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AN ELECTRONIC THEORY OF DEMOCRACY:  
HOUSE MEMBERS ON THEIR COMPUTERS

By

Doug Murdoch

B.A. Friends University, 2013

A Thesis

Submitted to the Faculty of the  
College of Arts and Sciences of the University of Louisville  
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for the Degree of

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University of Louisville

Louisville, Kentucky

May 2015



AN ELECTRONIC THEORY OF DEMOCRACY:  
HOUSE MEMBERS ON THEIR COMPUTERS

By

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Thesis Approved on

April 24, 2015

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## ABSTRACT

### AN ELECTRONIC THEORY OF DEMOCRACY: HOUSE MEMBERS ON THEIR COMPUTERS

Doug Murdoch

April 25, 2015

This paper analyzes the use of the Twitter use of all House of Representative members in the 111<sup>th</sup> Congress. The data used is a secondary dataset originally created by Gainous and Wagner (2014). This paper aims to demonstrate the methods members of Congress to create a public image. In traditional campaign literature, campaign statements are divided into four mutually exclusive categories: positive competitive, negative competitive, substantive, and information dissemination. This paper seeks to add a fifth category to the discussion, the presentation of self. The presentation of self is not a traditional form of campaigning. Rather, it is the strategy used to maximize the personal vote. This paper investigates the degree to which Members of Congress use Twitter for these quasi-campaigning reputation building exercises, and seeks to find ways to predict the circumstances that cause Members of Congress to use Twitter for traditional campaigning purposes, and which circumstances cause members of Congress to use Twitter for the presentation of self. For simplicity, this paper simplifies the four

aforementioned campaign strategies into three, combining information dissemination and substantive messaging and calling this traditional campaigning. This paper considers, age, gender, geographic region, district competitiveness, experience and salience as explanatory variables. This paper finds candidates use Twitter significantly more for negative competitive messaging when the candidate is unsafe in their reelection outcome and when their tweets reach a larger audience. Further, this paper finds that candidates use traditional campaigning significantly more when their tweets reach a large audience.

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## CHAPTER ONE: INTRODUCTION

Members of Congress are often portrayed as being hyper partisan, calculating, and constantly campaigning. Two seminal works in the American Politics literature argue that candidates are not always purely rational vote-share maximizers (Mayhew 1974; Fenno 2003).<sup>1</sup> The theory that members of Congress find, “it is only reasonable [to] believe that whatever it was that won [the election] last time is good enough to win the next time” (Mayhew 1974: 47) is central to this paper. However, Mayhew’s hallowed words, combined with the reality that people are becoming more engaged in politics (Abramowitz 2010), and incumbents are more likely to be challenged by a competitive primary challenge (Boatright 2014) leads to an interesting intersection in the American Politics literature.

Does the decreased cost of political engagement in politics—and subsequent polarization—force the politician’s calculus to become more of a vote share maximizer?<sup>2</sup>

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<sup>1</sup> Mayhew does note that members of Congress are purely interested in reelection. Further, as Fowler and Smirnov (2007) find incumbent behavior does not significantly change with the vote margin. Further, Fenno (2003) makes the distinction between an expansionist phase and a protectionist phase in a member’s tenure. The expansionist phase is when members are trying to gather as much support as they can from whomever they can convince to support them. Members do this at the risk of alienating their core supporters. The protectionist phase, however, is the phase where members are almost content with their core of supporters and the members focus their concerns on their personal goals in Congress.

<sup>2</sup> It could be argued that Putnam (2000) has pointed out that civic engagement is on the decline and use that as an argument against any major effect on the politician’s calculus. However there are two major problems with this argument. The first criticism is on the grounds of definitions Burger (2011) notes that civic engagement is not a very useful term to use to study citizens’ attention to politics as it is overly broad. Second, as

If so, we would expect members of Congress to increase their energy in advertising, credit claiming, and position taking (Mayhew 1974: 73). Further, if the increased probability of a competitive primary challenger changes congressional behavior, how might a political scientist model the change? Finally, the most important research agenda for scholars of American Politics to undertake is one which acknowledges the influence of the Internet on political communication. The Internet has decreased the information cost that was keeping the public uninformed, while simultaneously decreasing the cost of campaigning.<sup>3</sup> The Internet has obviously both played a role in the increased polarization among the public, and has helped potential primary challengers. However, it is much less clear in the literature how the Internet affects congressional behavior.

This paper seeks to answer if we can determine a change in congressional behavior by Members of Congress's Twitter accounts. If this reading of Mayhew and Fenno are correct, we will find that over the course of a congressional session not a great deal of energy is spent on gaining a relative advantage over their opponents by attacking their opponents or flaunting their qualifications.<sup>4</sup> Rather, most of the time spent on the Internet by members of Congress will be more close to the median user's internet practices. Most of the time, we expect, the members of Congress will be tweeting about their families, pets, and hobbies, rather than attacking their opponents on esoteric policy positions. I therefore expect to be able to code a significant amount of the tweets made by politicians as what

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Abramowitz (2010) notes, citizens are becoming more engaged because of instant access to partisan media.

<sup>3</sup> Campaigning will be defined as spending time and energy on the three activities described by Mayhew (1974) and mentioned above—advertising, credit claiming, and position taking.

<sup>4</sup> Henceforth, this is described as “competitive campaigning.” Chapter 3 has a detailed explanation into the different types of competitive campaigning.

Fenno (2003) calls *the presentation of self*.<sup>5</sup> I argue that politicians find more utility in this quasi-campaign reputation building method of tweeting, than using their Twitter as a pulpit to espouse their differences with their opponent.<sup>6</sup> The concept of candidate evaluation based on personal characteristics is not a new theory in the Political Science literature (Lodge, McGraw and Stroh, 1989; Fiorina 1981; Cain, Ferejohn and Fiorina 1987; 1983; Cover 1980; Miller, Wattenberg and Malanchuk 1986). This paper is investigating the degree to which candidates form their campaigning online about their personal characteristics.

To determine the share of candidate centered messaging, and how it relates to other forms of campaigning, I create a content analysis of all tweets made leading up to the election by members of Congress in the 111<sup>th</sup> congressional session. The dataset starts 6 months prior to the election and continues until the Midterm election in November 2010. I will first code them in a way to determine the share of campaign statements made, compared to the share of statements made in an attempt to present oneself. I will also seek to determine whether the use of Twitter is used to replace traditional forms of campaigning in geographical regions. This is necessary to study because it is important to understand what costs each member of Congress weighs when constructing their digital persona.<sup>7</sup> Further considerations are made for the effect that gender, age, district competitiveness, candidate salience, and vote shares.

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<sup>5</sup> Fenno borrows this term from psychology literature, specifically Goffman (1959).

<sup>6</sup> Otherwise put, Twitter is significantly used for reputation building activities. In the frame of the present paper, that includes most of what is captured under the variable “Traditional Campaigning” and is precisely what is captured under the variable “Presentation of Self.”

<sup>7</sup> Although Fenno does not explicitly talk about geography, in the section where he discusses the presentation of self, he talks about members of Congress getting the most bang for their buck when describing one member of Congress’s decision to go on a photo op instead of shaking hands at a festival.

This project tests two different hypotheses. The first deals with candidate salience and messaging strategy. I test to see if members who are more visible online use Twitter to avoid issue oriented tweeting.<sup>8</sup> To test this, I hypothesize that high salience members use Twitter more for competitive messaging. Thus, high salience members attack their political adversaries and present themselves as strong partisan leaders more often than more marginal, less salient members. I ultimately reject this hypothesis. The data show little relationship between salience and competitive messaging. The results show that highly visible candidates use Twitter to attack their opponents and for traditional campaigning. However, if the model makes the distinction for only competitive campaigning—rather than for positive competitive and negative competitive—I find no significant results for competitive campaigning and reject hypothesis 1.

The second hypothesis I test is to determine whether the safety of the district has any determination on Twitter style. There is a strong literature, as discussed in Chapter 2, suggesting that district competitiveness does cause members to maximize their appeal based on their personal characteristics. However, the data do not support this argument. The data show no relationship between district safety and the presentation of self. However, the data do show a relationship between district safety and negative competitive messaging, a relationship that only has a weak support in the literature.

This paper shows that Twitter has not caught up to traditional candidate messaging tools, such as mass mailers, press releases, and email lists. Despite all logic, this paper does

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<sup>8</sup> When discussing the visibility of a candidate I use the term “candidate salience.” In chapters 2 and 3 I describe that salience is measured through PageRank, which is a metric of how often people link to a certain webpage.



not show that member use Twitter to enhance the interactions with constituents adding, what Fenno (1974) describes as, “the personal touch.” Members of Congress generally use Twitter similarly. When a candidate has a high degree of visibility, or high candidate salience, they tend to use Twitter for traditional campaigning and negative messaging. This is a consistent finding with Gainous and Wagner’s (2014) findings about the control of information with the by the use of external links and retweets. However, Twitter as a campaign tool is still in its infancy and it is reasonable to expect that it will continue to evolve and researchers in the future will find results consistent to the literature.

### *Plan of the Thesis*

The argument of the thesis is as follows: Chapter 2 provides a literature detailing current studies in relevant subfields of Political Science, and develops into the theory. Under the section “hypothesis definition” I give an extensive overview of the immediately relevant literature to the hypotheses, and provide detailed explanations of the results from the literature.

For hypothesis 1, the effects that candidate salience has on campaign messaging, I draw from the literature on ambiguousness and candidate strategy. This literature leads to the hypothesis that candidates who reach a larger audience—candidates with a higher salience—are more likely to use Twitter for competitive campaign strategies. For hypothesis 2, the effects that district competitiveness has on campaign messaging. I draw from literature that looks explicitly into these exact effects. I thus draw the conclusion that marginal members are more likely to use the presentation of self.

Chapter 3 deals with the definitions and methodology used in the thesis. In this chapter I define each variable and provide summary statistics. It is useful to provide a brief overview of the 4 variables I created. First, I make the classification of positive competitive campaigning, for a tweet to be considered positive competitive, it must be an attempt to frame the member as the holder of momentum or success. Positive competitive tweets make the member look more official as an office holder. The second classification I use is negative competitive. This classification counts the frequency that a member attacks their opponent, opposing party, opposing party's leadership, or another entity they find unfavorable. The third, and most often used, classification of tweet is traditional campaigning. Traditional campaigning occurs when a member uses information dissemination or substantive issue-oriented activities. I frame this in Mayhew's (1974) classic three electoral activities: Credit claiming, position taking, and advertising. The final classification is the presentation of self, which is an attempt to connect with the constituency, either through personal characteristics or casework.

Chapter 4 provides a more detailed summary statistic, where I find a number of positive relationships. For example, I find that younger members and more junior members are more likely to use positive competitive messaging. However, this relationship disappears when the variable tested for youth is changed to political experience. Similarly, I find Democrats significantly more likely to use competitive campaigning than their Republican counterparts.

Chapter 4 is also where I test the hypotheses. Hypothesis 1 I reject, as competitive campaigning is not used significantly more by members with a higher salience. Although, in Chapter 5, I suggest that the hypothesis might have been ill-construed and that my results

might actually corroborate the literature. I also reject hypothesis 2, as marginal members are actually more likely to use negative competitive messaging.

Finally, Chapter 5 is the concluding chapter. In this chapter I state potential limitations to the models and the scope of the project. I then suggest how this project fits in with the rest of the Political Science literature. I also suggest further avenues for research related to this topic.

## CHAPTER TWO: LITERATURE REVIEW

### ***Introduction:***

The literature review is a vital part to understand the basic theories that develop the model. In the literature review, I am primarily concerned with describing all theoretically relevant literature. This includes theories of political communication, political information, and theories of Internet politics. I break this chapter down into three sections, each one narrowing down to a more specific literature. The first section broadly details political communication online, and theories of how campaign information is processed by the media. In the next section, I discuss the significant literature that develops the theory. This includes a detailed look at the origins of the presentation of self, and candidate consciousness, followed by relevant definitions for the rest of the project. This chapter then concludes with an explicit stating of my hypotheses, and a close analysis of the immediately relevant literature.

### ***Informative Literature:***

The media model modern political scientists are tasked with studying are not as simple as the model Zaller (1992) studied. Modern scholarship notes that people seek information that they agree with politically, and media sources are less likely to produce stories that go against their audience's priors even if the media source believes it to be true (Arceneaux and Johnson 2013; Gentzkow and Shapiro 2006; Brundige and Rice 2009).

The grouping of consumers to partisan niche news sources by their priors has created, or exacerbated, polarization on the non-elite level of politics (Sunstein 2009; Abramowitz 2010; Ensley 2012).<sup>9</sup> This is a stark contrast to the two-sided distribution of information from the previous media model, which left non-elites apathetic and non-polarized (Converse 1964).

Gainous and Wagner (2014: 38) note that new models of media, specifically social media, allow consumers to create an “information bubble” where they do not ever have to hear a dissenting opinion. The bubble that consumers of political information reside challenges traditional candidate evaluation literature.<sup>10</sup> Ennsley (2012) notes that this information bubble provides incentives for candidates for public office to become more ideologically extreme on social media if there is sufficient ideological heterogeneity among their constituents. Ensley’s argument relies on the theory that divergence from the median voter increases mobilization of the core supporters.<sup>11</sup> Mobilizing core supporters is a tradeoff against attracting undecided voters; however, the payoffs of mobilizing core supporters outweigh the costs in an ideologically diverse district because there are fewer voters surrounding the median voter.

The link between media models and candidate messaging online is not immediately the consumer of the candidates’ messaging. Rather, it is more of a trickle down effect and the link lies with the ways the media itself uses candidates’ online communication. The literature on the media using candidate communication begins with Terkildsen, Frauke and

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<sup>9</sup> See Ensley (2012) for a theoretical look at how polarization is used in House Elections.

<sup>10</sup> For an analysis of traditional models of candidate evaluation, see Lodge, Steenbergen and Brau (1995).

<sup>11</sup> Downs (1957) made a similar argument about candidate positioning.

Ling (1998) who note that the media frames its coverage of events in the framework they are presented. Flowers, Haynes and Crespin (2003) provide a model of candidates using campaign releases for the purpose of media attention that corroborates Terkildsen, Frauke and Ling's account. Analysis for online research is not so clear cut. For online research, Hong and Nadler (2012) test the relationship between Twitter use and candidate salience. Using Twitter mentions as a measure for salience, their results show that the number of times a candidate uses Twitter does not have an impact on the candidate's salience. However, media mentions of the candidate increases candidate salience significantly.

The aggregate effects of online campaigning have been studied more thoroughly than political campaigning's effects on the overall media. Nevertheless, current studies on the Internet and politics do not provide a conclusive theory about the specific impact of the Internet. Nevertheless, two interesting studies show the motivations and efficacy of Twitter usage for campaigning. Peterson (2012) provides the first basic model of candidate communication on Twitter. Using data from the 111<sup>th</sup> Congress, Peterson shows that in the early stages of twitter Republicans were more likely to be active Twitter. In a similar study on Facebook, Gulati and Williams (2013) repeat a similar narrative. Younger candidates and marginal members are more likely to adopt Facebook as a means for campaigning. However, Gulati and Williams do not find a difference in party and Facebook adoption. Wagner, Gainous, and Holman (2014) show that Republican women use Twitter effectively to overcome negative perceptions about their candidacy.<sup>12</sup> Thus, Wagner et al find Republican women to be more active, more likely to attack, and more likely to find

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<sup>12</sup> It also must be noted that Gainous and Wagner (2014) find that out of power groups are more likely to adopt Twitter.

higher vote shares from of negative styles of tweeting. This finding corroborates Shogun's (2010) study that concludes that the minority party is more likely to use Twitter more frequently. Interestingly, Shogun predicts that the constant communication with the age of the Internet will lead to a higher turnover of high level staff members.

In Internet research's extreme infancy, Roberts, Wanta and Dzwo (2002) find that the media has agenda setting effects on electronic bulletin boards. They found that the discussion among individuals on electronic bulletin boards is heavily reliant on the issues the news media is reporting on. These results are so dated that they are only considered lightly as relevant to the present study. However, their research does beg for further, more updated research to be done on the subject: Does Twitter provide agenda-setting impact, or does the news media dictate the issues discussed online? Hong and Nadler's (2012) results suggest that news media still dictates the agenda, consistent with Roberts, Wanta and Dzwo (2002).

An important segue for scholars interested in social media are social networks. This, of course, is not social networks in the colloquial, online, sense. However, this literature discusses interpersonal networks. In a study of political participation online, Brundidge and Rice (2009) find that "the rich get richer."<sup>13</sup> The flow of information online is more likely to be used by those with higher socioeconomic status, Brundidge and Rice find by analyzing survey data. However, Brundidge and Rice suggest argue that online political discussion "contribute[s] slightly to the heterogeneity of political discussion networks" (Brundidge and Rice 2009: 154). If social networking sites create more

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<sup>13</sup> The name of their chapter, I am not citing a specific use of the term within the chapter.

heterogeneous social networks, there are potentially positive externalities. As Huckfeldt, Mendez and Osborn (2004) find that individuals with that witness more political disagreement—individuals who reside in heterogeneous networks—are more likely to have more informed opinions on political candidates.

An interesting study on social networks generalizable to social media, Ryan (2011) uses Lau and Redlawsk's (1997) study of correct voting, experiments to see how social networks can lead to a greater amount of correct voting. However, Ryan makes an important distinction from Lau and Redlawsk. Lau and Redlawsk roughly define *voting correctly* as making the same choice as one would under full information (Lau and Redlawsk 1995: 586). Ryan, on the other hand, defines voting correctly as the vote which receives the maximum payoff (Ryan 2011: 755). This may or may not be a problem depending on one's opinion on rational choice theory, as Ryan is assuming that a voter with full information would not chose to vote altruistically. The definition discrepancy does not have a significant impact on Ryan's results. Ryan's results were mixed. Informed partisans were most influenced by those with whom they were communicating and it was unclear if this had a positive or negative effect, where social networks helped uninformed partisans vote correctly.<sup>14</sup>

Nevertheless, in the context of the present project, it is irrational to consider the effect that Congressional tweeting has on discussion networks. Social networks of political discussion are far more complex than can be analyzed in the scope of this project. Families, friends, work relationships, and socioeconomic backgrounds are all unquantifiable in the

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<sup>14</sup> Ryan's results corroborate Abramowitz's (2010) argument about political engagement.



current context.<sup>15</sup> Thus, it makes most sense to look at the supply side—the Members themselves—as any argument over the actual effect on individuals would be spurious. Still, this literature is important, as it provides insight into communication based voter behavior.

Thus far, I have given a brief overview of the relationship between online campaigning and the media, along with a brief description of the consumption of the product of online campaigning and the media. For the present project, this is most useful for hypothesis 1—stated fully below—that investigates the relationship that the visibility of the candidate’s online persona has on the type of messaging utilized. The literature described above provides a brief understanding into what goes into the strategic calculations made by candidates.

*Specific literature:*

Discussion on the literature specific to the overall theory and the definitions made in chapter 3 must begin with a discussion on constituency contact. The defining works on constituency contact and constituency service are Fenno (2003, 2000). Fenno (2003)<sup>16</sup> uses a qualitative analysis of members’ communications with their constituencies. To make these inductions, Fenno traveled with many Members of Congress as they traveled in their districts. Fenno defines four different constituencies: Geographic, reelection, primary, and personal. The geographic constituency is the size and demographics of the constituency. In the perception of the Member of Congress, according to Fenno, the geographical

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<sup>15</sup> For an overview of social networks—different from social network websites, such as Twitter—see Zuckerman (2005) is the most comprehensive volume for these micro-level effects.

<sup>16</sup> I am using the Longman Classics reprint. *Home Style* was originally published in 1978.

constituency is simply a nonpolitical geographical space. The reelection constituency is a narrower constituency of the Member's supporters and potential supporters. In a smaller sphere, is what Fenno calls the primary constituency. These are the major supporters, the political elites, and the most reliable base for the member. Finally, the personal constituency is the member's inner most circle. The personal constituency is the group that the Member will share meals with to discuss strategy. The personal constituency is also the group of individuals that the Member will spend free time with and relax with.

The most important argument in Fenno's work (2003) to understand is trust and the home style. Trust, is one of the main goals in the presentation of self.<sup>17</sup> Fenno stresses, "Presentation of self enhances trust; enhancing trust takes time; therefore, presentation of self takes time" (Fenno 2003: 56). To earn trust, Members exhibit three types of behaviors: qualification, identification, and empathy. Qualification is most vital for nonincumbents, to show that they will be reliable and competent in office. Moreover, Fenno notes that a smaller component of *qualification* is honesty. However honesty is earned through the sum of the other components of the presentation of self. The second component, identification, is simply the way in which members show that they are just like their constituents. This includes, "habits of speech...contextually appropriate humor" and identifying factors such as religion or cultural sensitivity (Fenno 2003: 58). The final component of trust is empathy. This is when a member shows that he or she cares. When members use identification and empathy, constituents trust the member because they: "are like one

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<sup>17</sup> The presentation of self is briefly introduced in Chapter 1 of this project, and is defined at length in chapter 3. I do not spend a lot of time discussing Fenno's presentation of self in the literature review, because I amend his definition in Chapter 3 to capture a more specific type of behavior.

another... [and they] understand you” (Fenno 2003:59-60).<sup>18</sup> This is a purposeful strategy aimed at ensuring support, as Fenno describes when discussing the expansionist phase.

The trust maximizing strategies mentioned above are just one component of the *home style*. To Fenno—and subsequently, the rest of the Political Science discipline—home style is the sum of the presentation of self, explanation of Washington activities, and the allocation of resources. The explanation of Washington activities is simply the way in which members relate policy and politics to their constituents. Similarly, the allocation of resources is the way in which members budget their time and attentiveness to their district and constituents.

In almost a supplemental text, Fenno (2000) analyzes the same district in Western Georgia over approximately 30 years. Fenno’s expansive case study chronicles the changes of home style. Fenno shows that the calculation of person oriented, and policy oriented changes based on the circumstances. Fenno shows that during the expansionist phase—the phase when the member is trying to gain the widest share of support—is the trust maximization stage of the service.

The next specific pieces of literature necessary for the development of the theory are simply the literature associated with the definition of the variables. Although my definitions are not exactly the same, the actual categories of the variables, with the exception of the presentation of self, come from Flowers, Haynes and Crespin (2003). The variables are: positive competitive, negative competitive, traditional campaign, and the

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<sup>18</sup> I categorize identification and empathy differently than qualification. I give a brief explanation in Chapter 3 when discussing the coding of variables. For a more complete explanation, see chapter 5.

presentation of self. I define positive competitive as a message that makes the candidate appear to be in control, and deserving of support. It basically boils down to candidates tweeting about their endorsements, qualifications, and position in the polls. These tweets are intended to gain a relative advantage on their opponent.

The next style of messaging, negative competitive, is defined as an attack. The member can be attacking an individual, an organization, the opposing party and its leadership, and other undesirable entities. The literature on the effectiveness of using this style of messaging is inconclusive. In a meta-analysis Lau, Sigelman and Rovner (2007) find little evidence to suggest that negative competitive messaging is a rational strategy. However, Gainous, Wagner, and Holman (2014) show that going negative on Twitter helps out-of-power groups.

For the next variable, traditional campaigning, I basically combine information dissemination and substantive messaging. I find it most useful to focus this through Mayhew's (1974) three electorally oriented activities: advertising, position taking, and credit claiming. Advertising, insofar as the present paper is concerned, is simply members broadcasting events or campaign literature. Position taking and credit claiming are also very simple. Position taking is when a candidate makes a substantive statement on a policy or issue, and credit claiming is when a candidate takes credit for providing a benefit to his or her constituents.

The presentation of self has largely been discussed above with the discussion of Fenno. However, to be completely explicit, the presentation of self is a candidate centered campaign style used to increase vote share by making the member look more favorable to

their constituents. Apart from Fenno's discussion on the same topic, Fiorina's (1981) tally theory is especially important. Fiorina argues that voters get information about a candidate and make positive or negative tallies in their head to assess the candidate. The tallies can be made on anything, regardless of its political relevance. This is how voters are able to respond to questions about their feelings of a certain member. I also consider the definition of Cain, Ferejohn, and Fiorina (1987; 1983) when they describe *the personal vote*, which is the vote on a member based on their personal characteristics.

Finally, it is important to understand recent trends in electoral politics to understand the incentive structure of candidates. There are two major recent trends that began right before the time of the dataset. The first is increased polarization among the masses. The most convincing account of mass polarization is Abramowitz (2011). The argument is simple; informed citizens are more likely to be polarized, and the cost of information is decreasing significantly. Thus, the cost of being an informed citizen is lower. Arceneaux and Johnson (2013) provide a similar argument.

I am more interested in the recent phenomenon of legitimate primary opponents (Boatright 2014). Boatright (2014, 2011) shows that incumbents are being primaried by a strategic coordination of interest groups, namely Club for Growth and MoveOn.org. For the present project, I am interested in the effects this has on incumbent messaging. There are no recent studies to the exact effects of Boatright's analysis. The closest understanding comes from experimental studies on primary behavior. As Tullock notes, "If more than two parties or candidates are expected, then the vote-maximizing position is not close to your opponents, but well away from them" (Tullock 1967:55). This is confirmed by Cooper and Munger (2000) who run a simulation and find a huge variance in the winners of

primaries.<sup>19</sup> Their most relevant finding is that candidate characteristics<sup>20</sup> “are no more important than spatial location” (Cooper and Munger 2000:351). This is important to understand, understanding the location of the vote-maximizing position provides insight into the incentives for position taking. If, as Tullock—and to an extent Downs (1957) and Ensley (2012)—posits the position taking motivations are to provide candidate divergence (rather than simply to inform the constituents of policy preferences) it increases the probability for members to choose position taking as a campaign messaging.

This specific literature leads to the hypotheses. The hypotheses draw from two different literatures. The first hypothesis, regarding candidate salience and candidate messaging, draws from a rich experimental literature about the incentives of ambiguous messaging. The second hypothesis, regarding district competitiveness and candidate messaging, draws from an empirical body of literature that studies the effects that district safety has on constituent contact.

### **Hypothesis Definition:**

*Hypothesis 1:* The more salient the member, the more likely he or she is to tweet using competitive campaigning.

The literature on hypothesis 1 is limited. Most of the literature about candidate salience stems from Shepsle (1972) and Glazer (1990). The most relevant literature on hypothesis 1 also includes Berliant and Konishi (2005), Alesina and Cukierman (1999),

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<sup>19</sup> Their standard deviation is 27, when the values are on a 0-100 scale.

<sup>20</sup> Candidate characteristics are defined as everything other than fundraising prowess, momentum, and organizational ability.

and Glazer and Lohmann (1999). All these papers are looking at positional ambiguity; or, the strategy of individual members taking a position on salient or nonsalient issues. I am interested on the salience of members and if they alter their strategy compared to the other members. For the purpose of this paper, salience is defined as visibility—the more salient a member is, the more likely a viewer of political information is to come across that member’s page. Thus, I use PageRank, which is a measure of the visibility of a certain page to the random user of the Internet. Although none of these papers frame their analysis in a way that is consistent with hypothesis 1, Shepsle (1972) is the most relevant.

Shepsle’s model tests the Downsian argument on ambiguity that states candidates are encouraged to be ambiguous, as it increases the number of sympathetic voters (Downs 1957). The Downsian argument is a simple three-pronged argument: First, ambiguity increases the number of voters who may find the candidate appealing because there is a lower probability of offending someone while being ambiguous. Second, because ambiguity increases the number of potential voters, candidates are incentivized to be as ambiguous as possible on polarizing issues. Finally, and least relevant Downs argues, that ambiguousness detracts from voter rationality. Therefore, candidates and parties are rational to be ambiguous. In an experimental model, Shepsle (1972) shows that incumbents must be less ambiguous with their policy positions than their challengers. This gives an advantage to the incumbents as voters must be risk takers in order for unambiguous candidates to have a successful campaign (Shepsle, 1972: 564).

To this end, Shepsle does not support Downs’ ambiguous hypothesis, arguing that ambiguous strategies are irrational, as it leaves the member disadvantaged to a “median-adopting, nonequivocating” candidate. However, if voters do accept a degree of risk and

hold “intense preferences,” an equivocating strategy is optimal (Shepsle, 1974: 567). Shepsle’s findings are critically important to hypothesis 1, as I am looking to find whether candidate strategies are different depending on their salience. Shepsle’s findings, however, do not provide direction for the prediction of results to the hypothesis. An extension of his argument, leads me to hypothesize that more salient members have stronger incentive to be ambiguous because their communication reaches a larger audience, and therefore offending voters with their preferences is more costly than it is for members with lower salience. Therefore members who are highly visible have a stronger incentive to make the election about their qualifications and the ineptitudes of their opponents.

Following Shepsle’s work, Glazer (1990) criticizes Shepsle for assuming that the candidate has sufficient understanding of the preferences of the median voter. Therefore, both candidates have an incentive to be ambiguous. According to Glazer, the incentives to be ambiguous are two-fold; first, equivocal candidates are less likely to state an unpopular opinion. Second, and more importantly, stating a definite position allows the other candidate to gauge the preferences of the median voter. If Glazer’s model is generalizable to Twitter use, there would be an expectation that issue-oriented Tweeting—which falls under the traditional campaigning variable—will be lower than other forms of campaigning.

Alesina and Cukierman (1990) provide a conclusion similar to Glazer (1990); however they operate under a different set of assumptions. Alesian and Cukierman show that ambiguity allows for members to take advantage of tradeoffs. However, “converging” on the ideologically preferred position of the party gives the member a higher chance of appointment to a prominent position. Thus the preferred strategy is one that obscures the



member's absolute preferences, but allows for the member to manipulate agencies for partisan gains. This paper's contribution to hypothesis 1 is critical, as it provides an explicit formal model of members balancing partisan preferences and ambiguous messaging. In the context of the 2010 midterm election, a bitterly polarizing election, the ambiguous messaging for Democrats would have been to avoid the polemical campaigns against Democratic initiatives, despite the partisan benefits. However, conversely, the Republican's ambiguous messaging would be to attack the Democratic Party, rather than developing an alternative narrative. The partisan considerations shown by Alesina and Cukierman provide the most important incentive for frontrunners to deviate from the ambiguous norms.

Berliant and Konishi (2005) provide a model critical to Glazer (1990) showing formally that underdogs have incentives to be unequivocal in order to drive voter turnout. To demonstrate their theory, Berlaint and Konishi describe ambiguous messaging over gun control. Their premise is simple: Gun control is an issue many people care about, voting is costly, and therefore if voters care about gun control, they will be more likely to vote when gun control is highly salient.<sup>21</sup>

Glazer and Lohmann provide a small deviation to the above literature showing that incumbents have an incentive to take salient issues "off the agenda even though the voter would prefer to be given a choice between different candidates" (Glazer and Lohmann,

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<sup>21</sup> For additional reading on candidate positioning, Ensley (2012) provides a particularly interesting model about centering positioning near the extremes.

1999: 391). These theories of ambiguity provide an interesting starting point to understand messaging strategies and how they relate to salience.

The theory that lead me to investigate the literature described above comes from Mayhew's (1974) discussion on how members choose committees for their personal electoral ambitions. Members who have high committee assignments relevant to more than their constituencies must be able to discuss issues plainly in order to relate to their constituencies. Further, as Mayhew mentions, committee allocations remain "ambiguous enough to allow members to claim personal credit" (pgs. 90-91). Therefore, I hypothesize that the salient members use *credit claiming* as a positive competitive strategy, where their less salient counterparts use credit claiming as a "traditional campaign" strategy. Credit claiming qua credit claiming is a form of traditional campaign. However, credit claiming can be coded as positive competitive, as shown in Chapter 3. The difference in the messaging strategies being, traditional campaign strategies that include credit claiming discuss their specific constituencies and their own involvement. Positive competitive credit claiming strategies are more nationally focused and equivocal to their involvement.

This leads to interesting avenues for additional research. Do senior members assume the role of incumbents as described by Shepsle (1972) in time of non-campaign political conflict? Can the dichotomy of ambiguity and unequivocal be measured in an empirical model?

*Hypothesis 2:* Members in unsafe districts are more likely to use the presentation of self.

The literature for hypothesis 2 is much more direct and expansive than the literature for hypothesis 1. The main source for the theory I test comes from Cain, Ferejohn and Fiorina (1987, 1983). Cain, Ferejohn, and Fiorina are interested in capturing what they describe as *the personal vote*.<sup>22</sup> Cain, Ferejohn and Fiorina describe the personal vote as “support...[for their]...personal qualities, qualifications, activities, and record” (Cain, Ferejohn and Fiorina 1987:9). The utility of maximizing the personal vote for marginal members, they argue, is to minimize negative swings in the electorate’s mood, and to augment positive swings in the electorate’s mood. Cain, Ferejohn and Fiorina look at constituency service in Great Britain and the United States and find that members are significantly more likely to reach out for casework when they are on the margins for reelection.

To model this, Cain, Ferejohn and Fiorina look at NES and CPS survey results on questions about the nature of constituency contact. Most of the questions were related to how the member’s responded to communication initiated by the constituents. The argument forward is simple; constituents satisfied with the responses to their communications are more likely to vote favorably and to speak favorably about the member. More marginal members are more likely to have a quicker turn around, and to have higher level of satisfaction, and over the course of an election, the member receives a higher vote share. Further, based on interviews with Representatives’ staff members, Cain, Ferejohn, and Fiorina find that roughly two thirds of Members in the United States and Great Britain

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<sup>22</sup> “The Personal Vote” is the name of their 1987 book. The description and analysis of the phrase *the personal vote* is from the introduction chapter of Cain, Ferejohn and Fiorina (1987) specifically pages 9-21.

advertise their constituent service. Subsequent literature, including the present project, test the methods used to advertise the constituency service, to sway *the personal vote*.

Cain, Ferejohn and Fiorina's work closely relates to Cover (1980) who shows that the use of constituency contact—by mass mailings—is pursued most aggressively by marginal members and by inexperienced members, although Cover does not discuss what members are saying in their mass mailings. From these two studies, the theory is formed that members in competitive districts, and members with worse expected vote shares, are going to reach out to their constituency more. This is not a new theory; all I am doing is testing to determine whether Twitter is a method used for this constituency contact that Cain, Ferejohn and Fiorina describe.

In more of a popular science piece, Epstein and Frankovic (1982) use survey data of incumbent members of Congress, district competitiveness data, and employment numbers at district offices to determine the amount of attention spent in the home district. Their results corroborate the results of Cain, Ferejohn and Fiorina (1987,1983) and the results of Cover (1980), finding that unsafe and younger members were more likely to have larger district offices. Further, Epstein and Frankovic find members in hostile districts correlated with attentiveness to district demands.

In a modern and more significant study, Adler, Gent and Overmeyer (1998) specifically look at how members of the House of Representative express their political home styles. Their results show that members in more affluent districts, Republicans, and marginal members use the Internet for constituency contact. Conversely, Democrats and marginal members are more likely to use the Internet for soliciting casework. Their

analysis, from 1998, was intended to determine the conditions present for a member to have a campaign website. Therefore, the affluence finding is no longer relevant, as the costs of getting online are significantly lower. Their findings about home styles, however, are extremely important to the present paper. They conclude, that “casework content” is solely based on party and electoral uncertainty. With this literature, it is perplexing why I reject hypothesis 2.

Interestingly, however, Arceneaux and Johnson (2013) note that in recent years parties are contacting constituents at a drastically higher rate than they were at the time of the literature cited above. Arceneaux and Johnson note, “almost 45 percent of voters in the [2010 election] report having been directly contacted by at least one of the major political parties” (Arceneaux and Johnson 2013:155). This is a shift in narrative from older studies on constituency contact that concludes party significance is on the decline (Huckfeldt and Sprague 1992; Rosenstone and Hansen 1993; Wattenberg 1998).<sup>23</sup> Arceneaux and Johnson use this finding as an inquiry into polarization. However, this party-centric finding might provide insight into the results of hypothesis 2. For example, candidates might tweet at a higher rate for competitive campaign messaging because parties have a much stronger organizational infrastructure than individual candidates, which decreases the benefits of candidate’s organizational structures.<sup>24</sup> This, therefore, provides insight into why negative competitive campaigning was significant, and the presentation of self held no relationship.

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<sup>23</sup> In contrast, Cain, Ferejohn and Fiorina (1987:52) find that only 15% of people reported being contacted by a representative or a representative’s office.

<sup>24</sup> I am *not* claiming that the absence of benefit for candidates to grow their organizational strength. However, I am simply claiming that party involvement marginally decreases the demand for candidate organizational structures.

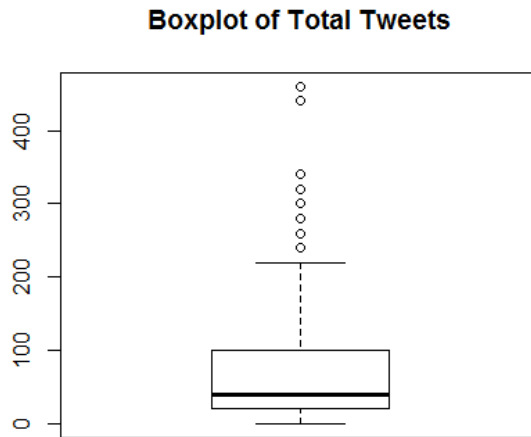
## CHAPTER THREE: DATA AND METHODOLOGY

### **Methods:**

The data are broken down into four categories, positive competitive, negative competitive, traditional campaign, and the presentation of self. Existing literature largely categorizes campaign messaging into two main categories, competitive and substantive (Haynes, Flowers and Gurian 2002; Flowers, Haynes and Crespin 2003; Bowler and Farrell 1992). My metrics are consistent with the existing literature. The positive competitive and negative competitive are to be seen as “competitive” campaign messaging, and traditional campaigning is to be seen as “substantive” campaign messaging.

The data are drawn from the tweets of all incumbents in the House of Representatives of the 111<sup>th</sup> Congress that ran for re-election in 2010. The data covers the final 6 months of the session. In whole, there 180 members analyzed. Over the time of the dataset, there were 15,036 tweets recorded. On average, members tweeted 79.98 times with a median of 40. Plot 1 shows the distribution of the tweet totals.

Plot 1, Total Tweets by Member



Systematic samples of each third tweet were manually coded into the four categories. Before reading tweets by each candidate, I did a google search to learn the context surrounding each campaign. Most searches were limited to “[Member Name] 2010 Campaign” however some searches required more research. I added up the total number of tweets used in each category and calculated the percentage for each category to determine the relative frequency of the each category. To account for inter-rater reliability, I distributed a random selection of 20% of the data to an outside reader along with the descriptions of each category below. To ensure that the data were selected randomly, I listed the names in alphabetical order and assigned each name a numeric value and used a random number generator to determine which data the outside reader would consider. The outside hand coded the data as if they were producing their own dataset. From this coding, I calculated the Scott’s Pi ( $\pi=0.81$ ), as proscribed by Neuendorf (2001). There are no subcategories hand coded.

Evidence already exists predicting which demographics use Twitter, and to a degree, how each demographic uses Twitter (Gainous and Wagner 2009, 2014, Wagner, Gainous, and Holman 2014; Peterson 2012). Further evidence exists for how candidates try to manipulate the media through campaign releases depending on the level of safety of retaining their seat (Flowers, Haynes, and Crespin, 2003). This evidence will be tested against the data. Peterson (2012) provides a generalizable model of what motivates members of Congress to use Twitter, and is applied to the data to see if the construction of Twitter usage has remained constant.

### **Positive Competitive**

Tweets coded into the positive competitive category are tweets where the candidate is seen as the initiator of some conflict with their opponent. Indeed, competitive messaging in the literature is sometimes referred to as war messaging. Positive competitive tweets, therefore, are tweets where a candidate proclaims a degree of success. Flowers, Haynes and Crespin (2003) describe positive competitive messages as, "...attempts to frame the candidate as the leader or as endowed with momentum" (260). This includes tweets where the member of congress is mentioning an endorsement, their position in the reelection campaign, the result of policies the member supported, and the result of bills the member was involved in. Further, tweets that are meant to make the member look more official, or tweets where a member piggybacks onto more salient members are also coded as positive competitive. Below I have selected a few examples of tweets that belong in positive competitive, along with a discussion of why each tweet fits in the category. These tweets only rarely will mention the opponents name or positions, or the name and positions of the other party.



## Examples

### *1. Albio Sires*

We passed a bill today to expand lending and offer tax incentives to millions of small businesses. Thursday, September 23, 2010 4:22:45 PM via TweetDeck

Albio Sires, a Democrat, only had been in congress since 2006, and despite the anti-incumbent and anti-democrat political climate of 2010, earned a 74% vote share. The above tweet came fewer than 2 months prior to the election, and is a perfect example of a positive competitive tweet because it shows the passing of a bill that he was involved in. The bill he is referring to is H.R. 5297, or the Small Business Lending Fund Act of 2010.<sup>25</sup> In large part, this bill was intended to help small businesses expand and add jobs. However, the “we” in this tweet is referring to the House as a whole. Representative Sires was not a Sponsor or a Cosponsor of the bill, although Representative Sires did vote in favor of the bill (U.S. Library of Congress). This is important as a positive competitive example because Representative Sires framed the bill as a way to pander to his more fiscally conservative constituents by mentioning the tax incentives given to the small businesses.

### *2. Dean Heller*

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<sup>25</sup> Talking about the same bill, Adam Smith—a democrat in a tight race in Western Washington—tweeted, “NEARLY \$20 MILLION ANNOUNCED FOR SMALL BUSINESS LENDING IN WASHINGTON STATE <http://bit.ly/bREv8c> 3:07 PM Oct 8th via web”. This is also an example of positive competitive, but not as strong of an example as Representative Sires as it could be seen almost as credit claiming.

I am deeply saddened to hear of the death of Governor Guinn. I was proud to have called him my friend. 2:09 PM Jul 22nd via HootSuite

Dean Heller is a different case than Albio Sires; Representative Heller worked as the Secretary of State in Nevada 12 years before moving on to the House of Representatives. The governor Heller worked under, Governor Guinn, was largely a popular governor and was succeeded by another Republican governor. This tweet was from July, when Representative Heller was facing a primary challenger. This tweet legitimizes Heller's role as a statesman, and reminds his constituents of his relationship with the now-late former governor.

### *3. George Miller*

Proud to say that I received a 100% rating from the Leadership Conference on Civil Rights on their scorecard for... <http://fb.me/KyOxbKOo> Friday, October 29, 2010 2:42:46 PM via Facebook

George Miller is a Democrat from California's 11<sup>th</sup> district. The 11<sup>th</sup> district is largely smaller municipalities within Oakland. George Miller, had been in congress since 1974. This is an example of positive competitive because Representative Miller's district is extremely racially diverse. George Miller is also old and white. Miller invokes his rating on Civil Rights because it acts as an endorsement from an authority on civil rights. This is an example of positive competitive campaigning because Representative Miller is showing his constituents that he is the best available defender of a salient issue.

4. Aaron Schock

Grateful for the @pjstar endorsement today  
<http://bit.ly/cK2xPK> Sunday, October 24, 2010 8:20:29 AM  
via web

This is simply an example of a representative using Twitter to relay a prestigious endorsement—in this case, the local newspaper—to the voters. Context is not required to categorize this tweet as positive competitive.

**Potential Sources of Variation**

Positive competitive is very similar to what I am capturing in the measurement of traditional campaigning. In a vacuum, Albio Sires' tweet could reasonably be considered credit claiming. Indeed, Sires is taking credit for participating in a roll call vote that is intended at giving a benefit to his community. This is why it is important to realize the context; Sires was not a major proponent of the bill, Sires did not claim any specific particularized benefit to the community, and Sires in a campaign against a Republican.

Further, the Dean Heller tweet could reasonably be coded as what I am trying to capture under the Presentation of Self. Heller is focusing on a local issue, discussing a local figure, and mentioning a personal relationship. This is true; however, Heller's competitor in the election—Nancy Price—was an academic with little political experience, and Heller's competitor in the primary—Patrick Colletti—was a pediatrician with no political experience. This context makes this tweet competitive.

## Negative Competitive

The most simple of categories, negative competitive tweets are tweets where the candidate is attacking something. This includes attacks on issues, candidates, and campaigns. These tweets are typical negative messaging. Often times, the candidate mentions members of the opposing party, especially the leadership. Almost all tweets mentioning a challenger were coded as negative competitive. The mention of the other party was also a key factor in coding a message as negative competitive. Many members try to veil their attacks by using the truth. For example, many members attack their opponents for saying something that is false or misleading. The key component of a negative competitive message is that it is used for relative gains at the expense of someone or something else. In some cases, Republican members will tweet the current U.S. debt. As above, there are examples below of a few key examples of negative competitive messaging.

### Examples

#### *1. Nancy Pelosi*

RT@[politifact](#) on Cantor's spending claim on @[TheDailyShow](#): "it's not just wrong--it's ridiculously false" <http://bit.ly/dnTsVA> Wednesday, October 27, 2010 12:59:08 PM via web

This is a case where the Speaker of the House, and perhaps the most salient member of the 111<sup>th</sup> Congress, uses negative competitive messaging towards a candidate that she is not in a campaign against. In this case, Representative Pelosi is retweets a negative message about a member of the Republican leadership. This meets the requirements for a negative competitive message; it gives Representative Pelosi an advantage over her Republican

challenger by making the Republican Party look bad, and it mentions the leadership of the Republican Party by name.

### *2. Tim Murphy*

Remember being told you could keep your [#health plan?](#) Think again. <http://tinyurl.com/24ncram> [#healthcare](#) 1:13 PM Jun 14th via web

Tim Murphy is a Republican from Western Pennsylvania who received two thirds of the vote share in 2010 election. Without mentioning either by name, Representative Murphy is attacking President Obama, and the Affordable Care Act. This fits as a negative competitive message, as it is both attacking an issue and an individual.

### *3. John Boehner*

Co-founder of Home Depot says businesses like his "would never have gotten off the ground" under Obama policies <http://is.gd/g3dBj> Friday, October 15, 2010 2:43:02 PM via [HootSuite](#)

Similarly to Representative Pelosi, Representative Boehner has a fairly politically homogenous district, and is one of the most salient members of the House of Representatives. In this tweet, Representative Boehner is using a business owner to attack the policies of the Obama administration.

## Potential Sources of Variation

Negative competitive is the most exclusive category analyzed. Most tweets can be looked at as positive, neutral, or negative. If the tweet is positive or neutral, there must be context and tone to determine which category the tweet belongs to; similarly, if the tweet is negative, it has to be negative competitive. However, tweets advertising appearances on national television, or in person, where the candidate is going to use negative competitive messaging, is a source of variation. For example, in July, Trent Franks—a Republican from Arizona—tweeted this,

On Fox News discussing possibility of states using federal funds to pay for abortions under Obamacare:  
<http://bit.ly/b0jZL0> 4:33 PM Jul 19th via web

This tweet is not directly attacking a policy or person; rather, it is advertising a television opportunity. One can tell by the tweet, that Representative Frank intends on attacking the Democrats and President Obama. The tweet even leads the reader to think of an imminent possibility of federal funds being appropriated to fund abortions. However, advertising is a key component of what I intend to capture under “traditional campaigning.” I therefore, believe that Representative Franks’ tweet, and tweets like it, are to be counted as traditional campaigning. Representative Franks’ tweet is more similar to the following Aaron Schock tweet, than to any of the tweets above:

As seen on MSNBC <http://bit.ly/dadVxC> Thursday, October 14, 2010 12:27:13 PM via web

Further sources of variation might occur with position taking—another key component for traditional campaigning. John Boehner tweeted this in August:

We need to repeal ObamaCare & replace it w/common-sense reforms that lower costs & protect jobs <http://is.gd/eLL7q> #gopcoded Tuesday, August 17, 2010 1:40:05 PM via TweetDeck

This tweet by Representative Boehner is an example of traditional campaigning, but could easily be erroneously coded as negative competitive. In this tweet Representative Boehner is taking a position, against Obamacare. This position could be seen as a negative position because it is a position against an issue that he appropriates to an individual and he implies that the position—and thus the individual—lack common sense. However, this has to be seen as traditional campaign because it is “prescribing American governmental ends” (Mayhew 1974: 61). If, perhaps, Representative Boehner’s tweet read, “We need to repeal the Unconstitutional Obamacare & replace it with something that works” this would be considered negative competitive because it is extending an attack on the policy, rather than simply affirming a position against the policy.

### **Traditional Campaigning**

The traditional campaigning metric is intended to capture tweets that strictly follow what Mayhew (1974) describes as “electorally oriented activities” (p. 73). The activities Mayhew is talking about are advertising, credit claiming and position taking. These activities are central to understanding the daily activities of Congress, according to Mayhew.

The first activity I am looking for when coding for traditional campaigning, is advertising. Mayhew describes advertising as, “any effort to disseminate one’s name among constituents in such a fashion as to create a favorable image but in messages having

little or no issue content” (p. 49). Mayhew’s further analysis of advertising is limited by the age of his work. The media situation has evolved members of congress now advertise online and on television more often than they do in person and on the radio. Because of this, I am amending Mayhew’s definition of advertising to, “any effort to disseminate one’s name among constituents.” The way members use Twitter to advertise is to refer their constituents to appearances they have made in the press, and to opinion pieces they have offered in journalism. Further, members use Twitter to inform constituents of events they are holding. I am expanding this definition further to include tweets used for Get Out the Vote efforts.<sup>26</sup> In this line, advertising explicitly political events, such as rallies (in their home district or in DC) and funding opportunities are counted under traditional campaigning. Moreover, often times members will solicit recommendations from their Twitter followers. Asking for “advice” on what they should ask a salient figure in a committee meeting, or what programs they should cut. This, too, is considered traditional campaigning as it is advertising

The second activity I am looking for when coding for traditional campaigning is credit claiming. Mayhew describes credit claiming as, “acting so as to generate a belief in a relevant political actor...that one is personally responsible for causing the government, or some unit thereof, to do something that the actor...considers desirable” (p. 53). For the purposes of the present paper, I am interested in capturing whenever a member discusses something they have had a part in doing. This is both when a member mentions a bill or

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<sup>26</sup> I include GOTV efforts as advertising as it is an effort to disseminate campaign relevant materials. This could also be seen as positive competitive; however, it remains firmly in traditional campaign because these messages do not provide relative gains.



law they have personally sponsored, introduced, or make a personal claim to the outcome, and when a member makes a mention of the outcome of a committee that they serve.<sup>27</sup>

The third activity I am looking for when coding for traditional campaigning is position taking. Mayhew describes position taking as, “public enunciation of a judgmental statement on anything likely to be of interest to political actors...important classes of judgmental statements are those prescribing American governmental ends...or governmental means” (p. 61). For position taking, I am interested in capturing substantive issue oriented messages. These messages are simply utilized for the member to get their opinion across to their constituents.

The activities I am looking to capture are often categorized as information dissemination and substantive messaging.<sup>28</sup> However, for the present paper, it makes the most sense to use the traditional Mayhew definition to avoid overlap among the categories.

## **Examples**

### *1. Adam Schiff*

I'm hosting a [#Small #Business Assistance & Career Opportunity Fair](#) on Aug. 11. Register now!  
<http://is.gd/dqn38> 8:49 AM Jul 13th via web

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<sup>27</sup> Mayhew makes the mention of particularized benefits, and even explicitly cites casework. I am not requiring any claim of particularized benefits. This would cause too much variation between what I am trying to capture with the presentation of self.

<sup>28</sup> See Flowers, Haynes and Crespin (2003) for a project that divides candidate strategy in this way.

Adam Schiff is an experienced Californian Democrat, who was being challenged by a tea party candidate. Representative Schiff's challenger was not very successful. In the above tweet—nearly a full 5 months prior to the election—Schiff advertises an event he is hosting for small businesses in his district. This actually meets all the requirements for Mayhew's (1974) definition of advertising.<sup>29</sup>

## *2. Al Green*

Where are you voting tomorrow? If you don't know, find out by visiting the Harris County Clerk's website: <http://www.harrisvotes.com/> 5:08 PM Nov 1st via web

In the above tweet, Representative Green demonstrates that advertising need not be candidate centric, and can simply be disseminating information relevant to the campaign.

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<sup>29</sup> My amendment of the definition is to make it more inclusive to new media outlets, and therefore much of what I code as advertising is not included in Mayhew's original definition.

### *3. Al Green*

As a Member of the House Homeland Security Committee,  
I thank God for the FBI and their work in thwarting the DC  
Metro bomb plot. 3:23 PM Oct 27th via web

This second tweet from Representative Green provides an interesting example of credit claiming. Representative Green, a Democrat from Texas, invokes his committee assignment as a means to make the reader think he had something to do with the FBI “thwarting” a bomb plot. Notice, this is coded as credit claiming under traditional campaigning because Representative Green is specifically mentioning himself and his position in concert to an act that is considered desirable.

### *4. David Wu*

I stand with the #LGBT community in celebration of  
national #comingout day. I will ALWAYS be among  
your strongest allies in Congress #pdx Monday,  
October 11, 2010 7:01:27 PM via web

This tweet by Representative Wu is an interesting example of position taking. Wu, an Oregonian Democrat, is displaying his support for a group considered to be marginalized. It is important to note that this tweet is coded under traditional campaigning as position taking despite failing to meet the requirement of prescribing governmental action.

## Potential Sources of Variation

Mayhew's original definition is meant to encompass all sources of reelection activity. Therefore, it is easy to overuse each subcategory. This category, more than any other, requires careful attention. The difference between competitive issue-oriented tweets and the substantive issue-oriented tweets is not very large. The underlying difference is the intent of the tweet. For a tweet to be considered competitive, it must have aims at a relative gain. For example, in the David Wu example above, he is using the tweet as a means of explaining his opinion to his constituents. This is purely an informational activity. Had he mentioned an endorsement showing his advocacy for the LGBT community, or mentioned any reason why the LGBT community benefited from having Representative Wu as an ally, this tweet would have been positive competitive. Had he mentioned his challengers stance on LGBT issues, this tweet would have been negative competitive.

Similar cautionary measure must be taken when analyzing the other subcategories of traditional campaigning. Credit claiming can easily be seen as positive competitive. Indeed, there needs to be tonal evidence and context to determine the proper coding of the tweet. Further, credit claiming must include a specific mention to the member, or the member's affiliation, to the desirable end.<sup>30</sup>

Likewise, advertising and the Presentation of Self are potential sources of overlap if not handled with caution. The main distinction I am making the advertising component of traditional campaigning and the Presentation of Self is that advertising has an explicitly

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<sup>30</sup> For discussion of what is not credit claiming, see the section on positive competitive messaging.

political end. Advertising is used for campaign announcements, updates from House session, links to media stories, and the like. These all are explicitly meant to “disseminate one’s name among constituents.”

### **The Presentation of Self**

The presentation of self is to be viewed as the way the members present themselves in ordinary life. Fenno (2003)—using Goffman’s (1959) definition—emphasizes the physical presence required for this behavior. Thus, under the presentation of self variable, I am intending to capture the ways in which the members interact with their constituencies. For this, I am interested in how the member discusses their family life, their hobbies, their friends, and most importantly their constituencies. Often, this will include members talking about their constituency service record. As Cain, Ferejohn, and Fiorina (1987) note, constituency service is a vital method used in name recognition and vote share maximization. This not tangibly different than any of the other strategies—all of them are used to secure reelection, and vote share. This strategy, however, differs in the fact that it is personal rather than political.

Thus, soliciting casework and discussing a track-record of good casework are quintessential cases of the presentation of self I am interesting in capturing. However, most of the occurrences of the presentation of self are times in which the member is offering congratulations to a favorable entity within their constituency.<sup>31</sup> This includes members discussing University Rankings, congratulating sports teams, and local events. Further,

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<sup>31</sup> Often times they will also mention soldiers, or the military even if their constituency does not have a military base.

soliciting local events are to be counted as presentation of self. The only political messaging that is coded under the presentation of self is when a member mentions a discussion they had with local people or groups that is assumed to be favorable. This messaging is meant to imply that the member works for and with the constituency.

### **Examples**

#### *1. Adam Schiff*

Congrats 2 John Dabiri, this year's youngest recipient of the coveted [#MacArthurFoundation](#) "genius grants" @<http://bit.ly/d8YX51> [#Caltech](#) Thursday, October 07, 2010 1:18:37 PM via web

Congrats to [#Armenians](#) around the globe on the 19th anniversary of the independence of the [#Republic](#) of [#Armenia](#). Oorakh Angakhootyan Or! Wednesday, September 22, 2010 10:25:38 AM via web

Congrats to [#Caltech](#) on jumping to 2nd place among the world's top 200 universities (tho we know they're really no. 1) @<http://is.gd/fjwyT> 12:31 PM Sep 20th via web

These three examples from Adam Schiff are all great examples of what I am trying to capture by in the variable for the Presentation of Self. In each instance, Representative Schiff tweets support to popular, salient and nonpolitical local issues. Fenno (2003) describes two different home styles of the presentation of self. Stating, "Some kind of presentation are calculated to reach large numbers of people even if they produce lukewarm support. Other kinds of presentation are calculated to produce devoted support, even if they do not reach many people" (p. 129). Representative Schiff utilized both strategies. It is reasonable to expect that virtually all of Schiff's constituents have positive feelings towards

Cal Tech, and the success of its students and graduates. In contrast, Representative Schiff has very few Armenian constituents; however, the independence of the Armenian people is naturally of utmost importance to Armenian constituents.

## 2. *Mike Quigley*

Check out photos of Mike judging Halloween costumes at Space Park over the weekend <http://fb.me/AOUWPP2t> Monday, November 01, 2010 1:23:24 PM via Facebook

It is nearly impossible to have negative feelings towards a Member of Congress that takes a night off—2 days before the election—to judge Halloween costumes. Especially, when it is the Representative’s first re-election campaign. This tweet both exudes confidence for the Chicago Democrat, and it paints Representative Quigley as a Representative that is in touch with the community. Unsurprisingly, Representative Quigley earned a 70% vote share.

## 3. *Nancy Pelosi*

Congrats [#SFGiants!!!](#) Phenomenal team effort, great pitching! [#FearTheBeard](#) RT [@SFGiants](#): The [@SFGiants](#) are 2010 World Champs Monday, November 01, 2010 10:52:12 PM via [Twitter for BlackBerry®](#)

Like Representative Schiff, Nancy Pelosi tweets congratulations to an extremely salient and nonpolitical event that is favorable to her constituents.

### **Potential Sources of Variation**

As mentioned above, the difference between advertising and the presentation of self are not huge. However, the defining factor of the presentation of self is that it is not explicitly political. I am trying to capture tweets that are intended to make the reader think that the member is just a regular citizen, or just is trustworthy. These tweets are meant to improve the member's agenda by improving their self-image, rather than improving their agenda on the merits of their agenda.

### **Hand coding versus pattern coding**

This paper utilizes both methods of hand coding, and coding based on patterns in the text. Both methods have merit; however, for this paper, both methods do not have equal merit. When trying to capture the frequency and conditions relevant for a candidate to choose a home style that emphasizes the constituency and the apolitical life of the candidate, it is extremely unreliable to look for patterns in the text. Text analysis software only yielded one reasonable result, the word congratulations and its variations. Often times, members would congratulate constituents, companies in their district, universities in their district, and popular sports teams for accomplishments.

The reason why it is impossible to code for the tweets I am interested in capturing is because each district is different. There is no unifying theme. A researcher interested in capturing how members talk about tax policy can easily generate a list to reliably code based on textual patterns. The researcher would be able to develop a list—both by their own analysis and with text mining software—of the relevant terms and phrases. The



researcher can do this because tax policy is tax policy in Peoria, just as it is in Portland. However, the constituency of Peoria is different than the constituency of Portland.

### **Summary Statistics:**

#### **Candidate Messaging**

The data are centered in the middle of a salient midterm election. Unsurprisingly, most members used Twitter the most for traditional campaigning. The median share for traditional campaigning was 55.88%. This results from a high use of candidates sharing their campaign advertisements, and noncompetitive issue-oriented messaging. Presentation of Self is the second most frequent style of campaign media, with a median of 14.29%. Positive Competitive and Negative Competitive have medians of 8.33% and 8% respectively. It is tempting to simplify the variables into Competitive campaigning, noncompetitive campaigning, and candidate centric, nonpolitical messaging.<sup>32</sup> If we combine the competitive messaging variables, the median becomes 11.25%. Below table 1 and figures 1 through 4 demonstrate the distribution of these variables. The distribution of the variables these plots are reflected in the summary statistics above, and in table 1. Plot 1, the density plot for traditional campaigning, shows a basically normal distribution. The density plots for presentation of self, positive competitive and negative competitive—plots 2, 3, and 4, respectively—similarly show a basically normal distribution with outliers. This is to be expected, as shown in plot 1, there are some outliers for the total tweets.

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<sup>32</sup> Indeed, I do combine the variables for competitive campaigning for a model testing hypothesis 1.

*Table 1, Variable Summary*

|                    | <b>Percent Traditional</b> | <b>Percent Positive Competitive</b> | <b>Percent Negative Competitive</b> | <b>Percent Presentation of Self</b> |
|--------------------|----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Median             | 55.88                      | 8.33                                | 8                                   | 14.29                               |
| Mean               | 57.39                      | 11.3                                | 14.4                                | 16.9                                |
| First Quartile     | 44.44                      | 0                                   | 0                                   | 3.7                                 |
| Third Quartile     | 71.43                      | 16.67                               | 23.53                               | 25                                  |
| Max                | 100                        | 50                                  | 71.43                               | 100                                 |
| Standard Deviation | .204558                    | .1146685                            | .1681068                            | .167396                             |

Notwithstanding Standard Deviation, all data reported are percentages.

Figure 1

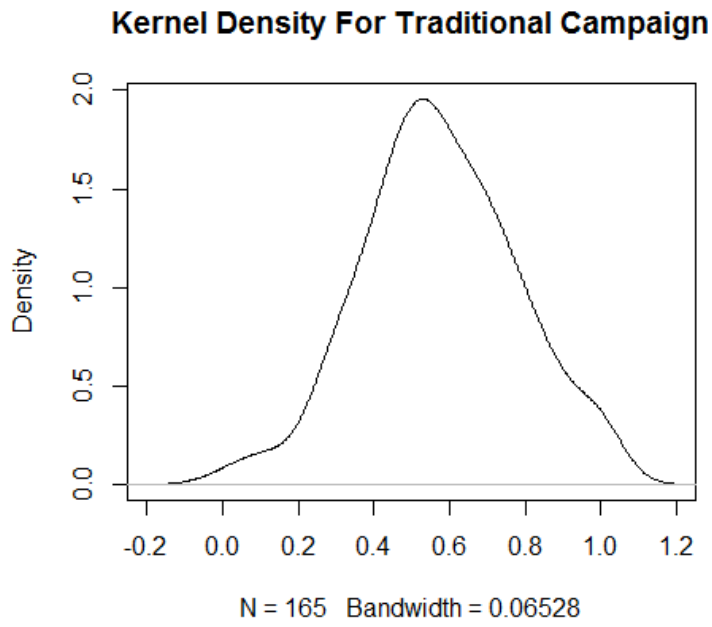


Figure 2.

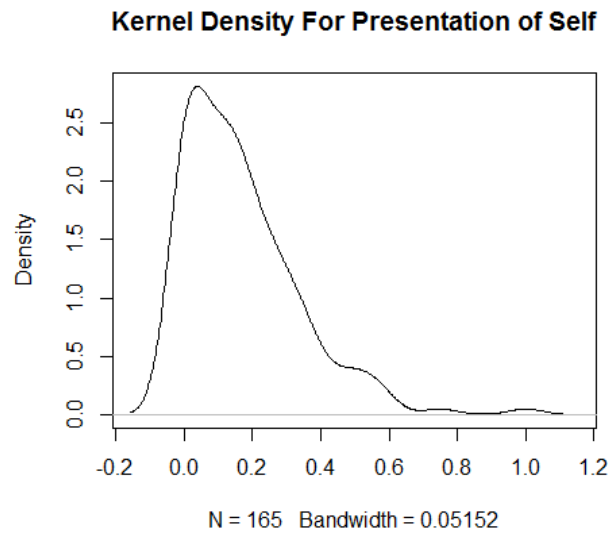


Figure 3.

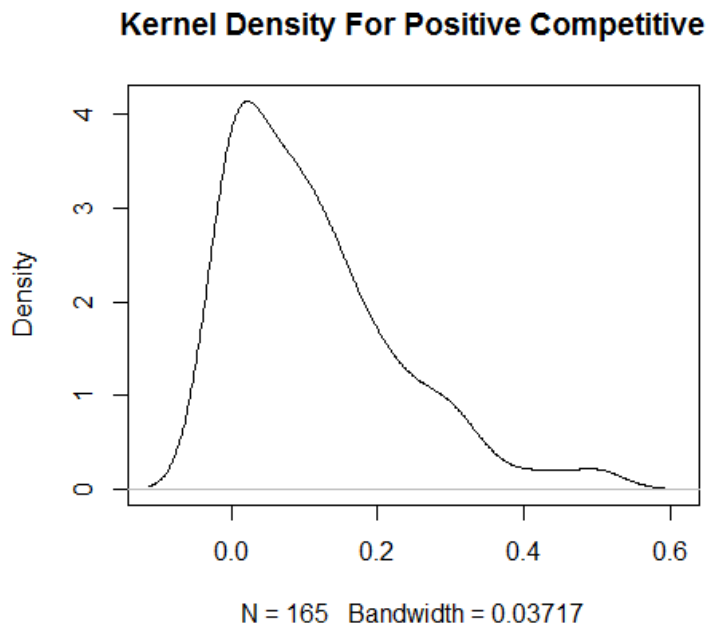
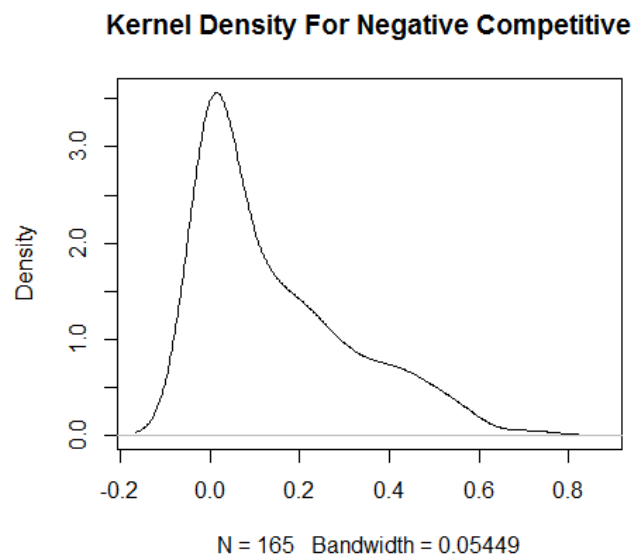


Figure 4.

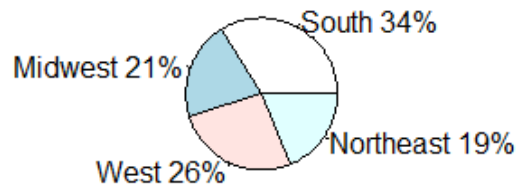


## Region

Using the same regional divisions used by the Economic Census (Census Bureau 2015), I distributed the home states of each member. The states were distributed four regions: Northeast, Midwest, South, and West. The states coded as Northeast include, Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, and Rhode Island. The states coded as Midwest include, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. The states coded as South include, Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas. The states coded as west include, Arizona, Alaska, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. Figure 5 shows the distribution of Twitter accounts belonging to members from each region.

*Figure 5.*

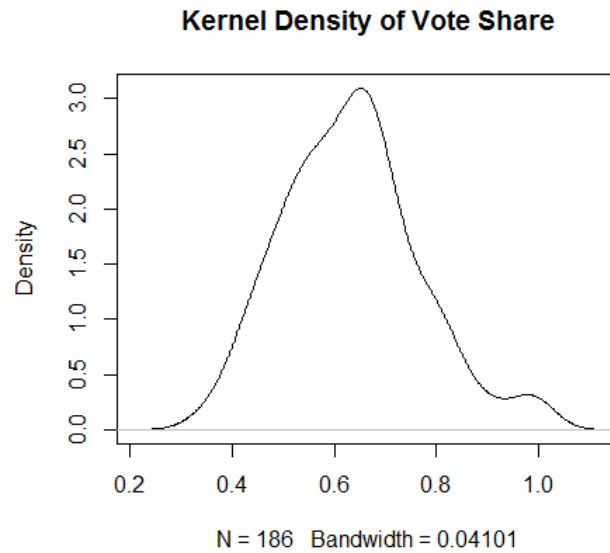
### Pie Chart of Region



## **Vote Share and District Competitiveness**

The vote share reflects the effectiveness of the campaign. Vote share is used partly as a measure of the competitiveness of the race. This is simply measured by the percentage of votes each member received in the general election. Of the members analyzed, the median vote share was 63.17 percent. Joseph Cao received the lowest vote share of 33.47 percent. Phil Gingrey and Tom Graves were the only members to run opposed. Joseph Cao, Phil Gingrey, and Tom Graves are all Republicans. The standard deviation of the distribution is .1333089. Figure 6 shows the distribution of the vote share variable. The vote shares are important to the theory because there is evidence that the safety of the district changes how the candidate crafts their message (Flowers, Haynes, and Crespin 2003). Further, members of Congress who think that what allowed them to win the last election might not be enough to win their next election will be more likely to risk innovative campaign measures and will see a higher benefit for campaigning over Twitter than their counterparts in safe and ultra-safe districts.

Figure 6.

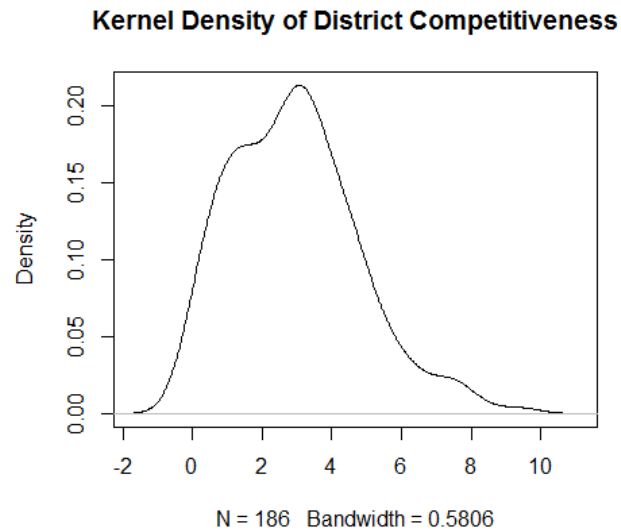


The vote share distribution is a statistic used by Gainous and Wagner (2014) and Wagner, Gainous and Holmon (2014). Wagner, Gainous, and Holmon (2014: 15) describe the collection method as,

District competitiveness was measured by taking the absolute value of the difference between the winner's vote total in the previous election and the loser's vote total in the previous elections and then we divided this value by 500,000 to make the interpretation of estimate clearer.

This measure is the primary measurement used in determining the safety of the district. Members with a District competitiveness score below 1.3 are considered unsafe. Figure 7 displays the district competitiveness.

Figure 7.



**Miscellaneous Variables:**

I analyze two experience factors, incumbent experience and political experience. Incumbent experience captures how long the candidate has held their current office. The median for incumbent experience is 10 years. Political experience captures how long the candidate has held elected office. The median for political experience is 18 years. The data come from Gainous and Wagner (2014) and Gainous, Wagner and Holman (2014). To calculate the experience, they gathered the data from the candidates' websites. Figure 8 and figure 9 demonstrate the distributions of the experience measures.



Figure 8.

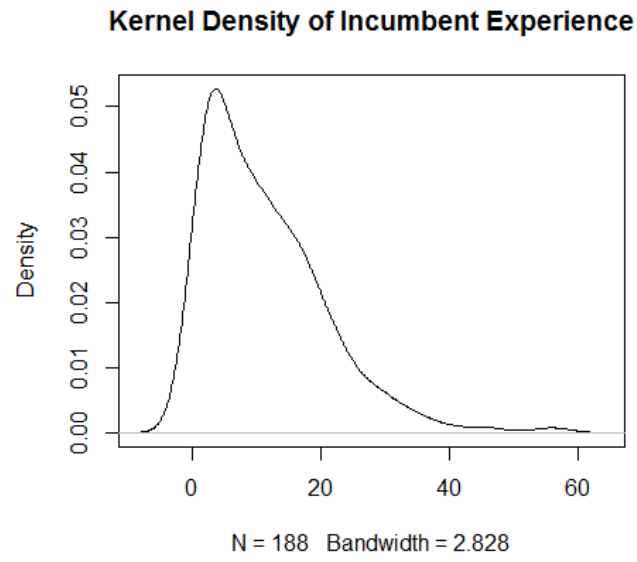
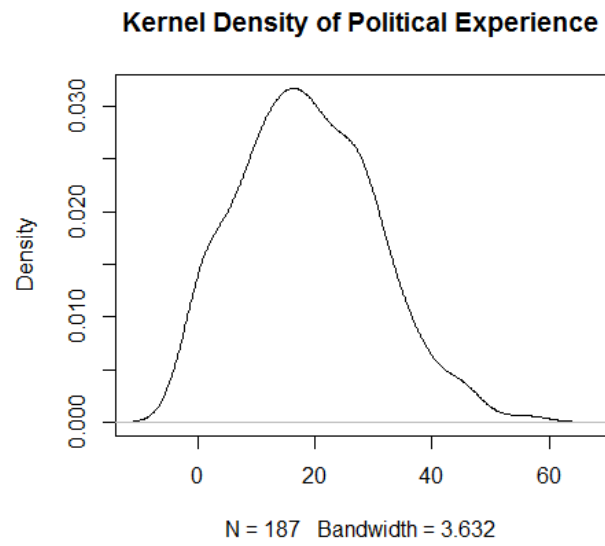


Figure 9.



I also look at age, gender, party and ethnicity as variables. For age, I calculated the members' age at the time of the election. I got the data from their website when available; if unavailable I googled the member's name and "age" to extrapolate a birthday.<sup>33</sup>

The youngest member analyzed was Aaron Schock, who was 29 at the time of the election, and only had 2 years of incumbent experience. The oldest member analyzed was 84 year old John Dingell, who has held nearly held his seat 56 years—nearly twice as long as Aaron Schock has been alive. The median age at time of election was 58 years. Figure 10 shows the distribution of ages represented in the dataset. Figure 10 is a density plot to show the distribution of age. Most of the members observed were White (82%), Male (81%) Democrats (57%). The distribution of gender party and ethnicity are shown graphically in Figure 11, Figure 12, and Figure 13. In the models, I will use 0-1 dummy variables for Male, White, and Democrat.

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<sup>33</sup> Missing data from members' website only occurred for age.

Figure 10

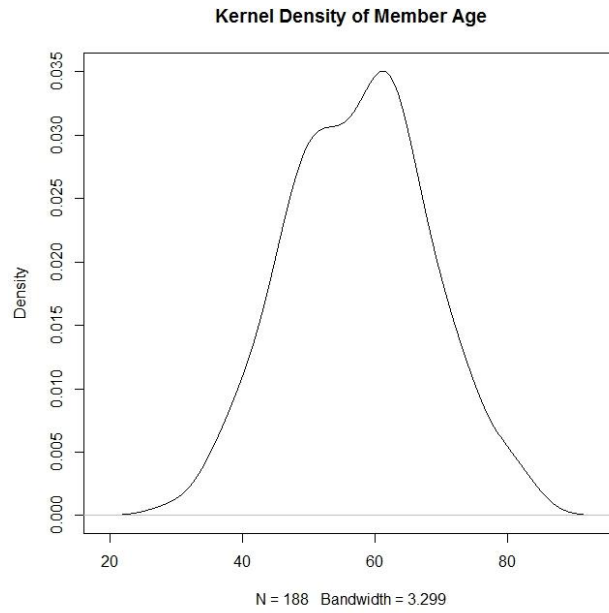


Figure 11.

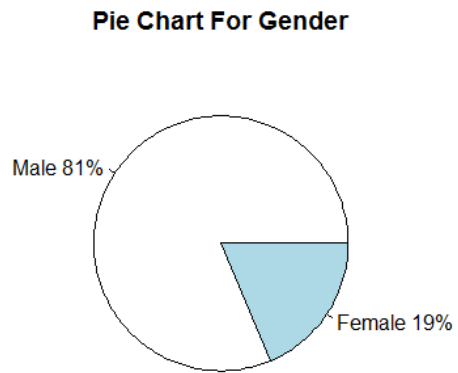


Figure 12.

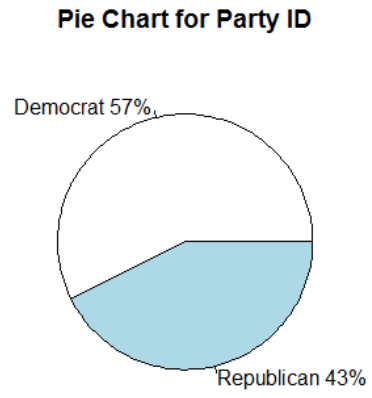
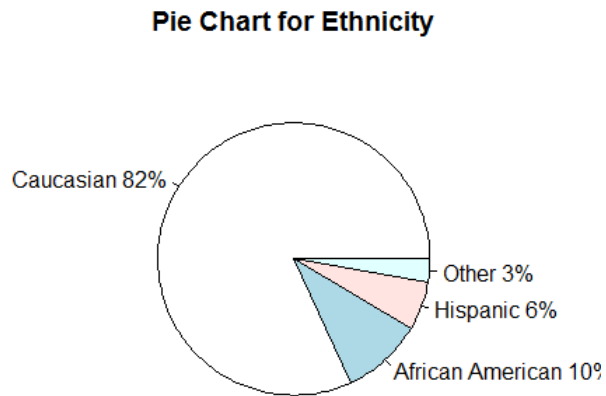


Figure 13.



## CHAPTER FOUR: DATA AND ANALYSIS

Chapter 5 shows the results of the data. In this section I add to the descriptive statistics by showing the correlation of the variables in depth. I run Pearson's correlation on many of the variables to derive; additionally, I use one-way ANOVA tests to show the correlation of each variable with the tweeting variables. To test the hypotheses, I use an Ordinary least squares (OLS) regression. The regressions I run three sets of models; the first model I use the type of tweeting being analyzed as the left-side variable, and for controls I use PageRank, incumbent experience, age, ethnicity, gender, party, and district competitiveness. The tweeting style in this model is counted as the total number of tweets per variable. The second set of models I run uses all the same controls, except I analyze the share of tweets that were counted for each variable. Thus, a candidate who tweeted 8 out of 100 tweets as negative competitive was given a score of 0.08. To control for candidates who used Twitter very little, I added a control for the total amount of tweets. The third set of models are the exact same as the second model, except I control for the vote share as the measure of competitiveness.

The results of the three sets of models are both very different, and very similar. For the first set of models, I find PageRank to be significantly positively correlated with the traditional campaign variable, and with the negative competitive variable. Similarly, when I look at the shares of tweets, compared to the total number of tweets, I still find the traditional campaign variable and the negative competitive variable to be statistically

significant; however, I find the presentation of self variable, and the positive competitive variable to be significantly negatively correlated.<sup>34</sup>

For the second hypothesis, I find only negative competitive to be significantly related to district competitiveness when looking at the total numbers of tweets by each member. This result holds in the second set of models, but traditional campaign messages become significantly negatively correlated with district competitiveness. However, when I choose vote share as the measure for the marginality of the member, I find no significant difference in tweet style.

### **Correlates:**

This section provides a short description of how each variable correlates with the other variables. I look at the interaction between each dummy variable and the variables created. These are not *ceteris paribus* calculations, just basic estimates to serve as more advanced descriptive statistics.

The first test I run is to understand how party affects the use of each type of political messaging. As this is a model with multiple continuous dependent variables, I run a one way ANOVA test with the variable for Democrat as the left-side variable. The results of this model show that there is a significant relationship between Democrat and *both* forms

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<sup>34</sup> It must be noted that Traditional Campaign technically falls outside of the standard accepted range of significance, with  $P=0.0588$ , in the second set of models.

of competitive campaigning.<sup>35</sup> Table 2 shows displays the full results. Democrats observed are also younger (p=0.001) and had higher district competitiveness (p=0.009).

Table 2, Tweet Style and Democrat

|                             | <i>Degrees of Freedom</i> | <i>Sum of Squares</i> | <i>Mean of Squares</i> | <i>F-Value</i> | <i>Pr (&gt;F)</i>  |
|-----------------------------|---------------------------|-----------------------|------------------------|----------------|--------------------|
| <i>Traditional Campaign</i> | <i>1</i>                  | <i>0.63</i>           | <i>0.635</i>           | <i>2.983</i>   | <i>0.0861.</i>     |
| <i>Positive Competitive</i> | <i>1</i>                  | <i>.95</i>            | <i>0.945</i>           | <i>4.444</i>   | <i>0.0366*</i>     |
| <i>Negative Competitive</i> | <i>1</i>                  | <i>4.49</i>           | <i>4.486</i>           | <i>21.090</i>  | <i>8.86e-06***</i> |
| <i>Presentation of Self</i> | <i>1</i>                  | <i>0.37</i>           | <i>0.375</i>           | <i>1.762</i>   | <i>0.1863</i>      |

This is directly related to the both Hypothesis 1 and Hypothesis 2. Democrats were significantly more likely to have a higher PageRank (p=0.049)—and therefore a higher salience online—and Democrats were significantly more likely to have a lower vote share (p=5.282e-06). The results from Table 2 suggest that I should be able to confirm Hypothesis 1, and reject Hypothesis 2. This is not surprising, as Democrats are more likely to have younger supporters; therefore for people interested in sharing the thoughts of a

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<sup>35</sup> From the above test, I can reject the null hypothesis for Positive Competitive and Negative Competitive, while accepting the null hypothesis for Traditional Campaigning and Presentation of Self.

member of Congress, there is more utility for using Twitter as a medium for Democrats than for Republicans. Further, the Democrat's supporters are generally younger, and thus more likely to use Twitter. This affects the sharing of the information that is distributed on Twitter, and increases the PageRank for Democratic members.

The relationship between youth and Twitter usage is important to understand for the purposes of this paper. Indeed, simple correlation testing finds that age is a significant factor in the online home style. Younger members are significantly less likely to use positive competitive messaging ( $p=0.044$ ). Further, there is a strong correlation ( $p=0.006$ ) that younger members tweet more. Interestingly, if the measure for youth is changed from age to political experience, positive competitive messaging is no longer strongly correlated ( $p=0.069$ ). However, if the measure for youth is incumbent experience, the relationship with positive competitive campaigning is stronger ( $p=0.028$ ). It is important to consider the role that experience has on political communication; as Cover (1980) shows, more junior members are more likely to embrace mass communication with their constituencies. With this literature in mind, I use incumbent experience as the measure for experience in the hypothesis testing.

It is also important to understand gender differences in Twitter use. Gainous, Wagner and Holmon (2014) use the same data set as this paper and find Republican women use Twitter to increase their vote share by using Twitter as a mean for attacking. I am observing slightly different variables than they are, and find marginally different results as shown in Table 3. We both find that Women tweet more than men, however we find a different distribution of usage of each type of campaigning, specifically negative



campaigning. The difference simply arises from the differences in population.<sup>36</sup> None of the differences in the means are statistically significant. As for other correlations, I found no differences between the genders for district competitiveness, vote share or PageRank.

Table 3, Means of Tweeting Style by Gender

|                            | <b>Men</b>   | <b>Women</b> |
|----------------------------|--------------|--------------|
| Mean, Total Tweets         | 77.78        | 89.6         |
| Mean, Negative Competitive | 5.31 (15.21) | 3.08(11.17)  |
| Mean, Presentation of Self | 5.51(16.69)  | 7.16(18.15)  |
| Mean, Traditional          | 15.63 (57.8) | 16.29 (54.8) |
| Mean, Positive Competitive | 3.12 (10.43) | 3.72 (15.29) |

*Source:* All means are not trimmed and are rounded two decimal places. In parentheses are the proportions that the means represent.

### **Hypothesis Testing and Results:<sup>37</sup>**

*Hypothesis 1:* The more salient the member, the more likely he or she is to tweet using competitive campaigning.

For the purpose of testing hypothesis 1, I use the PageRank as a proxy measure of salience. The PageRank uses an algorithm developed by Sergey and Page (1998) to determine how often the page is cited on other pages. Since PageRank calculates the

<sup>36</sup> Looking at their data for the members observed in this paper, Men used attack at a marginally higher rate than women—which is consistent with my findings.

<sup>37</sup> All statistical guidance was derived from Angrist and Pischke (2009), Wooldrige (2002) and discussions with members on my thesis committee.

probability that a “random surfer” visits the page, PageRank is a useful measure for calculating the salience on the web.<sup>38</sup> For the model used to calculate the effects PageRank, I use dummy variables for Male, White, Age, and Democrat. Further, I include all theoretically relevant variables. This includes district competitiveness and incumbent experience. To test hypothesis 1, I use an Ordinary Least Squares (OLS) regression. Tables 4, 5, 6, 7 and 8 show the results of the models.

As shown in tables 5, 6 and 8, the hypothesis is partially rejected. Candidates who use Twitter for negative competitive messaging ( $p=0.014$ ) and traditional campaign messaging ( $p=0.008$ ) are more likely to have a higher PageRank. However, if the same model is tested for the sum of competitive messages (positive competitive + negative competitive), the support for hypothesis 1 falls through ( $p=0.677$ ).

Interestingly, however, I find further complications for hypothesis 1 when I use the share of tweets instead of the total number of tweets. As shown in tables 9, 10, 13, and 14 I find the presentation of self and positive competitive to be negative correlated at significant levels.<sup>39</sup> Making substantive statements on the issues are certainly not captured in the presentation of self variable, and are only captured under positive competitive in certain circumstances. These results reinforce the rejection of hypothesis one.

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<sup>38</sup> The Oxford English Dictionary defines Salience as “most notable or important” (Oxford English Dictionary of English 2010) PageRank calculates the circulation of the webpage. The major problems with using PageRank as a measure for salience is that it can be manipulated through link farming.

<sup>39</sup> For presentation of self, with district competitiveness as a dependent variable,  $P=0.006$ ; with vote share as a dependent variable,  $p=0.013$ . For positive competitive, with district competitiveness as a dependent variable,  $p=0.012$ ; with vote share as the dependent variable,  $p=0.001$

Existing campaign literature is consistent with this finding. In an analysis of press releases during a Presidential primary, Flowers, Haynes and Crespin (2003) find that competitive campaign messages are not significantly more likely to find its way into the broader media. Stating that competitive campaign messages do not “significantly influence either the media’s coverage of the campaign or attention to the candidate” (Flowers, Haynes and Crespin, 2003: 272). In a more modern study of online communication Hong and Nadler (2012) note, candidate salience online is more about the media, than about candidates themselves.

Thus, the results from the models are not surprising. Rather than candidates crafting a message for the size of their audience, as the original theory argues, candidates rather increase their PageRank by advertising their campaign and the daily happenings of Washington. This increases their PageRank because the national news, local news, and politically active social media users then turn to Twitter for this information. As Terkildsen, Frauke and Ling (1998) point out, media members frame stories the way the stories are presented to them.

Similarly, negative campaigning is associated with a high PageRank. This is likely for the reasons stated in Chapter 2. It makes sense for party leadership, and other salient members, to use Twitter as a way of rallying supporters in an iconoclast us versus them mentality. Doing this, high salient members do not risk losing the support of their political base by taking stances on tough issues.

On the negative correlations side, it makes sense that candidates with a high PageRank do not use Twitter for a significant share of the presentation of self. As noted in

Chapter 2, candidate centric media strategies are generally reserved for more marginal members. Further, salience, as calculated by PageRank, is largely a measure of how often people link back to a member's profile. It seems unlikely that a large amount of members of the media are going to report on a member who just ate a cheese steak at a locally famous shop.

Similarly with positive competitive, members often use positive competitive tweets to show links describing themselves as the frontrunner, or showing a poll showing that a stance they take is very popular. Therefore often times the members are linking stories from the media, or discussing things that have already gone through a media cycle. This means that members of the media are not going to have any use with the representatives' tweets.

***Limitations to this model:***

Careful readers will note that in Chapter 2, I made the argument that salient candidates do not have incentives to take firm stances on issues. By taking stances on the issues, candidates risk alienation by those who disagree. Thus, candidates—by my estimation—should use Twitter to talk about their accomplishments and their opponents' shortcomings. The results of this model find traditional campaigning significantly related to PageRank, and one of the components to the traditional campaigning variable is position taking. Above, I explain the significance of traditional campaigning as it relates to advertising. That is really the most consistent finding with the literature (Flowers, Hayes and Crespin, 2003).

This hypothesis would have been better tested with subcategories for position taking or substantive messaging and advertising or campaign related messaging. If such a model shows that candidates with a high PageRank use both subcategories of traditional campaigning significantly more, it would have been a more conclusive rejection of Hypothesis 1. However, if such a model shows that candidates with a high PageRank only use advertising significantly more, it would suggest that my estimation of candidates' incentives was flawed. Rather than being competitive as a substitute for discussing policy, this would show that candidates advertise as a substitute for discussing policy.

Table 4, Presentation of Self

|                                 | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt; t )</b> |
|---------------------------------|-----------------|---------------------------|----------------|--------------------|
| Intercept                       | 18.51812        | 6.11092                   | 3.030          | 0.00287**          |
| <i>District Competitiveness</i> | -0.41988        | 0.46520                   | -0.903         | 0.36817            |
| White                           | -1.26323        | 2.09126                   | -0.604         | 0.54670            |
| Male                            | -2.13735        | 2.02530                   | -1.055         | 0.29294            |
| Democrat                        | -1.91478        | 1.68675                   | -1.135         | 0.25807            |
| Age                             | -0.20104        | 0.09326                   | -2.156         | 0.03267*           |
| Incumbent Experience            | 0.11116         | 0.10999                   | 1.011          | 0.31380            |
| <i>PageRank</i>                 | 0.69592         | 0.62094                   | 1.121          | 0.26415            |

*Significance Codes:* 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1; R-Squared: 0.06274

Table 5, Positive Competitive

|                                 | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt; t )</b> |
|---------------------------------|-----------------|---------------------------|----------------|--------------------|
| Intercept                       | 4.10560         | 2.83976                   | 1.466          | 0.1503             |
| <i>District Competitiveness</i> | -0.14883        | 0.21618                   | -0.688         | 0.4922             |
| White                           | 0.27289         | 0.97181                   | 0.281          | 0.7792             |
| Male                            | -0.44574        | 0.94116                   | -0.474         | 0.6365             |
| Democrat                        | 0.43797         | 0.78384                   | 0.599          | 0.5772             |
| Age                             | -0.04811        | 0.04334                   | -1.110         | 0.2687             |
| Incumbent Experience            | 0.02549         | 0.05111                   | 0.499          | 0.6188             |
| <i>PageRank</i>                 | 0.49344         | 0.28855                   | 1.710          | 0.0893.            |

*Significance Codes:* 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1; R-Squared: 0.03539

Table 6, Negative Competitive

|                                 | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt; t )</b> |
|---------------------------------|-----------------|---------------------------|----------------|--------------------|
| Intercept                       | 5.43823         | 5.00632                   | 1.086          | 0.27908            |
| <i>District Competitiveness</i> | -0.83703        | 0.38176                   | -2.193         | 0.02986*           |
| White                           | 2.12634         | 1.71374                   | 1.241          | 0.21661            |
| Male                            | 0.73106         | 1.6617                    | 0.440          | 0.66050            |
| Democrat                        | -3.74459        | 1.38772                   | -2.698         | 0.00776**          |
| Age                             | -0.06860        | 0.07639                   | -0.898         | 0.37058            |
| Incumbent Experience            | 0.07898         | 0.09012                   | 0.876          | 0.38218            |
| <i>PageRank</i>                 | 1.25989         | 0.50937                   | 2.473          | 0.01448**          |

*Significance Codes:* 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1; R-Squared: 0.1602



Table 7, Traditional Campaign

|                                 | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt; t )</b> |
|---------------------------------|-----------------|---------------------------|----------------|--------------------|
| Intercept                       | 19.990088       | 10.05464                  | 1.988          | 0.04857            |
| <i>District Competitiveness</i> | -0.12230        | 0.76542                   | -0.160         | 0.87326            |
| White                           | -1.34056        | 3.44087                   | -0.390         | 0.69737            |
| Male                            | 0.56082         | 3.33233                   | 0.168          | 0.86657            |
| Democrat                        | -3.66224        | 2.77531                   | -1.320         | 0.18895            |
| Age                             | -0.22863        | 0.15344                   | -1.490         | 0.13829            |
| Incumbent Experience            | 0.09706         | 0.18097                   | 0.536          | 0.5923             |
| <i>PageRank</i>                 | 2.72415         | 1.02166                   | 2.666          | 0.00849**          |

*Significance Codes:* 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1; R-Squared: 0.07123

Table 8, Share of Positive Competitive and Negative Competitive

|                                 | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt; t )</b> |
|---------------------------------|-----------------|---------------------------|----------------|--------------------|
| Intercept                       | 35.44389        | 12.38209                  | 2.863          | 0.00479**          |
| <i>District Competitiveness</i> | -1.66086        | 0.94259                   | -1.762         | 0.08007.           |
| White                           | 2.83444         | 4.23736                   | 0.669          | 0.50456            |
| Male                            | -2.00330        | 4.10370                   | -0.488         | 0.62613            |
| Democrat                        | -4.43685        | 3.41774                   | -1.298         | 0.19618            |
| Age                             | -0.09699        | 0.18896                   | -0.513         | 0.60851            |
| Incumbent Experience            | 0.05247         | 0.2286                    | 0.35           | 0.81419            |
| <i>PageRank</i>                 | 0.52506         | 1.25816                   | 0.417          | 0.67703            |

*Significance Codes:* 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1; R-Squared: 0.06075

Table 9, Share of Presentation of Self

|                                 | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt;  t )</b> |
|---------------------------------|-----------------|---------------------------|----------------|---------------------|
| Intercept                       | 37.88803        | 10.98330                  | 3.450          | 0.000727***         |
| <i>District Competitiveness</i> | -0.19336        | 0.79886                   | -0.242         | 0.809076            |
| White                           | -1.11033        | 3.570011                  | -0.311         | 0.756215            |
| Male                            | -2.92286        | 3.47644                   | -0.841         | 0.401802            |
| Democrat                        | 4.51873         | 2.92977                   | 1.542          | 0.0125068           |
| Age                             | -1.18045        | 0.16312                   | -1.106         | 0.270364            |
| Incumbent Experience            | -0.05784        | 0.19085                   | -0.303         | 0.762230            |
| <i>PageRank</i>                 | -2.97121        | 1.06612                   | -2.787         | 0.006000**          |
| Total Tweets                    | 0.03790         | 0.01491                   | 2.541          | 0.012053*           |

*Significance Codes:* 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1; R-Squared: 0.1081

Table 10, Share of Positive Competitive

|                                 | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt;  t )</b> |
|---------------------------------|-----------------|---------------------------|----------------|---------------------|
| Intercept                       | 17.622437       | 7.092389                  | 2.485          | 0.01405*            |
| <i>District Competitiveness</i> | 0.233038        | 0.515861                  | 0.452          | 0.65210             |
| White                           | 0.811518        | 2.305311                  | 0.352          | 0.72531             |
| Male                            | -3.483986       | 2.244886                  | -1.552         | 0.12275             |
| Democrat                        | 7.238603        | 1.891881                  | 3.826          | 0.00019***          |
| Age                             | -0.024883       | 0.105332                  | -0.236         | 0.81357             |
| Incumbent Experience            | -0.040001       | 0.123237                  | -0.325         | 0.74594             |
| <i>PageRank</i>                 | -1.742489       | 0.688441                  | -2.531         | 0.01239*            |
| Total Tweets                    | -0.002862       | 0.009630                  | -0.297         | 0.76671             |

*Significance Codes:* 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1; R-Squared: 0.1407

Table 11, Share of Negative Competitive

|                                 | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt;  t )</b> |
|---------------------------------|-----------------|---------------------------|----------------|---------------------|
| Intercept                       | 18.003677       | 10.100060                 | 1.783          | 0.0767.             |
| <i>District Competitiveness</i> | -1.898613       | 0.734622                  | -2.5841        | 0.0107*             |
| White                           | 2.017908        | 3.282942                  | 0.615          | 0.5397              |
| Male                            | 1.460874        | 3.196876                  | 0.457          | 0.6483              |
| Democrat                        | -11.704313      | 2.694172                  | -4.344         | 2.54e-05***         |
| Age                             | -0.073995       | 0.015000                  | -0.493         | 0.6255              |
| Incumbent Experience            | 0.094294        | 0.175498                  | 0.537          | 0.5919              |
| <i>PageRank</i>                 | 2.273753        | 0.980388                  | 2.319          | 0.0217*             |
| Total Tweets                    | 0.002074        | 0.013714                  | 0.151          | 0.8800              |

*Significance Codes:* 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1; R-Squared: 0.2278

Table 12, Share of Traditional Campaign

|                               | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt;  t )</b> |
|-------------------------------|-----------------|---------------------------|----------------|---------------------|
| Intercept                     | 26.485859       | 13.202256                 | 2.006          | 0.0466*             |
| <i>District Competiveness</i> | 1.858931        | 0.960259                  | 1.936          | 0.0547.             |
| White                         | -1.719099       | 4.291262                  | -0.401         | 0.6893              |
| Male                          | 4.945971        | 4.178784                  | 1.184          | 0.2384              |
| Democrat                      | -0.053025       | 3.521676                  | 0.015          | 0.9880              |
| Age                           | 0.279328        | 0.196072                  | 1.425          | 0.1563              |
| Incumbent Experience          | 0.003551        | 0.229402                  | 0.015          | 0.9877              |
| <i>PageRank</i>               | 2.439946        | 1.281511                  | 1.904          | 0.0588.             |
| Total Tweets                  | -0.037107       | 0.017926                  | -2.070         | 0.0401*             |

*Significance Codes:* 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1; R-Squared: 0.1335

Table 13, Share of Presentation of Self with Vote Share

|                      | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt;  t )</b> |
|----------------------|-----------------|---------------------------|----------------|---------------------|
| Intercept            | 35.10821        | 13.95647                  | 2.516          | 0.0129*             |
| <i>Vote Share</i>    | -0.73616        | 11.32390                  | -0.065         | 0.9483              |
| White                | -0.95085        | 3.70131                   | -0.257         | 0.7976              |
| Male                 | -1.88112        | 3.43647                   | -0.547         | 0.5849              |
| Democrat             | 3.91327         | 3.35747                   | 1.166          | 0.2456              |
| Age                  | -0.17124        | 0.16316                   | -1.050         | 0.2956              |
| Incumbent Experience | -0.06492        | 0.18241                   | -0.356         | 0.7224              |
| <i>PageRank</i>      | -2.58373        | 1.03107                   | -2.506         | 0.0133*             |
| Total Tweets         | 0.03749         | 0.01523                   | 2.461          | 0.0150              |

*Significance Codes:* 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1; R-Squared: 0.09723

Table 14, Share of Positive Competitive with Vote Share

|                      | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt;  t )</b> |
|----------------------|-----------------|---------------------------|----------------|---------------------|
| Intercept            | 25.715494       | 9.088806                  | 2.829          | 0.00529**           |
| <i>Vote Share</i>    | -3.023604       | 7.374412                  | -0.410         | 0.68237             |
| White                | -0.847952       | 2.410386                  | -0.352         | 0.72548             |
| Male                 | -4.504730       | 2.237914                  | -2.013         | 0.04588*            |
| Democrat             | 6.843673        | 2.186468                  | 3.130          | 0.00209**           |
| Age                  | -0.046059       | 0.106252                  | -0.433         | 0.66527             |
| Incumbent Experience | 0.027923        | 0.118792                  | -0.235         | 0.81448             |
| <i>PageRank</i>      | -2.147514       | 0.671459                  | -3.198         | 0.00168**           |
| Total Tweets         | -0.005473       | 0.009920                  | -0.552         | 0.58196             |

*Significance Codes:* 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1; R-Squared: 0.1746



Table 15, Share of Negative Competitive with Vote Share

|                      | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt;  t )</b> |
|----------------------|-----------------|---------------------------|----------------|---------------------|
| Intercept            | 19.376268       | 12.857678                 | 1.507          | 0.1339              |
| <i>Vote Share</i>    | -13.687609      | 10.432373                 | -1.312         | 0.1915              |
| White                | 4.136871        | 3.409905                  | 1.213          | 0.2269              |
| Male                 | 1.414241        | 3.165914                  | 0.447          | 0.6577              |
| Democrat             | -13.328083      | 3.093135                  | -4.309         | 2.92e-05***         |
| Age                  | -0.042781       | 0.168051                  | -0.285         | 0.7763              |
| Incumbent Experience | 0.010525        | 0.168051                  | 0.063          | 0.9501              |
| <i>PageRank</i>      | 2.248283        | 0.949894                  | 2.367          | 0.0192*             |
| Total Tweets         | 0.004529        | 0.014034                  | 0.323          | 0.7473              |

*Significance Codes:* 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1; R-Squared: 0.2148

Table 16, Share of Traditional Campaign with Vote Share

|                      | <b>Estimate</b> | <b>Standard<br/>Error</b> | <b>T Value</b> | <b>Pr(&gt;  t )</b> |
|----------------------|-----------------|---------------------------|----------------|---------------------|
| Intercept            | 19.80003        | 16.81341                  | 1.178          | 0.2408              |
| <i>Vote Share</i>    | 17.44737        | 13.64195                  | 1.279          | 0.2029              |
| White                | -2.33806        | 4.45898                   | -0.524         | 0.6008              |
| Male                 | 4.94161         | 4.13992                   | 1.201          | 0.2316              |
| Democrat             | 2.57114         | 4.04475                   | 0.636          | 0.5259              |
| Age                  | 0.26008         | 0.19656                   | 1.323          | 0.1878              |
| Incumbent Experience | 0.08232         | 0.21975                   | 0.375          | 0.7085              |
| <i>PageRank</i>      | 2.48296         | 1.24213                   | 1.999          | 0.0474*             |
| Total Tweet          | -0.03655        | 0.01835                   | -1.992         | 0.0482*             |

*Significance Codes:* 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1; R-Squared: 0.2148

*Hypothesis 2:* Members in unsafe districts are more likely to use the presentation of self.

For the purpose of testing hypothesis 2, I use district competitiveness to measure for marginality or safety.<sup>40</sup> I choose district competitiveness as it is the same measure used in the literature (Cover 1980; Cain, Ferejohn and Fiorina 1987; 1983). As stated above, district competitiveness is measured by taking the absolute value of the difference between the winner's vote share and the loser's vote share. To test hypothesis 2, I use the models above and from these models I also fail hypothesis 2. In fact, surprisingly, I find that marginal members are significantly more likely to use Twitter for negative competitive messaging.

The first estimate, as shown in Table 4, shows that the only significant relationship to the presentation of self is age. Younger members are significantly more likely to use the presentation of self than their older colleagues. However, this relationship does not exist when we consider youth as incumbent experience, as is consistent with the literature. In fact, no tweeting styles are significantly related to incumbent experience. This estimate does not change when testing for the share of the presentation of self.

The failing of this hypothesis is a change from existing literature. Adler, Gent and Overmeyer (1998) find in the early stages of Internet research, that the decisions to solicit casework online is strongly correlated with the safety of the district.<sup>41</sup> This is consistent

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<sup>40</sup> Throughout the paper, I use “marginal” and “unsafe” interchangeably.

<sup>41</sup> Many studies before the use of Internet communication have discussed the conditions present for constituency service and constituency contact (Cain, Ferejohn, and Fiorina 1983; 1987; Cover 1980; Epstein and Frankovich 1982). My findings contradict their

with older studies that find constituency service as an effective way for marginal members to increase their favorable characteristics among their constituents.

The most reasonable explanation for this negative result is that ease of Twitter has not translated into an effective means of constituency service. Put another way, there still lies utility for members to utilize mailings and email lists to solicit constituency contact. Twitter use during a campaign is impersonal; the tweets are cast out to a large audience, rather than to individuals. Therefore, it makes sense for candidates to use Twitter for other forms of communication to do things like soliciting casework as they can design the message to a more targeted audience.

However, I did find that members in competitive districts were significantly more likely to use negative competitive messaging. As a casual observer of elections, this result is not surprising; negative competitive messaging is a means of attaining a relative advantage on an opponent, and it allows the attacker to set the narrative because the opponent often is forced to respond. From an academic perspective, the findings are less clear. Skaperdas and Grofman (1995) model negative campaigning and find that the frontrunner has less of an incentive to go negative than the underdog.

Unfortunately, Skaperdas and Grofman do not look at the incentives for incumbents and their nonincumbent opponents. Similarly in an empirical study of U.S. Senate elections, Lau and Pomper (2002) find that negative campaign strategies are useful strategies for *challengers*. Further, in a meta-analysis Lau, Sigelman and Rovner (2007)

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results, though they do not invalidate them. Twitter has simply not been used as a medium to interact with constituencies at the rate that their findings might suggest.

find evidence that negative campaigning is not an effective method of increasing a candidate's vote-share.

The most significant piece providing explanation of my results is Theilmann and Whilhite (1998). In an experiment with political consultants as the population, Theilmann and Whilhite find that negative messaging is a predictable strategy when incumbents are in a close race, or are losing (Theilmann and Whilhite 1998: 1055). My evidence corroborates Theilmann and Whilite, but provides little to the overall literature on negative messaging.

Interestingly, when I look at the share of tweets—rather than the total number of tweets—I find that the share of negative competitive tweets come from the share of traditional competitive tweets. This is counterintuitive as there seems to be incentives for members in a tight race to mobilize their supporters by advertising get out the vote efforts. However, when considering the variable as a whole, it shows that members use negative competitive messaging as a substitute for substantive messaging when in close races.

#### ***Limitations to the model:***

The major limitation of the model is the length of time that the data were collected. It is reasonable to expect candidate behavior to change over the course of the session, and it is entirely possible that over the course of the entire session that I would have found different results. It is debatable how significant this limitation is. After all, this is paper is looking at an election therefore data from outside the election season are not relevant. However, Cover's (1980) seminal study studies the entire session. Further, it would make sense to understand incumbent behavior leading to the election, as incumbents are

primarily interested in reelection. In Chapter 5, I discuss potential problems with my definitions that might have biased my sample. In essence, I used a narrower definition of the presentation of self than the rest of the literature, which might have taken positive effects out of the model.

### **Discussion about the models:**

The three sets of models I test find very similar results for hypothesis 1. The models are simply looking at the same variables but in different ways. The most significant difference in the sets of models is the significance of traditional campaign messaging and PageRank. The estimates are all basically the same, but as shown in Table 12 and Table 16 the significance becomes much weaker. Indeed, in Table 12, there is technically not a significant relationship. Similarly, the relationship of negative competitive becomes marginally weaker for PageRank. However, the relationship becomes marginally stronger when looking at district competitiveness for hypothesis 2.

This is not worrisome; the most important set of models is the first as I am most interested in the actual amount of tweets members' make when they are reaching a large audience, or when they are in a competitive election. It is not as important to understand the share of tweets. A member tweeting 3 out of 5 tweets as negative competitive is not the same as a member tweeting 30 out of 100 tweets as negative competitive, because the frequency is higher for the second member. When I am looking at the share of tweets, the first member appears to use Twitter twice as much for negative competitive messaging as the second member. Further, the results stay basically the same. Negative competitive and traditional campaign remains positively correlated with PageRank and negative

competitive stays positively correlated with district competitiveness. The difference between the sets of models is the negative correlation for positive competitive and presentation of self with PageRank. This is not surprising, as I am using PageRank as a metric of salience, and other users are not likely to disseminate a candidate's tweet proclaiming that they had a good cheese steak at a mom and pop restaurant in their district. Users are also not likely to disseminate a candidate's tweet when the candidate is proclaiming that they have a big lead in the race. People looking to disseminate information consistent with the positive competitive variable, are likely to look for a more comprehensive source than a 140 character tweet.

The third set of models are equally underwhelming as the theory behind hypothesis two was about the safety of the district, not about the outcome of the election. All the literature cited uses a similar measure to measure for district competitiveness. The third set of models might corroborate previous literature doubting the efficacy of negative campaigning, as they show that members who are in competitive campaigns are more likely to go negative, but are not likely to benefit from going negative. However, there is little more to learn by substituting district competitiveness for vote share.

## CHAPTER FIVE: CONCLUSION

### *Introduction:*

In the conclusion, I first discuss the findings of this paper contrasted with previous literature, and explore theories as to why I had non-results. I discuss the non-results for hypothesis 1 by considering the possibility that variable selection was suboptimal. To discuss non-results for hypothesis 2, I consider that the direction that the variables I coded might have been too narrow to capture the effects I was testing for. Then, I discuss how this paper fits in the Political Science literature. I summarize that hypothesis 1 does little for the literature. Hypothesis 2, however, provides a blow to a large literature and suggests that further research must be done to understand the nature of the presentation of self.

### *Discussion of results:*

Absent of positive results, this paper makes an important point about candidate messaging on social networks. It shows that, with near uniformity, a majority of the time candidates use social media for civil political use. They use it to disseminate information about upcoming campaign events, about the daily political events in Washington, and about their own stances on salient issues. Therefore, I can conclude that the home styles projected by members of Congress are not dissimilar to what Fenno describes. Members are trying to project that they are working for their constituents (Fenno 2003). They using Twitter to



hold rallies for constituents to show their support, they hold town hall meetings to get feedback from their constituents.

The degree that members use Twitter for traditional campaign activities was surprising; it was expected that there would be a greater share of Twitter usage focused on candidates' desirable traits and focused on building a relationship with the constituency. Advertising political events or taking a stance on an issue on Twitter is impersonal. Twitter is a relatively personal form of communication, where members go to share their thoughts and cat pictures. I expected the Twitter usage by members of Congress to be significantly closer to the median Twitter user's usage. In other words, the expectation was for the Home Style projected to be more candidate centric, personal and focused on reputation building.

However, my expectations for the shares of Twitter usage is not the reason why this project failed to yield positive results. For Hypothesis 1, I used PageRank to determine whether salient members tweeted differently than nonsalient members. The literature to support this hypothesis is very slim. The literature that inspired hypothesis 1, and that I used to describe hypothesis 1, are formal theoretic models on candidate ambiguousness. This literature describes the incentives for candidates to make issues more salient by taking a firm stance on the issue. The literature fairly uniformly shows that there are not sufficient incentives for candidates to be specific when talking about issues. This lead me to believe that position taking and credit claiming, or substantive messaging, would be much less likely to occur. Further, high salience members do not have sufficient incentive to use this form of communication, as it would only give their adversaries an opportunity to attack them. Therefore, high salience members' incentives are to use Twitter to make themselves look like they deserve to be a ranking member or a party leader. High salience members

also theoretically have incentives to use Twitter to attack their adversaries, as it will have a greater impact because it will reach more people.

However, it appears candidates do not agree with my theoretical understandings of their incentives. There is a possibility that I was not looking at Hypothesis 1 correctly. PageRank calculates how often the page is linked to. As Hong and Nadler (2012) show, a candidates' salience online is correlated with new coverage of the candidate. Therefore, it might have been more useful to look at the tweet styles that are more likely to get news coverage. However, had I used that model, it would have yielded similar results. As shown above, members use Twitter significantly as a means of traditional campaigning. Further, Flower, Haynes and Crespin (2003) show that most of the campaign messaging that is picked up by the news media are campaign announcements. However, Flowers, Haynes and Crespin are investigating a Presidential primary, not a Congressional session. Therefore, it is likely that the media will rely much less on individual members from the dataset, than Flowers, Hayes and Crespin found.

PageRank is also possibly a bad measure for salience. PageRank is calculated on a 0-10 scale—every page on the web fits on this scale. 125 of the 180 members analyzed had either a 4 or a 5. It is possible that this scale hides the actual effects of salience as so many members are grouped so closely together. However, I also had data for the Alexa traffic rank, which is a Google Chrome extension that measures traffic to the webpage and the amount of pages that link to the page. The Alexa rank offers a much more specific number than PageRank; however, there are no major differences in the model when Alexa is substituted for PageRank.

A final conjecture about the failure of hypothesis 1 was that I was looking at the variables incorrectly. Advertising political events, news appearances, and the like, are very much a way to avoid making unequivocal stances on issues. When building the model, I dismissed this notion because at political events members are likely to take firm stances and to vary away from an ambiguous strategy. I did not have data on this, however. There is no way to determine—5 years later—whether a candidate utilized an ambiguous strategy in each event that they advertised on Twitter.

Even if I had that data, the traditional campaign variable is problematic as a means of testing an ambiguous strategy. To test advertising as an ambiguous strategy, it would have to be decoupled from the unequivocal strategies of position taking and credit claiming.

Nevertheless, when considering the proportions of tweets, rather than the overall tweets, I find positive competitive and negative competitive to be negatively correlated. This might further suggest that the theory is backwards. Candidates that reach a large audience might actually be tweeting significantly more to take stances on the issues, as a means of controlling the narrative in Washington. However, to determine the exact nature of this, further research is warranted.

There are possible avenues for research for Hypothesis 1. For example, it would be interesting to empirically test the formal theories about candidate ambiguity with a similar method. To test this, one would simply need to analyze both the messaging used by challengers and incumbents and perform a content analysis. Twitter would not be able to be the only source of data; the researcher would have to also look at speeches and campaign

releases. The model would probably be best suited for a Presidential primary, rather than for a congressional election as there is a higher frequency of public statements which would make it easier to track the aggregate strategies of the candidate. The only problem would arise in determining how to model for issues never brought to salience by the incumbent or frontrunner that Glazer and Lohmann (1999) discuss. Even if there is not an effective way to capture this in the model, it would still be interesting to see the conditions present for a candidate to get specific on an issue and which issues come to salience in the campaign cycle.

Rejecting Hypothesis 2 was especially surprising. There is plenty of generalizable literature to suggest that marginal members would use Twitter to engage their constituency, and solicit casework. It simply was not represented in the data. One additional reason might be that often times members would simply share links with the title of the link. If it was clear what type of messaging strategy was being used, I would count it as such. If not, or if the link had no context and was broken, I would simply skip it as there would be no way of determining which category it belonged to. Often times, I suspect, these links were links to photo albums of constituency visits, and links to inspiring stories about their constituents. With more recent data where I would be able to check the links, there might have been a different result.

However, the result postulated in the body of the text are still valid. There is no possibility of measurement error, as with hypothesis 1. However, it would be interesting to do the same model but with data from Facebook, as Facebook gives members the ability to tell longer stories by providing its members with an unlimited character count for its

posts. It might, then, be more effective to use Facebook for constituency service and constituency contact.

Nevertheless, there is the likelihood that the variables I used were too narrowly focused, as mentioned in Chapter 2, the seminal study on which hypothesis 2 was based, started with a much broader definition, looking at “personal qualities, qualifications, activities, and record” (Cain, Ferejohn, and Fiorina, 1987:9). Personal qualities and activities are certainly captured under my variable “the presentation of self” but qualifications were mostly counted as positive competitive, and depending on the context and tone, record was coded as either positive competitive, traditional campaigning, or the presentation of self. This method of coding is a little unorthodox in traditional content analyses. I am confident in my assumptions that the reader of the tweets will be able to discern context from the members’ tweets. Users who are likely to follow members of Congress are likely to be politically informed enough to understand the tone and context of the tweets. Nevertheless, this subjectivity of the coding did result in much variation between the positive competitive and the traditional campaign variables. In fact, nearly all the variation between my reading of the tweets, and the second reader’s reading of the tweets came from this subjectivity. Using Scott’s Pi as a coefficient of determination, I am not worried that the subjectivity of my variables biased the results.

Further, the definition I used was even narrower than a narrow reading of Fenno’s (2003) definition of the presentation of self. An important part of the presentation of self for Fenno was qualification. When a member used Twitter to look more qualified, I coded it as positive competitive. I chose to do this because, as Fenno notes, the qualification component is more important for the challenger or nonincumbent (Fenno 2003:57).

Further, it is hard to imagine a situation near an election in which a member is flaunting their qualifications without a competitive motive. Indeed, if there were a mention of qualifications that did not come off as competitive, it would have been coded as the presentation of self.

Furthermore, I do not agree with Fenno's three-pronged approach for trust. Qualification is categorically different than identification and empathy. The latter two, make the member look like they are "one of us" and helps the member identify with the constituency. Qualification, however, separates the member from the constituency. Qualification makes the member seem elite, and as one that the constituents can look up to. Sure, some degree of balance of the three is the optimal trust maximization strategy; however, qualification intensive messaging is intended to provide relative political gains against opponents, where identification and empathy is a more personal, nonpolitical messaging. Had I used a broader definition—that is fully comprehensive of Cain Ferejohn and Fiorina (1987) and Fenno (2003)—there is a possibility of a different, positive, result.

The negative competitive significance was a little surprising. The best conjecture is that campaigns are run by professional political consultants, and not by academics who understand the effects of negative campaigning. My results provide the most significant contribution to Theilmann and Whilite (1998) whose analysis is based on a survey of political consultants. The actual aggregate data analysis of negative competitive campaigning is mixed at best on its utility for incumbents. If anything, the nonresults of the third set of models show that negative campaigning might be the likely strategy, but it is not necessarily the effective strategy.

*The Literature as a whole:*

The two hypotheses tested both provide insight into the Political Science literature. Hypothesis 1 was mostly an attempt at empirically testing a formal theory. In all, it did not work. It was not surprising that it did not work, as there is empirical work on campaign media that finds similar results about salience and issue-framing (Hong and Nadler 2012). Further, the model was too simple to test candidate strategy against the literature of ambiguousness. It would have required a much more sophisticated econometric analysis. Moreover, to properly empirically test the literature of ambiguousness, I would have needed district level attitudinal data that I did not have access to. To test this hypothesis most effectively, it might be better to do a time series analysis of a Presidential primary, as there would be better attitudinal data readily available.

Hypothesis 2, however, provides a great deal of insight into the Political Science literature. Every piece of literature, spanning decades, suggests that marginal members should have more tweets fall into presentation of self category. But, the test failed. Assuming the decisions I made about data collection was not the primary reason why the test failed, the failed result opens a lot of questions. Are safer members contacting constituents more because the cost is lower due to the expansion of the Internet, while marginal members' contact levels have stayed constant? Or, has Twitter not yet been adopted to improve the presentation of self? Finally, has the nature of elections changed so that the personal, empathy, and identity characteristics of candidates has become less relevant?

## REFERENCES

- Abramowitz, Alan. *The Disappearing Center: Engaged Citizens, Polarization, and American Democracy*. New Haven and London: Yale University Press, 2010.
- Adler, E. Scott, Chariti E. Gent, and Cary B. Overmeyer. "The Home Style Homepage: Legislator Use of the World Wide Web for Constituency Contact." *Legislative Studies Quarterly* 23, no. 4 (November 1998): 585-595.
- Aldrich, John H. *Why Parties?: A Second Look*. Chicago and London: The University of Chicago Press, 2011.
- Alesina, Alberto, and Alex Cukierman. "The Politics of Ambiguity." *The Quarterly Journal of Economics* 105, no. 4 (November 1990): 829-851.
- Angrist, Joshua D., and Jorn-Steffen Pischke. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton: Princeton University Press, 2009.
- Arceneaux, Kevin. "Cognitive Biases and the Strength of Political Arguments." *American Journal of Political Science* 56 (April 2012): 271-285.
- Arceneaux, Kevin, and Martin Johnson. *Changing Minds of Changing Channels? Partisan News in an Age of Choice*. Chicago and London: The University of Chicago Press, 2013.



- Bade, Sophie. "Electoral competition with uncertainty averse parties." *Games and Economic Behavior*, no. 1 (2011): 12-29.
- Basinger, Scott J., Damon M. Cann, and Michael J. Ensley. "Voter response to congressional campaigns: new techniques for analyzing aggregate electoral behavior." *Public Choice* 150 (March 2012): 771-792.
- Berger, Ben. *Attention Deficit Democracy: The Paradox of Civic Engagement*. Princeton University Press, 2011.
- Berliant, Marcus, and Hideo Konishi. "Salience: Agenda Choices by Competing Candidates." *Public Choice* 125, no. 1/2 (October 2005): 129-145.
- Boatright, Robert G. *Getting Primaried: The Changing Politics of Congressional Primary Challenges*. Ann Arbor: The University of Michigan Press, 2014.
- Boatright, Robert G. "Interest Group Niches and Congressional Primaries." *Western Political Science Association 2011 Annual Meeting Paper*, 2011.
- Bowler, Shaun, and David M Farrell. *Electoral Strategies and Political Marketing*. Basingstoke: Macmillan Press, 1992.
- Box-Steffensmeier, Janet M., David Darmofal, and Christian A. Farrell. "The Aggregate Dynamics of Campaigns." *The Journal of Politics*, 2009: 309-323.
- Brundidge, Jennifer, and Ronald E. Rice. "Political engagement online: do the information rich get richer and the like-minded more similar?" In *Routledge Handbook of Internet Politics*, by Andrew Chadwick and Philip N. Howard, 144-157. New York: Routledge, 2009.

- Buchler, Justin. "Competition, Representation and Redistricting: The Case Against Competitive Congressional Districts." *Journal of Theoretical Politics*, 2005: 431-463.
- . *Hiring and Firing Public Officials: Rethinking the Purpose of Elections*. London: Oxford University Press, 2011.
- Cain, Bruce, John Ferejohn, and Morris Fiorina. "The Constituency Component: A Comparison of Service in Great Britain and the United States." *Comparative Political Studies*, 1983: 67-91.
- . *The Personal Vote: Constituency Service and Electoral Independence*. Cambridge and London: Harvard University Press, 1987.
- Census Bureau. *Regions and Divisions*. January 11, 2015.  
[http://www.census.gov/econ/census/help/geography/regions\\_and\\_divisions.html](http://www.census.gov/econ/census/help/geography/regions_and_divisions.html)  
(accessed January 22, 2015).
- Chadwick, Andrew. *The Hybrid Media System: Politics and Power*. New York: Oxford University Press, 2013.
- Converse, Philip. "The Nature of Belief Systems in Mass Publics." In *Ideology and Discontent*, by David E. Apter. New York: The Free Press of Glencoe, 1964.
- Cooper, Alexandra, and Michael C Munger. "The (un)predictability of primaries with many candidates: Simulation evidence." *Public Choice* 103, no. 3/4 (2000): 337-355.

- Cover, Albert. "Contacting Congressional Constituents: Some Patters of Perquisite Use." *American Journal of Political Science*, 1980: 125-135.
- Davis, Richard, and Diana Owen. *New Media and American Politics*. New York and Oxford: Oxford University Press, 1998.
- Downs, Anthony. *An Economic Theory of Democracy*. New York City: Harper and Row, 1957.
- Druckman, James N., Erik Peterson, and Rune Slothuus. "How Elite Partisan Polarization Affects Public Opinion Formation." *The American Political Science Review* 107 (February 2013): 57-79.
- Druckman, James N., Jordan Fein, and Thomas J. Leeper. "A Source of Bias in Public Opinion Stability." *The American Political Science Review* 106 (May 2012): 430-454.
- Ensley, Michael. "Incumbent positioning, ideological heterogeneity and mobilization in US House elections." *Public Choice* 151 (April 2012): 43-61.
- Epstein, Laurily, and Kathleen Frankovic. "Casework & Electoral Margins: Insurance is Prudent." *Polity*, 1982: 691-700.
- Everland, JR, William P., and Steven B. Klienman. "Comparing General and Political Discussion Networks Within Voluntary Organizations Using Social Network Analysis." *Political Behavior* 35 (March 2013): 65-87.

Fenno, Richard F. *Congress at the Grassroots: Representational Change in the South 1970-1998*. Chapel Hill and London: The University of North Carolina Press, 2000.

—. *Home Style: House Members in Their Districts*. Longman: New York, 2003.

Fiorina, Morris P. *Retrospective Voting in American National Elections*. New Haven: Yale University Press, 1981.

Flowers, Julianne F., Audrey A. Haynes, and Michael H. Crespin. "The Media, the Campaign and the Message." *American Journal of Political Science* 26 (April 2003): 259-273.

Fowler, James H., and Oleg Smirnov. *Mandates, Parties, and Voters: How Elections Shape the Future*. Philadelphia: 2007, 2007.

Gainous, Jason, Adam David Marlowe, and Kevin M. Wagner. "Traditional Cleavages or a New World: Does Online Social Networking Bridge the Political Participation Divide?" *International Journal of Politics, Culture, and Society* 26 (June 2013): 145-158.

Gainous, Jason, and Kevin M. Wagner. *Tweeting to Power: The Social Media Revolution in American Politics*. New York and Oxford: Oxford University Press, 2014.

Gentzkow, Matthew, and Jessie M. Shapiro. "Media Bias and Representation." *Journal of Political Economy*, 2006: 280-316.

Glazer, Amihai. "The Strategy of Ambiguity." *The American Political Science Review* 84, no. 1 (March 1990): 237-241.

- Glazer, Amihai, and Susanne Lohmann. "Setting the Agenda: Electoral Competition, Commitment of Policy, and Issue Salience." *Public Choice* 99, no. 3/4 (1999): 377-394.
- Goffman, Erving. *The Presentation of Self in Everyday Life*. New York City: Anchor, 1959.
- Gordon, Sanford C., and Gregory A. Huber. "The Effect of Electoral Competitiveness on Incumbent Behavior." *Quarterly Journal of Political Science*, 2007: 107-138.
- Graber, Doris A. *Mass Media and American Politics*. 7th. Washington: CQ Press, 2006.
- Green, Donald P, and Ian Shapiro. *Pathologies of Rational Choice Theory: A Critique of Applications in Political Science*. New Haven: Yale University Press, 1994.
- Gulati, Girish J., and Christine B. Williams. "Social Media and Campaign 2012: Developments and Trends for Facebook Adoption." *Social Science Computer Review* 31, no. 5 (2013): 577-588.
- Haynes, Audrey, Julianne Flowers, and Paul-Henri Gurian. "Getting the Message Out Early: Candidate Strategy and the Invisible Primary." *Political Research Quarterly* 55, no. 3 (2002): 633-652.
- Hong, Sounman, and Daniel Nadler. "Which candidates do the public discuss online in an election campaign?: The use of social media by 2012 presidential candidates and its impact on candidate salience." *Government Information Quarterly*, 2012: 455-461.

Huckfeldt, Robert, and John Sprague. "Political Parties and Electoral Mobilization: Political Structure, Social Structure, and the Party Canvass." *The American Political Science Review* 86, no. 1 (March 1992): 70-86.

Huckfeldt, Robert, Jeanette Morehouse Mendez, and Tracy Osborn. "Disagreement, Ambivalence, and Engagement: The Political Consequences of Heterogeneous Networks." *Political Psychology* 25 (February 2004): 65-95.

King, Gary, Robert O. Keohane, and Sidney Verba. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press, 1994.

Lau, Richard R., and David P. Redlawsk. "Voting Correctly." *The American Political Science Review* 91 (September 1997): 585-598.

Lau, Richard R., and Gerald M. Pomper. "Effectiveness of Negative Campaigning in U.S. Senate Elections." *American Journal of Political Science* 46, no. 1 (January 2002): 47-66.

Lau, Richard R., Lee Sigelman, and Ivy Brown Rovner. "The Effects of Negative Political Campaigns: A Meta-Analytic Reassessment." *The Journal of Politics* 69, no. 4 (November 2007): 1176-1209.

Lodge, Milton, Kathleen M. McGraw, and Patrick Stroh. "An Impression-Driven Model of Candidate Evaluation." *The American Political Science Review* 83, no. 2 (June 1989): 399-419.

- Lodge, Milton, Marco R. Steenbergen, and Shawn Brau. "The Responsive Voter: Campaign Information and the Dynamics of Candidate Evaluation." *The American Political Science Review* 89 (June 1995): 309-326.
- Mayhew, David R. *Congress: The Electoral Connection*. New Haven and London: Yale University Press, 1974.
- Miller, Arthur H., Martin P. Wattenberg, and Oksana Malanchuk. "Schematic Assessments of Presidential Candidates." *The American Political Science Review* 80, no. 2 (June 1986): 521-540.
- Monroe, Burt L., and Amanda G Rose. "Electoral Systems and Unimagined Consequences: Partisan Effects of Districted Proportional Representation." *American Journal of Political Science*, 2002: 67-89.
- Monroe, Burt L., and Amanda G. Rose. "Electoral Systems and Unimagined Consequences: Partisan Effects of Districted Proportional Representation." *American Journal of Political Science*, 2002: 67-89.
- Neuendorf, Kimberly A. *The Content Analysis Guidebook*. Thousand Oaks, California: SAGE Publications, 2001.
- Oxford English Dictionary of English*. 3. Oxford University Press, 2010.
- Papacharissi, Zizi. *Affecting Publics: Sentiment, Technology, and Politics*. New York: Oxford University Press, 2014.

- Peterson, Rolfe Daus. "To Tweet or not to Tweet: Exploring the Determinants of Early Adoption of Twitter by House Members in the 111th Congress." *Social Science Journal* 49 (2012): 430-438.
- Prat, Andrea, Riccardo Puglisi, and James M. Snyder. "Is Private Campaign Finance a Good Thing? Estimates of the Potential Information Benefits." *Quarterly Journal of Political Science*, 2010: 291-318.
- Putnam, Robert D. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster, 2001.
- Richey, Sean. "The Autoregressive Influence of Social Network Political Knowledge on Voting Behaviour." *British Journal of Political Science*, July 2008: 527-542.
- Roberts, Marilyn, Wayne Wanta, and Tzong-Hong Dustin Dzwo. "Agenda Setting and Issue Salience Online." *Communication Research* 29, no. 4 (August 2002): 452-465.
- Rosenstone, Steven J, and John Mark Hansen. *Mobilization, Participation, and Democracy in America*. New York: Macmillan, 1993.
- Russell, Matthew A. *Mining the Social Web*. 2nd. Cambridge, MA: O'Reilly Media, 2013.
- Ryan, John Barry. "Social Networks as a Shortcut to Correct Voting." *American Journal of Political Science* 55 (October 2011): 753-766.
- Samuels, David, and Richard Snyder. "The Value of a Vote: Malapportionment in Comparative Perspective." *British Journal of Political Science*, 2001: 651-671.



- Sergey, Brin, and Lawrence Page. "The anatomy of a large-scale hypertextual Web search engine." *Computer Networks and ISDN systems* 30, no. 1 (1998): 107-117.
- Shepsle, Kenneth A. "The Strategy of Ambiguity: Uncertainty and Electoral Competition." *The American Political Science Review* 66, no. 2 (June 1972): 555-568.
- Shogan, Colleen J. "Blackberries, Tweets, and YouTube: Technology and the Future of Communicating with Congress." *PS: Political Science and Politics* 43 (April 2010): 231-233.
- Skaperdas, Stergios, and Bernard Grofman. "Modeling Negative Campaigning." *The American Political Science Review* 89, no. 1 (1995): 49-61.
- Sunstein, Cass R. *Going to Extremes: How Like Minds Unite and Divide*. New York: Oxford University Press, 2009.
- Terkildsen, Nayda, Frauke I. Schnell, and Christine Ling. "Interest Groups, the Media and Policy Debate Formation: An Analysis of Message Structure, Rhetoric and Source Cues." *Political Communication* 15 (1998): 5-32.
- Theilmann, John, and Allen Wilhite. "Campaign Tactics and the Decision to Attack." *The Journal of Politics* 60, no. 4 (1998): 1050-1062.
- Tullock, Gordon. *Toward a Mathematics of Politics*. Ann Arbor: University of Michigan Press, 1967.
- U.S. Census Bureau. *American Community Survey, 2013*. September 18, 2014.  
<http://www.census.gov/acs> (accessed September 2014, 2014).

- . *Geography*. September 09, 2014. <http://www.census.gov/geo/reference/urban-rural.html> (accessed September 22, 2014).
- U.S. Library of Congress. *Bill Summary & Status 111th Congress (2009-2010) H.R. 5297*. n.d. <http://thomas.loc.gov/cgi-bin/bdquery/z?d111:h.r.05297>: (accessed February 27, 2015).
- Wagner, Kevin M., Jason Gainous, and Mirya R. Holman. "I am Woman, Hear me Tweet! Gender Differences in Twitter Use among Congressional Candidates." *Paper presented at the Annual Meeting of the Southern Political Science Association*. 2014.
- Wagner, Kevin, and Jason Gainous. "Electornic Grassroots: Does Online Campaigning Work?" *Journal of Legislative Studies* 15 (2009): 502-520.
- Wooldridge, Jeffery M. *Econometric Analysis of Cross Section and Panel Data*. Cambridge and London: The MIT Press, 2002.
- Yiannakis, Diana Evans. "House Members' Communication Styles: Newsletters and Press Releases." *The Journal of Politics* 44, no. 4 (November 1982): 1049-1071.
- Zaller, John R. *The Nature and Orgins of Mass Opinion*. New York: Cambridge University Press, 1992.
- Zuckerman, Alan S., ed. *The Social Logic of Politics: Personal Networks as Contexts for Political Behavior*. Philadelphia: Temple University Press, 2005.

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