An Analysis of Congressional Disgust Language on Twitter by Party Identification

Martha Nichols

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AN ANALYSIS OF CONGRESSIONAL DISGUST LANGUAGE ON TWITTER BY PARTY IDENTIFICATION

by
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A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of the requirements of the Sally McDonnell Barksdale Honors College.

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ABSTRACT

This thesis seeks to advance the existing work in the field of political communications through a study of congressional Twitter use. While there has been a significant amount of study focused on presidential Twitter presence, there is less existing literature on the use of Twitter by members of the U.S. Congress. This study focuses on the use of disgust language on Twitter and tests the hypothesis that Republican congressmen and women will have a higher proportion of disgust language in their Twitter presence over time. The hypothesis was unsupported, as the results produce an unexpected outcome that Democratic members of Congress utilize an increased proportion of disgust language throughout the dataset. The findings suggest that further research may produce a more holistic answer to the correlation between party and level of disgust language utilized, and discussion of potential alternative hypotheses is provided in the conclusion.
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INTRODUCTION

Throughout American history, public outreach by politicians has taken many forms—speeches, radio and television interviews, mailings, email chains, and more. Public addresses by presidents, members of Congress, and other prominent politicians allow for direct outreach to the American public to establish connection, advance their political agendas, and remain in good favor of their constituents. Along with Donald Trump’s 2016 presidential candidacy emerged a new era of expanded use of social media—Twitter, specifically—as a tool for politicians to reach the public. The increased use of Twitter and other social media platforms as a form of public outreach has become a powerful tool of modern-day politics, allowing political elites to engage with millions of Americans daily.

In the new age of political Twitter use, prominent political figures are not only able to communicate to the public much more frequently, but they also use Twitter to communicate in a more casual manner than in public appearances and speeches. In this space, political elites are able to discuss their own political agendas, respond to the statements of other Twitter users, and, in some cases, openly criticize their opponents and other political figures. Twitter allows politicians to present themselves more personally to the public by the manner in which they choose to communicate. The use of Twitter as a campaign tool by presidential candidates began in the election of 2012, but studies show that Twitter use by presidential candidates at the time produced inconclusive results and showed little effect on followings and engagement. A 2013 study on Twitter use in the presidential election of 2012 revealed that presidents were not yet using Twitter as frequently as outreach like news publications and speeches, meaning there was not a consistent stream of tweets from any candidate, and Twitter activity did not increase as
election time drew near (Conway, et al., 2013, pp. 1609-1610). An additional study on the 2012 presidential election revealed that the candidates’ use of Twitter did not include frequent use of reply tweets, meaning the candidates were not yet using Twitter as a means for connection to the general public (Adams & McCorkindale, 2013, pp. 357-359). However, the use of Twitter by presidential candidates became a much more significant campaign tool in the 2016 election. Since Twitter’s rise in political significance, scholars have conducted studies on Twitter as a public forum for political commentary (Robertson et al., 2019), specific ways in which candidates present themselves on Twitter (Pain & Chen, 2019), and the ways in which Twitter was first utilized by candidates in the 2016 election (Gunn, 2017), to cite just a few examples. Because of the nature of Twitter as a public forum that allows for easy dialogue, it is one of the most important areas of study in political communications today.

A majority of the existing literature on political communications via Twitter has evaluated the use of Twitter by presidents and presidential candidates. However, this research targets the use of Twitter by members of Congress. Senators and Representatives are political actors motivated by reelection and the advancement of their agendas, and Twitter provides a public platform for politicians who are less often able to address the public in comparison to presidential speeches and public appearances. Today, each member of the United States Congress has an account on Twitter (U.S. House of Representatives Press Gallery, 2024; UC San Diego Library, 2024), and a recent report from the Congressional Research Service on congressional Twitter use proves Twitter to be a pertinent tool for congressional communication between colleagues and in congressional outreach to the public (2016). The primary goal of this study is to observe the ways in which members of the U.S. Congress use Twitter as a tool of persuasion on their constituents. This research is focused on the use of emotive language—specifically
disgust– on Twitter. Emotive language is speech intended to evoke a feeling about a particular issue through positive or negative connotations and potentially call the audience to action. Emotive language is powerful because its use may trigger an innate response from the audience, causing the listener to recall a feeling or experience that sparks those emotions and make a hasty judgment (Macagno, 2012, p. 117). Therefore, it follows that the use of stronger emotions in political rhetoric should rouse stronger emotions from the public and other political figures. The strategic use of emotive language by political elites can redefine the audience’s attitude about a subject by assigning it a new connotative meaning (Macagno & Walton, 2019). Disgust language is just one kind of emotive language that a leader may use to rouse a reaction from the audience. Disgust is a basic human emotion that is defined as a visceral repulsion from a stimulus that rouses immediate separation of oneself from that stimuli (Olatunji & Sawchuk, 2005, p. 935; Kam & Estes, 2016, p. 481). If political actors utilize disgust language in reference to their opponents or to policies they disagree with, then their constituents are more likely to feel disgust or a repulsion from the opposing party or policy, which entrenches existing party polarization. Additionally, the frequent use of disgust language in online discourse by politicians may create hostility in the working relationships of politicians. With nearly unlimited access to the public through Twitter, the frequent use of disgust language by political elites has the power to create a more polarized political climate, which makes the responsibilities of Congress more difficult to accomplish and leads to a more disgruntled general public. The aim of this study is to find observable patterns in the use of disgust language by political elites on Twitter over time. This research seeks to answer the following research question: Is there an observable difference in the Republican and Democrats in Congress utilize disgust language on Twitter. The findings
will indicate how members of Congress use social media as a persuasive tool and how disgust language is strategically implemented in online Twitter rhetoric.

This research will provide insight into the current and future implications of the use of disgust language in online rhetoric by political figures. Because Twitter is still relatively new on the political stage, the successful answering of the proposed research question would provide political scientists in the field of political communications with more data on congressional engagement with the public, as tweets are much more numerous than are live speeches. Twitter is an especially unique perspective for studying presidential rhetoric, because it offers the opportunity for direct feedback from both the public and other political elites. Additionally, Twitter is unique from other campaigning and marketing tools because it is inexpensive and has the ability to reach a large audience very quickly. The successful answering of the research question at hand– whether the use of disgust language on Twitter differs across party lines– will provide the field of political communications with new information on how members of Congress use Twitter.

Through quantitative analysis of a dataset containing a large, random sample of tweets by members of Congress between 2008 and 2022, the study is aimed to examine whether party identity correlates with a Congress member’s level of disgust language in their Twitter activity. The study begins with a well-informed literature review that contains an extensive summary of the knowledge that exists thus far on congressional Twitter use, digital and social media in campaigns, disgust language, and ideological divides based on the principles of the Moral Foundations Theory. Next, a testable hypothesis is presented based on existing research that suggests the validity of the Moral Foundations Theory for political research and research that suggests Twitter is used as a campaign tool by members of Congress. The proposed hypothesis is
then tested by conducting a quantitative analysis of congressional tweets to assign scores for disgust and compare proportions of disgust language in congressional tweets by party.

CHAPTER I: LITERATURE REVIEW

In order to adequately assess changes in Congress members’ use of disgust language over time, it is important to consider previous scholarly findings in relevant areas of study. This research builds upon extant literature on political rhetoric surrounding campaigns, the integration of social media into politics, and the definition and impacts of disgust language. The Literature Review section is broken into four sections: (1) Congressional Twitter Use, (2) Digital and Social Media in Campaigns, (3) Disgust Language, and (4) Moral Foundations Theory. It is necessary to examine each of these categories individually, as they all contribute vital information to the study of political communications and the use of disgust language by congressmen and women. The completion of this study will connect the findings of existing studies in each of these topics and fill a gap in political science research.

Congressional Twitter Use

The proliferation of social media platforms, particularly Twitter, has fundamentally transformed the dynamics of political communication, as such platforms allow politicians to engage with their constituents, colleagues, and opponents in a real-time, public arena. Public data shows that each member of the current (118th) United States Congress has a Twitter account (U.S. House of Representatives Press Gallery, 2024; UC San Diego Library, 2024). Additional data from Pew Research Center suggests that members of Congress, considered as a whole, are becoming increasingly active on Twitter. The 2020 study found that, compared to 2016, an average member of Congress tweeted more than twice as often, had approximately three times
the followers, and received six times as many retweets on an average post (Van Kessel et al., 2020).

A 2013 study conducted by Hemphill, Otterbacher, and Shapiro sought to explore the motives for Twitter use by members of Congress in the winter of 2012. The findings suggest that members of Congress most often use Twitter to provide information and, secondarily, to share a political stance. The study explored the influence of factors such as gender and ideological party on a Congress member’s likelihood to post on Twitter. An interesting aspect of social media in political communications research is the fact that Twitter provides politicians with a platform to engage with the general public at any time. The researchers find that members of Congress use their platforms to declare policy positions and continue their campaigns throughout their tenure in office (2013). The accessibility of social media platforms like Twitter create an ongoing campaign for reelection amongst members of Congress.

A 2016 report by the Congressional Research Service declares that the shift toward social media in the Congressional realm has revolutionized communications amongst members of Congress. The study reports that social media’s inexpensive cost, speed at which information may be dispersed, and extensive reach to the public are the reason for such a transformation in congressional communication (Straus & Glassman, 2016, 8-10). The report also states that the rise in congressional use of social media has warranted a formulation of Web regulations for the House and the Senate to follow.

The recent surge in Twitter use by Congress and other prominent political figures leaves ample opportunity for continued research in the field of political communications and declares the study of Twitter use among politicians to be incredibly pertinent.

**Digital and Social Media in Campaigns**
In order to effectively observe political rhetoric in the modern world, it is necessary to look to digital and social media. Over the past two decades, social media has secured a significant role in political campaigning and communication to constituents. This statement applies to campaigns for presidential, congressional, and state elections. In their book, *Presidential Campaigning and Social Media*, John Allen Hendricks and Dan Schill state that social media offers four primary functions for candidates: (1) informing voters, (2) involving supporters, (3) connecting online users and politicians, and (4) mobilizing voters (Hendricks & Schill, 2014, p. 29). They attribute the rise of social media as a campaign tool in 2012 largely to the increasing commonality of smartphones and the creation of social media applications on smartphones. Users could read and engage with political campaigns and donate with the click of a button. As a result, voters take on an active role in spreading campaign messages (Dan & Schill, 2014, p. 8). Though this study focuses primarily on presidential social media use for campaigning, the standard is also applicable to the U.S. Congress, as we see the pervasiveness of Twitter use among members or Congress to reach voters.

The earliest use of social media in campaigning took place in the 2008 U.S. presidential election, when the candidates implemented public Facebook profiles to share their lives and policy issues with the public (Slotnick, 2009, p. 256). Hendricks and Schill note in their evaluation of the use of social media for campaigning over time that social media used by 2012 presidential candidates Barack Obama and Mitt Romney were not centered around relationship cultivation strategies, but rather the candidates used social media to spread campaign messages and receive donations (Hendricks & Schill, 2014, p. 41). In the 2016 presidential election, scholars observed a shift from professionalism to authenticity in the use of Twitter as a campaign tool (Enli, 2017). Additionally, Twitter became a forum for public debate and critique in the 2016
election, opening social media as a mode of engagement with political candidates (Enli, 2017, p. 1). Finally, Twitter assumed a central role in the 2020 presidential election, as incumbent Donald Trump sought reelection and used his personal Twitter to share campaign messages. The aspect of open communication on Twitter allowed political elites as well as the general public to share their thoughts throughout the election. The second study cites the use of Twitter as a 2020 campaign tool as a source of further party polarization in the U.S. (Gould, 2021, p. 21).

Following the boom in social media as a campaign tool in presidential elections, members of Congress and candidates for Congress also utilize social media platforms to conduct an ongoing campaign, as stated in the 2013 study conducted by Hemphill, Otterbacher, and Shapiro. An additional study by LaMarre and Suzuki-Lambrecht examines the use of Twitter amongst candidates for congressional election in 2010, finding that an increased use of Twitter directly correlated to an increased chance for victory in the election (LaMarre & Suzuki-Lambrecht, 2013). It follows that an even greater Twitter presence today would warrant the use of Twitter and a congressional campaigning strategy.

**Disgust Language**

This research focuses specifically on the use of emotive language meant to rouse feelings of disgust in the audience. Disgust is identified as a basic human emotion (Allred & Amos, 2018, p. 122), and though it is often intertwined with feelings of fear, it is a distinct emotion. Disgust may be defined as a visceral repulsion from an undesirable stimuli (Olatunji & Sawchuk, 2005, p. 935; Kam and Estes, 2016, p. 481). Disgust is associated with an immediate response of distancing oneself from the undesirable stimulus based on a feeling of imminent threat or contagion (Morales et al., 2012, p. 385; Olatunji & Sawchuk, 2005, p. 937).
Scholars have conducted previous studies to investigate the impacts of emotive language such as fear and disgust used in public rhetoric by politicians. A study conducted by Travis Ridout and Kathleen Searles sought the answer to whether political candidates use emotional language strategically during campaigns. The study found that candidates may use fear- and anger-evoking language at the end of a race to persuade moderate voters by prompting an immediate, emotional response in relation to the campaign. This study and others confirm that politicians regularly use emotive language to evoke fear, anger, and hope (Ridout & Searles, 2011, p. 455; Erisen & Villalobos, 2014). Additionally, studies show that the evocation of disgust may be used either alone or in tandem with fear tactics to effectively persuade an audience or even influence public opinion on politics (Kam & Estes, 2016, p. 492; Morales et al., 2012, p. 391). Emotive language, generally, may be used as a persuasive technique because it causes the audience to assign a value-based judgment to the target, thus bringing forth an emotional judgment based in personal values (Macagno, 2014, p. 107), which may bring even moderate voters to choose a partisan alignment. The extensive nature of the existing research on the implications of disgust rhetoric suggests that the topic is a relevant area of research. The strategic use of disgust language by political elites is important for continued study because it is likely to bring about a reaction from the audience—the public and political elites alike.

**Moral Foundations Theory**

In this research, a test will be conducted to determine whether there is a trend in likelihood to use disgust language based on ideological party, between Republicans and Democrats. This exploration seeks to build on existing theory that conservative individuals have a greater tendency to use disgust rhetoric. The Moral Foundations Theory (MFT) is a psychological framework proposed by social psychologists Jonathan Haidt and Jesse Graham in
2007 (Dobolyi, 2023). It seeks to explain the origins and variations in human moral reasoning by identifying a set of innate moral foundations that underlie moral judgments across different cultures and societies. The five foundations of the theory are care, fairness, loyalty, authority, and purity (Dobolyi, 2023). Additional literature on MFT validates the theory as applicable and declares that the theory acknowledges that all humans have a set of moral foundations, but it allows for an array of existing moral matrices (Graham et al., 2013).

MFT has been effectively applied in numerous studies within the field of political psychology. Studies suggest that there is a standard difference in moral foundations between liberals and conservatives (Democrats and Republicans, respectively). Liberals most often value care and fairness over the remaining three foundations of MFT, while conservatives tend to value each of the five foundations more equally (Graham et al., 2009). A 2014 study attributes the difference between conservative and liberal moral foundations to conservatives’ greater values of authority and purity, which leads to greater authoritarianism, and liberals’ valuation of care and fairness, which perpetuates lower levels of social dominance (Kugler et al., 2014). This difference in moral foundations may lead to differences in sensitivity to disgust, as noted in a study that found a positive relation between disgust sensitivity and political conservatism. The study also showed that disgust sensitivity was associated with conservative voting in the 2008 presidential election and with conservative ideologies globally (Inbar et al., 2012).

CHAPTER II: THEORY

The purpose of this research is to evaluate trends in the use of disgust language by members of Congress on Twitter over time. Disgust language is a rhetorical device used by the speaker to evoke a reaction of disgust in the audience. Because there is reason to believe that
disgust language may be employed as a persuasive tool, it may be inferred that political elites may strategically adopt heightened levels of disgust language over time to help frame national political agenda to the speaker’s benefit. The formation of a hypothesis in this research rests on two premises that may be supported by existing scholarly work presented in the prior section. The first premise is that members of Congress may strategically use disgust language as a tool for persuasion in campaigning. Disgust language, as a negatively-connotated variant of emotive language, calls for a value-based judgment from the listener, causing the audience to either side with or against the speaker. Audience members with similarly aligned values to the speaker may be persuaded by the message, even if they are not affiliated with the same political party. Twitter provides Congress members with a platform to conduct a sort of ongoing campaign, but it follows that they would be more likely to utilize persuasive techniques as elections draw near.

The second premise on which the theory for this research is formed is the acceptance of studies that find a positive correlation between sensitivity to disgust and political conservatism as applicable standards for further research. Several studies suggest that liberals and conservatives have differing moral foundations based on the Moral Foundations Theory, whereas liberals tend to value care and fairness and conservatives place greater value on authority and purity (Kugler et al., 2014). The Moral Foundations Theory was chosen as the theoretical foundation for this research because it seeks to explain individual moral motivations for decision making and social organization. Disgust language is rhetoric that evokes human emotion, so it is fitting to use a moral framework, as issues that pertain to moral foundations are more likely to warrant significant emotions. For the purposes of this study and in accordance with current party alignment, Democrats are qualified as liberal and Republicans as conservative. Because Republicans today may be classified as politically conservative, it follows based on existing
literature that Republicans would be more likely to use an increased level of disgust language, as conservative individuals have a heightened sensitivity to disgust. If conservative voters have a higher sensitivity to disgust, then it is likely Republican members of Congress would expect a greater reaction from their constituents if they utilize disgust language frequently. Based on these two premises, the following hypothesis will be tested in this study: If there is an observable difference in the level of disgust language on Twitter by members of Congress over time, then Republican members will use a greater level of disgust language.

CHAPTER III: Research Design

The goal of this research is to observe trends in the levels of disgust language on Twitter by Congress members, specifically considering the influence of party identity on a member’s use of disgust language on Twitter. A crucial task to adequately carry out this research was the compilation of viable datasets containing all the necessary Twitter data. Along with Twitter’s recent shift to X, the company’s API access policies underwent a significant change. In the past, Twitter had an open API that allowed researchers to gather mass amounts of tweets to create massive datasets. Due to the inability to create new datasets using Twitter’s API, the options for datasets became limited to those that were created before the policy change and remain available for use. Despite this challenge, a dataset was obtained containing all the tweets of Congress members from 2008 to 2022 from a professor whose dataset was posted to ProPublica, a non-profit news source. The original dataset contained 4.5 million tweets, nearly every existing tweet from a member of Congress over the span of fourteen years. The dataset used in this study consists of every one-hundredth tweet to produce a random sample with a total of 45,278 files, where each individual tweet is a file. The magnitude and sampling of this dataset make it a
robust and appropriate representation of congressional Twitter presence over time. Each file in the dataset represents an individual tweet by a representative or senator. The dataset contains several variables for each file, the most pertinent being the tweet’s text content, the name of the individual who posted the tweet, the date of the tweet, and the party identity of the tweet’s author. This dataset is appropriate for this study because it contains a vast amount of Twitter data across four presidencies and seven congresses. It is important to note that the most recently available data from 2022 may be limited in comparison to previous years, as the Congressional dataset that was available is incomplete for the year 2022. Additionally, there are some gaps in the availability of tweets in the early portion of the corpus due to the data collection process from ProPublica. However, the dataset’s magnitude and coverage over time make it the most valuable dataset available for this research following Twitter’s API policy change. While it is unlikely the Twitter API policy change will obstruct the end goal of this research, it is important to note this limitation that appeared in the data collection stage. A display of the amount of tweets collected over time is displayed below in Figure 1.
*Figure 1 depicts the frequency of tweets collected over the period the sample, 2008 to 2022.

For this research, all of the data entry and analysis were conducted using R, a coding environment for statistical computing. In addition to the congressional Twitter dataset, the NRC Word-Emotion Association Lexicon was utilized to derive numeric levels of disgust language versus non-disgust language in a large compilation of tweets. The NRC Word-Emotion Lexicon is an existing dictionary created by the National Research Council of Canada that contains an extensive list of words categorized under eight emotions (one being disgust) and two sentiments, positive and negative. For the purposes of this research, each of the tweets was scanned for both

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1 For the purposes of this study, the phrase ‘non-disgust term’ is defined as any word that appears in the NRC Word-Emotion Association Lexicon that is not categorized under disgust. The non-disgust terms are any terms categorized under anger, anticipation, fear, joy, sadness, surprise, and trust.
disgust terms\(^2\) and non-disgust terms to produce a variable for a disgust proportion which represented the number of disgust terms used in a tweet divided by the sum of disgust and non-disgust terms. The NRC Word-Emotion Lexicon may be considered an adequate dictionary for this research, as the list of disgust terms is very extensive and contains terms that implicate both subtle and blatant expressions of disgust. By applying the NRC’s Word-Emotion Lexicon as a metric for levels of disgust to the dataset containing the sample of congressional tweets, \(R\) was used to count the number of disgust terms in each tweet, which then generated and assigned a numerical disgust score to each tweet in the dataset. The term “disgust score” may be defined in this research as the exact number of disgust terms counted in each tweet. However, the study examines the fluctuation of disgust by evaluating changes in the disgust proportion variable\(^3\) in order to control for the length of each tweet. The disgust proportion variable was calculated by dividing the disgust score of each tweet by the sum of its disgust and non-disgust terms. The observation of the disgust proportion of each tweet rather than the disgust scores accounted for the length of each tweet’s text so that longer tweets are not understood as greater use of disgust language. To further contextualize what appears as a tweet with a high disgust proportion, a screenshot of a 2017 tweet by former California representative Lucille Roybal-Allard of the Democratic party. This tweet possesses a high proportion of disgust because it contains multiple disgust terms and no non-disgust terms. The disgust terms present in this tweet are

\textit{discrimination, cancer}, and deadly.

\(^2\) Disgust terms are any of the terms designated in the ‘disgust’ category of the NRC Word-Emotion Association Lexicon.

\(^3\) Note that the terms ‘disgust score’ and ‘disgust proportion’ are two distinct variables, whereas disgust score is defined as the exact number of disgust terms that exist in each tweet, while the disgust proportion is calculated by dividing the disgust score by the sum of the disgust and non-disgust words present in each tweet. This study primarily observes changes in disgust proportion.
#GrahamCassidy would allow discrimination against Americans with asthma, breast cancer, and more. #Trumpcare would be deadly.

12:33 PM · Sep 20, 2017

2 Reposts 3 Likes

(Roybal-Allard, 2017)
The study began by loading the NRC Word-Emotion Lexicon into R by two files—disgust and non-disgust terms. Then, the large sample of congressional Twitter data was loaded into R. In the original Twitter dataset, members of differing parties were marked by either ‘1’ or ‘2’ to indicate their party affiliations, whereas ‘1’ identifies Democrats and ‘2’ identifies Republicans. Because the aim of this research is to determine whether congressional members of the Republican party are more likely to use disgust language on Twitter, two new variables were created to separate each member of Congress by their party identification. The new variable ‘republican’ created a column in which Republican members of Congress were assigned a 1 and Democratic members were assigned 0. The variable ‘democrat’ created a column in which Democratic members were assigned 1 and Republican members were assigned 0. A corpus was then created to compile each of the tweets loaded into R, and the corpus was tokenized to be read only for text and to remove all punctuation from the text\(^4\). The tokenization of the corpus allowed for R to apply the NRC disgust dictionary to each tweet and scan for word matches. A document feature matrix was then created, which is a tool used to count the features of importance in a document— in this case, disgust and non-disgust terms. Then, the disgust proportion variable was created, which was calculated by the number of disgust terms in each tweet divided by the sum of disgust terms and non-disgust terms found in each tweet. Finally, a table was created that listed each of the variables that were part of the original dataset as well as the newly-created variables: democrat, republican, disgust, non-disgust, and disgust proportion.

Finally, to evaluate the difference between the disgust proportions between Democrats and Republicans, a linear regression model was run in R, which is a function used to determine a linear relationship between variables and produce the predicted effect of introducing a new

\(^{4}\) ‘Text’ may be defined as the textual content of each tweet.
independent variable. For the purpose of this research, the independent variable was party identity, and the dependent variable was average disgust proportion. The designation of the independent and dependent variables is appropriate because each member of Congress must declare a party affiliation in order to be elected, so party identification is a set variable that takes place before a member of Congress may use Twitter while in office.

CHAPTER IV: DATA ANALYSIS & DISCUSSION

The linear regression model was conducted to test the proposed hypothesis that Republican members of Congress would be more likely to utilize disgust language on Twitter than their Democratic colleagues, based on the premises that disgust language may be used as a tool for persuasion in an ongoing campaign and that Moral Foundations Theory finds that conservative politicians are more likely to utilize disgust language. The initial linear regression model was run to test the effects of being a democrat on the average disgust proportion of congressional tweets over time. The model produced a p-value that indicated a significant relationship between the independent variable, Democratic party identity, and the dependent variable, average disgust proportion. The estimated value produced indicated that, contrary to the expected outcome of the proposed hypothesis, being a Democrat increased the average disgust proportions across the sample. To explore this unexpected result further, a series of subsequent linear regression models were conducted, where disgust proportion remained the dependent variable and party identity the independent variable, controlling for a selection of additional variables to determine how factors other than party identity are involved in the correlative relationship observed in the initial linear regression model.
The subsequent linear regression model evaluated the influence of the gender of each Congress member, the influence of representing a “red state,” and geographical region of the United States. The variable for each Congress member’s gender existed in the initial Twitter dataset, but variables for red states and geographical regions were subsequently created in R. For this research, a red state was defined as a state in which the statewide victory in a presidential election between 2008 and 2020 went to the Republican candidate. To account for swing states and party changes over time, the label of ‘red state’ was assigned only to the states in which the Republican presidential candidate has won in every presidential election since 2008, which is appropriate for this study, as the earliest data comes from 2008. The states designated red states in this study are as follows: Idaho, Montana, Wyoming, Utah, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, Missouri, Arkansas, Louisiana, Kentucky, Tennessee, Mississippi, Alabama, West Virginia, and South Carolina. Finally, five variables were created for each geographic region of the United States as identified by the United States Census. The variables are south, northeast, midwest, west, and pacific, whereas being from the identified region codes as 1 and not being from the specified region codes as 0.5

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5 The District of Columbia and other United States permanent territories, such as Puerto Rico and the U.S. Virgin Islands, serve as the baseline variables against which the other five variables are compared. The tweets by representatives from these regions will code always code as ‘0’ to produce a working linear regression model.
The results of the subsequent linear regression model, displayed above in *Figure 2*, determined that being a male produced a higher proportion of disgust across the sample. In accordance with the results of the initial linear regression, being from a red state reportedly decreased the overall disgust proportion across the sample. Finally, each of the five geographic regions of the United States had roughly an equal influence on the disgust proportion across the sample, with the Western region of the U.S. having had the least influence of each of the five regions. Finally, the variable for the year a tweet was created was tested in the linear regression model. This variable proved to have a significant positive effect on the disgust proportion, meaning that with every passing year, the disgust proportion was likely to increase, which may
warrant further research about the use of disgust within specific time frames and historically significant events. Ultimately, the proposed hypothesis lacked support, which creates an avenue for continued research to determine why a Republican senator or representative may be less likely to utilize disgust language over time.

CONCLUSION

The aim of the research conducted in this thesis was to investigate patterns in the usage of disgust language by political elites over time. The tested hypothesis for this study was formulated based on existing literature on congressional Twitter use, disgust language, and the Moral Foundations Theory. Using quantitative data through the text analysis of a random sample of congressional twitter data between 2008 and 2022, the proposed hypothesis that an observed difference in disgust language used on Twitter between political parties would show that Republicans tend to use a greater amount of disgust language on Twitter was tested using a linear regression model. However, the data analysis produced contradictory results that indicated that Democratic members of Congress were more likely to utilize disgust language on Twitter. In order to strengthen these results and address additional factors that may lead to a lesser amount of disgust language, several additional control variables were introduced: gender, status as a red state, and five variables to represent each geographic region of the U.S. The results proved to be particularly interesting when controlled for the gender of representatives, as the linear regression model showed that being male increased the overall disgust proportion across the sample. However, the Democratic party had a significantly greater percentage of female representatives and senators over time (Desilver & Leppert 2023). This statistic leads one to believe that the greater percentage of women in the Democratic party would have some effect on the usage of
disgust language on Twitter, making Democrats less likely to utilize disgust language across the sample.

There are several potential explanations for the falsehood of the proposed hypothesis in this study. Among these explanations is the possibility that the party with the majority in the House and the Senate would have less incentive to use disgust language on Twitter. Data on the makeup of the House and Senate since 2008 shows that the House majority has been Republican for every congressional term in the dataset except for 2008, 2018, and 2022. The Republican majority held Senate majority from the 114th to the 116th Congresses. (Hillman 2017; Washington Post Staff 2022; U.S. Senate 2024). The greater size of the House and the longstanding Republican majority status may account for the lesser disgust proportion of Republicans over time, if members of the majority party are less likely to use disgust language as a tool for persuasion. This alternative explanation may be expanded upon with further research on the topic.

Additional factors that may affect a Congress member’s likelihood to utilize disgust language on Twitter may be age and/or religiosity of their average constituent. It may be possible that older and/or more religious are more likely to respond negatively to the use of disgusting language by their representatives and senators. With re-election in mind, those members of Congress may avoid the risk of using disgust language in their online rhetoric. Additionally, a political conservatism is traditionally associated with maintenance of the status quo and a lesser desire for government interference. It is possible that a greater proportion of disgust language as a persuasive tactic may be seen by conservative constituents as an overstep of power by their senators and representatives. Finally, the dependent variable in this study, disgust proportion, accounted only for disgust terms and non-disgust terms as designated by the NRC Word-Emotion
Association Lexicon. It is possible that words that do not fit into either of these categories, such as filler words, could have influenced the outcome of this study.

Finally, studies moral foundations and political ideology in reference to the COVID-19 pandemic produced results that also may seem contrary to previous foundational research in MFT and political ideology. Based on early literature on MFT, Republicans should have been more likely to be sensitive to disgust during the COVID-19 pandemic, but a 2022 study shows that more liberal individuals showed a greater disgust sensitivity to COVID-19 concerns and were more willing to comply with social distancing efforts than conservative individuals (Tarry et al., 2022). The study showed that there was a significant correlation between attitudes about the COVID-19 pandemic, moral foundations, and political ideology, but other moral foundations may have produced the unexpected results. It is possible that this phenomenon may explain the unexpected results obtained from this research.

The study of politics and social media is a relatively new field that is rapidly expanding and changing, which means there is much to be discovered and observed, and the findings of this study will contribute to future of this field of research. The findings from this thesis are valuable to future research in political science, as there has been very little prior research on the effects of emotive language by members of Congress. This research not only serves as a model for the quantitative analysis of politicians’ tweets, but it also provides new findings which future studies may build upon. Further research built upon these findings may examine the influence of the use of disgust language by the president or the media on the use of disgust language by members of Congress. A similar study could also be conducted to observe the use of other categories of emotive language by members of Congress to find interesting results.
While this research may be conducive to future advances in political science research, it is necessary to acknowledge that there are a number of influential factors that may not have been considered in this research. Among these factors are the influence of extraordinary events on politicians’ online rhetoric, the influence of other prominent politicians’ and public figures’ disgust speech on members of Congress, and each subject’s individual likelihood to use negative emotive language in public speech. It is likely that the consideration of these factors could alter or expand upon the findings of this thesis, and this research may be conducive to more informed, holistic findings in the future.
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