rights, gay rights, minority rights. Sounds good? But he wants to end welfare/benefits, no health care, no control over corporations, no control over the economy at all. Everything that the pre-depression era was all about. Then, the great Depression happened."	IRAQ: "I LOVE HIM!!!" "I like Mike!!!" "Vote for Romney 2008! Mormons Rock!!"	IRAQ: "I agree 100%. John Edwards voted for us to go into Iraq on day 1. Ron Paul didn't." "Another of the main reasons why I'm supporting Mike! He understands the part of Islam that most politicians don't or don't want to admit. That Radical Islam wants to Dominate the world, so it would seem, But we will defend ourselves!"

Figure 5

Primary Election Coded Argument Types: Emotion-based, Enthusiasm-heuristic, Endorsement

Examples Note. Arguments are reprinted exactly as they were posted on YouTube (with the exception of profanity, which is indicated with dashes).

Self-Interest	Other-Interest
ECONOMY: *"What a joke he is. My responsibility is not to go to work and then turn over 60% of what I make to the government so Edwards can given it to a bunch of lazy people who won't get off their rear ends and do something for themselves. How about some freedom from the government, not more government."*	*ECONOMY:* *"Every one needs a place to live. What's left over buys food and other necessities. My first job some 35 years ago paid the minimum wage of $2.32/hr. The price of the average home was about$15-20,000. 35 years later, the minimum wagein the same part of the country is about $7/hr, but the same home now costs $400,000. The property tax would now be $4,000/yr. or $333/month. Is ignorance bliss? My heart goes out to the younger generation who will not be able to afford a home."*
HEALTHCARE: *"It won't help you. Republicans like market based solutions in health care. The market would take on look at your medical history and run the other way. No insurance company can profit off you, so you are stuck paying for your own care. Good thing we don't leave roads and the military to the free market.."*	*HEALTHCARE:* *"Immigrating to the USA from Europe, in my mind, the universal healthcare is a single domestic issue that ought to be changed immediately. It is abnormal that out of almost all developed countries, the USA is the one without a comprehensive protection system. Being allowed to remain healthy is not a privilege—it is A BASIC HUMAN RIGHT, which 1/6 of Americans doesn't have. I can't comprehend why people would be against abortion and euthanasia and NOT support healthcare…"*
IRAQ: *"mitt romney doesn't care. Your liberties are going down the drain. Your nation doesn't even know if you have the right of habeas corpus anymore. Police state will be upon you soon and you'll be scared quiet and a never ending recession will aaaaaaaaaaaaaaaah! YOUR TOO IGNORANT."* *"Everything he says is so true, so obvious. Democrats and ron paul knows all this is true. That is why they want us to pull out, they want massive failure, catostofic stuff, suffering of biblical proportions, just so they can say they were right."*	*IRAQ:* *"where're not responsible for what's happening in Iraq?come on people,we invaded iraq,we can't just pullout and let them in a civil war,this would be iresponsability.How can hillary just say that,american life's is important but what about Iraqi's people,we just don't care?is that it?"* *"what's wrong with raising taxes if he's going to put that money into investments in clean energy and fixing the immigration system? id be much more willing to pay higher taxes for those things than less taxes for nukes, stealth bombers, tanks, and automatic assault rifles."*

Figure 6

Primary Election Coded Argument Types: Self-Interest and Other-Interest Examples

Note. Arguments are reprinted exactly as they were posted on YouTube (with the exception of profanity, which is indicated with dashes).

Study 2 Results

Primary Election: Argument Types by Issue

Table 6 (p. 32) presents the frequency that each argument type was enlisted about Iraq, health care, and the economy in the two split-half datasets. In both halves of the primary dataset, reason-based appeals were used most frequently for discussing health care (61.5 & 47.7%), but the difference was only significant in the second dataset ($p < .05$). Candidate-based arguments were enlisted significantly most frequently in response to the Iraq videos across datasets (33.47% & 35.04%; $p < .005$). In contrast with candidate arguments, which were consistently enlisted across datasets, emotion-based and endorsement-based appeals were enlisted inconsistently across the three issues and the two split-half datasets. For example, there were significantly less emotional arguments about health care than Iraq or the economy in the first dataset (7.59%; $p < .005$), and yet there were significantly more emotional arguments about health care in the second half of the data (17.02%; $p < .005$). Endorsements were used significantly less frequently for health care in the first dataset than for Iraq (n = 33) and the Economy (n=34), which had similar frequencies (4.14%; $p < .005$). However, endorsements were not more frequently enlisted for health care or the economy in the second dataset and were used significantly more frequently for Iraq (15.62%; $p < .005$). Enthusiasm heuristic appeals were equally present across issues in the first dataset, with no statistically significant differences observed. However significantly more enthusiastic appeals were enlisted in response to Iraq in the second dataset (3.36%; $p < .01$) than for economy (n = 11) and health care (n = 10), which had similar frequencies. Self-interested appeals were equally present in the first dataset with no statistically significant differences observed, but self-interested appeals were significantly preferred for health care in the second dataset when compared with the economy or Iraq (5.56%; $p < .05$). frequent in response to health

care videos in both datasets (3.45% & 5.24%; $p < .005$), than they were posted about the

economy or Iraq.

Table 6

Split-half Analysis: Percent of Argument Types Across Primary Issues on YouTube

Argument-type	Primary I (%)				Primary II (%)				I and II Pooled χ-Square (df = 1)
	Economy	Health Care	Iraq	χ-Square (df = 2)	Economy	Health Care	Iraq	χ-Square (df = 2)	
Reason-based	37.56	51.03	36.98	$.23^{ns}$	39.27	39.61	32.26	5.64^{ns}	7.14^{c}
Candidate-based	30.85	17.01	33.47	48.88^{a}	28.77	17.02	35.04	103.53^{a}	140.79^{a}
Emotion-based	13.68	7.59	14.67	25.45^{a}	9.36	17.35	9.93	6.01^{b}	20.26^{a}
Endorsement	8.21	4.14	7.02	13.82^{a}	15.75	13.58	15.62	14.78^{a}	17.64^{a}
Self-Interest	3.48	9.66	4.75	4.59^{ns}	3.65	5.56	2.63	1.55^{ns}	9.11^{c}
Enthusiasm-heuristic	4.73	7.13	3.10	3.02^{ns}	2.51	1.64	3.36	10.12^{b}	3.80^{ns}
Other-Interest	1.49	3.45	0.00	12.01^{a}	0.68	5.24	1.17	18.35^{a}	22.20^{a}
Total (n)	402	435	484		438	611	685		

Notes. The null hypothesis for the χ-Square Goodness-of-fit analysis was equal proportions of the argument type observed for each issue. Superscript denotes the χ-Square probability that a Type I error was committed: $(p < .005)^{a}$; $(p < .01)^{b}$; $(p < .05)^{c}$ (non-significant)^{ns}.

The values for chi-square goodness-of-fit across the split-half datasets (the far right column of table 6) indicate that the most robust difference was YouTube participants' preference for arguing about the candidate in response to videos about Iraq χ^2 (2, n = 830) = 140.79, $p <$ .005, followed by a preference for arguments based on other-interest for health care χ^2 (2, n = 64) = 22.20, $p <$ .005. When the datasets were combined, reason-based arguments were enlisted significantly more frequently for health care across both datasets χ^2 (2, n = 1187) = 7.14, $p <$ .05. In contrast, the frequency of use of the enthusiasm heuristic appeals became non-significant. Although the emotion-based and endorsement argument types were used at significantly different frequencies across topics when the datasets were combined, the frequencies varied by dataset. Therefore, it is difficult to draw conclusions about YouTube participants' preference for emotional or endorsement argument-types for these three political issues.

Study 2 Discussion

In study 2, examination of the frequencies of appeals enlisted by political issue suggested that YouTube persuaders significantly preferred to use arguments about the candidates' character (Aristotle's *ethos)* to discuss the issue of the war in Iraq. Given that the president is the commander-in-chief of the U.S. armed forces, appeals based on the candidate's judgment and qualifications, may have been more heavily weighted by YouTube participants when constructing arguments about Iraq, relative to other issues. The second largest difference (for argument type by political issue) was a statistically significant preference for using other-interested appeals in response to health care videos. Given that the current debate about health care in the United States is focused on increasing access to care to create more universal benefits, it is not surprising this issue would engender other-interested arguments. However, self-interested appeals were also enlisted in response to the issue of health care with significantly

greater frequency than the issues of economy or the war in Iraq ($p < .05$). Therefore, even though the issues of war and the economy have been associated with self-interest in previous research studies, many YouTube persuaders may have perceived both self- and other-interested appeals as effective for the issue of health care.

Consistent across the two split-half datasets, participants also appealed to reason most frequently for health care, followed by Iraq, followed next by the economy (Note: the effect was significant at the $p < .05$ level when datasets and issues were combined). Therefore results suggest that YouTube persuaders engaged most effortfully for the health care issue, by more frequently developing more complex reason-based arguments comprised of overlapping sophisticated social-emotional types (i.e., self- and other-interest) than for the issues of Iraq or the economy.

Finally, two types of arguments varied inconsistently across the two halves of the dataset: endorsements and emotion-based appeals. Therefore, based on the frequency data, the researchers could not infer whether YouTube participants perceived endorsements or appeals to emotion as more or less effective for a particular political issue.

Overall, random selection of comments ensures that any comments posted to candidates' YouTube videos during the first month of the presidential primary had an equally likely chance of being included for analysis. The high coding agreement between coders indicates there was adequate construct validity of the argument type codebook. Split-half randomization of the videos and not comments reduced error caused by partisanship while still keeping the interactive debate intact, allowing for interpretation of the persuasive appeals in context. Split-half randomization to two datasets also allowed for comparisons both between and within the argument types. The ability to use such stringent data collection and analysis methods improves

the internal validity of study 2. Naturalistic observation of the comments also removes researcher influences on the behavior. Therefore, it is theoretically informative that YouTube persuaders most frequently argued about the candidates for the Iraq issue, and although it was the least frequently used argument type, persuaders significantly preferred to argue based on other-interest for health care.

CHAPTER 4

STUDY 3: PRESIDENTIAL ELECTION

The final purpose of grounded theory methodology is to test hypotheses in the data. The ability to randomly collect data by time point allowed for quantitative comparisons of the proportions of data coded as an argument type by historical event. The predictive validity of the grounded theory design refers to the ability of the coding scheme to predict how YouTube persuaders would make arguments at a future point in time. To that end, another date was randomly selected in the month prior to the presidential election, and the video stimulus selected was the CSPAN video of the third presidential debate. Study 3 tests predictions about the proportions of argument types observed on YouTube based on the persuaders' involvement.

Introduction: Involvement

In their meta-analysis of involvement research, Johnson and Eagly (1989) defined involvement as a motivational factor presumed to impact persuasion by inducing higher-level processing of persuasive messages. When involvement was based on personally important values (value involvement), highly involved participants were less persuaded than less involved participants. When involvement was based on relevance to currently important goals and outcomes (outcome involvement), high-involvement participants were more persuaded than low-involvement participants, but only when arguments were of high-quality. The majority of involvement research manipulated message *recipient* involvement to determine its influence on attitude change, and focused on mass persuasion (one speaker to many receivers) or interpersonal face-to-face persuasion (one-to-one).

The present study examined many-to-many online *persuaders* during involvement-inducing election events. The primary election dataset was comprised of responses to candidate

videos about health care, the economy, and Iraq. The 5,982 comments posted to videos viewed

by approximately 1.1 million people, indicated that the rate of participation (total comments/total

views) was less than 1%. The presidential election dataset was comprised of responses to the

CSPAN third presidential debate video. 29,633 comments were posted, and the video was

viewed by approximately 1.3 million people, which doubled the rate of participation to 2.2%.

Table 7 (p. 38) shows the traffic rankings of the election dataset video stimulus. On the randomly

selected date, the final U.S. presidential debate video posted to YouTube by CSPAN (and

featured by YouTube's "YouChoose" page) was the most viewed and discussed of all YouTube

videos in the U.S. and in many countries around the world. The researchers believed that the

minority of viewers who posted comments to YouTube differed from the majority who viewed

but did not post, based on their level of involvement. Although both groups of posters (primary

and election) were highly involved, the research team coded user-generated YouTube comments

and made predictions about the *type* of involvement motivating persuasive behaviors over time.

Impression Involvement

Johnson and Eagly (1989) examined involvement based on a motivation to hold socially

acceptable attitudes (impression involvement). For example, Zimbardo (1960) used an

involvement manipulation informing participants there would be public evaluation of their views

and that their attitude could reveal something important about them. In one study, impression

Table 7

YouTube Presidential Debate Traffic Rankings by Country - October 19, 2008

Video Title: Third 2008 Presidential Debate (Full Video)   Video Source: CSPAN

Added to YouTube: October 15, 2008

Posted Video Description:	Full Video of the Third 2008 Presidential Debate with Sen. Barack Obama (D-IL) and Sen. John McCain (R-AZ).

Views: 1,346,880	Text Comments: 29,633	Video Responses: 668
Ratings: 4,094	Favorited: 6,019 times	Category: News & Politics (NP)

Discussed via text:	Responded via video:	
#1 - United States (This Week)	#1 - U.S. (This Month) - NP	
#1 - U.S. (This Week) - NP	#1 - U.S. (This Week) - NP	
#2 - U.S. (This Month) - NP	#2 - U.S. (Today) - NP	
#5 - U.S. (This Month)	#3 - U.S. (All Time) - NP	
#46 - U.S. (All Time) - NP	#3 - U.S. (This Week)	
	#3 - U.S. (Today)	
	#4 - U.S. (This Month)	
	#29 - U.S. (All Time)	

Video views:

#1 - Australia (This Week) - NP	#3 - Spain (This Week) - NP	#27 - India (This Week)
#1 - Canada (This Week) - NP	#4 - New Zealand (This Week) - NP	#27 - South Korea (This Week)
#1 - Czech Republic (This Week) - NP	#5 - Netherlands (This Week)	#30 - Japan (This Week) - NP
#1 - Germany (This Week) - NP	#5 - U.S. (This Week)	#30 - Spain (This Week)
#1 - India (This Week) - NP	#6 - Israel (This Week)	#34 - Mexico (This Week)
#1 - Ireland (This Week) - NP	#6 - Canada (This Week)	#38 - Hong Kong (This Week) - NP
#1 - Israel (This Week) - NP	#6 - New Zealand (This Week)	#45 - U.S. (This Month)
#1 - Mexico (This Week) - NP	#7 - Germany (This Week)	#60 - Poland (This Week)
#1 - U.K. (This Week) - NP	#7 - Czech Republic (This Week)	#66 - Brazil (This Week)
#2 - Ireland (This Week)	#10 - Italy (This Week) - NP	#76 - Italy (This Week)
#2 - U.S. (This Week) - NP	#12 - Australia (This Week)	
#2 - Netherlands (This Week) - NP	#14 - U.K. (This Week)	
#2 - Poland (This Week) - NP	#16 - U.S. (This Month) - NP	
#2 - Russia (This Week) - NP	#16 - Brazil (This Week) - NP	
#3 - France (This Week) - NP	#16 - Russia (This Week)	
#3 - South Korea (This Week) - NP	#22 - France (This Week)	

Note. Third U.S. Presidential debate video traffic rankings as compared to all posted YouTube videos.

involved recipients were not affected by message quality in thought, behavior, or public attitude (Leippe & Elkin, 1987). Leippe and Elkin (1987) concluded that the self-presentational motivation of these kind of impression involvement conditions encourage socially acceptable or moderate stances especially when audience views are unknown. Impression involvement may be uniquely applicable to YouTube, in that YouTube persuaders communicate with an unknown social group. During the pilot study we concluded that YouTube appeals captured by our codebook represented posters' attempts to effectively influence the diverse YouTube audience.

Psychological and communication theories describe social networks and group norms as a significant component of face-to-face persuasion. Psychologists, including Lewin (1948; 1997), Sherif and Hovland (1961), and Brewer (1999), as well as communication researchers such as Rogers (1983), highlight the value of "ingroups" and other social networks as a basis for re-education (Lewin), social judgment (Sherif & Hovland) and diffusion of innovation (Rogers). Further, Han and Shavitt (1994) conducted content analyses of cultural variability in individualist and collectivist values in United States and Korean magazines and concluded that persuasive appeals in mass communications are indicative of cultural norms. It is likely that YouTube posters enlisted persuasive strategies, consistent with personal experiences and beliefs and shaped by cultural norms, which they believed were most likely to influence others. Therefore the researchers believed that attempts to appear socially desirable were enlisted in service of the poster's appeal to YouTube culture consistent with impression involvement. Impression involvement could also explain the high proportion of reason-based appeals observed in the posts because persuaders may have been motivated to appear reasonable among unknown peers.

Data were collected during the first month of the presidential primaries when a presumed

involved minority of the population with Internet access sought out candidates' YouTube videos. From this minority, an even smaller number of people self-selected to post comments. Diffusion of innovations theory (DOI) explains the process by which a new alternative is communicated over a period of time among members of culture (Rogers, 1983). Rogers distinguished two channels. The mass communication persuasive channel transmits messages from one or a few sources to an audience of many, whereas the interpersonal persuasive channel involves face-to-face interactions. YouTube is uniquely neither of these channels. The website includes interpersonal interactions, but they are mediated by text, do not occur face-to-face, and occur between individuals who may otherwise be strangers. The text-based interactions of those who self-select to participate is available for others to view as a mass communication, but it is less of a minority/authority source than traditional media (e.g., newspapers, radio and television), because there is a diverse sample of thousands of posters. Therefore, the public nature of YouTube is congruent with impression involvement conditions enlisted in the laboratory (e.g. Zimbardo, 1960; Leippe & Elkin, 1987). Similarly, Rogers (1983) described the DOI process as an S-curve where a minority of individuals, or "early adopters," first engages an innovation to be joined later by the majority. DOI is consistent with diffusion-based agenda setting theories (Dearing & Rogers, 1995) because of the role a minority of people play at one point-in-time in shaping the set of alternatives perceived by the majority at a later point in time. The researchers propose that YouTube participation during the first month of the presidential primaries was based on early adoption of the YouTube technology by an impression involved minority trying to influence election events with their persuasive appeals (i.e., impression involvement). Early adopters of the YouTube innovation would be motivated to enlist moderate appeals to win over the diverse and unknown audience early during the primary (Leippe and Elkin, 1987). Based on

the high proportion of elaborate reason-based appeals observed in studies 1 and 2, the research team predicted that the self-presentational motivation of impression involvement during the primary could be contrasted with the last month of the presidential election, when the impending outcome would instead increase participants' value- and outcome-based involvement and shift the motivation behind their persuasive appeals.

Value Involvement

Involvement has been the focus of heated scientific debate (see Johnson & Eagly, 1989, 1990; Petty & Cacioppo, 1990). Among psychologists, the earliest conceptualization of value involvement was called "ego-involvement" by Hovland, Harvey, and Sherif (1957), who defined this kind of personal involvement as an individual's stand on a controversial social issue. Hovland, Harvey, and Sherif (1957) examined prohibition and repeal in a "dry" state (a local controversy at the time of study) and sought out "ego-involved" participants who had publicly committed stances on the issue, such as the Women's Christian Temperance Union (WCTU). Consistent with the present YouTube study of the presidential election, the WCTU participants were involved with political events. However, Hovland, Harvey, and Sherif (1957) recruited their participants and designed the persuasive messages in their study. In the present investigation, YouTube persuaders generated messages on their own during election events when they were motivated to do so.

Emotions may mediate agenda setting effects of political events (Miller, 2007). In one study, emotional arousal was endorsed by a majority of participants as a motive for identifying important issues (McCombs, 1999). In another study, the valence (positive and negative) and arousal of emotions, as well as judgments of the national importance of political issues, were based on content that aroused negative emotions (Miller, 2007). The theory of affective

intelligence (Marcus, Neuman, & MacKuen, 2000) describes two neural mediators of emotional processing, which were used to explain Miller's (2007) findings. One subsystem, called the disposition system, monitors an individual's environment for cues that all is well, producing feelings of enthusiasm. The other subsystem, called the surveillance system, monitors the environment for threats. In study 3, the research team predicted that as the election alternatives narrowed, crosscutting values and outcomes were more likely to be perceived as threatening leading to an increase in emotion-based appeals in the month before the election as compared to the primaries.

Outcome Involvement

ELM researchers introduced involvement initially by experimentally manipulating the personal relevance of a persuasive communication (Petty & Cacioppo, 1984). This involvement manipulation included telling undergraduate research participants that a college comprehensive exam requirement would either directly impact them by being implemented within 1 year, or would not impact them because the policy would be implemented in 10 years. This college sample-based manipulation to artificially induce involvement is the most commonly used operational definition of involvement in persuasion research (Johnson & Eagly, 1989; Kumkale & Albarracin, 2004). Study 3 similarly used the timeframe of impact to operationally define outcome involvement by comparing persuasive appeals on YouTube in the first month of the primaries when the election was still eleven months away to persuasive appeals during the month immediately before the election. During presidential primaries, candidates distinguish themselves from one another by taking nuanced issue stances (Kraus & Davis, 1976). However, once presidential candidates are reduced and election results more immediate, participants are likely to be motivated by outcome involvement because their election alternatives are reduced to

the candidates winning the race. The research team predicted that when the election was at stake participants would more frequently focus their appeals on the strengths and weaknesses of the remaining major party frontrunners, Obama and McCain, than they did during the primaries.

Study 3 Hypotheses

The aim of study 3 was to test predictive hypotheses about the proportions of argument types observed during the presidential primaries in comparison to during the month before the presidential election.

1. Early adopters of YouTube technology, who self-select into the impression involvement condition of the presidential primaries, will enlist a significantly higher proportion of reason-based arguments than later adopters during the month before the presidential election.

2. Due to increased threat from crosscutting values, value involvement will motivate a significantly higher proportion of emotion-based arguments during the presidential election than during the presidential primaries.

3. Once the presidential election agenda is reduced to two candidates, outcome involvement will motivate a significantly higher proportion of arguments about the candidates than during the presidential primaries.

Study 3 Method

Theoretical Sampling

Data were collected from YouTube at two time points. Using the randomization function of Microsoft Excel, the researchers selected one date and time during the first month of the presidential primaries (January 18) and one date and time during the month before the presidential election (October 19) for data collection. The primary dataset was randomized into

two split-half datasets by video for coding. From the total 29, 633 comments posted to the presidential debate, two election datasets were randomly selected using block randomization. Use of randomization to derive two datasets for each time point allowed the researchers to stringently assess whether any significant differences in the observed proportions of persuasive appeals could be explained by chance and not historical event. As Table 7 showed, the debate video was one of the most viewed, discussed (via text), and responded to (via video) videos in the YouTube category "News and Politics" all around the world for that week. Therefore, it is likely that participants in the YouTube interaction represented many diverse political perspectives because of the popularity of the video in the U.S. and abroad.

Coding Procedure

Two undergraduate coders from studies 1 and 2 followed the same coding procedures and both coded 100% of the data to meet the assumptions of Cohen's kappa. The values for kappa in Appendix A (p. 62; study 3 overall $\kappa = .86$) are very robust and require "near identical" coding agreement as defined by qualitative assessments of kappa values (Landis & Koch, 1977). The coders were blind as to how the data had been coded by the other coder and to the hypotheses of the study.

Study 3 Results

Primary Election: Argument Type Frequencies

Chi-square goodness-of-fit analyses were used and confirmed that YouTube participants enlisted argument types that were significantly different from a null hypothesis of equal proportions. Consistent with impression involvement, participants significantly preferred to enlist reason-based arguments in the split-half primary dataset followed by candidate and emotional appeals. Together, these three types of arguments comprised approximately 80% of

the total coded comments. When the argument types were collapsed across the primary dataset

issues (i.e., Iraq, health care, and the economy), YouTube participants demonstrated significant

preferences among the seven argument types in both of the split-half datasets when determined

via non-mutually exclusive coding: *primary I* χ^2 (6, *n* = 1321) = 1210.48, *p* < .005 and *primary*

II χ^2 (6, *n* = 1734) = 1486.29, *p* < .005; or when determined via mutually exclusive coding

primary I χ^2 (6, *n* =701) = 802.96, *p* < .005 and *primary II* χ^2 (6, *n* = 848) = 735.35, *p* < .005.

Table 8

Percent of Unique and Overlapping Codes for Seven Argument Types on YouTube –
Primary Election

Argument-type	Primary Data I (%)			Primary Data II (%)		
	Total coded	Unique coding	Overlap with other types	Total coded	Unique coding	Overlap with other types
Reason-based	41.79	47.5	39.67	40.68	41.04	46.05
Candidate-based	27.25	24.96	51.39	30.11	25.71	45.50
Emotion-based	12.04	8.84	61.01	16.59	11.32	55.35
Endorsement	6.43	5.42	55.29	13.77	4.13	57.53
Self-Interest	5.98	4.28	62.03	4.36	12.97	66.18
Enthusiasm-heuristic	4.92	7.56	18.46	2.82	2.71	20.45
Other-Interest	1.59	1.43	52.38	2.75	2.12	58.14
Total (n)	1321	701		1734	848	

Although the coding was completed one argument type at a time to insure independent

observations of each theoretical construct, many participants were sophisticated enough to enlist

more than one persuasive strategy in a single comment. Overlapping argument types ranged from a low of 18.46% for enthusiasm heuristic appeals (first split-half dataset) to a high of 66.18% for self-interested appeals (second split-half dataset), indicating that participants tended to use enthusiasm as the sole appeal, whereas self-interest was most commonly combined with other types of appeals. Examination of the differences between the frequency of comments coded with overlapping argument types and the frequency of comments that were coded as only one argument type indicates that coding the comments as more than one type did not significantly impact the coding proportions (see Table 8, p. 45). In addition, comparison of the two split-half datasets shows that the argument-type frequencies were consistent within the primary time point.

Presidential Election: Argument Type Frequencies

Table 9 (p. 47) presents the coding of the two randomly selected excerpts from the total 29,633 comments posted to YouTube on October 19 in response to the third presidential debate between Obama and McCain. Chi-square goodness-of-fit analyses confirmed that YouTube participants enlisted argument types that were significantly different from a null hypothesis of equal proportions in the presidential election dataset, as they did during the primary dataset. Consistent with our hypothesis, participants most frequently enlisted candidate-based arguments in the presidential election dataset followed by reason-based and emotional appeals. Once again, these three types of arguments comprised over 80% of the total coded comments. When the argument types were collapsed across the two presidential datasets, YouTube participants demonstrated significant preferences among the seven argument types when determined via non-mutually exclusive coding: *election I* χ^2 (6, *n* = 1308) = 1019.57, *p* < .005 and *election II* χ^2 (6, *n* = 1620) = 1297.70, *p* < .005; or when determined via mutually exclusive coding *election I* χ^2 (6, *n* =556) = 476.30, *p* < .005 and *election II* χ^2 (6, *n* = 644) = 568.13, *p* < .005.

Table 9

Percent of Unique and Overlapping Codes for Seven Argument Types on YouTube –
Presidential Election

Argument-type	Election Data I (%)			Election Data II (%)		
	Total Coded	Unique Coding	Overlap with other types	Total Coded	Unique Coding	Overlap with other types
Candidate-based	32.03	33.81	55.13	30.8	30.43	60.72
Reason-based	30.43	30.94	56.78	31.11	33.7	56.94
Emotion-based	22.4	22.3	57.68	23.95	24.07	60.05
Self-Interest	7.11	4.68	72.04	6.3	4.35	72.55
Endorsement	5.81	4.14	69.74	6.48	4.97	69.52
Enthusiasm-heuristic	1.99	3.96	15.38	0.8	2.02	0.00
Other-Interest	0.2	0.18	66.67	0.56	0.47	66.67
Total (n)	1308	556		1620	644	

Across both datasets, overlapping argument types ranged from a low of 0% for enthusiasm heuristic appeals to a high of 72.55% for self-interested appeals (both in the second dataset). This indicates that consistent with the primary data, participants tended to use enthusiasm as the sole appeal, whereas self-interest was most commonly combined with other types of appeals. Examination of the differences between the frequency of comments coded with overlapping argument types and the frequency of comments that were coded as only one argument type, indicates that coding the comments as more than one type did not significantly

impact the coding proportions. Observed proportions of the argument types were consistent across both of the randomly selected datasets.

Hypothesis Tests

Table 10 (p. 48) displays the results of the three hypothesis tests using Chi-Square. All of the researchers' hypotheses were supported. As hypothesized based on impression involvement, reason-based appeals were enlisted significantly more often during the first month of the presidential primaries than they were during the month before the election (hypothesis 1). Emotion-based appeals were enlisted significantly more often during the month before the election than they were during the first month of the presidential primaries (hypothesis 2). Finally, candidate arguments were enlisted significantly more often during the month before the election than they were during the first month of the presidential primaries (hypothesis 3).

Table 10

Chi-Square: Argument Type Election Coding for Hypothesis Testing

Supported Hypotheses	Frequency		Chi-Square	Significance
	Primary	Election		
Reason-based *(Primary > Election)*	830	918	274.47	$p < .005$
Emotion-based *(Election > Primary)*	1187	902	82.56	$p < .005$
Candidate-based *(Election > Primary)*	374	681	446.66	$p < .005$

Note. Controlling for the total number of comments posted at each time point, the null hypothesis was equal proportions of the argument type observed for each issue with $df = 1$.

Study 3 Discussion

When examined by historical event, hypotheses about the three types of involvement specified via meta-analysis by Johnson and Eagly (1990), outcome-, value-, and impression-relevant, were supported via naturalistic observation in the context of YouTube.

With respect to hypothesis one, YouTube posters enlisted significantly more reason-based arguments than they did right before the presidential election. During primary election data collection, when the candidate field was wide-open, the involvement type of YouTube posters was believed to be concerned with the more nuanced issue stances taken by multiple candidates. Because the use of YouTube for political content was even more novel during the primary, it was believed that the minority of individuals who sought out candidate videos *and* posted comments were motivated to enlist more moderate reason-based appeals in order to influence the YouTube audience early in the election. This self-presentational motivation, or impression involvement, is more likely to be relied upon in situations when persuaders do not know their audiences' views. In summary, it appears reasonable to assume that participants who sought out the newly available candidate media on YouTube early in the primaries *and* posted persuasive arguments, may have been trying to influence the primary election using the public forum (Rogers' S-curve; 1983). Therefore, the persuasive comments posted to YouTube on January 18, 2008 are believed to provide evidence of the impression involved persuasive behaviors of "early adopters" of the YouTube innovation.

More recently, researchers have begun work to better clarify the intersection of reason and emotion-based frames influencing political behaviors (Lakoff, 2002, 2004, 2008; Westen, 2007). Westen and colleagues used fMRI imaging to explore the neural networks that are activated by different types of political campaigns and messaging, and have concluded that the

most effective appeals to voters do not activate portions of the brain associated with "cold" reasoning (Westen, Blagov, Harenski, Kilts, Hamann, 2006). Like the YouTube data in the present study, the four neural activation networks observed by Westen and colleagues (2006) were based on the presentation of *text* (on slides while individuals were in the fMRI scanner) to 30 "committed partisans" during the 2004 election. However, unlike the present investigation of preferred persuasive appeals by time point, Westen et al.'s (2006) research does not indicate when during the election cycle the study was conducted, which could influence the researchers' conclusions. The test of hypothesis 2 suggests that election events account for how YouTube persuaders enlist emotion-based persuasive appeals.

Consistent with hypothesis two, findings suggest that right before the U.S. president is elected, individuals may more frequently enlist emotion-based appeals when presented with crosscutting views inconsistent with their values (value involvement) *and* when the outcome of the election is impending (outcome involvement). Emotion-based appeals were observed with significantly more frequency during the presidential election than during the primary, suggesting that individuals may perceive reason-based arguments as more effective early in the process of electing a president (impression involvement). Then the preferred persuasive style may shift when the final election is at stake.

Consistent with hypothesis three, results indicated that YouTube posters' arguments right before the election were more focused on the credibility of the candidates themselves once election alternatives were narrowed to two candidates. By the final presidential debate, the YouTube posters were limited to the issue stances taken by republican candidate John McCain and democratic candidate Barack Obama. Given that the new president of the United States

would be elected in a few short weeks, YouTube posters had likely clarified their sense of the outcomes at stake in the election and focused their appeals on the candidates.

The researchers did not believe that during the primaries YouTube posters were unconcerned with their own values or with the outcome of the election. However, on January 18, 2008 the presidential election was still 11 months away, as opposed to one month away on October 19, 2008. Results of study 3 indicate that YouTube posters were significantly more likely to base their arguments on the strengths and weaknesses of the candidates or to use emotion-based appeals, such as name-calling, when the election results were imminent. Results of these hypothesis tests add empirical support for the continued development of coding procedures using theoretical sampling by time point on YouTube and for beginning to differentiate the role of involvement in motivating a minority of individuals to persuade online.

CHAPTER 5

GENERAL DISCUSSION

Despite finding empirical support for hypothesized differences between postings during the primary and the election, it is important to remember than any of the minority of YouTube participants who viewed videos and posted arguments were believed to be highly involved when compared with those who did not post arguments. During the pilot study the researchers observed that the majority of the highly involved YouTube posters made complex arguments including multiple argument types. For example, the enthusiasm-heuristic appeal was conceptually defined to be consistent with low-involvement and minimal effortful processing. The YouTube persuaders did not significantly prefer to use the enthusiasm-heuristic type of appeal for any particular issue, and, in fact, it was infrequently used at either data time point. Therefore, the present findings are consistent with previous ELM and HSM findings that effortful processing is associated with anonymous textual arguments where typical social source cues, such as facial expression, social identities (i.e., ethnicity, age, and gender), and tone of voice are unavailable (Chaiken & Eagly, 1983). Effortful processing is also associated with the context of multiple crosscutting views (Harkins & Petty, 1987) and conditions of high-involvement (Johnson & Eagly, 1989). The YouTube posts were often sophisticated, referring to other poster's arguments and the positions stated by candidates in the videos. This provides evidence that many YouTube participants were engaging in effortful processing of the overall persuasive social interaction. Although these findings are consistent with dual process models based on the text-based medium, cross-cutting context, and involvement-inducing events it may surprise those who presume that no substantive debates or engaged interaction occurs on YouTube.

It is notable that during both the primary (study 2) and the presidential election (study 3), reason-, candidate-, and emotion-based appeals comprised over 80% of the coded argument types. Therefore, the majority of 21st century YouTube persuaders enlisted the three means of persuasion in the online civic discourse of the 2008 U.S. Presidential election that Aristotle described in the 3rd century B.C.E. This is consistent with Aristotle's suggestion that persuasion (rhetoric) is a practical art developed to be consistent with prevailing convention (Aristotle/Kennedy, 2007; p. 28). At the same time, it appears surprising based on the considerable research about other factors that influence persuasion and political behaviors that the prevalence of these three argument types was so high compared to the other four argument types.

After data for the present study had been collected on January 18, 2008, comments posted to YouTube during the later months of the primary elections appeared to either more frequently enlist the enthusiasm-heuristic appeal, or as candidates began to win races and receive more funding for their campaigns, it is possible that staff persons began to moderate the YouTube forums and limit posts to enthusiastic appeals. Enthusiasm appeals can produce partisan loyalty via music and videos (Brader, 2005). However, because textual comments posted by multiple unknown persons are associated with higher-level scrutiny of the message, enthusiasm may have been a less effective strategy for influencing others on YouTube (Chaiken & Eagley, 1983; Harkins & Petty, 1987). It is also possible that as candidates dropped out-of-the race, YouTube participants began to engage less effortfully with the political events and issues until the month before the election. The C-SPAN third presidential debate video was selected for analysis to avoid any potential for errors caused by moderation of the posted comments by a political candidate's team.

Recommendations for Future Research

The strengths of the data collected from an anonymous public on the web, contrast with the strengths afforded by large-scale survey panels, experimental control, or neural imagery. Given ongoing theoretical debates, the lack of researcher influence on the data is particularly helpful for better distinguishing the roles of emotion, reason, and self-interested and other-interested values in voter stances about war, health care and the economy. There are also limitations to the present study design, principally the lack of experimental control to make more stringent causal inferences. Because of the naturalistic observation study design, the researchers made predictive inferences about of the types of involvement influencing persuasive behavior that were empirically supported, but potential confounding variables were not controlled. Although the present study makes a novel contribution through the application of dual process models to online persuaders' arguments (instead of message receivers' processing), the classification of the argument types posted on YouTube by 1-2% of the total viewers does not inform psychologists about how or whether YouTube viewers were persuaded by the arguments. Still, it was theoretically critical to study the small minority of persuaders, (in relation to total YouTube viewers) because it could be reasonably assumed that these YouTube viewers were uniformly the most involved in influencing others.

It is likely that in the future, adopters of innovations such as YouTube as a form of social influence will increasingly impact United States historical events, encouraging psychologists make use of the Internet as a new paradigm for research (Kuhn, 1996; Lewin, 1945). It is possible that the minority of Internet users who are motivated to become bloggers, or less formal "online persuaders," will increasingly comprise a new agenda setting force beyond traditional media. As national debates become increasingly interactive online, it is a critical advance for

scientists that behaviors are public and more readily capable of being studied than communication previously limited to face-to-face interpersonal networks.

In particular, YouTube data may be a more generalizeable dataset than could be collected from other websites and of particular interest to researchers of intergroup relations who have identified the limitations of using demographic categories to define research groups (Unger, 2005). YouTube differs from other "social networking sites" such as Facebook or MySpace. Although one must log-in to YouTube to participate in the discussions, one does not need to be a member of YouTube to see videos, or be connected to them via official candidate websites or via e-mail. Even party supporters who are solely tracking one candidate via his/her website may end up on YouTube because many websites use the site to support video media. Table 11 (p. 56) displays twenty percent of the traffic sources (i.e., other websites) to the candidates' posted primary videos. The diverse representation of traffic sources suggests that viewers and posters participation than other websites. Therefore, YouTube may provide an "instrument for studying group life" and "a more efficient and less prejudicial handling of group problems" that psychologist Kurt Lewin identified as "particularly essential in a democracy" over sixty years ago.

Table 11

Twenty Percent of Traffic Sources to Primary Election YouTube Candidate Videos - May 11, 2008

IRAQ (Traffic to YouTube)

Candidate Controlled Sites	Social Networking Sites	Other Sites
barackobama.com (57,352)	myspace.com (7,220)	prisonplanet (3,213)
mikehuckabee.com (23,713)	facebook.com (3)	infowars.com (2,602)
ronpaul2008.com (10,080)		hillaryhub.com (1268)
kucinich.us (4,364)		nationalreview.com (808)
myspace.com/johnmccain (4,340)		democraticunderground.com (150)
dennis4president.com (455)		politico.com (149)
johnedwards.com (338)		time.com (95)
hillaryclinton.com (102)		prezvid.com (20)
		dailykos.com (19)
		blog.electromneyin2008.com (8)
		daggerclan.net (3)

HEALTH CARE (Traffic to YouTube)

Candidate Controlled Sites	Social Networking Sites	Other Sites
mikehuckabee.com (20,757)	friendster.com (696)	crooksandliars.com (1,833)
barackobama.com (17,548)	myspace.com (379)	jwharrison.com (356)
johnedwards.com (13,630)	imedexchange.com (12)	dailykos.com (205)
ronpaul2008.com (8,475)	care2.com (9)	firedoglake.com (204)
kucinich.us (1,044)		drudgereport.com (165)
		ronpaulstances.com (100)
		expertvoter.com (79)
		thephoenix.com (50)
		blog.thehill.com (45)
		ronpaulforpresident2008.com (13)
		lairoflove.blogspot.com (2)

ECONOMY (Traffic to YouTube)

Candidate Controlled Sites	Social Networking Sites	Other Sites
mikehuckabee.com (37,823)	myspace.com (53)	video.stumbleupon.com (282)
ronpaul2008.com (1,139)		dailykos.com (148)
barackobama.com (794)		blog.electromneyin2008.com (113)
johnedwards.com (512)		democraticunderground (54)
myspace.com/denniskucinich (46)		bobgeiger.blogspot.com (49)
hillaryclinton.com (34)		sayit.edublogs.org (35)
dennis4president.com (29)		blackvoices.com (22)
		michiganformccain.blogspot.com (20)
		kogo.com (19)
		mitbbs.com (13)
		nyformitt.blogspot.com (12)
		mydd.com (11)
		godlikeproductions.com (10)
		grist.org (9)
		politicomafioso.blogspot.com (5)

.In conclusion, grounded theory recommendations for conducting ecologically valid research online in the future include theoretical sampling in an interpretable context (such as the historical events selected for the present study) and moving from qualitative data-driven analysis to predictive quantitative analysis. Psychological scientists may note that behaviors of interest are capable of being observed in a way that was previously practically not feasible. Perhaps even more important, although the strengths of online data include affordability and accessibility, the biggest scientific contribution of a dataset such as YouTube is that the sources of error, such as social desirability bias and researcher influences, are systematically different from some of the most commonly employed research designs. Many of the sources of error on YouTube are perhaps yet to be discovered. Nonetheless, as the role of interactive Internet media in American life continues to become more prominent, the potential to naturalistically observe user-generated content may provide an increasingly important complement to other research designs in psychology.

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APPENDIX

Coder Agreement data: Cohen's (κ)

Argument-type	Pilot (κ)			Primary (κ)			Election (κ)			Overall (κ)
	I	II	*Pooled*	I	II	*Pooled*	I	II	*Pooled*	
Reason-based	0.76	0.89	*0.82*	0.79	0.86	*0.83*	0.95	0.90	*0.93*	*0.86*
Candidate-based	0.68	0.83	*0.75*	0.73	0.89	*0.81*	0.90	0.96	*0.93*	*0.83*
Emotion-based	0.86	0.74	*0.80*	0.72	0.91	*0.82*	0.94	0.92	*0.93*	*0.85*
Enthusiasm-heuristic	0.80	0.82	*0.82*	0.88	0.95	*0.92*	0.89	0.98	*0.94*	*0.89*
Endorsement	0.63	0.71	*0.67*	0.81	0.86	*0.84*	0.98	0.94	*0.96*	*0.82*
Self-Interest	0.96	0.81	*0.89*	0.91	0.95	*0.94*	0.99	0.97	*0.98*	*0.94*
Other-Interest	0.42	0.92	*0.67*	0.94	0.87	*0.91*	1.00	1.00	*1.00*	*0.86*
Overall (κ)	0.73	0.82	*0.77*	0.83	0.77	*0.86*	*0.95*	0.95	*0.95*	*0.86*

Note. The numerator and denominator of Cohen's (κ) were computed using agreement of the number of characters. Pilot I & II datasets (range = 20043-23650); Primary I datasets (range = 42517-64723); Primary II datasets (range = 51740-85522); Election I dataset (92822); Election II dataset (91202).