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The Tweet Delete of Congress: Congress and Deleted Posts on Twitter

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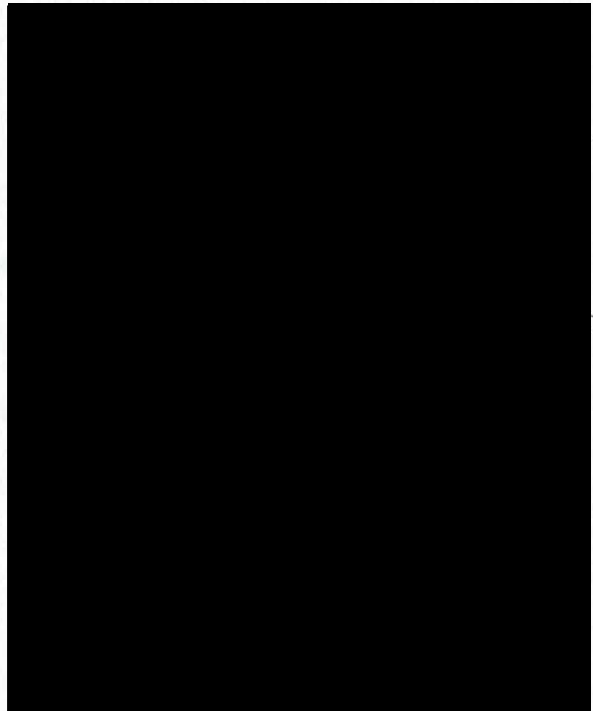
THE TWEET DELETE OF CONGRESS: CONGRESS
AND DELETED POSTS ON TWITTER

by

Theresa Loraine Cardenas

A Thesis
Submitted to the Graduate School
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December 2013

ABSTRACT
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Since 2006, increasingly more politicians have joined, and are active on, social media networks, in order to reach out to constituents. However, politicians, such as Anthony Weiner, have started to find themselves in the middle of Twitter scandals and criticism, since their posts are openly available to the public. These ramifications may be leading politicians to delete their tweets, but thanks to the Sunlight Foundation and its website Politwoops, deleted tweets by politicians are now archived and ripe for political research. This raises the question Which members of Congress are deleting tweets and why? Thus, I conduct the first known qualitative study on Congress and deleted tweets, to determine what members may be trying to delete. An empirical analysis on raw data, including 500 deleted tweets by Congress members, was used to discover which posts, and by which members, are deleted more often. I hypothesize that Congress members, specifically Republican Senators, are more likely to delete negative tweets, such as posts that are unprofessional, against their constituents' views, or contain controversial issues, in order to ensure public support and avoid backlash.

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CHAPTER I

INTRODUCTION

The 2012 presidential election broke the record for the most tweeted about event in United States political history with more than 31 million tweets in one night (Bellenger, 2012). However, it was not just the general public that was *tweet happy* on the government's big day. During the past decade, social media sites, such as Twitter and Facebook, have increasingly been used for political interaction after politicians flocked to Facebook during the 2006 national elections. That same year Twitter was launched and quickly became a political powerhouse resulting in political figures, such as Barack Obama, John McCain, and Sarah Palin, being among the top 50 trending topics on Twitter (Ladhani, 2010, p. 43). Increasingly more and more politicians are joining social media networks, particularly Twitter. A recent study by Almacy, Hauptman, and Newbert (2012) found that members of Parliament and Congress who used Twitter rose from 31% in 2010 to 53% in 2011. By January 2013, all 100 members of the United States Senate and 398 members of the House of Representatives had joined the world of Twitter (Choney, 2013).

Members of Congress originally embraced social media as a way to control their messages and promote legislative goals and accomplishments themselves rather than leaving it up to the media. As a result, social media has become an important communication tool used to influence constituents and gain public support by making it easier for Congress to reach out and represent the public. Republican House Representative Bob Latta has previously stated about

social media networks, "Social networking tools have given us a 2.0 democracy; letting people participate in the legislative process at all times and giving members of Congress the instant ability to connect and engage with constituents" (as cited in Almay, Hauptman, & Newbert, 2012, p.12). Additionally, Twitter provides constituents, who have also increasingly joined, with the opportunity to voice their concerns and engage government representatives in a more direct manner. In just two years there was almost a 600% increase in constituents' use of Twitter to reach lawmakers, from only 7% to 41% (Almay et al., 2012, p.12).

However, posts on social media sites can have serious ramifications for congressional members. Since information posted on social media sites are open to the public and can lead to unwanted reactions by constituents, Congress must be careful with what information they freely share with the public. In just the past five years, many Congress members have found themselves in the center of Twitter scandals and criticism, including Democratic Representative Steve Cohen, whose tweets have been scrutinized on two separate occasions already this year. To avoid such scrutiny, many congressional members often delete their post on social media sites, removing the information from public viewing, assuming that once a tweet is deleted from Twitter it is no longer available for public viewing.

Fortunately, the Sunlight Foundation, and its website Politwoops, have made deleted tweets by politicians available to the public once again. This raises the question what type of tweets, and by which Congress members, are more

likely to be deleted? Additionally, what types of congressional tweets are more likely to be deleted by each political party? I theorize that tweets that may lead to a loss of public support, such as a tweet that is unprofessional, do not represent constituents' views, or may contain controversial issues, are more likely to be deleted in order to ensure public support and avoid backlash.

This study looks at an alternative perspective on congressional Twitter use than previous studies, focusing on deleted tweets by Congress members. While many studies have focused on Congress and its relationship with social media networks (Almacy et al., 2012; Glassman, Straus, & Shogan, 2010; Golbeck, Grimes, & Rogers, 2010), none have examined the tweets Congress members delete, nor explored reasons why Congress members deleted them. This study uses a qualitative approach to examine the connection between deleted tweets and Congress members. This study seeks to discover what types of information and tweets Congress may be trying to hide by deleting a tweet and how partisanship influences the type of information and tweets Congress members try to discard from public viewing. Additionally, a coding scheme is developed in this study for determining what tweets are deleted and why.

The following sections will provide background information on the use of social media and Twitter by Congress members, and its impact on them, before presenting the research question and hypotheses. This will be followed by a presentation of the data and methods used to test my hypotheses, followed by the findings of the study, and concluding with a discussion of the results.

CHAPTER II

THEORETICAL FOUNDATIONS

Congress, Social Media, and Twitter

Historically, members of Congress communicated with their constituents through one of two methods: mediated methods, such as televisions, radio, and newspapers; or directed methods, including personal appearances, postal mail, email, and websites (Golbeck et al., 2010, p. 1613). By 2005, nearly all members of Congress had developed a personal website to communicate with their constituents. More recently, increasingly more congressional members have joined social media networks, such as Twitter. During the 2006 national election, political candidates campaigned through the use of social media for the first time, when politicians took to Facebook to reach out to constituents and voters. That same year, Twitter became an additional communication medium for Congress, when members began tweeting within Twitter's first year operating. By the 2008 presidential election, Twitter was used for the first time by candidates to connect with voters, and marked the emergence of social media as a new campaign tool. Since tweeting 140 characters is faster than the time consuming posts on Facebook, Twitter quickly grew to be the most prominently used social media site by Congress (Williams & Gulati, 2010, p. 7).

In September of 2009, 149 members had used Twitter to reach out to constituents, including 120 Representatives and 39 Senators. Of these, 102 were Republicans and 57 were Democrats (Golbeck et al., 2010, p. 1615). In 2010, 132 Congress members were actively using Twitter, including 25 Senators

and 107 Representatives (Senak, 2010, p. 6). By 2013, 498 members had joined Twitter, all 100 Senators and 398 Representatives (Choney, 2013). Of these congressional tweeters, 264 were Republicans, 234 were Democrats, and 2 were Independents (*TweetCongress*, 2013).

The use of Twitter by Congress is mainly a campaign tool for outreach to supporters, share information, campaign, and mobilize political action. In fact, during the 2010 midterm election, the vast majority of candidates for the House of Representatives and virtually all candidates for the Senate used Twitter as a campaign tool (Hanna, Sayre, Bode, Yang, & Shah, 2011). Knowing Congress uses Twitter for a political tool leads one to believe that deleting tweets is also a part of that strategy. However, determining individual motivation for the adoption of Twitter by congressional members is difficult to conclude. David S. Lassen and Adam R. Brown's (2011) study found that members were more likely to join Twitter if they belonged to the minority party, if their party leaders urged them to, if they were young, or if they served in the Senate and had little to do with electoral vulnerability (p. 419). Republicans and their leaders were far more likely to use Twitter than Democrats, with 10 out of 12 Republican leaders using Twitter with many Republican rank-and-file members following suit, but only 1 out of 17 Democrat leaders were on Twitter (Lassen & Brown 2011, p. 427). A lack of partisan effect by Republicans and Democrats who joined Twitter in the Senate, found by the study, implies that much of the partisan effect in the House is the result of party leadership efforts (Lassen & Brown 2011, p. 428). For instance, during the early days of Twitter, Republican leaders invited youngsters

to speak before the House of Republicans about using the technology (Hadfield, 2011).

On the other hand, another study suggests that the adoption of Twitter by congressional members is driven by constituent outreach. Feng Chi and Nathan Yang (2010), found that the past success of congressional members using Twitter gave current members valuable information about the advantage of Twitter as a mode for influence. An increase in the average followers on Twitter among past adopters is associated with an increase in the current adopter's own followers (Chi & Yang, 2010, p. 3). Thus, Congress members who adopt Twitter soon after successful Twitter adopters may also enjoy success themselves. These findings on motivation behind the adoption of Twitter by Congress members gives us an idea for the reasoning behind members deleting their tweets. If Lassen and Brown are right, then partisan effect may have a lot to do with the deletion of tweets on Twitter, leading to the deletion of more tweets, which may reduce public support for a party. On the other hand, if the main motivation for adopting Twitter is constituent outreach, then tweets against constituents' views are more likely to get deleted.

Furthermore, an increase in the number of congressional members on Twitter is also a result of efforts taken by grass-root organizations, such as The Sunlight Foundation and TweetCongress.org. Through recommendations made through Open House Project, and efforts including lobbying on Capitol Hill, and the "Let Our Congress Tweet" campaign, The Sunlight Foundation, whose mission is to make government more transparent and accountable through the

use of technology, helped successfully reform the congressional rules to permit social media use by members of Congress (Lee, 2012, p. 9). Similarly, TweetCongress.org seeks to get Congress online and active on Twitter by urging the public to encourage their elected officials to join Twitter. Additionally, TweetCongress.org ranks congressional members already on Twitter by followers and activity level to determine their success on Twitter (Ladhani, 2010, p. 43).

As a result, there are more members of Congress on Twitter, tweeting to their constituents; however, the use of Twitter varies widely by individual members. Glassman, et al. found that the average number of tweets sent by an individual member was approximately one tweet every other day (2010, p. 5). Two years later, congressional members tweeted more than 1,500 times, in just a month, from May 9 to June 8, 2011 (Ross 2011, p. 10). More specifically, "Congressional Tweets: Yeas and Nays of the Congressional Twittersverse," found that Republicans tweeted, on average, 30% more than Democrats, while Senators were more active than Representatives, averaging 147.6 tweets per handle compared to 125.7 tweets per handle by Representatives (Almacy, et al., 2012, p. 9). However, according to Hemphill, Otterbacher, and Shapiro's (2013) findings, the most active congressional members on Twitter tend to be Representatives, Republicans, and males. Out of the two congressional houses in 2012, Representatives were significantly more active than the Senate, tweeting 28,834 times compared to the Senate's 6,527 tweets, while congressional Republicans out tweeted both the Democrats and the

Independents, with 21,253 tweets, followed by the 13,648 Democratic tweets, and the mere 460 Independent tweets (p. 880). Additionally, Senators sent a total of 844 tweets while in session, and 628 tweets during recess, while Representatives sent a total of 2,512 tweets in session and 3,094 tweets during recess (Glassman et al., 2010, pp. 6-7). As a whole, members of Congress were unlikely to tweet right before or after a vote, with fewer than two percent of all tweets posting within thirty minutes of a vote. However, members of the Senate were less likely to wait for Congress to adjourn, with Senate Democrats being slightly more prone to tweet while Congress is still in session (Almacy et al., 2012, p. 11).

Additionally, male congressional members tweeted 24,291 more times than female members, tweeting 29,826 times compared to the 5,535 tweets female members posted (Hemphill et al., 2013, p. 880). Tenure was also found to have a strong effect on Twitter activity and influence. While Twitter use was particularly heavy among the 113th Congress' freshman class, Hemphill et al.'s findings (2013) suggest that longer tenure predicts more active tweeting. Furthermore, members of Congress with "safe seats," or secure margins of victory, tweet more often than those with slim ones. Studies have already suggested that incumbents are more likely to have secured seats than challengers and freshman (Williams & Gulati, 2010, p. 10). This study uses these findings on activity level of members on Twitter to determine whether a relationship between activity level and deletion of tweets exist. For instance, it can be predicted that higher activity level is correlated with more deleted tweets.

It can be assumed, because of these findings, that since Republicans and Senators tweet more on Twitter than Democrats and Representatives, then Republicans and Senators are more likely to delete tweets from Twitter. Findings from these studies on the nature and types of Congressional tweets, as well as types of tweets, such as retweets and tweets containing URL links, are used and extended in this study to help determine the nature of deleted tweets.

While the nature of communication on Facebook by congressional members is aimed at mobilizing public support, the majority of congressional tweets have focused more on job specific content, such as legislative and policy agenda information. One study shows that the nature of Congressional tweets varies, ranging from Legislative tweets, (involving news related to legislation, events, and political issues) to combative, polarization or negative attacks on the opposition, personal or humanizing, (including human interest stories, remembrance, and holidays), irreverent or fun, and miscellaneous tweets (Almacy et al., 2012, p. 14). Data suggest that the most frequent types of tweets by congressional members in 2009 were district or state tweets by 24%, followed by policy tweets by 23%, media tweets and position-taking tweets by fourteen percent, with the most common in session tweet being "policy" tweets and "district" tweets during recess (Glassman et al., 2010, p. 12). In 2010, Williams and Gulati found that the statuses or informational content of legislative activity represented the highest proportion of tweets, followed by advocacy or position taking (p. 8). According to Almacy et al.'s findings, in 2011 between half and two-thirds of tweets dealt with legislation, one in eight tweets were politically

combative, while one in six tweets were devoted to human interest stories (Almacy et al., 2012, p. 14). Similarly, a study of the last two months of the 2012 national election found that only 29% of congressional tweets on Twitter were “personal” tweets (Sides, 2013, p. 1).

Moreover, research has suggested that while both Republican and Democratic members are largely using Twitter to promote their legislative goals and accomplishments, Republican conservatives tweet more provocatively (Who’s Winning, 2009, p. 1). Republicans tend to tweet more about position taking, and policy statements, with Republicans tweeting about legislation, and referenced specific pieces of legislation, in their tweets three and a half times more than Democratic members (Almacy et al., 2012, p. 9). However, Democrats reference District or State affairs in their tweets significantly more than Republicans, by approximately 10% (Greenberg, 2012). Additionally, Republican members are more likely to attack the Democratic party using Twitter. In fact, Almacy et al. found that while tweeting across the aisle, 34% of the House Republicans tweets were critical or negative, compared to 28% by House Democrats (2012, p. 15). The study suggest that the minority status of the party likely influenced many Republicans in Congress to adopt alternative media, such as Twitter, in an effort to circumvent the traditional media dominance of the majority party (Lassen & Brown, 2011, p. 431). David All, president of the David All Group, a conservative media consulting firm, also claims that Republicans’ provocative and combative tweets are a “survival tactic” since “[Republicans] are in the minority. They can’t get press clips anymore. They need to rally support for

their policies outside of the Beltway” (Who’s Winning, 2009, pp .1-2). These findings suggest that Congress members, more specifically Republican members, use Twitter to campaign throughout their tenure, in order to gain and maintain public attention and support. While these studies focused on the content of tweets by each party and suggest the use of Twitter to gain public support, this study looks at the content of the tweets that each party deletes in order to maintain support. Since the content and nature of tweets posted by Congress members differ between political parties, it can be expected that the content and nature of deleted tweets will also differ by political parties.

Additionally, a study in 2009 found that links were extremely common, found in over 44% of congressional tweets, including links to online news articles, congressional blogs, and Congress members’ personal website (Golbeck et al., 2010, p. 1617). Retweets by Congress, reposting a tweet posted by another user, on the other hand, was rare, found only five times out of 4,626 tweets (Golbeck et al., 2010, p. 1618). More specifically, Senators and Republicans tweeted more links in 2011 than Representatives and Democrats, while Representatives tended to tweet more replies and retweets than members of Senate (Almacy et al., 2012, p. 6).

Congress, Twitter, and Constituents

As previously mentioned, social media, specifically Twitter, has emerged as a new and important communication tool, used by Congress members to directly connect to the public. Democratic Representative Mike Hoda recently stated, “Constituents now want direct access to their elected officials at all levels”

(as cited in Almay et al., 2012, p. 18). The use of Twitter by members of Congress have increased this direct access and communication between members and their constituents, who are able to directly send members questions or comments. Through Twitter, a congressional member may be able reach out to individuals who feel comfortable sharing their political views and are interested in politics. Direct communication offers members a ready and potentially effective opportunity to preserve and expand their support base within their district by minimizing the appearance of personal or ideological differences with their constituents (Lassen & Brown, 2010, p. 422).

It has even been suggested that Twitter is a communication barometer of how effective elected officials are communicating with their constituents (Senak, 2010, p. 3). Accordingly, websites have been created to determine and indicate how Congress members are using Twitter to communicate with the public, such as Tweet Congress, which measures how often members send tweets and replies to other Twitter users (Who's Winning, 2009, p. 2). One study has shown that members are under-utilizing Twitter for public communication, with communication between members of Congress and their constituents accounting for only seven and a half percent of members tweets in 2009, totaling 338 messages (Golbeck et al., 2010, p. 1619). Other researchers argue that social media networks, like Twitter, actually have the capacity to engage more people in the political process. According to the Pew Research Center's Internet and American Life Project, which evaluated the state of political engagement on Twitter and other social networking sites during the 2010 national election, 21%

of online adults used social networking sites to engage in the 2010 election, and 35% of all social networking site users got involved politically on these sites (Smith, 2011, pp. 2-3). Additionally, 11% of Twitter users followed a congressional candidate or other political group involved in the 2010 election (Smith, 2011, p. 12). Accordingly, research has found that 67% of those who followed politicians on Twitter during the 2010 election said that the information posted by those they followed were interesting and relevant, and 26% of these individuals said that they paid attention to most of the material posted by politicians they followed, with 40% paying attention to some of the material posted by the politicians (Smith, 2011, pp. 12-13).

Twitter is primarily a broadcasting device for politicians, so being able to assess its outreach capabilities is especially important to politicians (Chi & Yang, 2010, p. 26). Political tweeters were found to be more engaged in political participation activities than nonpolitical tweeters (Bekafigo & McBride, 2013, p. 17). In addition, previous research has also suggested that political tweeters can influence political polls, finding a positive correlation between candidates with more Twitter followers and the candidate's popularity in the polls (Zeng, Hartman, & Einhorn, 2011). Even more, this new and improved means of communication by members of Congress, allowing them to directly reply back to constituents for meaningful public exchanges, leads to benefits for Congress by increasing public trust and support for congressional members. According to Himelboim, Weaver Lariscy, Tinkham, and Sweetser, a positive relationship was observed between institutional political trust and willingness to openly share ones political thoughts

with others (2012, p. 96). Considering the interpersonal nature of social media for exchanging opinions and information, this relationship between trust and openness may also be associated with willingness to share via social media (Himmelboim, Weaver Lariscy, Tinkham, & Sweetser, 2012, p. 96). Additionally, Republican Representative Cathy McMorris Rodgers believes that as Twitter continues to evolve and members continue engaging constituents, if members are successful then, "the result will be a more open, transparent, and inclusive Congress" (Almacy et al., 2012, p. 15).

Almacy et al. measure just how successful congressional members are on Twitter in "Capital Tweets: The Yeas and Nays of the Congressional Twittersverse" (2012), finding that Senators exhibited a faster growing following on Twitter than Representatives, while no significant difference was found between Republicans and Democrats. In 2010, a study by Senak revealed congressional Republicans on Twitter had an average of over 3,000 more followers than Democrats. The average number of followers for Senate Republicans was over 120,000 compared to only 9,894 for the Senate Democrats, and in the House, the average number of followers for Republicans was 3,054, compared to the Democrats' 1,759 followers (Senak, 2010, pp.10,12). However, it should be noted that Senator John McCain's followers alone accounted for 112,906 followers for the Republican Senate in 2010. By 2013, Senator McCain had nearly 1.8 million followers, leading the list of "most-followed" Congress members (Choney, 2013, para. 5).

Almacy et al. (2012) also concluded that Republican members in Congress, rather than Democrats, were more successful in generating public support by using Twitter more effectively than Democrats. Almacy et al. measure TweetLevel Influence (that is, how successful Congress is in influencing constituents through Twitter) by using a metric developed to score Twitter users according to how influential, popular, engaging, and trustworthy they are by combining 16 metrics to determine an overall "influence" (Almacy et al., 2012, p. 6). According to their findings, the most influential members of Congress were the Senate Republicans, followed by Senate Democrats, House Republicans, then House Democrats (Almacy et al., 2012, p. 8). After looking at Republicans' activity level and number of followers, though, it is not surprising that Republican congressional members have greater influence than Democrats on Twitter. Another study found that a Republican's Klout score, representing how influential they are, is predicated to be 98.2% higher than an otherwise identical Democrat (Lassen & Brown, 2011, p. 427). Additionally, out of the most influential Congress members on Twitter, according to an influence ranking assigned by Twitalyzer, the Republicans occupy six of the top ten slots in the Senate, and eight spots of the top ten in the House (Senak, 2010, pp. 10,14). Research has also suggested that a few of the most effective and popular Twitter users in Congress have twenty-one to twenty-five years of tenure, including Senator John McCain, Representative Nancy Pelosi, and Senator Harry Reid (Almacy et al., 2011, p. 21).

Since increasingly more constituents are looking to social networking sites for information on their representatives, leading to political engagement and possible success, congressional members must be cautious about their activity on these sites. Thus, this paper looks to see if tweets deleted by members contain information that could have negative impacts on a member's influence level, such as unprofessional tweets, which are predicted to decrease a member's influence on constituents.

Congressional Scandals and Twitter

While Congress members can be successful and influential on Twitter, members can also find themselves in the middle of unwanted criticism and backlash with just one simple misstep, since Twitter allows for the immediate posting of information to be out in the open for public viewing. For instance, Republican Senator John McCain, was criticized for his publicized interaction with MTV reality star Snooki, as well as Democratic Senator Chris Dodd for his profane tweets. However, scandalous behavior is nothing new for Congress. Since Watergate, more than 250 members of the House of Representatives alone have been involved in various congressional scandals (Basinger, 2013, p. 385). In just the 112th Congress, around 25 Representatives were involved in new scandals, three in continuing scandals, which resulted in three members resigning (Basinger, 2013, p. 388). Moreover, Basinger found that Democratic Representatives have been involved in more scandals than Republican Representatives, with 154 scandals compared to the Republicans 92 scandals (Basinger, 2013, p. 389). Of the 43 total sex scandals between 1973 and 2010,

the parties were evenly divided with Republicans being involved in just two more sex scandals than the 18 sex scandals involving Democrats (Basinger, 2013, p. 389).

Thus, it is not surprising that there are rules governing how Congress may use social media sites. Since 1789, "Franking rules" have regulated all types of communication between members of Congress and the public, however, the outdated rules regulate paper mail only and do not extend to include changing technology (Mergel, 2012, p. 109). Therefore, it is difficult for members to decide how to apply Franking rules to social media sites, such as Twitter. According to Democratic Representative Michael Capuana, who was appointed to chair the Special Task Force on Ethics Enforcement in 2006, resulting in the establishment of the Office of Congressional Ethics in 2008, "tweets may violate House rules that 'have been interpreted to prohibit (House) members from posting official content outside of the House.gov domain'", and he advised that "some rules are necessary so as not to mix House official messages with commercial and political campaign material" (as cited in Williams & Gulati, 2010, p. 1). In response, Republican John Culberson argued that Capuana's interpretation of the House rules limits their communication. In fact, Hemphill et al. (2013) suggest that the lack of narrative among officials may be the result of these rules prohibiting communications that are not relevant to the official and representational duties.

However, even with such rules, as social networking sites became more popular, political posts and tweets have generated their share of controversy, and created a new generation of political scandals. In 2009, former Republican

House Speaker, Newt Gringrich, tweeted that Supreme Court Nominee Sonya Sotomayer was racist. Even more significant was the unintentional revealing of confidential information about a trip former Republican Representative Peter Hoekstra took to Iraq, when he tweeted "just landed in Baghdad" during a top-secret trip as part of the House Intelligence Committee (Almacy et al., 2012, p. 13). More recently, Democratic Representative Steve Cohen's tweets became the center of media attention twice in the first four months of 2013, after Cohen sent what appeared to be flirtatious tweets to Cyndi Lauper and a pretty twenty-four year old, including, "@Victoria_Brink nice to know you were watchin SOTU (state of the union). Happy Valentines beautiful girl. ilu" (Coscarelli, 2013, para. 2; Estes, 2013).

However, these examples of minor Twitter slip-ups do not compare to the Twitter mistake committed by Democratic Representative Anthony Weiner, and the intense backlash he received from the public and other members of Congress. In the summer of 2011, Weiner mistakenly published a sexually suggestive photograph of his crotch on Twitter, which was intended to be a direct message. Although Weiner originally tried to deny tweeting the picture by accusing hackers, the release of additional photos and a digital trail of his online exchanges eventually forced Weiner to confess having inappropriate online relationships with various women. While Weiner gained more than 35,000 Twitter followers due to his picture scandal, he was also forced to resign from Congress. On June 16, 2011, Anthony Weiner became the first Congressmen to step down over an indiscretion on Twitter (Almacy et al., 2012, p. 13). Furthermore, between

2009 and the beginning of 2013, around seven Congress members were involved in some sort of social media scandal, particularly on Twitter. Of these seven scandalous male members, four were Republicans and three Democrats, and surprisingly, all but one member involved in these scandals were senior members of Congress (Straczewski, 2011; Almacy et al., 2012).

Following the Weiner scandal, there was a noticeable decrease in the number of messages congressional members posted on social networking sites, including Twitter. During the week following the posting of Weiner's photo, members of Congress tweeted 28% less than the previous week (Condon, 2011). Additionally, the week Weiner confessed to the picture, Democrats tweeted about 30% less than prior to the scandal, with only 120 tweets, while Republicans experienced an 18 point drop in tweets (Condon, 2011).

Although a full two-thirds of incumbent members who engaged in scandalous behavior between 1966 and 2002 were reelected, incumbents are still hurt by these scandals (Brown, 2006). Scandals not only tarnish members' reputations, but they also cost incumbents an average of 5% of their general election vote share (Basinger, 2013, p. 385). Interestingly, according to Brown's findings, Republicans seem to be severely punished for engaging in morality scandals, while Democrats are penalized more for fiscal scandals (Brown, 2006). Thus, according to these findings, a mishap on Twitter could lead to negative consequences for members, especially Republicans, since tweets on Twitter are more likely to involve morality than finances.

As a result, Congress has learned that a slip in judgment on Twitter can lead to detrimental consequences, especially once the media becomes involved. Almay, et al., point out that Twitter is part of a coordinated communication strategy, overlapping between multiple forms of media, including traditional, owned, hybrid, and social media (Almay et al., 2012, p. 14). Thus, reporters have quickly learned to track congressional tweets for developing stories. A recent study of American journalists found that 57% of journalists regularly consult microblogging sites, such as Twitter, when researching stories (Lassen & Brown 2011, p. 421). Therefore, it is crucial that all elected officials, including members of Congress, understand the relationship between various media channels, in order to achieve their desired communication and objective (Almay et al., 2012, p. 17). For these reasons, members of Congress must be careful with what information they freely share with the public, in order to avoid controversy and backlash.

Since Twitter is a major tool for members of Congress to reach out, communicate, and expand their base of support, as the previous mentioned studies have concluded, then the types of messages and information revealed on Twitter posts are crucial. This may contribute to one reason why members of Congress, like most members of the general public, delete their tweets. In an empirical study of deleted tweets by Twitter users in 2013, Almuhiemedi, Wilson, Liu, Sadeh, and Acquisti found that 2.4% of all tweets are deleted and about 50% of all users deleted at least one tweet during the week. More importantly, their analysis showed a slightly higher-frequency of negative keywords in deleted

tweets. For instance, 9.97% of tweets containing offensive comments were deleted, 7.96% regarding sexual activity were deleted, 1.69% of tweets about alcohol and illegal drug use were deleted, and 0.0964% of tweets mentioning religion and politics were deleted (Almuhimedi, Wilson, Liu, Sadeh, & Acquisti, 2013, p. 901). As a result, they argue a causal link between regret and deletion of tweets on Twitter. Therefore, it is argued in this paper that tweets that could potentially affect their constituents' support in a negative manner, or tweets that may go against their constituents' views or beliefs, may be deleted by congressional members to sustain their image and constituents' trust in them.

Upon deletion, the tweet disappears from the user's and their followers' timelines, resulting in users assuming that their tweets will no longer be available for the public viewing. However, thanks to the Sunlight Foundation, deleted tweets by politicians are now still accessible to the public, and subject to scrutiny, on its website Politwoops. Launched in May of 2012, Politwoops contains a comprehensive collection of deleted tweets by United States politicians, archived with screen shots of any links contained in the tweet, and recorded when the tweet was deleted, as well as the elapsed time before removal (Margolies, 2012). By May 2013, Politwoops followed 86 Senators and 521 Representatives from the 111th, 112th, and 113th Congresses (Politwoops, 2013). Additionally, Politwoops had archived around 4,085 congressional deleted tweets, including 850 deleted tweets by Senators and 3,235 deleted tweets by Representatives (Politwoops, 2013).

CHAPTER III

RESEARCH QUESTIONS & HYPOTHESES

Thanks to Politwoops, researchers can now study the use of Twitter by congressional members further, by examining deleted tweets that members previously tweeted and deleted, assuming they were no longer visible to the public. Having Congressional members' deleted tweets archived on Politwoops, to be freely observed and scrutinized by the public, leads to three important questions: What is Congress trying to delete? More specifically, what information, from which members of Congress, is most likely to get deleted from social media sites, particularly Twitter? How does a Congress member's political party influence the type of information or tweets that members delete?

As previously discussed, Congress uses Twitter to reach out to and influence their constituents. However, a simple mistake or a tweet taken out of context can lead to negative consequences and reactions by the public, including members' constituents. Accordingly, this research hypothesizes that members of Congress are more likely to delete tweets on Twitter that could potentially result in decreased public support, such as tweets that are unprofessional, do not represent their constituents views, or contain controversial issues. Also, the nature of tweets posted by the Republican Party and the Democratic Party differ, with Republicans tweeting more combative tweets than Democrats (Who's Winning, 2009). Thus, another hypothesis is derived from the idea that the nature of deleted tweets will differ according to the political party of the member who deleted them, with Republicans, who tweet more provocative and combative

tweets on Twitter, deleting more negative tweets than Democrats. Furthermore, Republicans have been involved in more Twitter scandals than Democrats (Straczewski, 2011). Therefore, my main two hypotheses are

Hypothesis 1: The nature of deleted tweets by members of Congress are more likely to be tweets that negatively affect public support, such as tweets that are unprofessional, contain controversial issues, or against constituent's views.

Hypothesis 2: Republican members of Congress are more likely to delete tweets that negatively affect public support, such as tweets that are unprofessional, contain controversial issues, or against constituent's views, than Democratic members of Congress.

Additionally, since previous studies have found Republican Representatives tweet more than Democrats (Almacy et al., 2012), this research explores whether Republican and Representatives are more likely to delete their tweets.

Hypothesis 3: The members of Congress who delete their tweets are more likely to be Representatives.

Hypothesis 4: Republican Congress members are more likely to delete tweets on Twitter than Democratic Congress members.

Moreover, while male members of Congress were found to tweet significantly more than female members, they have also been involved in more social media scandals than female congressional members (Almacy et al., 2012; Hemphill et al., 2013; Straczewski, 2011). The greater likelihood of Congress men to be wrapped up in a scandal on Twitter suggest their carelessness and lack of caution while tweeting. Thus,

Hypothesis 5: Male congressional members are more likely than female congressional members to delete more tweets.

In regards to tenure, studies have found that longer tenure predicts more tweets posted on Twitter and have suggested that a few of the most effective and popular Twitter users in Congress have longer tenure in office (Almacy et al., 2012; Hemphill et al., 2013). However, while senior members have been involved in more social media scandals (Straczewski, 2011), the danger of losing reelection is greater for freshman than senior members with longer tenure in office and secure seats. Therefore, I argue that the chance of freshman losing their seats will lead to cautiously deleting more tweets in order to avoid backlash or scandals.

Hypothesis 6: Freshman members of Congress are more likely to delete tweets on Twitter than senior members of Congress.

Lastly, in accordance to previous results (Golbeck et al., 2010) that URL links in congressional tweets were extremely common compared to retweets which were rare, I argue

Hypothesis 7: Members of Congress are more likely to delete tweets that contain URL links.

CHAPTER IV

DATA AND METHOD

An empirical analysis of raw data, including deleted tweets by members of the 112th and 113th Congresses was conducted to test my hypotheses. Out of the 4,085 deleted tweets on Politwoops, 500 tweets were chosen for the sample, 249 from the Senate and 251 from the House of Representatives.¹ The last 100 tweets posted on Politwoops, for each house, were chosen for the sample on November 30, 2012, while another one hundred were chosen on December 14, 2012, the day of the Newtown school shooting. The original post dates from the deleted tweets in the sample spanned from November 17, 2011 to April 18, 2013. Specifically, tweets by Representatives deleted from November 4, 2012 to November 30, 2012 and December 14, 2012 to January 23, 2013 were obtained for the sample, while tweets by Senators deleted from August 19, 2012 to November 27, 2012 and December 4, 2012 to April 18, 2013 were included. During this time period, major events affected both the United States and Congress, such as Hurricane Sandy, the 2012 presidential election, the Newtown school shooting, gun-control proposals and debates, sequestration, and the Boston Marathon bombings, which may have influenced the content and nature of tweets posted, and deleted, by members of Congress.

Additionally, since most politicians were unaware that their deleted tweets were being archived for public viewing on Politwoops when the site first

¹An error mistakenly categorized a Representative as a Senator

launched, the first 50 deleted tweets by Representatives posted on Politwoops, and the first 50 deleted tweets by Senators, were added to the sample. These first 100 deleted tweets on Politwoops were originally posted on Twitter between November 17, 2011, and December 1, 2011.

After obtaining and examining the 500 deleted tweets, the tweets were divided into seven categories to explain why they were deleted. Since no previous study has been done on deleted tweets by Congress, and a coding scheme for deleted tweets was not available, this work modified and built on to Glassman et al.'s (2010) coding scheme, as well as Almacy et al.'s (2012) coding, which were both created to characterize the nature of congressional tweets. To characterize the nature of deleted tweets, I established seven categories similar to their coding scheme. Two additional categories, Unprofessional and Error, were created. The seven categories characterizing deleted tweets include

Legislative: job specific tweets that contain information on policies, political updates, endorsements of policies and candidates, and campaign and election related information. For example, Democratic Representative Bob Brady's retweet, "RT @Seiuncpa: @RepBrady vows to stand up for #Medicaid #Medicare and #SocialSecurity in Philly. <http://t.co/KdEdQNPI>," or Democratic Senator Ben Cardin's reply to Steny Hoyer, "@StenyHoyer- congratulations to you too! Together we are moving #MD #forward! #mdpolitics."

Combative: attacks on political opposition, or criticism of issues, policies, or politicians. For example, Republican Representative Mary Bono Mack's attack on Nancy Pelosi in her tweet, "Nancy Pelosi put another \$81,000 2day into her apprentice Raul Ruiz. As you can see by this photo- they r inseparable.

<http://t.co/q7zuxxv3H>."

Personal: tweets regarding family, friends, sports, religion, national holidays, or humor. Such as Republican Senator Rob Portman's tweet on Thanksgiving, "Driving to NC to celebrate Thanksgiving with my beautiful wife Jane, kids & in-laws. I can smell the turkey already!", or Republican Senator Ron Johnson's tweet "Packers score! <http://t.co/PPHZY37G>."

Informational: tweets containing neutral information on events, media, disaster relief, and information on scheduling. For instance, Republican Senator John McCain's tweet of an upcoming news event, "Will be talking to @Soledad_OBrien on @CNN next <http://t.co/kInWRyK3>."

Miscellaneous: all other tweets that do not fit into one of the other categories. Such as replies to others' tweets, like Democratic Senator Jeanne Shaheen's tweet, "RT@ccc1964: @SenatorShaheen Franklin Pierce."

Unprofessional: tweets that are unprofessional, controversial, or against constituents' views. For example, Democratic Representative Jim Himes' unprofessional tweet to a constituent, "Umm. Because I was elected? '@lisarichards124: @jahimes Why did you accept the job as CT Congressman only to ignore everyone's e-mails?'"

Errors: including grammatical errors, duplicates, tweets accidentally sent, wrong URLs, or misinformation, such as Republican Senator Lindsey Graham's grammatical error, "If you haven't done so yet, please allow follow our Facebook page. <http://t.co/CHOOKBnE>."

Deleted tweets were multiply coded, with each tweet falling into one or more categories which properly characterized them. For example, if a deleted tweet about a legislative policy contained a grammatical error, it was coded as *Legislative* and *Error*. For example, Senator Dianne Feinstein's deleted tweet, "Let's @49ers!", was coded as *Personal* and *Error*. Once the 500 deleted tweets were each coded into their proper categories the deleted tweets in each of the seven categories were divided and coded by the members' political party—Republican, Democrat, and Independent—in order to determine what information and tweets each party deleted most.

The 500 deleted tweets were then divided by three groups of Congress members, for each Congress chamber, as well as the individual members in each house, to find out which members delete more tweets on Twitter. First, the 500 deleted tweets were divided by political party, including Republicans, Democrats, and Independents. Second, the deleted tweets were divided by gender and coded as male or female. Lastly, the tweets in the sample used were divided by tenure and coded as freshman, junior, and senior. I classified all members who had been in congressional office for 1 to 2 years as freshman, members in office for a total of 3 to 9 years were classified as juniors, and any members in office for a total of 10 or more years as seniors. However, since the

tweets in the sample span three years, some members' tenure classification changed. For instance, if a member assumed office in 2011 they were classified as a freshman until 2013 when they were coded as a junior. Thus, some members' tenure are classified twice.

I also identified the number of individual members who deleted tweets in the sample for each house, political party, gender, and tenure, to find out which members delete tweets more often. For Congressional members who had more than one Twitter account, the accounts were combined into one in order to accurately calculate the number of individual members who deleted tweets posted on Politwoops and in the data sample used.

Finally, tweets were divided by type of tweet, whether the tweet was a retweet, or the tweet contained a URL link. Tweets that were retweeted and also contained a URL link were counted twice. Additionally examined was the duration of time, the moment the tweet was originally posted to when it was deleted, to determine the relationship between time duration and deleted tweets. The duration time was coded in seconds, minutes, hours, days, and weeks.

After all 500 deleted tweets were coded appropriately, the sum of the deleted tweets in each category were calculated and analyzed. The frequency was found for each category, and an Independent T-Test was used to analyze and compare congressional chambers, political party, tenure, and gender.

CHAPTER V

RESULTS

The results of the study conclude that my hypothesis, that Twitter tweets that could negatively affect public support are more likely to be deleted by Congressional members to ensure public support, was actually inaccurate. Legislative tweets, not tweets that may negatively influence public support, were found to be the most deleted tweet on Twitter by Congress. Out of the seven categories of deleted tweets, legislative tweets contributed to 48% of deleted tweets by Congress. Additionally, 35.4% of deleted tweets were informational, 24.4% contained errors, 19.8% were personal, 13.6% were combative, 6.8% were unprofessional, and lastly 6.2% were miscellaneous tweets.

Table 1

*Nature of Deleted Tweets**

	Legs.	Combative	Personal	Info.	Misc.	Unprofessional	Error
1. Congress	48%	13.6%	19.8%	35.4%**	6.2%	6.8%	24.4%
2. Senate	30%	10%	13%	21%	5%	6%	15%
3. House	32%	8%	13%	25%	3%	3%	16%

*By Percentage

**Significant $p < 0.1$

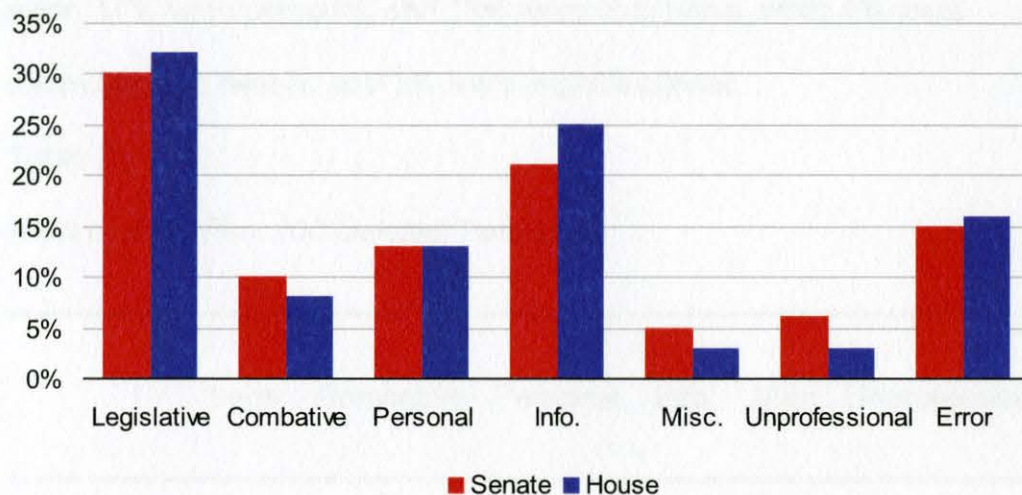


Figure 1. Nature of Deleted Tweets. Illustrates the percentage of deleted tweets by the nature of tweets in the Senate (red) and the House of Representatives (blue)

The average of deleted tweets by the Senate and House of Representatives were almost identical to Congress as a whole. In the Senate, 30% of deleted tweets were legislative, 21% were informational, 15% contained errors, 13% were personal, 10% combative, 6% unprofessional, and 5% were miscellaneous tweets. Similarly, 32% of deleted tweets by the House of Representatives were legislative, 25% were informational, 16% contained errors, 13% were personal, 8% combative, and 3% were both unprofessional and miscellaneous tweets.

The nature of the first 100 deleted tweets posted on Politwoops, on Table 2, also illustrated that the majority of deleted tweets by Congress were legislative, not tweets that could negatively affect public support. In fact, the findings of the first 100 deleted tweets posted on Politwoops only slightly differed from the results of the 500 deleted tweets used in the sample. Of the first 100 deleted tweets, 54% were legislative, 43% were informational, 33% contained

error, 17% were personal, and 13% were combative, while 4% were miscellaneous tweets, and 3% were unprofessional.

Table 2

*Nature of the First 100 Deleted Tweets**

	Legs.	Combative	Personal	Info.	Misc.	Unprofessional	Error
1. Congress	54%	13%	17%	43%	4%	3%	33%**
2. Senate	31%	6%	13%	31%	1%	3%	14%
3. House	33%	9%	8%	21%	3%	1%	24%

*By Percentage

**Significant $p < 0.1$

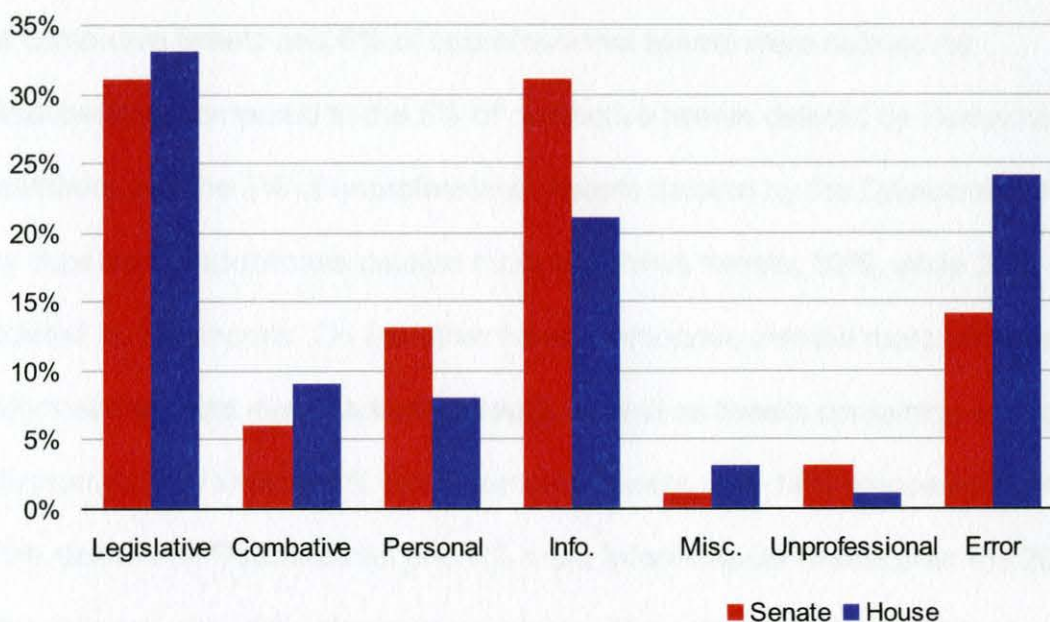


Figure 2. Name of the First 100 Deleted Tweets. Illustrates the percentage of the first 100 deleted tweets on Politwoops by the nature of the tweets in the Senate (red) and the House of Representatives (blue).

Although, once the first 100 deleted tweets on Politwoops are divided by Congress chambers, the findings start to differ. In the Senate, legislative and informational tweets contribute to 31% of deleted tweets, followed by 14% of tweets that contained errors, 13% that were personal, 6% that were combative, 3% that were unprofessional, and 1% that were miscellaneous tweets. On the other hand, 33% of the deleted tweets in the House of Representatives were legislative, followed by 24% of tweets containing errors, 21% that were informational, 9% that were combative, 8% that were personal, 3% that were miscellaneous, and only 1% which were unprofessional.

However, as expected, the majority of deleted tweets that were negative in nature, including combative and unprofessional tweets, were more likely to be deleted by Republican Congress members, as shown in Table 3. Eleven percent

of combative tweets and 6% of unprofessional tweets were deleted by Republicans, compared to the 5% of combative tweets deleted by Democratic members and the 3% of unprofessional tweets deleted by the Democrats. Also as expected, Republicans deleted more legislative tweets, 32%, while 29% were deleted by Democrats. On the other hand, Democrats deleted more personal, informational, and miscellaneous tweets, as well as tweets containing errors. Democrats only deleted 1% more personal tweets, with 14% compared to the 13% deleted by Republicans, and 8% more informational tweets than the 20% by Republicans with 28% informational tweets. They also only deleted 1% more miscellaneous tweets than Republicans, with 5% of miscellaneous tweets deleted by Democratic members, and 1% more tweets that contained errors, deleting 16%, compared to the 15% deleted by Republicans.

Independents are also more likely to delete legislative and combative tweets, with 41% of their deleted tweets consisting of legislative tweets, and 24% being combative. Additionally, 22% of tweets deleted by Independents contained an error, 11% were informational, and 3% were personal. However, deleted tweets by Independents only account for 18 of the 500 deleted tweets in the sample, and thus, does not accurately reflect, and cannot be compared to, the findings.

Table 3

*Nature of Deleted Tweets by Party**

	Legs.	Combative	Personal	Info.	Misc.	Unprofessional	Error
1. Republican	32%	11%	13%	20%	4%	6%	15%
2. Democrat	29%	5%	14%	28%	5%	3%	16%
3. Independ.	41%	24%	3%	11%	0%	0%	22%

*By Percentage

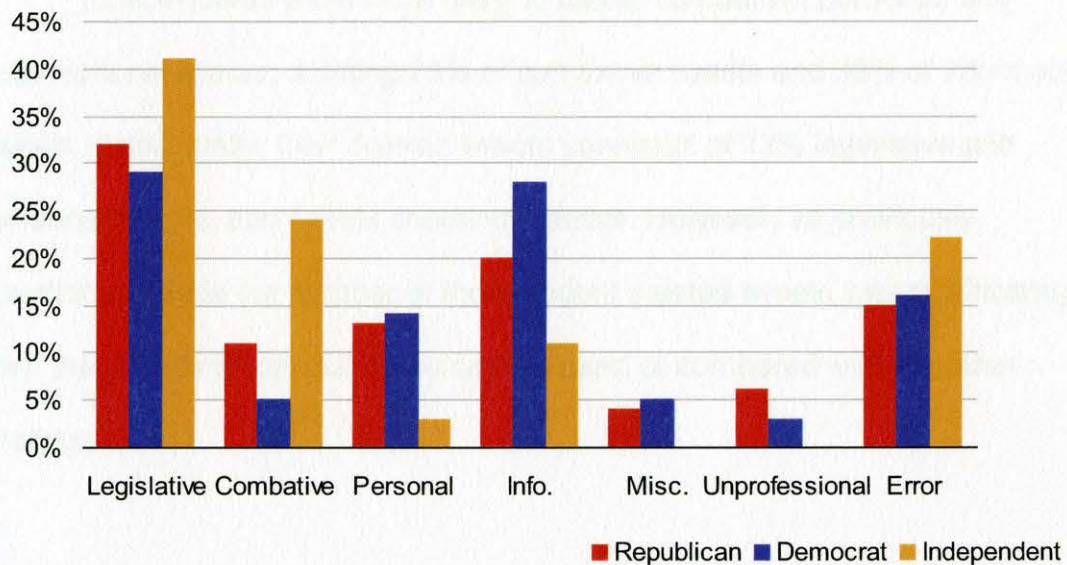
**Significant $p < 0.1$ 

Figure 3. Nature of Deleted Tweets by Party. Illustrates the percentage of deleted tweets by nature for Republicans (red), Democrats (blue), and Independents (yellow).

When looking at the first 100 deleted tweets on Politwoops (Table 4), these findings moderately change with Republicans deleting more legislative and combative tweets, as well as tweets containing errors, and Democrats deleting more personal, informational, and miscellaneous tweets. Republicans' deleted tweets consisted of 36% legislative tweets, 8% combative tweets, and 21% tweets containing errors, compared to the 28% of legislative tweets, 5% combative tweets, and the 18% of tweets containing errors that the Democrats deleted. While Democrats' deleted tweets consisted of 13% personal, 30% informational, and 3% miscellaneous tweets, compared to the 8% of personal tweets, 22% informational, and 2% miscellaneous tweets deleted by Republicans. For both the Republicans and the Democrats, deleted unprofessional tweets counted for only 2% of their deleted tweets.

Independents were more likely to delete combative, personal, and informational tweets, deleting 25% of combative tweets and 36% of informational tweets. Additionally, their deleted tweets consisted of 13% legislative and personal tweets, and tweets containing errors. However, as previously mentioned, since the number of Independent deleted tweets was significantly low, these findings cannot be accurately used or compared with the other findings.

Table 4

*Nature of The First 100 Deleted Tweets by Party**

	Legs.	Combative	Personal	Info.	Misc.	Unprofessional	Error
1. Republican	36%	8%	8%	22%	2%	2%	21%
2. Democrat	28%	5%	13%	30%	3%	2%	18%
3. Independ.	13%	25%	13%	36%	0%	0%	13%

*By Percentage

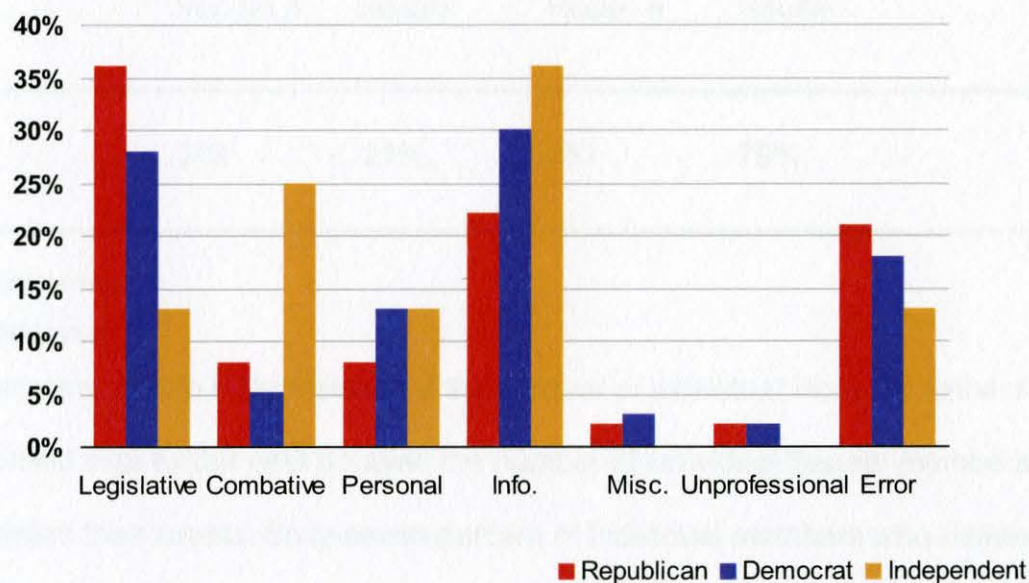
**Significant $p < 0.1$ 

Figure 4. *Nature of First 100 Deleted Tweets by Party.* Illustrates the percentage of the first 100 deleted tweets on Politwoops by nature for Republicans (red), Democrats (blue), and Independents (yellow).

When it comes to deleted tweets by Congress members, the results from this study support the hypothesis that as a result from Representatives tweeting more than Senators, Representatives would be more likely to delete tweets on Twitter. As shown in Table 5, out of the 4,085 deleted tweets by Congress since May of 2013, the House of Representatives deleted almost 60% more tweets than the Senate, with the House deleting 79% of the deleted tweets, around 3,235 tweets, compared to the 21% of tweets the Senate deleted, around 850 tweets.

Table 5

*Deleted Tweets by Congress Chamber**

Senate n	Senate	House n	House
249	21%	251	79%

*By Percentage

**Significant $p < 0.1$

Moreover, Table 6 illustrates that the number of individual House members who deleted their twitter post doubled the number of individual Senate members who deleted their tweets. Sixty-seven percent of individual members who deleted the 500 deleted tweets in the sample were House members, with 143 members. Only 33%, 72 of the individuals, were Senators.

Table 6

*Members Who Deleted Tweets by Congress Chamber**

Senate n	Senate	House n	House
72	33%	143	67%

*By Percentage

**Significant $p < 0.1$

When it comes to deleted Twitter post by political party, the hypothesis that Republicans, who like Representatives, tweet more than Democrats, would be more likely to delete tweets on Twitter, was also supported by the findings. Out of the 500 deleted tweets by Congress that were observed, slightly more than half of the tweets, 53.6% were deleted by Republicans, with 267 tweets (see Table 7). In comparison, Democrats deleted 42.8% of the tweets, 215 tweets, and Independents deleted a mere 3.6%, with only 18 tweets. These findings are consistent when looking at the deleted tweets for each Congressional chamber. In the Senate, Republicans led Democrats in deleted tweets by almost 20%, with Republicans deleting 56% of tweets, compared to 37% by Democrats, with Independents deleting a mere 7% of the deleted tweets in the Senate. In the House of Representatives 51% of deleted tweets were by Republicans, with the remaining 49% of deleted tweets by Democrats.

Table 7

*Total Deleted Tweets by Party**

	Republican n	Republican %	Democrat n	Democrat %	Independ. n	Independ. %
1. Congress	268	53.6%	214	42.8%**	18	3.6%
2. Senate	139	56%	92	37%	18	7%
3. House	129	51%	122	49%	0	0%

*By Percentage

**Significant $p < 0.1$

Additionally, the study found more individual Republican members deleted tweets from Twitter than Democratic and Independent members. Out of the 215 individual congressional members who deleted tweets in the sample, 53% (114 members) were Republican. In comparison 46.5% (100 members) were Democrats, and a mere .5% (one member) was an Independent, as shown in Table 8. In the Senate, 56% of members who deleted tweets were Republican, while 43% were Democrat, and 1% were Independent. In the House, Republicans made up 52% of individual members who deleted tweets, compared to the 48% of Democrats. These findings were similar for both the Senate and the House of Representatives. Fifty-six percent of Republicans in the Senate, 40 members, deleted Twitter posts, compared to the 43% of Democrats, and 1% of Independents, while, 52% of Republicans and 48% of Democrats in the House deleted tweets.

Table 8

*Members Who Deleted Tweets by Party**

	Republican n	Republican %	Democrat n	Democrat %	Independ. n	Independ. %
1. Congress	114	53%	100	46.5%	1	0.5%
2. Senate	40	56%	31	43%	1	1%
3. House	74	52%	69	48%	0	0%

*By Percentage

**Significant $p < 0.1$

The results of this study, however, did not support the third hypothesis that freshman members of Congress would be more likely to delete tweets than senior members. Instead, as displayed in Table 9, senior members of Congress, not freshman members, were more likely to delete their tweets from Twitter, followed by junior members. Of the 500 deleted tweets, 43.8% of the tweets were deleted by senior members, while 37.4% were deleted by junior members, and only 18.8% were deleted by freshman members. Deleted tweets by senior Senate members was only 4% greater than the number of deleted tweets by junior members, and significantly greater than the 10% deleted by freshman members, with 47%. Although, senior members deleted less than 10% more tweets than junior and freshman members in the House of Representatives, with 39% of deleted tweets, compared to the 31% of tweets deleted by junior members and 26% deleted by freshman members.

Table 9

*Total Deleted Tweets by Tenure**

	Freshman n	Freshman	Junior n	Junior	Senior n	Senior
1. Congress	94	18.8%**	187	37.4%**	219	43.8%
2. Senate	25	10%	106	43%	118	47%
3. House	69	26%	81	31%	101	39%

*By Percentage

**Significant $p < 0.1$

Additionally, as shown in Table 10, while the number of individual freshman and junior members who deleted tweets from Twitter was closer to that of the senior members who deleted tweets, more individual senior members deleted tweets. 39% of Congress members included in the sample were senior members compared to 37% of junior members, and 23% of freshman members. In the Senate, only 7% more seniors deleted tweets than junior members, with 45% of members, while 18% of freshman members deleted tweets. However, individual junior members deleted more tweets in the House of Representatives than both the senior and freshman members, with 37% of members deleting tweets compared to the 36% of senior members and 27% of freshman members. It should be pointed out though that, out of the 215 individual members in the sample, 11 of the members' tenure classification changed during the study, eight members in the Senators and three Representatives.

Table 10

*Members Who Deleted Tweets by Tenure**

	Freshman n	Freshman	Junior n	Junior	Senior n	Senior
1. Congress	53	23%	84	37%	89	39%
2. Senate	14	18%	30	38%	36	45%
3. House	39	27%	54	37%	53	36%

*By Percentage

**Significant $p < 0.1$

The findings were also consistent with the fifth hypothesis of this study: male congressional members would delete more tweets on Twitter than female members (see Table 11). Seventy-eight point six percent of the 500 deleted tweets by Congress members were deleted by men, while only 21.4% were deleted by women. In the Senate, an average of 82% of the deleted tweets were by male members, compared to the 18% by female members. While the number of female deleted tweets increased in the House of Representatives, the male members still deleted 52% more tweets than the females, with 73%, compared to the 24% deleted by females.

Table 11

*Total Deleted Tweets by Gender**

	Male n	Male	Female n	Female
1.Congress	393	78.6%	107	21.4%**
2.Senate	204	82%	45	18%
3.House	189	73%	62	24%

*By Percentage

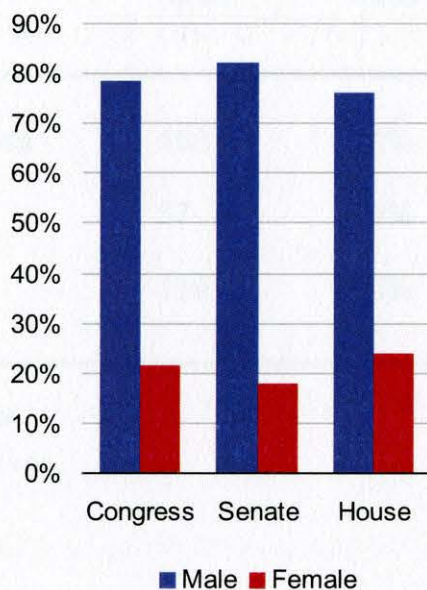
**Significant $p < 0.1$ 

Figure 5. Deleted Tweets by Gender. Illustrates the percentage of deleted tweets by males (blue) and females (red) in Congress, the Senate, and the House of Representatives.

Furthermore, Table 12 illustrates that the number of individual male congressional members who deleted tweets from Twitter significantly outnumbered female members who deleted tweets. Of the 215 congressional members who deleted tweets in the sample, 77% were male and only 23% were female. Seventy-nine percent of the 72 Senators who deleted tweets were male, while only 21% were female. In the House, again, the number of female members who deleted tweets increased slightly to 24%; however, the male members still outnumbered the females by 52%, with 76%.

Table 12

*Members Who Deleted Tweets by Gender**

	Male n	Male %	Female n	Female %
1.Congress	166	77%	49	23%
2.Senate	57	79%	15	21%
3.House	109	76%	34	24%

*By Percentage

**Significant $p < 0.1$

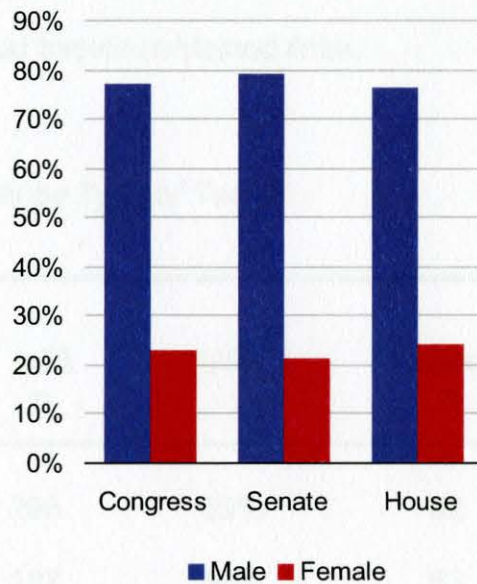


Figure 6. Members Who Deleted Tweets by Gender. Illustrates the percentage of individual members who deleted tweets by males (blue) and females (red) in Congress, the Senate, and the House of Representatives.

Lastly, consistent with hypothesis 7, the study found, as shown in Table 13, that tweets containing URL links are more likely to be deleted by members of Congress, regardless if they are by Senators or Representatives, while tweets deleted by members are less likely to be retweets. Tweets containing URL links account for 59% of all deleted tweets by Congress, with 295 deleted tweets, containing a link. Representatives tend to delete tweets containing links slightly more than the Senate, with the Representatives deleting 158 tweets with links, out of 250, accounting for an average of 63% of their deleted tweets, while links contribute to 55% of Senate's deleted tweets. Moreover, more than half of all Republican, Democratic, and Independent deleted tweets contained a URL link, displayed in Table 14. Out of the 500 tweets in the sample, an average of 59% of

Republican and Democratic tweets contain a URL link, while 55% of Independents deleted tweets contained links.

Table 13

*Total Deleted Tweets by Type of Tweet**

	URL n	URL	Retweets n	Retweets
1.Congress	295	59%	92	18.4%**
2.Senate	137	55%	53	21%
3.House	158	63%	39	16%

*By Percentage

**Significant $p < 0.1$

Table 14

*Deleted Tweets Containing URL Links by Party**

	Party n	URL n	URL
1.Republican	268	159	59%
2.Democrat	214	126	59%
3.Independ.	18	10	55%

*By Percentage

**Significant $p < 0.1$

On the other hand, a relatively small number of retweets were deleted from Twitter by Congress. Only 92 out of 500 deleted tweets by Congress were retweets, accounting for only 18.4% of deleted post. Similarly, only 38 deleted tweets by Representatives were retweets, 16% of their deleted tweets, while retweets contributed slightly more to deleted tweets by the Senate with an average of 21% of retweets (53 tweets), being deleted. However, the low numbers of deleted retweets may be related to the fact that members of Congress do not retweet very often. Additionally, retweets only accounted for 21% of Republican deleted tweets, 16% of Democratic, and 17% of Independent deleted tweets.

The URL link and retweet findings for the 500 deleted tweets in the sample were consistent with the sum of links and retweets found in the first 100 deleted tweets posted on Politwoops. Table 15 reveals that 67% of the 100 tweets contained a URL link, with 12% of the Senates' deleted tweets, and 15% of the House of Representatives' deleted tweets containing a URL Link. Furthermore, of the first 100 deleted tweets, 68% of Republican deleted tweets, and 71% of Democratic deleted tweets contained URL links, as shown in Table 16.

Table 15

*Total First 100 Deleted Tweets by Type**

	URL n	URL	Retweets n	Retweets
1.Congress	67	67%	5	5%
2.Senate	29	12%	4	2%
3.House	38	15%	1	0%

*By Percentage

**Significant $p < 0.1$

Table 16

*First 100 Deleted Tweets Containing URL Links by Party**

	Party n	URL n	URL
1.Republican	59	40	68%
2.Democrat	38	27	71%
3.Independ.	3	0	0%

*By Percentage

**Significant $p < 0.1$

Only 5% of the first 100 deleted tweets, however, were retweets, As Table 15 reveal, retweets only account for an average of 2% of the Senates' deleted tweets, and a mere 0% of the House of Representatives deleted tweets.

However, despite only contributing to an average of 3% of both the Republican and Democratic deleted tweets for the first 100 tweets, retweets account for 66% of the Independents' deleted tweets.

Table 17

*First 100 Deleted Retweets by Party**

	Party n	Retweets n	Retweets
1. Republican	59	2	3%
2. Democrat	38	1	3%
3. Independ.	3	2	66%

*By Percentage

**Significant $p < 0.1$

Finally, the results in Table 18 show that Congress members tend to delete their tweets from Twitter fairly quickly, with the majority of deleted tweets by members being deleted within seconds and minutes of being posted on Twitter. The majority of tweets, 44.6%, were deleted within 1 to 59 minutes, followed by 27.2% of tweets that were deleted within 1-59 seconds. Additionally, 15.4% were deleted within 1 to 23 hours, 9.4% were deleted within 1 to 6 days, and 3.4% within weeks.

Table 18

*Time Duration of Deleted Tweets**

Seconds	Minutes	Hours	Days	Weeks
27.2%	44.6%	15.4%	9.4%	3.4%

*By Percentage

**Significant $p < 0.1$

Moreover, as displayed in Table 19, the majority of legislative tweets are deleted within minutes, with 43% of tweets being deleted 1-59 minutes after they were posted, 29% within seconds, 13% in hours, 10% within days, and 5% within weeks. Similarly, 47% of combative tweets were deleted within minutes, followed by 26% within seconds, 10% within days, and 9% within hours, and 7% within weeks. Personal tweets are 41% more likely to be deleted in minutes, followed by 26% deleted in seconds, which is only 3% more than the 23% deleted within hours, while 6% are deleted within days, and 3% within weeks. The time duration for informational tweets was 46% within minutes, 27% in seconds, 13% after days, 12% within hours, and only 2% after weeks. More than half of miscellaneous tweets, 58%, were deleted within minutes of being posted on Twitter, with 23% being deleted after seconds, 13% within hours, and only 3% were deleted after days and weeks. Forty-one percent of unprofessional tweets were deleted within minutes compared to the 25% deleted after seconds and the 19% deleted within hours of being posted, followed by 13% deleted in days and

3% deleted in weeks. However, unlike the other categories of tweets, tweets containing errors are more likely to be deleted within seconds of being tweeted with 40%, compared with 38% within minutes, 13% within hours, 8% after days, and 2% after weeks.

Table 19

*Time Duration of Deleted Tweets by Nature of Tweet**

	Seconds	Minutes	Hours	Days	Weeks
1.Legislation	29%	43%	13%	10%	5%
2.Combative	26%	47%	9%	10%	7%
3.Personal	26%	41%	23%	6%	3%
4.Informational	27%	46%	12%	13%	2%
5.Misc.	23%	58%	13%	3%	3%
6.Unprofessional	25	41%	19%	13%	3%
7.Error	40%	38%	13%	8%	2%

*By Percentage

**Significant $p < 0.1$

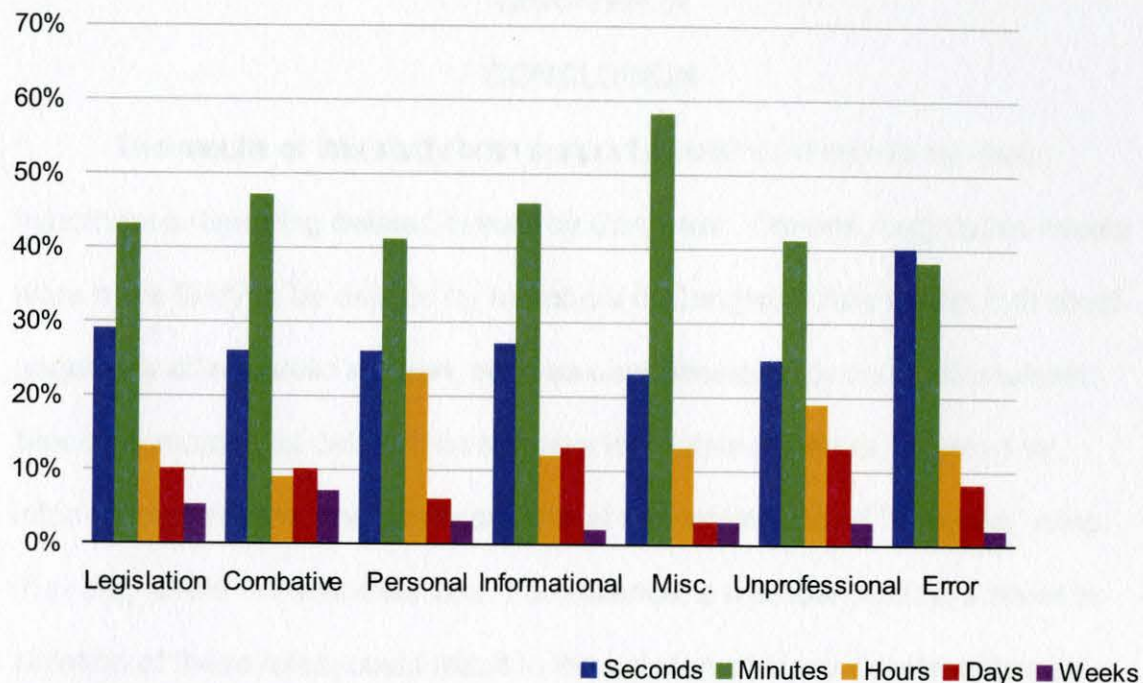


Figure 7. Time Duration of Deleted Tweets by Nature of Tweet. Illustrates the percentage of time duration by the nature of deleted tweets in seconds (blue), minutes (green), hours (yellow), days (red), and weeks (purple).

CHAPTER VI

CONCLUSION

The results of this study both support as well as disprove my main hypotheses regarding deleted tweets by Congress. For one, Legislative tweets were more likely to be deleted by members of Congress than tweets that could negatively affect public support, such as unprofessional or combative tweets. Since the majority of deleted tweets were legislative in nature, followed by informational tweets, one can assume that the congressional "Franking" rules may play a role in these deletions. For instance, a member posting a tweet in violation of these rules, could result in the deletion of those tweets, either by Congress, or the member himself to avoid sanctions.

Furthermore, the fact that the third most deleted tweets on Twitter by Congress members were due to errors, are a reminder that members of Congress are human too and often make mistakes. Additionally, one can assume that errors can also be related to public support, since members of Congress do not want to portray themselves as uneducated and under qualified to represent their constituents. Although, some of the deleted tweets due to error were of duplicate tweets, which may not actually have been an error, but instead could be strategic tweets throughout the day to ensure that all of their constituents had a chance to see it. It is also important to note here that the deleted tweets in the sample, which were placed in each category may not have, in fact, actually been deleted for that reason. However, the tweets were placed in categories that it was believed they belonged in to explain why they might have

been deleted, after observing both the deleted tweets and the tweets posted on each Congress member's Twitter.

Second, as expected, this study found that the nature of deleted tweets by Congress members differ in regard to the members' political party, with Republicans deleting more negative tweets and Democrats deleting more personal tweets. This suggests that political parties influence the types of tweets that are posted on and deleted from Twitter. These findings may also reveal reasons behind members' and parties' use of Twitter, as the majority of Republican deleted tweets were more job specific, while the Democrats' were more personal. One explanation, as Williams and Gulati (2010), and David All (Who's Winning, 2009) have suggested, may be that Republicans use Twitter more as an alternative means of communication to inform and rally support for their policies when they don't receive sufficient media coverage. Another explanation may be Hemphill et al.'s theory (2013) that allowing members of Congress to communicate directly with their constituents, through social media, impacts political parties' efforts to present a consistent brand.

The findings also shed light on which members of Congress are more likely to delete tweets on Twitter and reveals a relationship between the activity level of Congress members on Twitter and deleted tweets. Members who were found to be more active on Twitter, such as Representatives, Republicans, males, and senior members, were also found to delete more tweets from Twitter. Thus, one could conclude that the higher the activity level on Twitter by a member of Congress, the more likely they are to delete tweets.

Additionally, the results revealed, as argued, that Twitter tweets containing links are more likely to be deleted in comparison to retweets, since 59% of Congress' tweets contain URL links, and members rarely retweet. However, the 18.4% of deleted retweets in the study may not accurately reflect the number of retweets a member deleted themselves, for instance, if a member retweets another user's tweet, and the original tweet is deleted, then the member's retweet is unintentionally deleted.

Lastly, a slight relationship between deleted tweets and time duration was also found, with the majority of deleted tweets being deleted within seconds or minutes of being tweets. This may suggest that members accidentally post tweets too soon, make a mistake, instantly regret the post, or simply just change their minds. Yet the 12.8% of tweets that were deleted after days or weeks of originally being tweeted raises a question: why delete a tweet after so long?

Surprisingly, when comparing the results of the first 100 deleted tweets on Politwoops, to the 500 deleted tweets in the sample, the findings are almost identical. The deleted tweets by Congress did not become more legislative in nature as more people became aware of their archived deleted tweets on Politwoops, as one may assume. Instead, the majority of deleted tweets were legislative and informational. More specifically, they dealt with the Balanced Budget Act. In fact, the findings may suggest that members deleted more legislative and informational tweets, than personal, unprofessional, or combative tweets, when Politwoops was still new and barely discovered. However, the study did find one difference between the first 100 deleted tweets on Twitter and

the total sample. Interestingly, juniors, not seniors, deleted the majority of the tweets by 4%.

Nevertheless, this study does contain some weaknesses and limitations. For instance, it must be kept in mind that some of the 500 deleted tweets used for this study were originally posted during a time period when major events were affecting Congress; thus, they may not clearly represent tweets congressional members generally post or delete. Similarly, the span of time the deleted tweets were posted differed for each house, which may affect the type of tweets that were posted by the House of Representatives and the Senate, depending on what was going on in the political world at the time. The study also did not differentiate between tweets by professional or personal Twitter accounts. Approximately 330 Congress members have more than one account; however, in order to accurately calculate the individual members included in the data sample, I combined all multiple accounts into one. This may have also affected the nature of the deleted tweets used, since members' tweets are more likely to be legislative on their professional account and more personal on their personal account.

Additionally, one must keep in mind that most members of Congress who have Twitter have delegated their accounts to their staff members to maintain. Many members may never personally engage in interaction on Twitter, but pre-write tweets that are scheduled to be tweeted throughout the week. Thus, one way to further the study of Congress and deleted tweets on Twitter is to research whether tweets written by staff members have an effect on which tweets are

deleted, and whether tweets written by members of Congress staff are deleted more often than tweets posted by Congress members themselves. According to Professor Brown at Brigham Young University, a rule of thumb to determine who posted the tweet is that "the actual members of Congress tweet about things like hamburgers and football games, when it's the staff, the messages are all links to speeches and interviews. The strategy is to simply help the local press stay on top of the schedule" (as cited in Hadfield, 2011, para. 11). This may explain why so many tweets that are posted and deleted on Twitter contain URL links.

In conclusion, while the nature of this research is primarily exploratory the results of this study contribute to the recent increasing study on Congress and social media networks, since these findings could be used to further extend research regarding Congress members' use of Twitter. For instance, by revealing the types of tweets most likely to be deleted by each political party, and which Congress members were more likely to delete tweets, we may gain a better understanding of why members delete tweets. However, further research is needed to determine the exact reason Congress members delete their tweets from Twitter. For starters, determining whether tweets written by congressional staff members affect what tweets get deleted, and if they are deleted more than tweets posted by actual members, may further explain the reasoning behind deleted tweets. Moreover, this study raises an important question: since tweeting and communicating with constituents on Twitter is supposed to promote government transparency, does the deletion of tweets by Congress members affect transparency and trust in government?

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