

5-2018

A Lexically Driven Taxonomy for Political Campaign Interactions on Twitter

Joshua Curth
Purdue University

Follow this and additional works at: https://docs.lib.purdue.edu/open_access_theses

Recommended Citation

Curth, Joshua, "A Lexically Driven Taxonomy for Political Campaign Interactions on Twitter" (2018). *Open Access Theses*. 1445.
https://docs.lib.purdue.edu/open_access_theses/1445

This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries.
Please contact epubs@purdue.edu for additional information.

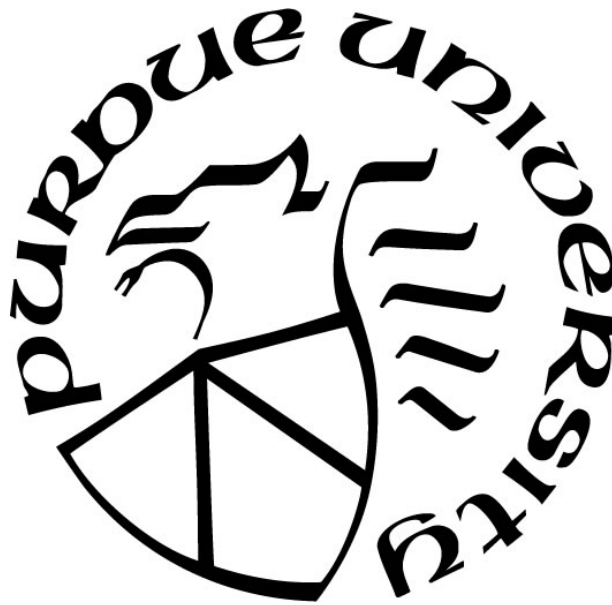
**RHETORICAL REPUBLIC: A LEXICALLY DRIVEN TAXONOMY FOR
POLITICAL CAMPAIGN INTERACTIONS ON TWITTER**

by
Joshua Curth

A Thesis

*Submitted to the Faculty of Purdue University
In Partial Fulfillment of the Requirements for the degree of*

Master of Arts



Brian Lamb School of Communication
West Lafayette, Indiana
May 2018

THE PURDUE UNIVERSITY GRADUATE SCHOOL
STATEMENT OF COMMITTEE APPROVAL

Dr. Sorin Matei, Chair

Lamb School of Communication

Dr. Melanie Morgan

Lamb School of Communication

Dr. Torsten Reimer

Lamb School of Communication

Approved by:

Dr. Melanie Morgan

Head of the Graduate Program

To my Family and all of Northwest Ohio

ACKNOWLEDGMENTS

A special thank you to Devika Banerji for making this dream possible.

TABLE OF CONTENTS

LIST OF TABLES	vii
LIST OF FIGURES	viii
ABSTRACT	ix
INTRODUCTION	1
LITERATURE REVIEW	4
Aim 1: Examining Tweets From a Rhetorical Lens, and Determining What Rhetorical Framework Is Most Appropriate for Covering Electoral Tweets	5
Mapping Aristotle’s Rhetoric Appeals to Electoral Tweets	5
Amending Aristotle’s Rhetorical Appeals	7
Aim 2: Twitter Specific Rhetorical Genres and Indicators Distinguishing Genres From One Another.....	9
Rhetorical Appeal Differentiation.....	10
Linguistic Markers for Distinguishing Appeals.....	12
Aim 3: Ritualistic Segments of Presidential Campaigns and How Twitter-Specific Rhetorical Genres Perform Within Them.....	15
Campaign Segmentation and Political Rituals.....	15
Strategic Implementation of Rhetorical Appeals by Both Mass and Salience	17
Preparation Stage	18
Convention Stage	18
Fall Campaign Stage	19
Pre-Election Stage.....	19
Aim 4: Twitter Specific Rhetorical Genres Influence on Intention Vote Within Each Ritualistic Period and Across the Entire Campaign.....	21
Networked Ecology of Social Media Messages	22
Appeal Implementation Effects on Public Intention to Vote.....	22
METHOD	25
Sample	25
Variable Operationalization.....	25
RESULTS	35

DISCUSSION	54
Framework Success and Ability to Distinguish Appeals From One Another	54
Ritualistic Segments and Twitter Specific Rhetorical Genres Perform Within Them	56
Do Twitter Specific Rhetorical Genes Influence Public Intention to Vote?.....	59
Limitations	61
Future Directions	63
Concluding Remarks.....	65
REFERENCES	67
APPENDIX A. List of Words used for Identifying Logical Appeals.....	70
APPENDIX B. Questions Distributed to Mturk Workers	72

LIST OF TABLES

Table 1:	Which Feature Facets Form What Rhetorical Appeals.....	27
Table 2:	Descriptive Table for Overall Tweet Salience for Both Candidates.....	36
Table 3:	Descriptive Table for Overall Tweet Mass for Both Candidates.....	36
Table 4:	Overall, the Percentage of Tweets Captured by Taxonomy, by Different Campaign Stages.....	37
Table 5:	Summary of Significant Results for Mass Use of Donald Trump Tweets	44
Table 6:	Summary of Significant Results for Salience use of Donald Trump Tweets	44
Table 7:	Summary of Significant Results for Mass use of Hillary Clinton Tweets.....	44
Table 8:	Summary of Significant Results for Salience use of Hillary Clinton Tweets.....	44
Table 9:	Summary of Significant Values for Donald Trump Correlations	47
Table 10:	Summary of Significant Values for Hillary Clinton Correlations	48
Table 11:	Summary of Significant Values for the Preparation Stage	51
Table 12:	Summary of Significant Values for the Convention Stage.....	51
Table 13:	Summary of Significant Values for the Fall Campaign Stage.....	51
Table 14:	Summary of Significant Values for the Pre-Election Stage.....	52

LIST OF FIGURES

Figure 1: Overall Tweet Distribution by Rhetorical Appeals	38
Figure 2: Mass of Tweets by Donald Trump Across the Four Stages of the Campaign	39
Figure 3: Mass of Tweets by Hillary Clinton Across the Four Stages of the Campaign	39
Figure 4: Overall Salience of Rhetorical Appeals for Both Candidates in Percentages	40
Figure 5: Salience of Tweets for Donald Trump for the Four Stages of the Campaign.....	42
Figure 6: Salience of Tweets for Hillary Clinton for the Four Stages of the Campaign.....	42
Figure 7: Kruskal Wallis Test for Donald Trump Fact Mass Use.....	45
Figure 8: Kruskal Wallis Test for Hillary Clinton Fact Mass Use	45
Figure 9: Kruskal Wallis Test for Hillary Clinton Attack Mass Use	46

ABSTRACT

Author: Curth, Joshua. MA

Institution: Purdue University

Degree Received: May 2018

Title: Rhetorical Republic: A Lexically Driven Taxonomy for Political Campaign Interactions on Twitter

Major Professor: Sorin Matei

Political candidates continuously develop new techniques for communicating to their targeted publics effectively through social media. One way to do so is through Twitter. This exploratory study maps Aristotelian rhetorical appeals to electoral tweets issued in the 2016 presidential election. Using automatic and human coding, the study proposes four different types of Twitter rhetorical appeals. Results show 58.8% of tweets issued during the presidential election are captured by the rhetorical taxonomy. The findings also show that the primary appeals both candidates use in both mass and salience did not always influence intention to vote. Finally, there are correlations between contextually relevant appeal use and an increase in public intention to vote. The appeal with the strongest positive correlation between changes in public opinion and rhetorical appeal use is the deliberative appeal, suggesting politicians need to focus on crafting messages foreshadowing the future. The major contribution of this study is in showing how a traditional persuasive framework can be applied to explain a modern political communication medium's impact in influencing public opinion.

INTRODUCTION

This thesis explores rhetorical appeals found in social media messages issued during political campaigns. The heart of my proposition is that despite the improvised nature and brevity of social media messages, the rules of rhetorical appeal and more important, rhetorical genres, are still relevant. While it is trivial to affirm that all human messages, including those issued on social media, are persuasive, it is not immediately intuitive that they might also be “rhetorical” in a rigorous sense. To be rhetorical, messages need to fall into some categories or genres predicated by rhetoric. This is, in the broadest sense, the aim of this thesis, namely to determine if social media (twitter) messages are rhetorical by some definable criteria, and if so, into how many genres do they fit and what persuasive effect each genre might have, both by measurable effects on other variables and by volume (mass) and salience (proportion). Volume or mass represents the raw tweet count for each type of rhetorical appeal within a time period (week). Salience represents the proportion of each type of rhetorical appeal within a week of tweeting output for a candidate. Both terms will be detailed below. This study also seeks to understand the relationship between rhetorical appeal and public intention to vote. This exploratory study contributes to current social media research by providing foundational understanding of rhetorical appeals on Twitter. In more specific terms, this study presents an Aristotelian based rhetorical taxonomy for viewing tweets. I start by identifying linguistic indicators present in electoral tweets. I continue by determining how these indicators combine to create rhetorical appeals and how these appeals work in the context of campaign cycle. I will also look at the effect of each type of appeal has on intention to vote both within each ritualistically defined segment of the campaign and across the entire campaign.

This thesis explores the issue of rhetorical genres in a political context focusing on identification of the acceptable range of characteristics and on of specific types of rhetorical

appeals. One of its most important goals is to generate a rhetorical appeals taxonomy. In order to keep it to a manageable size, this study proposes a foundational categorization of rhetorical appeals that can be as simple as that proposed by Aristotle, who distinguished between celebratory (positive and negative), forensic and deliberative appeals (Grimaldi, 1988, p. 80). This proposal sets out to test this basic taxonomic proposition and determine the appropriate framework for detecting the primary rhetorical appeals used in political campaign tweets. The next step will be creating a working taxonomy with objective linguistic and intention indicators that are able to be coded by human coders. From there, tweets issued by the US presidential candidates during the 2016 elections will be analyzed across the entire campaign and within four ritualistically defined campaign periods. These are periods of the campaign defined by broader events, in which the nature of the interaction and rhetorical strategies were modulated by the ritualized nature of the campaign.

It is not enough to categorize these appeals and create a taxonomic framework; I also want to see how this framework functions in practice. This will be done by studying how mass and salience (proportion) of the various types of rhetorical appeals (genres) vary across time periods and how they may affect changes in public intention to vote. The analysis will be conducted at daily level, and will estimate both overall effects and effects for specific ritualized periods. The analysis will determine the effects rhetorical appeals have on intention to vote using a 1 day, 1 week, 2 week, and 3 week lag correlation allowing for short term and long-term effects to be captured.

To summarize, this thesis explores these four general issues:

1. Why should Tweets be viewed from a rhetorical lens, and what rhetorical analysis framework is most appropriate for covering electoral tweets?

2. What are the Twitter specific rhetorical genres that fit within the study framework, and what indicators - linguistic or otherwise - distinguish one rhetorical genre from another?
3. What are the ritualistic segments of presidential campaigns and how do Twitter-specific rhetorical genres perform within them?
4. Are Twitter specific rhetorical genres related to the intention vote within each ritualistic period and across the entire campaign?

LITERATURE REVIEW

In what follows, I will discuss the theoretical justification for the four key research ideas stated above. First, it is necessary to determine why tweets should be viewed in a rhetorical lens, and decide what rhetorical analysis framework is most appropriate for covering electoral tweets. In order to do this, I will be introducing the Aristotelian rhetorical appeals due to the lucid nature of the appeals and their ability to match the current political vernacular use. Secondly, I want to take a step back and observe how Aristotle conceptualized the contexts by which specific rhetorical messages are most effective and what linguistic components distinguish one rhetorical genre from another. This will be accomplished by tracking the conceptualization process of Aristotle when he created the appeals and stitching these ideas to concrete linguistic components present in his definitions. The third goal of this study is to determine which communicative contexts and situations exist throughout American presidential campaigns, and in political campaigns more broadly. This will help me determine a set of exigencies that may influence the use of rhetorical appeals on political Twitter campaigns. How does strategic implementation of rhetorical appeals by both mass and salience maximize a given Tweets effectiveness? This will be achieved by identifying landmark events that are present in presidential campaigns and finding what rhetorical messages are most effective for each campaign segment. Finally, I seek to ascertain if there is a relationship between appeal genres and intention to vote data while acknowledging the exigencies present in the political environment.

Aim 1: Examining Tweets From a Rhetorical Lens, and Determining What Rhetorical Framework Is Most Appropriate for Covering Electoral Tweets

In this section I will be discussing why Aristotle's rhetorical appeals are the ideal genesis for exploring the rhetorical nature and framework of messages used by politicians on Twitter. There are hundreds of persuasive and rhetorical theories that would be an appropriate starting point for constructing this taxonomy, but at the end of the day, with this being an unexplored topic, simplicity and practicality were most valuable for undertaking this project. This section will provide succinct justification for considering tweets as rhetoric, explain the benefits and limitations of using Aristotle's rhetorical appeals as a means for objectively quantifying electoral tweets, and discuss what changes had to be made to Aristotle's original three rhetorical appeals to better fit the modern political discourse used on Twitter.

Mapping Aristotle's Rhetoric Appeals to Electoral Tweets

It is quite evident why electoral tweets should be considered rhetoric, they are meant to persuade. Yet the question of what rhetorical theory would be the most appropriate lens to use for this research remains less certain. This section provides rationale for using Aristotelian rhetorical appeals, as this study seeks to find the best way to begin classifying and quantifying rhetorical tweets issued during the Presidential election. As previously stated, there is a plethora of persuasive, media, and political communication theories that attempt to predict an audience's response to persuasive messages seen through various mediums. I considered Sherif and Hovland's (1961) Social Judgement Theory as a means by which politicians gage the audience's changing attitudes throughout the campaign, but this theory has vague rhetorical focus. After further research, it was determined that more contemporary persuasive theories are quite nuanced to context and this would limit the scope and range of the information my taxonomy would

provide. Campaign theories traditionally involve post-election evaluations, which provide insight into common techniques for running campaign messages, but fail to provide a theory that would lend to building a rhetorical taxonomy (Meadow, 1989). Alaimo (2014) provides general political campaign counsel and insights from top campaign advisors which helped us narrow our focus on the rhetorical components found in political speech, but ultimately didn't give enough concrete guidelines to help further this proposition. After doing research, it became evident that a flexible model was necessary. The model needed to be rhetorically focused, context specific, and conceptually straightforward, which led me to use Aristotle's rhetorical appeals.

The foundation of the rhetorical framework for categorizing tweets begins with Aristotle's classic tripartite oratory appeals (Deliberative, Forensic and Epideictic) as they provide clear, distinguishable list of appeals that are designed incorporating contextual conditions (Grimaldi, 1988). These rhetorical genres are the basis by which Aristotle's more prominently known persuasive appeals (ethos, logos, pathos) can be utilized. Each of these persuasive appeals is encompassed within the rhetorical genres and provide important distinguishing features when coding the variables in this study. The rhetorical genre sets parameters, and provides situational grounds for utilizing expert appeals (ethos), logical appeals (logos) and emotional appeals (pathos). In essence, the rhetorical appeals and persuasive appeals should be used in conjunction with one another to maximize effectiveness. For example, deliberative and forensic require specific tense usage together with logical appeals. Epideictic appeal(s) are designed to incite an emotional response from the audience requiring the use of affective argumentation. More detail about the comprehensive nature of each appeal will be provided in subsequent sections, but it is important to distinguish how Aristotle's appeals are used in this study. Although these appeals are old, they are remarkably accurate in describing the vast majority of appeals used by political

candidates, as messages need to be formal enough to cut across situational, demographic and geographic variance (Bennett, 1977). It can be argued that Aristotle's rhetorical appeals can be transferred and applied to Twitter message design due to the persuasive intent of these messages and the contextual capabilities of each appeal.

Amending Aristotle's Rhetorical Appeals

As stated in the previous section, one of the lures to using Aristotle is that fact that there is room to explore and add on to the existing features of the rhetorical appeals. Clearly one of the oldest and most seminal rhetorical theories needs a little hemming to be appropriately applied to a modern context. This section discusses what changes were essential in order to revamp these appeals to fit the rhetoric used by Politicians on Twitter today. Upon further examination of the Aristotelian appeals, it was necessary to tease apart the epideictic appeal and add a present oriented logical appeal to supplement the forensic and deliberative appeals.

The epideictic appeal is too broad to function as an effective variable in our taxonomy. Aristotle's original conception of this appeal was to use an emotional response to incite praise or blame which the audience would use to imply meanings of judgement and comprehension (Grimaldi, 1988). Emotional appeals have always been an effective weapon in the heat of campaign battle as studies have shown emotionally driven appeals to be the most effective in political campaign messages (Jerit, 2004, Stieglitz & Dang-Xuan, 2013). Of all emotional appeals available to campaigns and candidates, the attack message has time and again proven to be the most effective means of persuasion in a traditional campaign (Alaimo, 2014). Alaimo also adds that positive appeals have the ability to provide counterbalance for the negative emotional appeals against each candidate so their use is quite imperative for influencing public opinion. The range of emotional appeals available warranted a dichotomous split of the celebratory appeal into positive

celebratory messages, and negative celebratory or attack messages. Each appeal has the primary focus of emotional transfer, but the divergent nature of the emotions present in political rhetoric dictates the division of this category, increasing the taxonomy's preciseness.

After numerous iterations of coding for Deliberative, Forensic, Celebratory and Attack appeals, it became evident that there was a huge hole in what was being communicated on Twitter and what these 4 variables accounted for. The big hole was that Forensic tweets use logic and use past tense, and Deliberative tweets use logic and future tense, but nothing in Aristotle's appeals accounted for logical statements written in the present. Therefore, another appeal was added. This appeal is called the *Fact* appeal, and accounts for all Tweets that use logical argumentation and are written in the present tense, furthering the taxonomy's practical nature.

In total, the taxonomy uses these 5 rhetorical genres based off the original Aristotelian rhetorical appeals to explore the linguistic patterns of electoral tweets and find out how these Tweets can be used to impact voter behavior. Each appeal has linguistic indicators that are present in electoral tweets. By observing how frequently these indicators and appeals are used provides a strategy for determining what influences the attitudes of citizens who interact with political messages from candidates on Twitter. Positive epideictic (celebratory) tweets proclaim some ideas to make people feel good about themselves or about their community and in-group, while negative epideictic (attack) tweets assign blame or vilify the enemy. Forensic appeals are meant to determine and establish facts, deliberative tweets ask people to do something for a stated reason or reasoning, and Fact appeals attempt to establish present truth. The specific theoretical and linguistic components of each appeal will be thoroughly described in the methodology section, but this provides a fundamental understanding of what each appeal is designed to communicate.

In this section, I have explained why Tweets should be seen as rhetorical appeals, why Aristotle's rhetorical appeals provide an appropriate framework for my taxonomy, and what changes needed to be made to make this taxonomy relevant for electoral Twitter messages. The following section will detail the formulation and conceptualization process of the theoretical and methodological underpinnings of each genre as well as the linguistic markers for detecting and distinguishing the appeals. This will provide a clear and concise method for differentiating between types of appeal and form the coding parameters for the aforementioned rhetorical variables used in this study. All of this leads to my first formal research question which is:

RQ1: What percentage of electoral Tweets from the 2016 presidential election are accounted for by Aristotle's rhetorical genre's?

Aim 2: Twitter Specific Rhetorical Genres and Indicators

Distinguishing Genres From One Another

Now that the rhetorical analysis framework has been established, the focus switches to how rhetorical messages take shape, and what objective linguistic indicators are present in rhetorical messages that allow for coding electoral tweets. This will be accomplished by detailing how Aristotle conceptualized rhetorical appeals, and using that same rationalization to attach linguistic markers to each of my 5 rhetorical appeals. The conceptualization process for differentiating the five rhetorical appeals used in the taxonomy is necessary to justify the linguistic dimensions that follow. Once this is done, I will describe the process for detecting the linguistic markers in each appeal. These parameters will clearly establish how appeals function and how genre use communicates differently.

Rhetorical Appeal Differentiation

With the need for rhetorical appeal implementation for electoral tweets established, and a transferable framework in place, it is essential to recognize the process of identifying the linguistic markers that define and differentiate rhetorical appeals. This section will provide a theoretical overview of these dimensions which informs our grammatical stipulations for defining each appeal.

When undertaking the construction of rhetorical appeals, Aristotle attempted to link each appeal with a professional field where this rhetorical style was clearly present and provide action utterances to indicate what each appeal was looking to communicate and accomplish (Grimaldi, 1988, p. 82). Aristotle's conceptions of these appeals serve as moorings for the development of our rhetorical genres which is a developed enough process that leads us to conceptualize the electoral messages used on Twitter in a like-minded fashion. An emphasis on the contextual significance of each appeal is detailed. This thesis moves forward one step and add the linguistic indicators that undergird our taxonomy. This culminates in a preliminary, yet distinguishable set of appeals that capture the essence of political communication practiced in a mediated network.

Tracking Aristotle's process for conceptualizing each appeal provides our taxonomy with a blueprint on what facets are most significant in formulating a pragmatic rhetorical schema. Each appeal is also designed to communicate and do something, which makes the application to political rhetoric on Twitter so apt because each tweet is designed to communicate or do something as well. When he first conceptualized the *Forensic* appeal, Aristotle originally intended to describe the work of lawyers whose job was to draw upon previous stories and encounters to point to the logical conclusion that should be reached (p. 81). The forensic appeal is an appeal to the past, with a primary intent of establishing and determining facts. Forensic appeals use is to establish facts in

order to accuse, defend, or initiate justice and injustice (p. 82). The *deliberative* appeal was conceived using a political orator as the praxis of this appeal. Aristotle stated that politicians need to effectively use this appeal in order to convince the general public of policy importance and the effects of electing individuals into office has on the future well-being of the state (p. 82). The deliberative appeal is a future oriented statement asking people to do something for a stated reason. It is logic based appeal that uses stats, examples or testimony to inform people of future events or consequences of present action. For the final appeal, Aristotle conceived with the contextual designation of speech being used at an event or public gathering (p. 81). The *celebratory* appeal genre refers to exclamatory emotionally charged messages which highlight orator capabilities to make the audience feel good, or vilify the enemy (Oravec, 1976, p. 168). Its main purpose is to communicate in a different fashion than the reason based appeals, and relate to the audience on a personal, emotional level.

In this study, these foundational rhetorical appeals are used and adapted to fit the nature of political communication on Twitter. In order to move the discussion forward, it is imperative that each appeal is separated and defined by specific linguistic markers that allows for precise coding.

Now that the appeals have been demarcated and conceptualized in a theoretical sense, the discussion is brought down to earth and make practical use out of these conceptual definitions. The following provides more detailed grammatical markers present in each genre to provide an objective measure of each appeal, allowing us to categorize tweets into the rhetorical genres that form my taxonomy.

Linguistic Markers for Distinguishing Appeals

In proposing the Aristotelian method of distinguishing tweets, I am sensitive to the importance of proposing a method for distinguishing between types of appeal by means that go beyond subjective interpretation. For example, what is the defining characteristic of a forensic appeal, above and beyond the message itself? Theoretically speaking, the forensic genre focuses on fact finding, on “what happened.” Thus, this is an appeal to the past, with its primary intent of establishing the justice or injustice of some previous action designed to target a specific segmented audience (Grimaldi, 1988). Grimaldi highlights a temporal approach as a basis of understanding what each rhetorical appeal is, but he not details the practical functionality of the appeals themselves. Formally speaking, a forensic appeal can and should distinguish itself through various linguistic markers that go beyond time, such as: by argument type, time modality, emotional sentiment and several other dimensions. These same linguistic elements will likewise be utilized in conjunction with the other three appeals. In effect, distinguishing between types of appeals demands that we propose specific theoretical and linguistic dimensions across which tweets vary, and in doing so, they align with one or another rhetorical type. In doing so, it can be determined what components exist in these tweets that influences the attitudes of voters and if that impacts how people vote.

As Aristotle described, there are essential, non-negotiable facets of each appeal that must be included. For example, if a tweet is written in the past tense, this cannot be a deliberative tweet due to the qualifications set forth by Aristotle. In observing positive celebratory appeals, it is clear that if a tweet is using logic based reasoning it is not a positive celebratory appeal, because this appeal uses affective reasoning to make an audience feel good about themselves. Observation is another key auxiliary in the inductive process for creating linguistic indicators that help clearly

define the taxonomy. The lucid nature of the rhetorical appeals used in this study lends itself to simple deduction of which linguistic functions should be present for each genre. The following paragraphs will detail each category and justify their inclusion in the methodology.

Grammatical foundations for appeals can be built from the ground up with the help of linguistic indicators of: statement modality, sentiment type, temporal orientation, and argumentative appeal. Specifically, it is assumed that all messages need to have a statement modality (affirmative, interrogative, exclamatory). This indicates the mode of communication and implicitly distinguishes one of the core goals: to determine or affirm facts, to request information, invoke an emotional response, to negate or refute other statements or existential reference. Secondly, messages have temporal orientation: either present, past, or future. This allows the forensic, deliberative, and fact appeals to be distinguished since each appeal uses the same argumentation style. Third, it is assumed that all messages have an implicit emotional sentiment type: positive, negative, or neutral. Sentiment allows us to tease apart the Epideictic appeal into celebratory and attack appeals. Finally, specific argumentative appeals are formulated using: logos (logical appeal), pathos (emotional appeal), and Kairos (call to action). This is arguably the most important categorical section as it gives insight as to what each tweet is attempting to communicate and how the orator is attempting to persuade the audience.

These dimensions are combined into subsets, each of which is associated with one genre in the taxonomy. These dimensions act as decision rules for deciphering and coding tweets. Each appeal has at least one compensatory feature. These appeals are not mutually exclusive and can be used together in the same tweet. I propose that:

1. *Deliberative* statements foreshadow the future, or are written in the future tense, and tell the audience to do something for a stated reason. This dictates that this appeals

- compensatory features include logos or Kairos argumentation, and use of the future tense use. This appeal can use any modality or sentiment type.
2. *Forensic* statements refer to previous events, or are written in the past tense, and are meant to determine and establish facts. They are analogous to deliberative in that temporal and argument choice are compensatory characteristics. These tweets have: logic based or Kairos argumentation and are spoken about past events or are written in the past tense. This appeal can use any modality or sentiment type.
 3. *Fact* statements refer to present events, or are written in the present tense, and tell the audience what to believe, or how to frame an issue. This dictates that this appeal has compensatory features of logos or kairos argumentation, and use the present tense. This appeal can use any modality or sentiment type.
 4. *Celebratory* tweets are positive emotional statements proclaiming some thoughts or ideas to make people feel good about themselves or about their community and in-group, or in this context, political party. The compensatory features include: positive sentiment, emotional argumentation, and exclamatory or affirmative modality. This appeal can use any tense.
 5. *Attack* tweets are negative emotional statements used to assign blame or vilify the enemy, or in this context, political party. The compensatory features include: negative sentiment, emotional argumentation, and exclamatory or affirmative modality. This appeal can use any tense.

In this section, a review of how these appeals came to be in a methodological sense, and began to stitch together the linguistic underpinnings to make researching this possible. The

following section will operationalize these ideas, as well as detail the segmented nature of the American presidential campaign.

Aim 3: Ritualistic Segments of Presidential Campaigns and How Twitter-Specific Rhetorical Genres Perform Within Them

Bitzer (1992) argues that rhetoric is predicated by context, therefore I will also be outlining the political campaign events that coincide with the Presidential campaign timeline to track how genre use changes and evolves over the course of the campaign cycle. This section will also provide a basis for measuring each genre by: tracking how frequently each candidate's uses a given appeal (measuring volume), as well as which tweet was most used in the highest proportion (salience). It will conclude by explaining why it is necessary to distinguish and segment the campaign into ritualistic centered periods, and suggest the proper time to utilize each appeal based off previous political campaign and rhetorical research.

Campaign Segmentation and Political Rituals

Categorizing tweets as rhetoric, dictates the separation of the campaign cycle into ritualized periods, as situation dictates discourse. This allows one to view how campaign rhetoric should develop and evolve throughout the course of the campaign, and why certain appeals are more effective than others given the contextual exigencies of a ritualized campaign. It is justified to divide this seemingly continuous process into segments based of the constraints that each situation entails. Due to the prevailing knowledge that specific intervals in the campaign are defined by ritualistic expectations and constraints, campaign rhetoric attempts to naturally correspond to these demands and adapt their messages accordingly (Bennett, 1977). The first major premise of this thesis, as discussed in the first section, is arguing that we can categorize electoral tweets as rhetoric.

It is commonly believed that situation dictates discourse, therefore it is essential to segment our campaign, because rhetorical appeals should evolve according to those ritualistic expectations and constraints present in political campaigns (Bitzer, 1992).

Rhetorical evolution is necessary based on the “exigences” of the rhetorical situations, i.e. the ritualistic phases in the timeline of current events taking place in the campaign (Blitzer, 1992, Edbauer, 2005). Blitzer (1992) defines exigencies as, “publicly observable historic facts in the world we experience, are therefore available for scrutiny by an observer or critics who attends to them” (390). Edbauer (2005) states that rhetoric exists in a wide sphere of exigencies which are active, historical and lived processes (p. 8). The transient nature of the social environment and ritualistic expectations of the audience dictates which tweets are more persuasive than others. Discourse comes into existence because of some specific conditions or situations, and the response should fit the situation (Bitzer, 1992, p. 5). Therefore, if candidates can determine the values, issues, and psychological expectations of the audience at each specific campaign junction and match that tenor, candidates will be able to create rhetorically effective messages through their tweets.

The campaign timeline is constructed around previous literature and major political rituals that mark significant moments in the campaign. Segmenting the campaign enables effective tracking and the emergence and evolution of genres, changes in rhetorical appeal use, and their effect on future intention to vote. Each period is not only ritualistically segmented, but it is focused or leads to certain landmark political rituals such as: caucus and primary season, convention period, fall campaign and the debates.

Strategic Implementation of Rhetorical Appeals by Both Mass and Salience

One of the two major goals of this thesis is to study the presence, prevalence and salience of the various types of rhetorical appeals (genres) both cumulatively throughout the campaign as well as in the context of ritualized time intervals. Before I detail the segmented nature of the campaign, I will briefly describe the macro view of the electorate process and what we expect tweets to do over the course of the campaign. This will further understanding of which tweets are most powerful in generating an effect and which genres are most persistently found useful by each candidate.

The following sections describe the timeline of each campaign segment and predicts the two most effective appeals (one emotional, one logical) to create a balanced campaign. The timeline of events was crafted using Welzien and Erickson's (2002) timeline which was crafted to explain the fluctuation of individual's voting behaviors. They found that voter preferences evolved throughout the campaign, and specific intervals were best for conveying particular messages. For instance, in the week of each political party's national convention, messages that were positive and focused on party solidarity were most effective in for improving public opinion numbers. They also found that polling results only become representative of the voting behavior 300 days before the general election. After Labor Day (approximately 50 days before the election) the results become more accurate than any other period before. They came up with campaign segments based off the accuracy of polling numbers and prominent political campaign events that I used and adapted for the 2016 election. To form the timeline of this study, I also used landmark political campaign events described by Meadow (1989) such as the fall debates, national conventions, and the end of primary elections to attach to the polling periods detailed by Welzein and Erickson. Working backwards from Election Day 2016 (Nov. 8th), I divided the campaign into 4 segments

based off the political rituals present in each 50-day segment (Welzein and Erickson, 2002) and adjusted it to fit the campaign timeline of the 2016 election. Mid-May marked the point where primary elections were nearly over and each party had a clear nominee to represent the party, so the timeline begins there and runs through election day. Below, I will be describing each campaign segment timeline, specifically what political rituals are most salient in this time period, as well as suggested appeal usage based of previous political campaign literature with the goal of creating a balanced rhetorical campaign that will adhere to audience expectations.

Preparation Stage

The first campaign interval beginning at the end of the primaries and running up to the conventions is the “preparation stage” and runs from May 22- July 9th. This period is dedicated to candidates sculpting a positive self-image (celebratory), convincing party members of an eminent victory (deliberative), and bringing up concerns over the opponent (attack) (Bennett, 1977, Meadow, 1989, Welzein & Erikson 2002). This is an important phase in the campaign as candidates look to capitalize on the “bandwagon effect”, as it has been proven that those candidates who start strong in the public eye often carry momentum throughout the campaign, continuously building off the strong start (Alaimo, 2014). Due to these expectations, this is the most effective time period to use a high volume and salience of attack and deliberative tweets.

Convention Stage

The second interval, the “convention period”, takes place from July 10th- August 6th with the primary focus of unifying voters and maximizing voter learning. Studies have shown this is the peak stage for audience malleability (Welzier & Erickson, 2002, p. 983). Mezo (1997) suggests celebratory appeals are also designed to incorporate a broad audience, which is ideal at this

junction of the campaign when parties attempt to unify the voter base. Therefore, this is the premiere context to use deliberative tweets-- future oriented statements using logical argumentation--as well as celebratory tweets and attack tweets which are used to express solidarity. This will allow the candidate to create an emotional bond with the audience while simultaneously generating excitement and engagement opportunities for the future general election.

Fall Campaign Stage

The period between the conventions and the debates, often referred to as the “fall campaign” runs from August 7th- September 24th, and marks the beginning of a more static audience network with campaigns making a decided shift towards targeting specific demographics of undecided voters. Due to the election drawing nigh, there is also an increase of attack ads as these attacks are shown to endure in the audience’s mind through the general election (Welzier & Erickson, 2002, p. 986). In this context, forensic tweets and attack tweets are expected to be most effective. Forensic tweets establish facts, which is a doubly effective appeal in this time frame as it constructs consistency of campaign values before the national debates and provides ammunition for attack appeals. Welzier & Erickson (2002) describe how this juncture is the ideal time to use attack messages due to Election Day being only two and a half months away.

Pre-Election Stage

The final stage is the “pre-election stage” from September 25th- November 8th, culminating with the general election. In preparation of the general election, the weeks after the first debate have a unique strategy as we see an increase of the sheer volume of tweets by each respective candidate. This comes at a time when audience’s beliefs are beginning to become

cemented due to debate activity, increased campaign activity, and media coverage (Welzien & Erikson, 2002, p. 987). The mass of tweets can be explained by campaigns targeting undecided and battleground voting demographics and encouraging citizens to vote. Thus, it is most beneficial for campaigns to use deliberative (future oriented statement) appeals incorporating kairos argumentation (do something; vote) and celebratory tweets to prevent voter fatigue.

This section has discussed how situations and environmental conditions determine what rhetoric will blossom into effective discourse and made predictions for the mass and salience of each rhetorical genre for the four campaign periods. Of course, the inverse is also possible as campaign rituals give candidates the opportunity to show their knowledge of the myriad of voter concerns and issues as well as adhering to campaign gestures which are expected by the audience. Twitter messages occur at such a frequency that it allows candidates to build a consistent and authentic set of communicative norms that represents the type of representation the people would be getting from their president elect. Addressing these issues rhetorically dictates how well they connect with their audience's values, beliefs and opinions which is crucial for speaker (campaign) success (Oravec, 1976). My goal is to determine how the taxonomy functions in practice, and the only way to gage rhetorical effectiveness is by segmenting the campaign into ritualized temporal periods. This allows a campaign to determine not only what to tweet, but what not to tweet given the context of the campaign. Building on this theoretical scaffold, the following directive questions guide the study:

RQ2: What is the overall distribution of rhetorical appeal types overall and by stage, by candidate?

RQ3: What is the overall distribution of salience (proportion) of types of rhetorical appeal overall and stage, by candidate?

RQ4: Are there significant differences between periods for mass and salience of rhetorical genres for each candidate?

These are the initial descriptive questions, which are meant to set the ground for better understanding of political appeals.

The next section everything is tied together the previous sections and use the Remixed Aristotelian taxonomy to view how candidates meet the ritualistic expectations described above to predict how each appeal affects the public's intention to vote. The combination of these elements leads to the formation of a rhetorical model that seeks to understand the optimum strategy for social media electoral use. The following moves to the predictive phase of this study describing the presumptive effects of rhetorical appeals use on public intention to vote in the future.

Aim 4: Twitter Specific Rhetorical Genres Influence on Intention Vote Within Each Ritualistic Period and Across the Entire Campaign

Now that the taxonomy for twitter messages and the need for campaign segmenting have been established, this thesis culminates by determining the presumptive effects of strategic rhetorical appeal implementation on citizens intention to vote. The following section will revolve around two major premises. First, it will describe the conceptualization for how social media messages (tweets) interact within a networked communication ecology and acknowledge some of the limitations for predicting future polling numbers from rhetorical appeals made on Twitter. This information guides the second half of this section; bridging together the rhetorical appeals, and campaign segmentation, resulting in the final research questions for my thesis.

Networked Ecology of Social Media Messages

In this study, it is argued that one source of directionality influencing citizens intention to vote can be observed and quantified on social media, and by creating and testing the rhetorical taxonomy, one can begin to determine the extent of how the linguistic choices used on Twitter can accomplish the communicative goal of persuasion. Viewing the rhetorical nature of tweets can provide insight into how public opinion will fluctuate throughout the campaign. Obviously, there are numerous exigencies that influence public opinion during a presidential campaign such as: TV, newspaper, and radio coverage and campaign rally's. However, Twitter provides political candidates an unfiltered direct line of communication to the public and it has the potential to influence all media platforms which justifies the vantage point of this thesis.

Appeal Implementation Effects on Public Intention to Vote

Now that I have established a rhetorical taxonomy for social media messages, distinguished between rhetorical appeals, segmented the campaign into ritualized segments, and provided a vantage point for viewing how tweets effect public opinion, I can now propose the final research questions which look to unearth how specific rhetorical appeals influence public intention to vote. Each question is predicated by the mass of tweets used by each campaign, and also by salience (proportion) to determine the most effective uses for each genre. The goal is to find the most effective rhetorical appeals as far as changing the public's intention to vote in the 2016 presidential election.

As stated in the previous section, this study begins by documenting the communicative behavior of the social media user, in the case of this study, the political candidates' twitter account. The candidate has the agency to persuade using emotional appeals (celebratory, attack) or logical appeals (deliberative, forensic, and fact). Each one will invoke a different audience and media

reaction. In subsequent sections I detailed how: emotional appeals generate a bigger reaction than logical appeals, with the strongest emotion being negative (Alaimo, 2014, Jerrit, 2004, Stieglitz & Dang-Xuan, 2013). Rational appeals generate less of a reaction, are used to: counter emotional appeals, appeal to those with a high need for cognition, and target specific audiences (Alaimo, 2014, Cacioppo & Petty, 1982). This thesis tracks the volume of tweets as well as which tweet is most salient (highest proportional use) to determine what the campaign strategy was for each ritualistic period of the campaign. This allows for verification as to which rhetorical strategy was used by each candidate, and how this strategy compares with the ritualistic expectations of the audience, and collate these results to public opinion measures.

Tweets will not achieve maximum impact if the messages don't reflect the historical nature of the present. If campaign rhetoric online adheres to the current social climate, they have a stronger chance of influencing public opinion because they are providing a voice for the concerns of the citizens they seek to represent.

The original goal of this study was to find causality between Twitter genre use and public intention to vote. This viewpoint is warranted because of the known influence Twitter and social media has in influencing public intention to vote (Anderson, 2016). However, due to the study's lack of control on possible extraneous variables causal claims cannot be made. The only thing that can be done is looking at the correlation between the two variables. Building on the descriptive questions for rhetorical genre use, and taking into consideration the contextual expectations voters have throughout the campaign, the following predictive questions guide the second half of this exploratory study:

RQ5: Overall, which type of appeal(s), in terms of mass or salience, has the strongest correlation with changes in public intention to vote within each candidate's Twitter campaign?

RQ6: Within each campaign stage, which type of appeal(s), in terms of mass or salience, has the strongest correlation with changes in public intention to vote for each candidate's Twitter campaign?

METHOD

The following chapter of this thesis describes the data collection process, the means for coding the linguistic markers which will be aggregated to form each appeal, and how each rhetorical genre was categorized.

Sample

To explore the research questions detailed above, tweets issued by the two campaigns tweets will be analyzed by retrieving them through the Twitter API. Tweets issued by the verified accounts of the Donald Trump and Hillary Clinton campaigns for the study period of May 21, 2016- November 8th, 2016 were collected. Tweets, including links and a number of performance metrics (retweet count at the last point of data collection, favorites, etc.) were retrieved automatically using the Twitter R package. In total, 4,494 total tweets were collected during this period including 1,840 tweets for Donald Trump and 2,712 for Hillary Clinton. Tweets were coded by 392 independent coders hired on Amazon's MTURK program.

Variable Operationalization

A core aim of this study is to define types of rhetorical appeals. A rhetorical appeal is defined as having linguistic and persuasion components (Bizzell & Herzberg, 2001). For example, *deliberative* statements are written in the future tense and tell the audience to do something for a stated reason. These appeals get the audience motivated for the future and attempt to give the audience hope that they have a role to play in shaping that future. *Forensic* statements are meant to determine and establish facts. They are analogous to deliberative appeals in that temporal and argument choice are anchoring characteristics. However, their intention is altogether different

because they are written in the past with the intention to bring up either personal past success, or highlight errors from the opposition that lead the audience to be wary. *Fact* tweets are similar to forensic and deliberative in that they tell an audience to think or do something in the present tense. These appeals differ in that are useful in telling the audience what needs done now, informing them what can be done now, and grounding conversation in the present moment. *Celebratory* tweets proclaim some ideas to make people feel good about themselves or about their community, in-group, or political party. They are different from the previous three because they use emotional language or punctuation, and they are easily distinguishable from *attack* tweets because the overall message is positive. *Attack* tweets assign blame or vilify the enemy. They also use a combination of emotional language and punctuation which separate them from the first three appeals, but are explicitly different from *celebratory* appeals because their main goal is to criticize the opposition.

As will be explained in more detail below, these five rhetorical appeals can be identified by a mixed method of content analytic and linguistic analysis. Taking a brief step back, this study connects linguistic dimensions to rhetorical genre's. In order to do this, Aristotle's rhetorical appeals were broken down into specific discernable features. When combining selected facets of each feature, we describe the contour of a certain appeal. The summary table below shows which feature facets form what rhetorical appeals.

The dimensions (features) used aim to identify the broad, cross genre persuasive components of the tweets. The persuasive components consist of: modality, tense, sentiment, and argumentation style. The four dimensions named above define avenues for achieving persuasive goals. For example, statement modality (affirmative, interrogative, exclamatory) captures the nature of a rhetorical action (to state, question or interject). Modality implicitly distinguishes one

of the core goals of all political candidates: to determine or affirm facts, to request information, invoke an emotional response, to negate or refute other statements or existential reference.

Table 1: Which Feature Facets Form What Rhetorical Appeals

Rhetorical genre definition	Dimension			
	1	2	3	4
	Tense ^a	Sentiment ^b	Modality ^c	Argument ^d
Forensic; establishing facts or previous events	Past	Any	Affirmative/Interrogative	Logic/call to action
Deliberative; predicting future events	Future	Any	Affirmative/Interrogative	Logic/Call to action
Fact; refer to present events	Present	Any	Affirmative/Interrogative	Logic/call to action
Celebratory; positive statements	Any	Positive	Exclamatory/Affirmative	Emotional
Attack; vilifying enemy	Any	Negative	Exclamatory/Affirmative	Emotional

^a Past, present, future

^b Positive, negative, neutral

^c Affirmative, exclamatory, interrogative

^d Logic, emotional, call to action

Secondly, messages have temporal orientation: either present, past, or future, which captures the contextual dimension of goals. This allows for one to determine the best context to frame an issue. For instance, if we are talking about immigration, the issue can be framed according to tense. In 1898, laws did not have restrictions on immigration, and as a result the GDP grew by 10%. Today, immigration restrictions have helped ensure the premier expats are moving into the country. Next year, we should increase immigration to ensure economic growth. All three statements are talking about the same issue, in the same affirmative modality, but the communicative goal changes according to the tense used. As can be seen by this simple example, logical appeals and persuasive goals are dependent on tense.

Third, we assume that all messages have an implicit emotional sentiment type, which is also a contextual dimension. These include positive, negative, or neutral sentiments. Sentiment allows us to tease apart the epideictic appeal into celebratory and attack appeals. This gives us a clearer understanding of what emotions people respond more favorably to both overall and contextually.

Finally, the argumentative style of each statement is an important component to rhetorical appeals. Calls to action require a specific logical demonstration, or at the minimum, a reason for acting. Emotional argumentation, logical argumentation, and calls to action sound decisively different, but the same goal is attached to each one; persuasion. The end goal may be the same, but the route to achieving them can be decidedly different. As the old saying goes, “all roads lead to Rome”. As suggested by Stieglitz and Dang-Xuan (2013) among others, emotional argumentation on social media is an effective form of persuasion. Reasoning is typically a verbal statement that involves a verb or connector words that suggest consequence and inference. It is also an effective means of persuasion for those with a high need for cognition. To detect reasoning (logos), I used a linguistic analysis, which I will detail below

The core features (dimensions) mentioned above, except logos, were identified using human coders via content analysis facilitated by Mechanical Turk (Mturk) workers. The content analysis protocol asked Mturk coders to identify the five content features in the electoral tweets issued by each candidate. I pretested the protocol using two paid independent undergraduate research assistants. Each one was under the age of 20, one was male, the other female. One of the students was an English speaking international student and one was a native born English speaking student. This was done to best represent the diverse coders that would be working on Mturk. Each student coded independently coded 100 tweets, and intercoder reliability measured Cohen’s kappa.

I used Cohen's kappa because the coding involved mutually exclusive nominal scale questions, e.g. Does the speaker attempt to be positive by being encouraging, cheery, or supportive? (Yes or No) and Does the speaker encourage people to do something, to act? (Yes or No). Cohen suggested the Kappa result be interpreted as follows: values ≤ 0 indicate no agreement and 0.01–0.20 as none to slight, 0.21–0.40 as fair, 0.41–0.60 as moderate, 0.61–0.80 as substantial, and 0.81–1.00 as almost perfect agreement (Cohen, 1960).

The reliability scores were generally moderate. Due to the lack of funds and manpower, I could not retrain the coders to improve reliability. In detail, the reliability results look as follows. The Cohen's kappa for tense was $\kappa = .627$. The question tested was, "Overall, does the statement seem to refer to the past, the present, or the future?" Each tense had an example. The examples were: *past*: My opponent told everyone what they wanted to hear, *present*: My opponent tells everyone what they want to hear, *future*: My opponent will tell everyone what they want to hear.

The Cohen's kappa for *positive sentiment* was $\kappa = .615$. The question tested was, "Does the speaker attempt to be positive by being encouraging, cheery, or supportive? (Yes No)". The examples given to coders were: Tim is a good man. He's a true progressive. And he will make a great vice president. Thank you, ARIZONA! This is a MOVEMENT like nobody has ever seen before. Together, we are going to MAKE AMERICA SAFE.

The Cohen's kappa for *negative sentiment* category was $\kappa = .660$. The question tested was, "Does the speaker attempt to be negative by being hostile, unfavorable or using a mean tone? (Yes No)". The examples given to the coders were: My opponent is totally unfit to be our president—really bad judgement and temperament! My opponent was a failure at business and by wrecking his business, he wrecked the lives of his workers.

The Cohen's kappa for *neutral sentiment* category was $\kappa = .543$. The question tested was, "Does the statement refrain from emotional speech, limiting itself to facts and being neutral? (Yes No)" The examples given to the coders were: I will be watching the great Governor @Mike_Pence and live tweeting the VP debate tonight. With 35 days left, Hillary's in PA talking about how she'll help kids and families. Join the conversation live.

The Cohen's kappa for *emotional argumentation* category was $\kappa = .478$. The question tested was, "Do the tone or language of the message make you feel emotional, such as happy, sad, angry, scared, surprised, or disgusted? (Yes No)" The examples given to the coders were: Everybody gets knocked down in life. The real test is whether you get back up, dust yourself off, and keep going. If dummy Bill Kristol actually does get a spoiler to run as an Independent, say goodbye to the Supreme Court!

The Cohen's kappa for *Kairos* category was $\kappa = .425$. The question tested was, "Does the speaker encourage people to do something, to act? (Yes No)". The examples given to the coders were: To all of my twitter followers, please contribute whatever you can to the campaign. Text CONGRATS to 47246 to tell Hillary you're with her tonight.

The Cohen's kappa for *statement type* category was $\kappa = .475$. The question tested was "Overall, is this tweet: A question, An exclamation, Other." The examples given to coders were: *Questions*: What is she hiding? Start with "what, why, etc." or verbs like "does, is, etc." "?" often but not always found at the end. *Exclamations*: Make America Great Again! Express strong feelings. "!" often but not always found at the end. All other tweets only affirm facts or opinions: "Political compromise is good." Periods are typically but not always found at the end.

All variables were at least moderate, with some of the variables having substantial agreement. These numbers validate the clarity of the given statements. The *Kairos* category and

statement type category though lower in agreement, still are classified as moderate agreement. Future studies should look to provide additional clarity to guide coders decisions. The limitations of the results are immediately apparent with the numbers provided. These numbers should be higher with the questions being simple pattern recognition questions. Therefore, the results of the study could vary. Despite these limitations, there is a bright future for this coding system, as this was an exploratory study with no previous guideline to follow. More on the limitations will be discussed in the “limitations” and “discussion” sections. Ultimately, all questions were at least moderate, questions were then able to be distributed to coders on a larger scale.

Workers on Mturk were then given these same seven questions and asked to answer them within a time limit of 8 minutes. These workers were used as “pattern recognition” workers as the questions asked to identify objective features of each tweet. Each worker got one tweet from the list of 4,494. The tweet appeared in its entirety to the workers and they were able to see who issued the tweet, they also had access to any links, pictures and graphs. After the tweet was coded, it was removed from the list and another tweet from the list was given until they decided not to continue. Due to the simplistic nature of the questions asked, there was not a high level of cognition involved and Mturk workers were a viable option due to time and monetary constraints. All coders were paid \$0.20 per tweet. Once the coding was completed, the data was cleaned and all tweets that did not pass the security question were flagged and removed from the results. In total, 4,494 tweets were coded by 392 workers.

As mentioned, while content analytic processes captured basic context and actionable dimensions, linguistic analysis was used to identify reasoning. I used linguistic markers to identify common premise and conclusion argumentative words and phrases in the tweets. Using a conclusion and premise list developed by Cottrell (2011), I included in the list words such as: “in

order”, “which entails”, “demonstrating”, and “for example” (see appendix 3 for complete list). These words indicate that an orator is attempting to use logic to persuade.

I used a word match function (REGEXMATCH) in Google Spreadsheet to identify the words in the tweets and then to classify the tweets as logically-inclined or not. The function ignored cases and variable endings (plural, gerunds, regular verbs in the past tense). For each tweet, a logic score was identified by recording the number of logical words found in it. Tweets that had higher numbers were more logical. Tweets that included the presence of URLs were also identified. This was considered a form of logical inference, since the user tried to back up statements with facts. In total, 2 words (a website link counted as a word) needed to be included for a tweet to be considered logic.

Having these dimensions, I proceeded to calculate the probability that each tweet will fall into one of the 5 types of rhetorical appeals. A criterion based method was used for classifying the tweets into rhetorical appeal categories. Two or three compensatory features anchored each category depending on Aristotle’s conception of each appeal. Therefore, tweets that do not have these compensatory features cannot be included in the given category.

Specifically, *deliberative* appeals, which refer to statements written future tense, telling the audience to do something for a stated reason, dictate mandatory features including logos or Kairos (call to action) argumentation, and use of the future tense. The anchor features are: logical argumentation, and use of future tense. A tweet is *deliberative* if it includes at least two logical argumentative words or call to action words, and was written in the future tense. The specific formula is logic argumentation + call to action ≥ 2 , and tense = future. When a tweet had these three features, it was categorized as *deliberative*.

Forensic appeals, which refer to statements written in the past, with the end goal of determining and establishing facts, have mandatory features including logic based or Kairos argumentation and use of the past tense. The anchor features are: logical argumentation, and use of past tense. A tweet is *forensic* if it had at least two logical argumentative words or call to action words, and also written in the past tense. The specific formula is logical argumentation + call to action ≥ 2 , and tense= past. When a tweet had these three features, it was categorized as *forensic*.

Fact appeals, which refer to statements written in the present and are used to tell the audience what needs done now, informing them what can be done now, and grounding conversation in the present moment, have mandatory features including logic based or Kairos argumentation and use of the present tense. The anchor features are: logical argumentation, and use of present tense. A tweet is *fact* if it includes at least two logical argumentative words or call to action words, and is also written in the present tense. The specific formula is logical argumentation + call to action ≥ 2 , and tense= present. When a tweet had these three features, it was categorized as *fact*.

Celebratory tweets, which refer to statements that use emotional language or punctuation and proclaim some ideas to make people feel good about themselves or about their community and in-group, have mandatory features including exclamatory or affirmative modality, positive sentiment, and emotional argumentation. The anchor features are: positive sentiment and emotional argumentation. A tweet is *celebratory* if it includes both positive sentiment and emotional argumentation. The tweet also has to be either affirmative or exclamatory. Tweets cannot be celebratory if they ask a question, or use negative sentiment. The specific formula is positive sentiment + emotional argumentation ≥ 2 , and statement modality= exclamatory or affirmative. When a tweet had these three features, it was categorized as *celebratory*.

Attack tweets, which refer to statements that use emotional language or punctuation and assign blame or vilify the enemy, have mandatory features including negative sentiment, emotional argumentation, and exclamatory or affirmative modality. The anchor features are: negative sentiment and emotional argumentation. A tweet is attack if it includes both negative sentiment and emotional argumentation. The tweet also has to be either affirmative or exclamatory. Tweets cannot be attack if they ask a question, or use positive sentiment. The specific formula is negative sentiment + emotional argumentation ≥ 2 , and statement modality = exclamatory or affirmative. When a tweet had these three features, it was categorized as *attack*.

At the end of the coding process, each tweet was included in a category. Then, I calculated for each candidate, for each day and for each category, two indicators. One category using mass (volume) of rhetorical tweets, and a second category using salience (proportion) of rhetorical tweets. Mass, is a simple count of tweets. In other words, mass shows how many tweets matching a certain category were issued every day. Salience is calculated as a proportion. For each day, the proportion of that genre is calculated by dividing the mass of each genre by the total number of tweets.

The dependent variable in this study is the intention to vote for each candidate, for each day. Data was collected through realclearpolitics.com. The numbers were collected daily by averaging 9 major pollster's numbers. These polling agencies include: Bloomberg, Fox News, NBC news, ABC, LA Times, CBS News, Reuters, Monmouth, and the Economist. Daily Averages are calculated and made available for the public on the website. These daily averages served as the dependent variable. In the following section I report the results of the analyses used to answer the research questions.

RESULTS

Let us start with presenting some fundamental descriptive statistics of the data. There were 4,494 tweets in this study, of which 249 (5.5%) were classified as *forensic*, 384 (8.5%) *deliberative*, 740 (16.5%) as *fact*, 612 (13.6%) as *celebratory*, and 665 (14.8%) as *attack* tweets. Hillary Clinton had 2,712 tweets, while Donald Trump had 1,840 tweets.

The data was used to answer the research questions included in this study. In what follows each research question will be addressed sequentially.

RQ1: What percentage of electoral Tweets from the 2016 presidential election are accounted for by Aristotle's rhetorical genre's?

The first research question investigated how well Aristotle's rhetorical framework described the electoral tweets of the two presidential candidates. The degree to which the category system explained the tweets was examined. Combined, the mixed methods taxonomy accounted for 2,650 (58.8%) of the tweets issued in the 2016 Presidential election. Therefore, the category system covered majority of the tweets in the data, validating the theoretical proposition laid out by this project.

Taking the tweets of both candidates together, a majority of the tweets fit in the fact-based category ($n=740$), followed by the attack category ($n=665$) and celebratory category ($n=612$) respectively (see Tables 2 and 3). However, looking at the tweets separately for both candidates, majority of Donald Trump's tweets fit in the *attack* category ($n= 371$) while Hillary Clinton used tweets that fit in the *fact* category ($n= 547$). Therefore, the taxonomy used by this project showed two completely different rhetorical strategies used by the candidates. Trump resorted to an attack based strategy more frequently while Clinton resorted to a fact-based strategy for most of her

tweets. In other words, Aristotle's framework was successful in describing and bringing out the differences in the rhetorical strategies adopted by the two candidates on Twitter.

The rest of the tweets (42%) that fell outside the ambit of the taxonomy constituted mostly of announcements, hashtag use, and conversational tweets. These tweets were not categorized as persuasive arguments by the taxonomy. As the campaign progressed (fall campaign & pre-election) the frequency of tweets that fell outside the taxonomy decreased in their frequency and the taxonomy was able to increasingly capture a larger proportion of the tweets by both candidates (see Table 4).

Table 2: Descriptive Table for Overall Tweet Salience for Both Candidates

Appeal type/taxonomy categories	% of overall tweets Donald Trump	% of overall tweets Hillary Clinton	Total % for both candidates
Forensic	7.1	10.8	9.3
Deliberative	13.6	15.0	14.5
Fact	18.9	33.6	28.0
Celebratory	23.9	22.5	23.0
Attack	36.3	18.0	25.0
Total tweets	1,021	1,629	2,650

Table 3: Descriptive Table for Overall Tweet Mass for Both Candidates

Appeal type/taxonomy categories	Number of tweets Donald Trump	Number of tweets Hillary Clinton	Total for both candidates
Forensic	73	176	249
Deliberative	139	245	384
Fact	193	547	740
Celebratory	245	367	612
Attack	371	294	665
Total tweets	1,021	1,629	2,650

Table 4: Overall, the Percentage of Tweets Captured
by Taxonomy, by Different Campaign Stages

Stage	Number of days in period	Rhetorical tweets	Total number of tweets	% of tweets covered by taxonomy
Preparation stage	50	467	852	54.8
Convention stage	28	422	860	49.1
Fall stage	49	622	1,101	56.5
Pre-election stage	45	1,126	1,678	67.1

RQ2: What is the overall distribution of rhetorical appeal types overall and by stage, by candidate?

The second research question looked at the rhetorical strategies employed by the candidates and compared them across stages of the campaign. Across all four stages--Preparation Stage, Convention Stage, Fall Stage, and Pre-Election Stage--the fact-based appeal was most frequently used if the tweets of both candidates are taken together (see Figure 1). Both candidates had the highest tweeting volume during the *pre-election stage*. During this stage, Clinton had 700 tweets and Trump had 426 tweets. This was substantially higher than all other stages of the campaign for both the candidates (see Tables 5 and 6).

Looking at the tweets for different stages of the campaign and for both the candidates separately, Donald Trump used the emotional appeals of attack and celebratory most frequently across all stages (see Figure 2). During the *pre-election stage*, there was an increase in the use of logical appeals of fact and deliberative appeal by Trump, however, this increase was less than the increase in attack and celebratory appeals during the *pre-election stage*.

Hillary Clinton had more variance in her appeals across the different stages of the campaign (see Figure 3). Overall Clinton relied more frequently on logical appeals, particularly fact-based appeals, across all stages. However, there was a distinct increase in attack appeal in Clinton's tweets during the *fall campaign stage*. Clinton reduced the use of attack appeal during the *pre-*

election stage and enhanced the use of deliberative and celebratory appeals during the *pre-election stage*.

In sum, each candidate was consistent in their usage of one rhetorical appeal across all the stages of the campaign. Both candidates were different in their choice of appeals across the four stages of the campaign. Donald Trump relied on emotional appeals throughout the campaign stages while Hillary Clinton chose logical appeals throughout the campaign stages. However, the *pre-election stage* saw both candidates increasing the other appeals. Donald Trump increased the use of logical appeals while Hillary Clinton enhanced her use of emotional appeals (e.g. celebratory tweets). While both candidates were consistent in their use of appeals, Hillary Clinton substantially increased attack appeal in the fall campaign stage but the appeal was reduced in the following campaign stage (pre-election stage). Donald Trump did not have such sharp changes in his use of appeals across the four stages. Both candidates used the forensic appeal the least across all the four stages of the campaign.

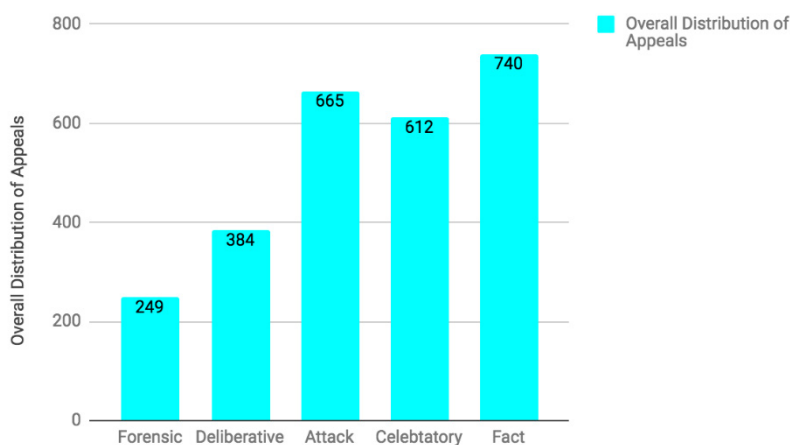


Figure 1: Overall Tweet Distribution by Rhetorical Appeals

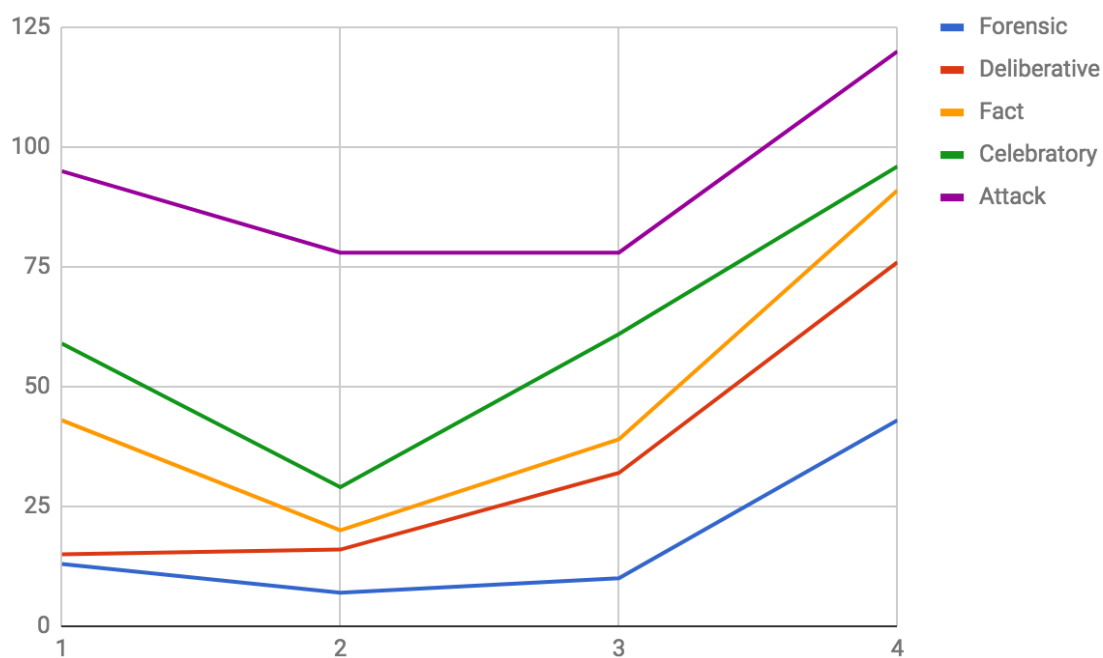


Figure 2: Mass of Tweets by Donald Trump Across the Four Stages of the Campaign

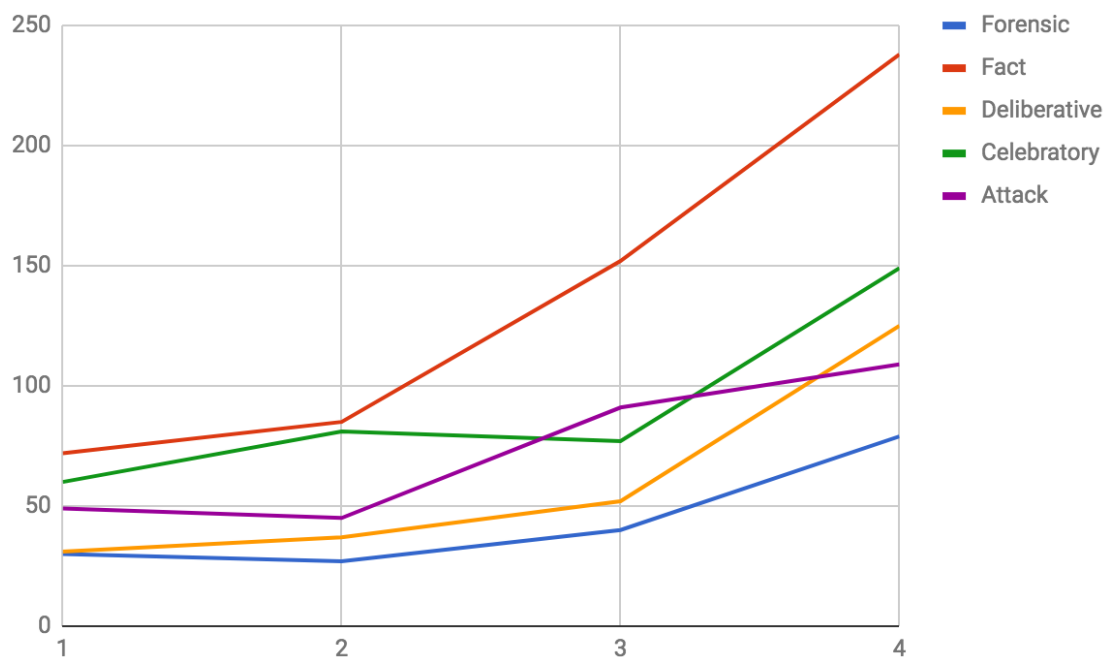


Figure 3: Mass of Tweets by Hillary Clinton Across the Four Stages of the Campaign

RQ3: What is the overall distribution of salience (proportion) of types of rhetorical appeal overall and period, by candidate?

The third research question looked at the salience of rhetorical appeals used by both candidates. Salience refers to the proportional weight of each appeal within a week, and is expressed in percentages. Salience is calculated by dividing the number of tweets falling into a category by the overall tweets. The salience of tweets was calculated by week, by day, and for the entire period for each candidate.

Taking the tweets of both Hillary Clinton and Donald Trump together, the salience of fact based rhetorical appeal (27.9%) was the highest followed by the attack appeal (25.1%) (Figure 4).

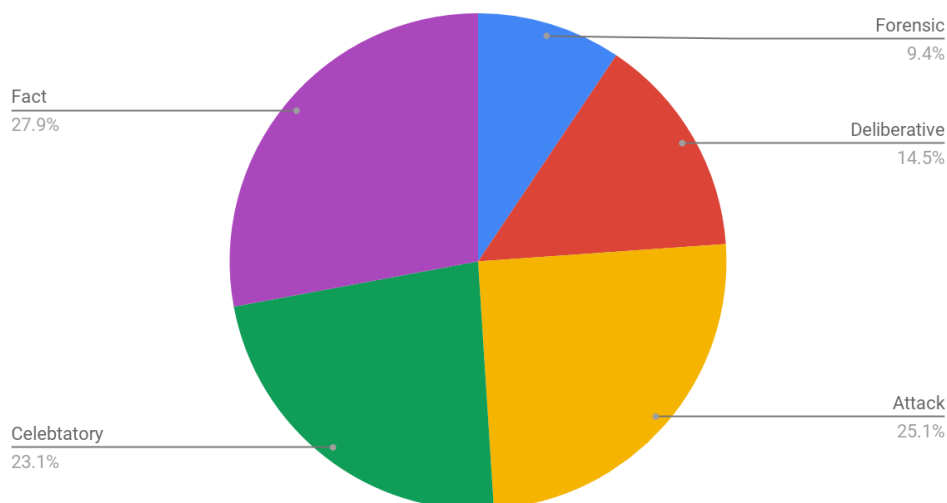


Figure 4: Overall Salience of Rhetorical Appeals for Both Candidates in Percentages

Breaking down the tweets by salience for each candidate, a clear distinction between the use of rhetorical appeal for Trump and Clinton was observed. For Trump, attack appeals (20.7%) were the most salient while for Clinton the fact appeal (20.2%) was the most salient across all stages of the campaign (see Tables 7 and 8).

The salience of other appeals for both Trump and Clinton varied across the four stages of the campaign. For Donald Trump, attack appeal was the most salient strategy across the stages but

the use of celebratory appeals plateaued during the *pre-election stage*. Also, the salience of logical appeals of fact and deliberative increased for Donald Trump during the *pre-election stage*.

This was contrary to the trend of salience observed for Hillary Clinton. While fact appeal, a logical appeal, was the most salient appeal for Clinton across the four stages of the campaign, attack appeal became more salient during the *fall campaign stage* and then plateaued during the *pre-election stage*. Also, the salience of other emotional appeals like celebratory increased for Clinton during the *pre-election stage* (see Figure 5).

Therefore, the salience of tweets for both candidates across the four stages of the campaign brought out the same pattern as was evident in the overall volume of the tweets used by each candidate. Donald Trump used more emotional appeals, particularly attack appeals, across the four stages while increasing logical appeals towards the end of the campaign. Hillary Clinton, on the other hand, relied more on logical appeals, particularly fact appeal, throughout the four stages of the campaign. However, there was an increase in the salience of emotional appeals towards the later stages of the campaign.

The fourth research question looked at whether there were statistical differences between the use of appeals for each candidate across the four stages of the campaign. A Kruskal-Wallis test for difference was used because the data was not normally distributed. For this analysis, the candidates were not being compared against each other. The test was used to investigate if there were systematic differences between how each candidate used rhetorical appeals in the four stages of the campaign. The test showed that each candidate varied the used of logical appeals in terms of both mass and salience throughout the campaign, but the emotional appeal usage was relatively similar for each campaign.

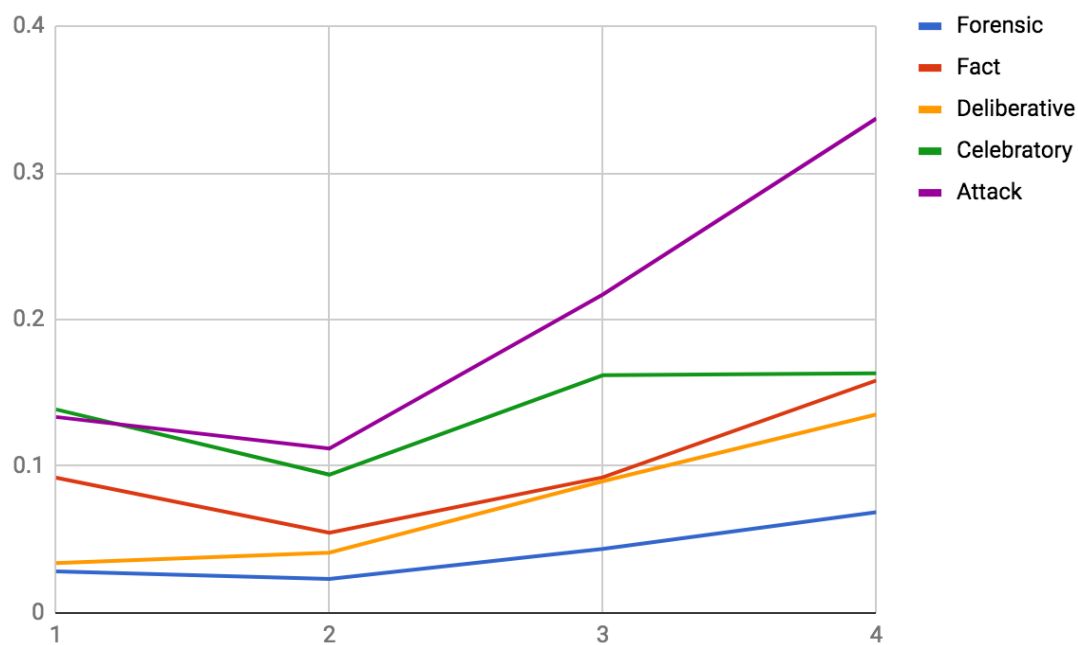


Figure 5: Salience of Tweets for Donald Trump for the Four Stages of the Campaign

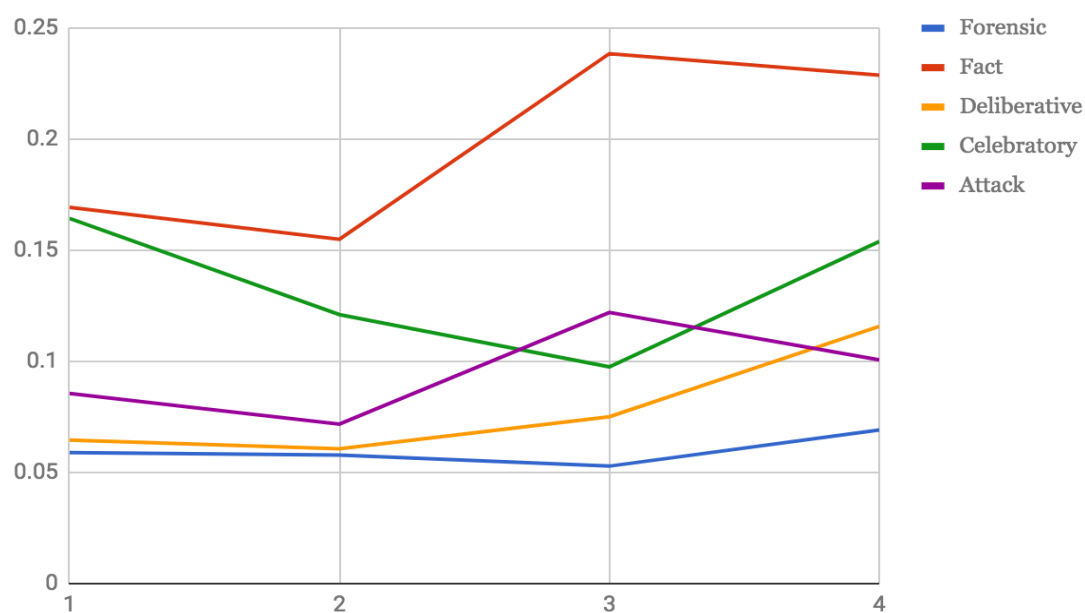


Figure 6: Salience of Tweets for Hillary Clinton for the Four Stages of the Campaign

RQ4: Are there significant differences between periods for mass and salience of rhetorical genres for each candidate?

For both candidates, there were significant differences in their use of various appeals across the different campaign stages. For Donald Trump, there were systematic differences across stages for volume of tweets that used logical appeals (forensic, deliberative and fact appeals) and one emotional appeal (celebratory appeal) (see Table 9). There were no significant differences in the salience of emotional appeals (celebratory and attack appeals) for Trump across the four stages, however, there were differences in how salient the logical appeals were across the stages (see Table 10). Trump used more logical appeals (forensic, fact, deliberative) during the *pre-election stage* than in the earlier stages of the campaign.

For Hillary Clinton, there were systematic differences between the use of both emotional and logical appeals across all the stages of the campaign. Looking at the volume of tweets, Clinton had significant differences between the use of all the appeals (see Table 11). Looking at the salience of appeals, Clinton had significant differences in the salience of all appeals but for celebratory appeal (see Table 12). Therefore, Clinton increased her use of logical appeals (fact, deliberative and forensic) throughout the stages of the campaign with a sharp increase during the final stages of the campaign. Her use of attack appeal, an emotional appeal, varied significantly across the stages with an increase during the *fall campaign stage* and then a decrease during the final stages of the campaign.

Table 5: Summary of Significant Results for Mass Use of Donald Trump Tweets

Appeal type	χ^2	p
Forensic appeal	28.52	<.001**
Fact appeal	18.07	<.001**
Deliberative appeal	32.45	<.001**
Celebratory appeal	9.45	.024*
Attack appeal	4.42	.220

Note. Kruskal-Wallis test significant values for Donald Trump mass use.

Table 6: Summary of Significant Results for Salience use of Donald Trump Tweets

Appeal type	χ^2	p
Forensic appeal	22.63	<.001**
Fact appeal	14.06	0.003**
Deliberative appeal	26.20	<.001**
Celebratory appeal	6.93	.074
Attack appeal	3.59	.310

Note. Kruskal-Wallis test significant values for Donald Trump salience use.

Table 7: Summary of Significant Results for Mass use of Hillary Clinton Tweets

Appeal type	χ^2	p
Forensic appeal	21.5	<.001**
Fact appeal	42.4	<.001**
Deliberative appeal	30.4	<.001**
Celebratory appeal	22.5	<.001**
Attack appeal	15.1	0.002**

Note. Kruskal-Wallis test significant values for Hillary Clinton mass use.

Table 8: Summary of Significant Results for Salience use of Hillary Clinton Tweets

Appeal type	χ^2	p
Forensic appeal	10.65	.014**
Fact appeal	11.29	.010**
Deliberative appeal	12.18	.007**
Celebratory appeal	8.08	.044**
Attack appeal	6.01	.110

Note. Kruskal-Wallis test significant values for Hillary Clinton salience use.

In terms of stage by stage differences there are some interesting commonalities and differences. First, as was already obvious from answering the preceding questions and indicated by Figures (2, 3, 5, and 6), both candidates had a sharp increase in the number of tweets in the last stage (*pre-election stage*) of the campaign. However, while Trump keeps a balanced and smooth course, leading with attack and using the other appeals evenly (Figure 2), Hillary Clinton over-emphasized fact and down pedaled attack (Figure 3). The pairwise test conducted under the Kruskal Wallis procedure confirmed that the differences between periods mass use of appeals were indeed significant for fact for Hillary Clinton and Donald Trump, as figures 7 and 8 below also suggest. The Kruskal Wallis tests also showed significant differences for attack when used by Hillary Clinton as seen below in table 9.

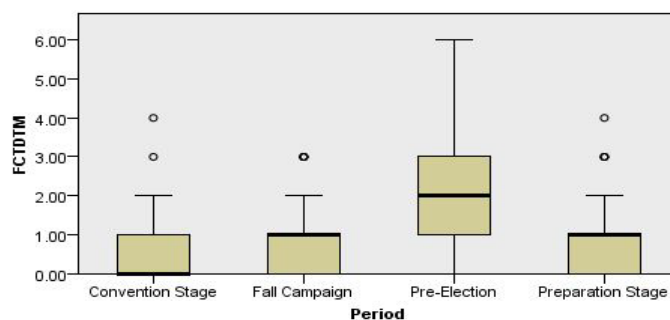


Figure 7: Kruskal Wallis Test for Donald Trump Fact Mass Use

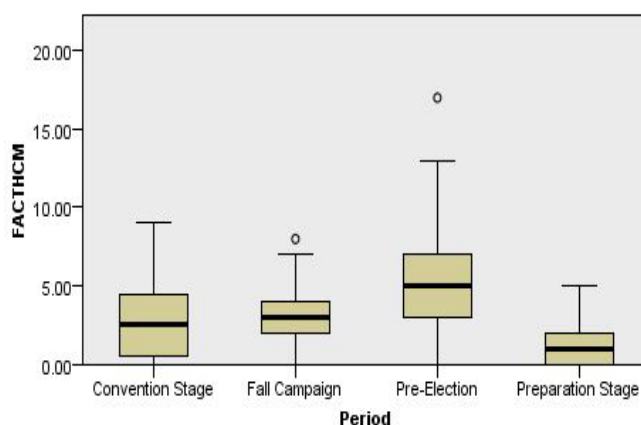


Figure 8: Kruskal Wallis Test for Hillary Clinton Fact Mass Use

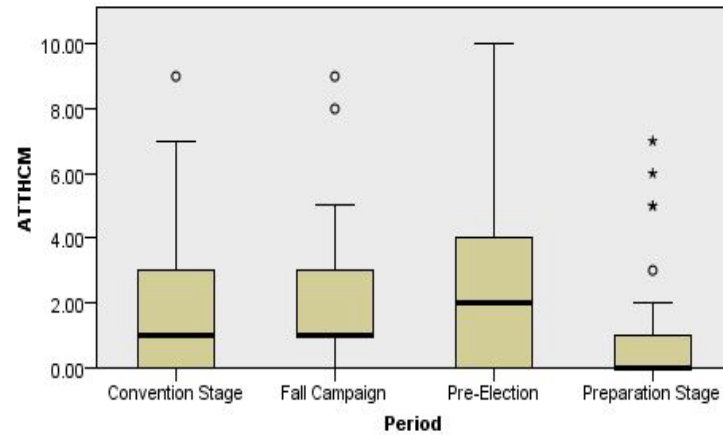


Figure 9: Kruskal Wallis Test for Hillary Clinton Attack Mass Use

In conclusion, the Kruskal Wallis tests showed that both candidates presented differences across most appeal usage throughout the campaign. Most significantly, Donald Trump did not show variability in his use of attack or celebratory tweets, nor did Hillary Clinton show variability in her use of celebratory tweets. Meanwhile, the test showed robust differences in how each candidate utilized the logical appeals throughout each stage of the campaign.

RQ5: Overall, which type of appeal(s), in terms of mass or salience, has the strongest correlation with changes in public intention to vote within each candidate's Twitter campaign?

For this question, a non-parametric correlation (Spearman R) was conducted between intention to vote, as recorded by Real Clear Politics (see above in the Methods section) and types of rhetorical appeals in tweets. The correlation used the rhetorical appeals in tweets as independent variables and the intention to vote as the dependent variable. Values were lagged by aligning intention to vote values with tweet mass and salience values for the preceding day, as well as in one, two, and three-week lags. Spearman correlation was used because the data was not normally distributed. Lagged values were preferred due to the causal nature of the inference, which proposes that past rhetorical events generate future electoral intentions.

Below is a summary of the significant values between appeal usage and public intention to vote. Table 13 presents the significant values for Donald Trump and Table 14 for Hillary Clinton. As can be seen, overall, there is a short-term impact for Donald Trump when using deliberative appeal and forensic appeal, both in terms of mass and salience. More interesting, deliberative appeals keep having an effect at the week and two-week level.

For Hillary Clinton, on the other hand there is a longer-term effect for most variables, especially for forensic and celebratory appeals. At the same time, the scope of the effects narrows for time windows closer to the polling time. Of note here is that deliberative appeals seem to have some short-term effects for Hillary, as well.

Table 9: Summary of Significant Values for Donald Trump Correlations

Polling	Forensic mass	Deliberative mass	Deliberative salience
1 day lag	.19*	.24**	.23**
1 week lag	N/A	.22**	.27**
2 week lag	N/A	.22*	.17*
3 week lag	.2*	N/A	N/A

Table 10: Summary of Significant Values for Hillary Clinton Correlations

Polling	Forensic mass	Forensic salience	Deliberativ e mass	deliberativ e salience	Fact mass	Fact salience	Celebrator y mass	Celebrator y salience	Attack mass	Attack salience
1 day lag	N/A	N/A	.23**	.17*	.26**	N/A	N/A	N/A	N/A	N/A
1 week lag	N/A	N/A	.27**	.19*	.3**	.17*	.19*	N/A	N/A	N/A
2 week lag	.16*	N/A	.24**	N/A	.37**	N/A	.22*	N/A	.2*	N/A
3 week lag	.31**	.26**	.29**	N/A	.42**	N/A	.32**	.16*	.31**	.19*

In more detail, for Donald Trump, the correlation results showed significant differences at the 1 day lag for forensic mass ($r_s=.19$, $p<.05$) and deliberative mass ($r_s=.24$, $p<.05$) and salience ($r_s=.23$, $p<.05$). In other words, his short-term polling numbers changed when he used forensic and deliberative tweets. There were also significant effects at the 1 week level for deliberative mass ($r_s=.22$, $p<.05$) and salience ($r_s=.27$, $p<.05$). There was also a significant difference at the one week level for celebratory mass ($r_s=.15$, $p<.05$). In other words, there was an effect on public intention to vote numbers when Donald Trump used both deliberative and celebratory tweets. The long-term effect of tweets for Donald Trump was much smaller than Hillary Clinton's. For Donald Trump, the only appeal that had a significant correlation with public intention to vote data at the 2-week level was deliberative mass ($r_s=.22$, $p<.05$) and salience ($r_s=.17$, $p<.05$), and the only appeal that had a significant correlation at the 3 week level was forensic mass ($r_s=.2$, $p<.05$). The most robust finding here is that deliberative appeals were positively associated with public intention to vote changes for a two-week lag and under (see table 12).

For Hillary Clinton, the correlation results showed significant differences at the 1 day lag for fact mass ($r_s=.26$, $p<.05$) and deliberative mass ($r_s=.23$, $p<.05$). In other words, her short-term polling numbers changed when she used fact and deliberative tweets. There were also significant differences at the 1 week level for fact mass ($r_s=.3$, $p<.05$), and deliberative mass ($r_s=.27$, $p<.05$), and the 2-week level for fact mass ($r_s=.37$, $p<.05$) and deliberative mass ($r_s=.24$, $p<.05$). In other words, there was a significant effect on public intention to vote when Hillary used both fact and deliberative tweets. The most robust findings for Hillary Clinton came from the 3-week lag polling data as every appeal use in both mass and salience is significantly correlated with public intention to vote data with the exception of fact salience and deliberative salience. This means that all the

rhetorical appeals are positively associated with changes in public intention to vote for Hillary Clinton with a 3-week lag (see Table 14).

Twitter specific rhetorical messages were viewed by isolating rhetorical appeals and then comparing their use to fluctuations in public intention to vote. Overall, Donald Trump's strategy produced short term effects in public intention to vote, specifically when he used the deliberative appeal. Hillary Clinton on the other hand, was able to generate favorable long-term polling effects, especially when using the forensic and celebratory appeals.

RQ6: Within each campaign stage, which type of appeal(s), in terms of mass or salience, has the strongest correlation with changes in public intention to vote for each candidate's Twitter campaign?

The sixth research question looked at which type of appeals in terms of mass or salience, has the strongest effect on public's intention to vote across the four stages of the campaign. Polling results were again lagged in increments of one day, one week, two weeks and three weeks so show the short and mid-term effect of appeal usage. A spearman correlation test was conducted to find which appeals had a relationship to changes in public intention to vote for each of the four stages of the campaign. A separate correlation was conducted for each of the candidate.

Significant correlations between appeals and intention to vote were more prevalent during the later stages of the campaign compared to the earlier stages for both candidates. Interestingly, the most frequently used appeals did not translate into increased polling numbers throughout the campaign as the correlations between them were not statistically significant. Below are summary correlation tables for the significant values found during each stage of the campaign.

Table 11: Summary of Significant Values for the Preparation Stage

Significant results	r_s values for appeal type
Donald Trump	
Polling	Attack salience
1 week lag	.30**
Hillary Clinton	
Polling	Celebratory salience
1 week lag	-.29**

Table 12: Summary of Significant Values for the Convention Stage

Significant results	r_s values for appeal type	
Donald Trump		
Polling	Attack mass	Deliberative mass
1 day lag	.45**	.51**
2 week lag	-.38**	-.41**
Hillary Clinton		
Polling	Attack mass	Attack salience
1 day lag	-.39**	N/A
3 week lag	.47**	.42**

Table 13: Summary of Significant Values for the Fall Campaign Stage

Significant results	r_s values for appeal type		
Donald Trump			
Polling	Forensic mass	Forensic salience	
2 week lag	.28**	.28**	
3 week lag	.37**	.36**	
Hillary Clinton			
Polling	Celebratory mass	Celebratory salience	Forensic mass
1 day lag	N/A	N/A	-.31**
3 week lag	.42**	.39**	.29**

Table 14: Summary of Significant Values for the Pre-Election Stage

Significant results		r_s values for appeal type	
Donald Trump			
Polling	Forensic mass	Forensic salience	Attack salience
1 day lag	N/A	N/A	-.36**
2 week lag	.36**	.37**	N/A
3 week lag	N/A	N/A	.47**
Hillary Clinton			
Polling	Celebratory salience		
1 week lag	-.34**		

During the *preparation stage*, the only appeal that had a significant correlation for Hillary Clinton was the salient use celebratory appeal which was negatively correlated with public intention to vote with a 2-week lag ($r_s = -.29$, $p < .05$) (see Table 16). For Donald Trump, the higher the salience of attack was in the *preparation stage*, the higher the intention to vote was with a 1 week lag ($r_s = .30$, $p < .05$) (see Table 15). During the *convention stage*, Hillary Clinton saw a 1 day negative correlation from using a high mass of attack ($r_s = -.39$, $p < .05$), but she saw success in her future polls by using attack tweets as seen by the 3-week lag results for mass ($r_s = .47$, $p < .05$) and salience ($r_s = -.42$, $p < .05$) (see Table 17). For Donald Trump, the convention stage saw that the attack mass was highly positively correlated with a 1 day lag ($r_s = .45$, $p < .05$), but negatively correlated with a 2-week lag ($r_s = -.38$, $p < .05$) (see Table 18). Initially in the *convention stage* there was a strong positive association between attacks and public intention to vote, however, the appeal lost its association in the second week. During the *fall campaign stage*, Hillary Clinton had a positive impact on intention to vote by using celebratory appeal with a 3-week lag in both mass ($r_s = .42$, $p < .05$) and salience ($r_s = .39$, $p < .05$) as they were positively correlated (see Table 20). During this stage, Donald Trump also had a positive impact on intention to vote by using forensic appeal looking at the results in a 2-week lag in both mass ($r_s = .28$, $p < .05$) and salience ($r_s = .28$, $p < .05$) as they are positively correlated (see Table 19). During the *pre-election stage*, Hillary only

saw a negative association between voter intention and use of celebratory appeal with a 1 week lag for salience ($r_s = -.34$, $p < .05$) (see Table 20). Donald Trump on the other hand, continued to see positive association between voter intention and forensic appeal in both mass ($r_s = .36$, $p < .05$) and salience ($r_s = .37$, $p < .05$) looking at a 2-week lag. There were also positive correlations between attack appeal and voter intention for Trump in salience with a 3-week lag ($r_s = .47$, $p < .05$) (see table 20).

Overall, looking at correlations between appeals and voter intentions for the four stages of the campaign, attack and forensic were the strongest and most effective appeals for Donald Trump. These findings were stronger in the last two stages of the campaign. For Hillary Clinton, attack appeals were the strongest during the earlier stages of the campaign, particularly during the *convention stage*. Interestingly, the celebratory appeals often were not effective for her and negatively affected her public opinion results both in the *preparation stage* and *pre-election stage*.

DISCUSSION

In this chapter, results are summarized and conclusions are drawn about the relationship between political candidate's rhetorical messages used on Twitter and their ability to influence public's intention to vote. Additionally, the limitations of the study are discussed, and recommendations for future research are proposed. The face validity of the findings matches up to expectations of each candidate's rhetorical approach throughout the campaign, therefore this study has visible merit. The extent to which results are able to make causal claims are not concrete, it still provides a preliminary basis for understanding rhetorical use and communicative patterns used by politicians on Twitter which was the primary objective of the study.

Framework Success and Ability to Distinguish Appeals From One Another

As the first research question described, the primary goal of this thesis was to discover how effective an Aristotelian based taxonomy of rhetorical appeals would be in categorizing the electoral messages given by political candidates in the 2016 presidential election. After amending the appeals to match the rhetorical nature of tweets, launching the content analysis questions on Mturk, and developing a linguistic programmed code for logical statements, my taxonomy accounted for 58.8% of tweets issued during the campaign. Thus, the rhetorical taxonomy was moderately successful in describing and explaining what candidates communicate to the public through Twitter engagement. This number is a success due to the exploratory nature of the study and not having a previously tested model to work from. While this initial number is deemed successful, more refinement is needed moving forward to capture a larger number of tweets and more importantly, being more precise with the coding process. Ultimately what this number means is that it is possible to classify electoral tweets based off identifiable persuasive and linguistic

components that are present in tweets. This study provides future campaigns with a blueprint for building and implementing a successful Twitter campaign, capable of tracking the effectiveness of strategic rhetorical appeal messages.

The framework can be deemed successful in allowing one to determine the different stylistic approaches from each candidate. Superficially, it would be easy to assume the two had different approach in engaging prospective voters. Using this taxonomy cements this idea in a concrete, tangible, discernable manner. The taxonomy revealed that Donald Trump used more emotional appeals and Hillary Clinton used more logical appeals. Therefore, it can be stated that this taxonomy properly encapsulates the tenor each candidate was trying to portray to their voters and gives more insight into the communicative personality of each candidate.

The second goal of the study was to establish what linguistic indicators distinguish Twitter specific rhetorical genres from one another. The framework allowed for lucid interpretation of what political candidates communicate online. This taxonomy distinguishes commonly used appeals clearly so that the persuasive intent of each message is able to be teased apart. The framework used a mixed methods approach which was able to be more effective in determining what all was being communicated by each candidate. The persuasive content analysis coding, done by human coders, enabled me to mold the framework around what real people felt, heard, and experienced when reading a political tweet. In essence, this allowed further understanding as to what is being communicated when different categories of rhetoric are used both independently and in conjunction with one another. The linguistic coding done automatically through the REGEXMATCH program was the ideal supplement to this information, because as was found out in the coding stages, people view logic subjectively. Therefore, it was imperative to use objective argumentative phrases and indicators to uncover attempts at logical persuasion. Together, this

system enabled crisp, clear, distinguishable features to emerge from naturally existing patterns in political rhetoric, and use these categories to define twitter specific rhetorical genre's.

Ritualistic Segments and Twitter Specific Rhetorical Genres Perform Within Them

The third goal of this study was to determine what political rituals were present throughout the campaign cycle and conclude what rhetorical genres performed best within each segment. The first part of the question was answered by (Bennett, 1977, Meadow 1989, and Wlezien & Erikson 2002). These three-works enabled me to track foundational campaign moments and break down the timeline into ritualized segments (preparation stage, convention stage, fall campaign stage, and pre-election stage).

The answer to the second half of the question was determined by the sixth research question and subsequent answers. In the literature review, Wlezien and Erikson's (2002) and Alaimo's (2014) predictions as to what rhetorical messages performed best during each campaign segment were described. They predicted that in the *preparation stage*, the most effective appeals would be attack and deliberative due to candidates attempting to convince party members of an eminent victory, and bringing up concerns over the opponent. Trump validated these predictions by finding success using the attack appeal salience during this time at a 1 week lag ($r_s=.29$, $p<.05$). However, neither candidate saw a positive relationship between using the deliberative appeal and increasing intention to vote.

In the *convention stage*, the primary focus is traditionally to unify voters and maximizing voter learning (Wlezien & Erikson 2002). Mezo (1997) suggested that celebratory and attack tweets would be beneficial at targeting a general audience, thus it was predicted that these appeals should be used along with deliberative appeals predicting future success for the party. Trump and Clinton both found positive associations with the attack appeal in this period, but the effectiveness

varied. Trump's short-term success when using deliberative appeal mass ($r_s=.50, p<.05$) and attack appeal mass ($r_s=.45, p<.05$) are not surprising here. Although he had a negative correlation between use of attack appeal mass ($r_s=-.38, p<.05$) and deliberative appeal mass ($r_s=-.41, p<.05$) in a two-week lag, this can be attributed to the fact that the Democratic National Convention was held the week after the Republican National Convention which naturally dampens the long-term impacts of these appeals. Hillary Clinton also verified that this period is an ideal time to use the attack appeal as she saw a positive three-week correlation when using the attack appeal in both mass ($r_s=.47, p<.05$) and salience ($r_s=.42, p<.05$). Thus, the predictions for rhetorical strategies during this period fit well with the literature predictions.

The *fall campaign stage* marks the beginning of a more static audience network with campaigns making a decided shift towards targeting specific demographics of undecided voters. Wlezien and Erikson (2002, p. 986) predict an increase of attack ads as these attacks are shown to endure in the audience's mind through the general election. Forensic tweets are also expected to be used frequently because this appeal establishes facts, which is a doubly effective appeal in this time frame as it constructs consistency of campaign values before the national debates and provides ammunition for attack appeals. Interestingly, attack appeals were not effective for either candidate in this period. Trump found success using the forensic appeal in a one day lag (mass $r_s=.32, p<.05$ & salience $r_s=.33, p<.05$), two-week lag (mass and salience $r_s=.28, p<.05$), and three-week lag (mass $r_s=.37, p<.05$ & salience $r_s=.36, p<.05$). This was the time when Hillary Clinton's email scandal was coming to the public eye, and Donald Trump was able to expose that for his benefit. despite using it least in terms of mass and salience. Clinton on the other hand, found success in a three-week lag with the mass ($r_s=.42, p<.05$) and salience ($r_s=.39, p<.05$) of celebratory appeal use. Therefore, it can be determined that in this particular campaign, the most effective

emotional appeals came from the celebratory appeal, and the most effective logical appeal was the forensic appeal.

The *pre-election stage* comes at a time when audience's beliefs are beginning to become cemented due to debate activity, increased campaign activity, and media coverage (Welzien & Erikson, 2002, p. 987). Thus, it is suggested that campaigns to use deliberative (future oriented statement) appeals incorporating kairos argumentation (do something; vote), and celebratory tweets to prevent voter fatigue. Immediately it can be determined that this strategy did not work well for Hillary Clinton. She used the celebratory appeal often throughout the campaign and it did not bode well for her this time around. In a one week lag, using having a high salience of celebratory tweets cost her some traction in the polls ($r_s = -.42$, $p < .05$). Donald Trump continued to find success with his least used appeal. In a two-week lag, he found a positive relationship between the use of forensic mass ($r_s = .36$, $p < .05$) and salience ($r_s = .37$, $p < .05$). This campaign might have been a fluke, but the suggested course of action proved to be ineffective in this scenario as neither candidate was able to use the deliberative appeal or celebratory appeal with much success.

The rituals used in this study were effective in determining the situational effectiveness of each appeal. One thing to note is how context dictates effective rhetoric (Bitzer, 1992). While some of the traditional strategies used for political campaigns proved to be an effective guide for rhetorical practice on Twitter, often times this strategy was implemented to no avail of either candidate. Ultimately what this shows is that social environment dictates effective rhetoric and traditional expectations, while helpful, should not be taken as a hard and fast rule for rhetorical choices used.

Do Twitter Specific Rhetorical Genes Influence Public Intention to Vote?

The fourth goal of this study was to determine if Twitter specific Rhetorical genres influence intention to vote both across the entire campaign and within each ritualistic period. This was achieved by answering research questions 5 and 6. As was discussed in previous sections, much can be learned from this analysis as far as content and contextual effectiveness. The descriptive statistics of this study tell a story, and the face validity of the results indicate this taxonomy was successful in identifying various social media rhetorical strategies. Overall, each candidate saw a positive correlation to changes in public intention to vote when using the deliberative appeal.

Viewing the results from research questions 5 and 6 give practical understanding of how to utilize social media as an effective tool to engage with the public and many lessons can be taken away from these results. When looking at the overall changes in public intention to vote, we find robust changes from Hillary Clinton's ability to influence the public in a three-week lag (See table 13). This means that while initially, her appeals had little impact on polling numbers, over time, they were able to tremendously boost her polling averages. A significant correlation between Hillary Clinton's mass and salience for almost every rhetorical appeal category was observed. The only appeals that did not produce a significant positive relationship with changing public intention to vote is fact and deliberative salience. One possible way to explain this relationship is that in using a more balanced approach overall, Hillary was able to create trust among voters. This strategy falls in line with previous research done by Alaimo (2014) about the importance of a balanced rhetorical approach. Practically speaking, candidates are able to establish credibility by engaging the public through a variety of rhetorical means. The object of any campaign is not to create shock and awe that does not last, but rather build and sustain trust from voters which this

balanced approach does. Future candidates should attempt to implement a strategy that incorporates and utilizes all these appeals to adhere and acknowledge the wide spectrum of ontological understanding the public has. Everyone learns and conceptualizes different and a balanced approach speaks to a greater number of people.

Donald Trump on the other hand, did not have as much success using rhetoric to influence public opinion when looking at overall influence. Oddly enough, the only appeal that proved to be effective in changing public opinion was the deliberative appeal which was significant at the 1 day, 1 week, and two-week lag (See table 12). One possible explanation for this is because his party was looking to regain control of the executive branch for the first time in 8 years, and by foreshadowing a Republican win, he was able to get more voters with staunch party loyalty aligned. In terms of practical takeaways that can be observed, one thing that holds true for both candidates is that talking about and articulating the future means gives candidates the ability to influence the public. Future campaigns need to have a vision of what will happen when they win, and be able to create that story for the public to latch on to. When looking at both candidates and their strategies, there was an observable relationship between use of Twitter specific rhetorical genres ability to influence the intention to vote data across the entire campaign which provides merit to crafting a strategic social media rhetorical strategy.

Twitter specific rhetorical genres also had observable effects within each ritualistic period as discussed in the previous section. These correlations highlight the importance of contextual use of each appeal. Each candidate had similar approaches as to altering rhetoric depending on context within each campaign segment as well (See figures 2 and 3). Something that stands out is how each candidate tended to use the same pattern throughout the campaigns. However, none of the appeals that were most frequently used were consistently generating positive results for intention

to vote data, indicating that neither candidate adapted their message to context as well as they potentially could have. The candidates found success when they were able to play off the exigencies that existed and fit the rhetorical message to fit the need or fears of the public in a given political context. In each campaign period, both candidates had observable correlations between appeal use and changes in public intention to vote (See tables 14-21).

This study maintains one source of directionality influencing citizens intention to vote can be observed and quantified on social media, and by creating and testing the rhetorical taxonomy, one can begin to determine the extent of how the linguistic choices used on Twitter can accomplish the communicative goal of persuasion. Viewing the rhetorical nature of tweets can provide insight into how public opinion will fluctuate throughout the campaign which was observed after running the correlations between Twitter specific rhetorical appeals and public intention to vote. From this vantage point, it is clear there that political candidate's tweets, and what they communicate in these tweets are able to have tangible impacts on real world voting behavior.

Limitations

With this study being one of an exploratory nature, there are a few obvious limitations to address moving forward. Two limitations of this study will be discussed; factors involved in changing the public's intention to vote, and coding reliability concerns. The most obvious of which is the extraneous variables present which construe the complete picture of how Twitter messages change public opinion. Clearly, rhetoric on Twitter is not the only way a candidate can influence the public's intention to vote. There are a few things that one should attempt to control when building off this pilot study. An obvious starting point is to affirm the relationship between media mentions and public opinion and understand that future studies should control for traditional media's influence on public intention to vote. Media research has long connected media's presence

in changing beliefs and attitudes of citizens in regard to political interactions. Stoekle and Scully (2016) confirmed this long-held assumption still holds true today, when they conducted a three-month study with data from the 2016 presidential election that looked for correlational relationship between these two variables and found significant evidence that they indeed were linked. The more frequently Donald Trump was mentioned in the media, the better his polling numbers were. This also held true for Hillary Clinton in this particular dataset. Media mentions are not the only old media platform that campaigns use, as newspapers, radio programs, phone calls, door to door canvassing, and campaign rallies are all used to influence the voting population (Bennett, 1977, Meadow, 1989). Therefore, we understand that “old media” mentions have a role to play in shaping public opinion. Having this data included in the observations would allow for a more solid understanding of the networked ecology that in summation influences public intention to vote.

The other half of this discussion involves new media, and social media in particular, because it has evolved to be such an important platform for influencing public opinion. In a Pew Research study done by Anderson (2016), 20% of social media users say they’ve modified their stance on a social or political issue because of material they saw on social media, and 17% say social media has helped to change their views about a specific political candidate. Consequently, it is important to note that new media comes in a variety of platforms: Facebook, Reddit, BuzzFeed are right at the heart of the communicative networked ecology that could potentially influence the public’s intention to vote. There are also a lot of people on Twitter that have the ability to influence public opinion, not just the candidates themselves. Friends, family, newspapers, people in authority all have accounts and are able to share views on this platform as well, so it’s difficult to isolate two accounts and say these accounts were the only ones responsible for changing public opinion. Twitter does have a role to play in influencing public behavior, but there are definite limitations

as to what we can deduce from the findings due to the breadth of social media “places”. Future studies should try and collect data from other media sources and hold them constant against the intention to vote data, in order to better isolate one platform’s influence over the public’s intention to vote.

The other main limitation involves the data collection process. This study used Amazon’s Mechanical Turk (MTurk) workers to code the data for this thesis. While this process was necessary with the constraints at hand, it also provides limitations to how reliable the data was. Despite the questions being pre-tested several times, workers on MTurk are not trained nor do they need any prior qualifications to complete questionnaires found on the platform. Therefore, the results could vary from the ones found in this study. 392 different independent coders working on the project, and inevitably, some of the results would be slightly off due to the crowdsourcing nature of the coding that was done for the project. Future projects could use a smaller number of coders to get more reliable results, or make more specific qualifications for those looking to participate in the research on MTurk. This would allow for a more precise blueprint when coding and potentially increase the reliability results.

Future Directions

The potential for moving this study forward is tremendous as this study merely scratched the surface with what can be accomplished using a rhetorical focus for viewing the ability of Twitter to influence the public. This is the first rhetorical analysis of social media messages that steps beyond the realm of content analysis and provides more specific communicative information objectively describing what was stated. The future of this research remains bright, and this section will include discussions on what could be done with the current data, what contexts this study

could apply to, and what information could be inferred by using new or more detailed variables in this study.

Using the Twitter API and Twitter R packages provides significant information that allows for further commentary about tweets that are harvested. As previously mentioned, when detailing the sample, Twitter R provides information such as the exact time a tweet was published, as well as provide the number of retweets and favorite for each tweet. One future direction of research would be to compare the rhetorical genres to favorites and retweets to show how much rhetoric influences Twitter users and see what rhetorical features allows a tweet to propagate itself and spread throughout this platform. This would eliminate the extraneous variables that impede giving a direct correlation between tweets and public intention to vote. Rather the scale would be shrunk to include just the amount of influence rhetorical use on Twitter has, and compare that to the 42% of tweets that did not use strong rhetorical language.

Additionally, another future direction for this study would be to change the context, so that local and state political races could use this information in their races. This would be incredibly important for both of these scenarios due to these campaign's smaller budgets and Twitter being a free platform for engagement. The biggest determining factor in making this a possibility is finding a good strong dependent variable that would be able to track the influence at the local and state level.

This initial study of rhetorical use on Twitter is the first step that can be taken to understand what is being communicated on Twitter and how to state things in an effective manner in order to change public opinion. While this start is substantial and provides insights into the phrases, emotions, sentence structure, and linguistics used in crafting messages on this site, more can be done to better capture what all is done on this platform. More specifically, there are 42% of tweets

in this dataset that were not accounted for, meaning that there is a large potential to create a revised taxonomy that better illustrates the linguistics used in electoral tweets. Understanding this information will be helpful, because the more nuanced the taxonomy becomes, the predictive impact of messages can become. This project set out to achieve a basic understanding of what can be derived by viewing Twitter messages in a rhetorical context, and this field is ripe with possibilities for future research projects.

Concluding Remarks

This thesis set out to establish a rhetorical taxonomy for electoral tweets issued on Twitter. Using the tweets issued during the 2016 presidential election allows for the development of this schemata. This thesis proves that Tweets can be pragmatically mapped to the communicative behavior and persuasive intent used in political campaign tweets onto rhetorical appeals using the Aristotelian deliberative, forensic, and epideictic genres. This study provides a basis for framing the online interactions of politicians to definable criteria based on the persuasive message used. It also explores the relationship of Twitter specific rhetorical appeal use to changes in public intention to vote. To summarize the results, both candidates used distinct strategies when tweeting, for both volume and salience. The most often used genres not always good predictors for changes in intention to vote. Overall, the balanced strategy of Hillary Clinton which incorporated a balance of both logical and emotional appeals was able to see a positive correlation between appeals and public intention to vote. Meanwhile, Donald Trump's emotionally filled rhetoric produced more short-term effects, with his deliberative and forensic tweets proving to be most effective. When broken down by campaign segment, the most effective appeals were those that aptly adjusted to current social flux and adhered to what the audience was interested in during a given context. This was especially true in the second half of the campaign for Trump who found success using the

forensic appeal to change public opinion, and in the convention stage for Clinton who used the attack appeal to her advantage. Overall, the appeal with the strongest positive correlation between appeal use and changes in public opinion is the deliberative appeal, meaning voters need to hear about what the future will entail with each candidate. Further exploration of rhetorical appeals and their effectiveness and ability to change public opinion will continue to inform political campaigns as to how to properly utilize Twitter as a part of their overall strategy to gain public support.

REFERENCES

- Alaimo, K. S. (2014). Casting ballots: What political campaigns can teach PR professionals. *Public Relations Tactics*, 21(11), 21.
- Anderson, M. (November 7, 2016). Social media causes some users to rethink their views on an issue. Retrieved from http://www.pewresearch.org/fact-tank/2016/11/07/social-media-causes-some-users-to-rethink-their-views-on-an-issue/?utm_content=bufferda3be&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer
- Bizzell, P., & Herzberg, B. (2001). *The rhetorical tradition: Readings from classical times to the present* (2nd ed.). Boston, MA: Bedford/St. Martin's.
- Bitzer, L. (1992). The rhetorical situation. *Philosophy and Rhetoric*, 25, 1–14. Retrieved from <http://www.jstor.org.ezproxy.lib.purdue.edu/stable/40237697>
- Bennett, W. L. (1977). The ritualistic and pragmatic bases of political campaign discourse. *Quarterly Journal of Speech*, 63(3), 219–238.
- Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social Psychology*, 42(1), 116–131.
- Cha, M., Benevenuto, F., Haddadi, H., & Gummadi, K. (2012). The world of connections and information flow in Twitter. *IEEE Transactions on Systems, Man, and Cybernetics—Part A: Systems and Humans*, 42(4), 991–998.
- Cialdini, R. B. (1993). *Influence: The psychology of persuasion*. New York, NY: HarperCollins.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20, 37–46.
- Cottrell, S. (2011). *Critical thinking skills: Developing effective analysis and argument*. New York, NY: Palgrave Macmillan.
- Deller, R. (2011). Twittering on: Audience research and participation using Twitter. *Participations*, 8(1), 216–245.
- Edbauer, J. (2005). Unframing models of public distribution: From rhetorical situation to rhetorical ecologies. *Rhetoric Society Quarterly*, 35(4), 5–24. Retrieved from <http://www.jstor.org.ezproxy.lib.purdue.edu/stable/40232607>
- Grimaldi, W. M. (1988). *Aristotle, Rhetoric II: A commentary* (Vol. 2). New York, NY: Fordham University Press.

- Hong, S., & Nadler, D. (2012). Which candidates do the public discuss online in an election campaign? The use of social media by 2012 presidential candidates and its impact on candidate salience. *Government Information Quarterly*, 29(4), 455–461.
- Jerit, J. (2004). Survival of the fittest: Rhetoric during the course of an election campaign. *Political Psychology*, 25(4), 563–575. Retrieved from <http://www.jstor.org.ezproxy.lib.purdue.edu/stable/3792409>
- Kaplan, A., & Hanlein, M. (2010). Users of the world unite! The challenges and opportunities of social media. *Business Horizons*, 53, 59–68. doi:10.1016/j.bushor.2009.09.003
- LaMarre, Heather L., & Suzuki-Lambrecht, Yoshikazu. (2013). Tweeting democracy? Examining Twitter as an online public relations strategy for congressional campaigns'. *Public Relations Review*, 39(4), 360–368.
- Levenshus, A. (2010). Online relationship management in a presidential campaign: A case study of the Obama campaign's management of its internet-integrated grassroots effort. *Journal of Public Relations Research*, 22(3), 313–335.
- McChesney, R. W. (2013). Digital disconnect: How capitalism is turning the internet against democracy. New York, NY: New Press.
- Meadow, R. (1989). Political campaigns. In R. Rice & C. Atkin (Eds.), *Public communication campaigns* (2nd ed., pp. 253–272). Newbury Park, CA: Sage.
- Mezo, R. (1997). An adaptation of Aristotle: A note on the types of oratory. *Rhetoric Review*, 16(1), 164–165. Retrieved from <http://www.jstor.org.ezproxy.lib.purdue.edu/stable/465975>
- Oravec, C. (1976). "Observation" in Aristotle's theory of epideictic. *Philosophy & Rhetoric*, 162–174.
- Stieglitz, S., & Dang-Xuan, L. (2013). Emotions and information diffusion in social media-sentiment of microblogs and sharing behavior. *Journal of Management Information Systems*, 29(4), 217–248.
- Sherif, M., & Hovland, C. I. (1961). Social judgment: Assimilation and contrast effects in communication and attitude change. Westport, CT: Greenwood Press.
- Stieglitz, S., & Dang-Xuan, L. (2014). Emotions and information diffusion in social media: Sentiment of microblogs and sharing behavior. *Journal of Management Information Systems*, 29(4), 217–248. doi:10.2753/MIS0742-1222290408

- Stoeckle, T., & Scully, C. (September 19, 2016). Here's a phrase we don't say often: Donald Trump may be onto something. Institute for Public Relations. Retrieved from <http://www.instituteforpr.org/heres-phrase-dont-say-often-donald-trump-may-onto-something/>
- Wlezien, C., & Erikson, R. (2002). The timeline of presidential election campaigns. *The Journal of Politics*, 64(4), 969–993. Retrieved from <http://www.jstor.org.ezproxy.lib.purdue.edu/stable/1520072>

APPENDIX A. LIST OF WORDS USED FOR IDENTIFYING LOGICAL APPEALS

1. Since
2. Therefore
3. As a result
4. Resulting
5. Given that
6. Shown by
7. Seeing that
8. Because
9. Finally
10. Consequently
11. For example
12. In fact
13. Example
14. As
15. According to
16. Given that
17. Considering
18. Hence
19. Thus
20. So that
21. Necessarily

- 22. Demonstrate
- 23. Show
- 24. Prove
- 25. Which entails
- 26. Indicating
- 27. Means
- 28. Said
- 29. Need
- 30. Answer
- 31. Make sure
- 32. Again
- 33. Fact
- 34. Include
- 35. Beside
- 36. Yet
- 37. Provide
- 38. Significant
- 39. Important
- 40. In order
- 41. In other words
- 42. Reason
- 43. URL weblink

APPENDIX B. QUESTIONS DISTRIBUTED TO MTURK WORKERS

1. Overall, does the statement seem to refer to the past, the present, or the future? Past Present Future

EXAMPLES:

- Past: My opponent told everyone what they wanted to hear
- Present: My opponent tells everyone what they want to hear
- Future: My opponent will tell everyone what they want to hear

2. Does the speaker attempt to be positive by being encouraging, cheery, or supportive? Yes No

EXAMPLES:

- Tim is a good man. He's a true progressive. And he will make a great vice president.
- Thank you ARIZONA! This is a MOVEMENT like nobody has ever seen before. Together, we are going to MAKE AMERICA SAFE

Does the speaker attempt to be negative by being hostile, unfavorable or using a mean tone? Yes No

EXAMPLES:

- My opponent is totally unfit to be our president-really bad judgement and temperament!
- My opponent was a failure at business and by wrecking his business, he wrecked the lives of his workers

3. Does the statement refrain from emotional speech, limiting itself to facts and being neutral? Yes No

EXAMPLES:

- I will be watching the great Governor @Mike_Pence and live tweeting the VP debate tonight
- With 35 days left, Hillary's in PA talking about how she'll help kids and families. Join the conversation live

4. Does the speaker provide numbers, specific examples, links, or facts to support the message? Yes No

EXAMPLES:

- The numbers are in. What we need: bridges, schools, a clean energy grid. <https://t.co/v61oYTyycJ> <https://t.co/QdFDJizLHj>
- "wolfblitzer: Campaign-to-date popular GOP totals:realDonaldTrump 7,546,980; tedcruz 5,481,737; JohnKasich 2,724,749" A BIG DIFFERENCE

5. Overall, is this tweet: A question An exclamation Other

EXAMPLES:

- Questions: What is she hiding? Start with "what, why, etc." or verbs like "does, is, etc." "?" often but not always found at the end.
- Exclamations: Make America Great Again! Express strong feelings. "!" often but not always found at the end.

- All other tweets only affirm facts or opinions: "Political compromise is good." Periods are typically but not always found at the end.

6. Type in the box below the first word in the tweet *not* including hashtags (e.g., "#xyz") or twitter user names (@xyz).

7. Do the tone or language of the message make you feel emotional, such as happy, sad, angry, scared, surprised, or disgusted? Yes No

EXAMPLES:

- Everybody gets knocked down in life. The real test is whether you get back up, dust yourself off, and keep going.
- If dummy Bill Kristol actually does get a spoiler to run as an Independent, say goodbye to the Supreme Court!

8. Does the speaker encourage people to do something, to act? Yes No

EXAMPLES:

- To all of my twitter followers, please contribute whatever you can to the campaign.
- Text CONGRATS to 47246 to tell Hillary you're with her tonight.
<https://t.co/ZBQ6wKlCP>