

THE PRE-EMPTIVE ELECTION: HOW THE MASS MEDIA
DETERMINE WINNERS AND LOSERS IN PRESIDENTIAL
PRIMARIES, 1988-2012

by

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ABSTRACT

The function of the mass media in the democratic process is crucial to an informed public and vital to a democratic system. One primary role of the media is that of gatekeeper between political candidates and the public. The influence the media has on the electorate is heightened during the primary process of presidential elections and even more so in the pre-primary season when a large majority of potential voters have yet to form opinions of candidates. The effects of the media in the pre-primary season of politics play out in significant relationships where media coverage results in measurable increases in campaign contributions to the candidates included in this research, while the tone of content has no measurable influence. Although models that tested the ability to predict success in primaries failed to reach statistically significant levels, the raw data show high correlations between media coverage and candidate success.

To my wonderful wife who sacrificed so much during this process, to my children who put up with my daily study time, and to my parents who never failed to offer an encouraging word.

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CHAPTER 1: INTRODUCTION

It is widely accepted in the study of political science that the media consortium of television, print and, more recently, the internet has a credible influence on how candidates for president of the United States are perceived by voters (Patterson 1980). However, most of the existing research tends to focus its analyses in one of three ways: on the election cycle broadly, specifically on the primaries, or solely on the general election season. And by merely seeking to determine the existence of such influence, most—if not all—stop short of quantifying the possible effects the influence of the media may have on election outcomes with any sort of predictive model. Consequently, the available research fails to grasp the significance that the mass media has on, not simply influencing the elections, but to the extent that it actually possesses the power to pick winners and losers. Of particular concern here is the gap in research that fails to provide such a model based on specific analysis of media effects in the pre-primary season—referred to by some as the “media primary” (Project for Excellence in Journalism 2011), “invisible primary” (Hadley 1976; Haynes, Flowers, Gurian 2002) or “viability primary” (Dowdle, Adkins and Steger 2009).

This paper analyzes the influence the mass media has on the electorate in the pre-primary process of United States presidential elections from 1988 through 2012 and attempts to quantify its predictive power. The question this paper seeks to answer is whether the media influence voter perception of a candidate to the extent that such influence affects the outcome of an election. By analyzing quantity and tone of media coverage of declared candidates during the pre-primary phase, a logistical regression

model will test to determine if there exists a quantifiable value of such influence. This value is measured in terms of the likelihood of success in the candidates' respective party primary in New Hampshire, historically the first primary in the nation. Multiple control variables will attempt to reduce the possibility of any spurious relationships. Furthermore, a lagged time analysis of the data will provide a means of reducing the potential for endogeneity between multiple factors that commonly contribute to success in the pre-primary process. This method comports with the methodology of prior work (Dowdle, Adkins and Steger 2009, 78).

CHAPTER 2: LITERATURE REVIEW

Before any research of media influence in the election process can begin, it is necessary to identify the key actors in this relationship and understand their functions. Of particular importance to this paper are three elements: the presidential candidates, the electorate, and the New Hampshire primary. A review of existing literature will explain each component's peculiar function within the context of its relationship to the others and, most importantly, to the media.

2.1 The Candidates

Candidates seeking their respective party's nomination for president begin the political cycle with varying degrees of political capital—whether that is expressed in experience, name recognition, party support, or financial resources. Regardless of how much political capital a candidate enjoys, there are specific goals that must be attained during the pre-primary process. Dowdle, Adkins, and Steger (2009) focus specifically on this pre-primary season of the election cycle and analyze the characteristics of the candidates in their quest for nomination. They note the peculiarity of the process in which party identification [highly significant in voter choice (preference), Campbell, et al. (1960)] is of no value, in that all candidates are of the same party (Dowdle, Adkins, Steger 2009, 78). The result of this situation is that candidates must find other means by which they can

differentiate themselves from other candidates, with the goal of creating an image of viability.

Additionally, candidates must find the proper balance between presenting their position on issues and their personal image. Choi and Lee (2007) note that “in the initial stage of impression formation for political figures, image information plays a more significant role than issue information” (61). Furthermore, they attribute this focus on candidate image to the “visual medium” of television (61). This can be related to the fact that low levels of information about the candidates exist in the pre-primary season due to the absence of party identification and often, the lack of general familiarity with the candidates. As Buell (1991) notes, during this early election season “...citizens [know] and [care] the least about candidates and issues” (150).

Arterton notes that campaigns may influence the way in which the media frame issues (1997, 193). However, Petrocik adds a caveat to this conclusion in that, “...each depends on the other to accomplish its objectives” (1984, 198). This creates a predicament for the candidate whereby they are beholden to the media for press coverage, all the while knowing that invariably the media has ultimate control over the framing of that coverage. Bartels (1985) found that expectations of candidates’ success had a greater effect on voters’ perceptions only in early primary states as compared to later primaries. Under these circumstances, a candidate will seek out the media to facilitate the process of acquiring this political capital in the hopes that it will translate to electoral success during the primaries and, ultimately, during the general election.

2.2 The Electorate

In a democratic election, what ultimately matters are the decisions that voters make in choosing candidates for office. As such, understanding how voters respond to various forms of stimuli—how they absorb, acknowledge, and react to political information—is essential to producing an accurate explanation of how the media influences their political decision-making processes. What the existing research finds is, as Flanigan and Zingale (2010) note, an “impressionable electorate” during the early election season (179). Similar to Buell’s (1991) uninterested electorate, Flanigan and Zingale attribute a vulnerable electorate to the reality that voters have few pre-conceived attitudes about the candidates during the primary – and to a greater extent during the pre-primary (199). The result is that the impact of new information tends to be greatest during such early phases of the election cycle as compared to the later phases when attitudes and perceptions about candidates become more established.

Within the context of the pre-primary phase of the election, the effects of the media are intensified since the public must rely on such functions as priming, gatekeeping and agenda setting to provide distinguishing information regarding the myriad candidates (Belt, Just, and Crigler 2012; Dowdle, Adkins, and Steger 2009; Patterson 1980). The media’s priming function consists of “attending to some problems while ignoring others” (Iyengar, Peters and Kinder 1982, 849). The gatekeeping function is defined as “a distribution function...with which media select and present stories across a range of tone” (Soroka 2012, 514). The term “agenda setting” represents a collective function that broadly

defines how the media determine what the public “takes to be important” (Iyengar, Peters and Kinder 1982, 848).

Highlighting content that is “sensational...unusual...and conflictual” over stories that are less so provides a blunt, although accurate, characterization of how the media acts as a facilitator of information from candidate to electorate (Soroka 2012, 514). But as Patterson (1993) notes, “substantive policy issues, even when covered, are subordinated to the drama of the conflict generated between the opposing sides. In this sense, the press ‘depoliticizes’ issues, treating them more as election ritual than as objects of serious debate” (137).

The effects of the media on the electorate are the focus of Choi and Lee (2007). Among other aspects, Choi and Lee measure the effect of positive/negative ordering of news broadcasts on viewers’ opinions. Participants were subjected to various news stories consisting of both positive and negative tone. These were alternated in an attempt to measure whether first stories (primacy effect) were more memorable than secondary stories (recency effect). The authors conclude that negative stories “...stand out, and therefore [are] much more likely to be noticed and processed by the viewing public, regardless of the primacy/recency factor” (Choi and Lee 2007, 48). Furthermore, this effect is so strong that negative exposures are roughly five to 10 times as effective as positive exposures in that, a negative story affected the viewer’s opinion of a candidate after only one or two viewings, whereas a positive story required anywhere from five to 10 viewings prior to an effect on opinion (Guskind and Hagstrom 1988).

Finally, negative impressions are likely to be indelible (Cusumano and Richey 1970) and more credible (Zanna and Hamilton 1972) than positive impressions. The prevalence of negative over positive messaging is not transient, either. Choi and Lee (2007) reference Richey, McClelland, and Shimkuna (1967) who found that, after more than a week, the effects of negative stories prevailed over positive ones, again regardless of the order in which participants viewed them.

Also of importance is that the salience of particular issues varies from election to election. The most obvious examples of these include current events, either foreign or domestic. However, of perhaps greater influence is what particular events the media deems pertinent as measured by the quantity of time dedicated to reporting on the subject or issue (Iyengar, Peters and Kinder 1982). Foreign affairs as well as domestic issues can help to frame the atmosphere of a campaign, but only to the extent that the media insists on dwelling on the issue (Belt, Just, and Crigler 2012).

Perhaps of more significance than any outside influence is the voter's individual desire to pick a winner. As Mutz (1995) points out, the strategic voter theory argues that a voter has a tendency to support a viable candidate. Viability simply refers to whether a candidate is perceived by someone to have a chance of winning an election. It is not too much of a stretch then to conclude that such viable candidates will also receive the lion's share of financial support as well in that, voters who will donate to political candidates would be expected to donate to viable candidates as well. In fact, previous studies have found that result (Dowdle, Adkins and Steger 2009; Kenny 1993; Stone, Rappaport and Atkeson 1995). Furthermore, Mutz (1995) describes this as a process of "strategic

contributing.” This process, therefore, assumes that media impressions determining who are viable candidates would one variable that affects voters’ financial support, polling preferences, and who the voters will ultimately support, reversing the causal arrow of much of the existing literature that argues in favor of a neutral, reactive media that merely follow the story instead of creating it (Paolino 1996; Steger 2000).

Cohen (1963, 16) sums up the role of the media when he notes that “...the mass media may not be successful much of the time in telling people what to think, but the media are stunningly successful in telling their audience what to think about.” The roles of the media as gatekeeper (controlling the flow of information), agenda-setter (elevating particular stories/issues over others) and framing (setting the context and value of stories/issues) are intertwined in a way that results in conferring on the public an altered view of candidates, issues, and policy preferences (Lippmann 1922; Patterson 1980).

2.3 The New Hampshire Primary

In testing the effects of the media in the pre-primary season, it is important to understand the critical role that the New Hampshire primaries play. First, New Hampshire is (and continues to be) the first primary to take place. And, while it is preceded by the Iowa caucus, New Hampshire tends to reflect both a more democratic process and a more representative electorate in that, as Norrander (1993; 2006) notes, caucuses “tend to favor ideologically extreme candidates” (344) and tend to be “complicated” and “unpredictable” (495). Furthermore, those participating in caucuses tend to be more partisan and

ideological (Stone, Abramowitz and Rappaport 1989), with the event itself having been described as “...principally fundraisers with voting restricted to ticket holders” (Buell, Jr. 1996, 20). While, on the other hand, Orren and Polsby (1987, 5) conclude that New Hampshire primary voters are in line “demographically” as well as “attitudinally” with the national party members. Even those who doubt New Hampshire’s demographic generalizations affix significant weight to the influence its primary has on long-term election predictions (Adkins and Dowdle 2000, 258). Such conclusions appear to give credence to the anecdotal notion that “Iowa picks corn, and New Hampshire picks presidents” (Hull 2005, 8).

Furthermore, the McGovern-Fraser reforms of the 1970s were implemented with the goal of stabilizing the nominating conventions and providing a more cohesive primary process. Ultimately, these reforms have placed more influence on the primaries—to the point that now more than 40 states use the primary, accounting for over 80 percent of the total convention delegates (Norrander 2010, 19-20). Patterson (1980) notes that the changing role of the media has been fostered by these structural changes in the election process as well. He points out—as do others (e.g. Key, 1964; Epstein, 1986)—that the advent of the primary shifted the influence of the nominating process from the party leaders to the electorate. The role of the media enhanced this process by providing a direct link between the candidates and the voters. Thus, any successful candidate will devote most, if not all, of his or her time pursuing the necessary media outlets that afford them the greatest amount of coverage (Patterson 1980).

Finally, previous research has shown that media coverage does, in fact, have a significant effect on voter preferences in New Hampshire. For instance, Farnsworth and Lichter (2003), in showing such an effect in the 2000 Democratic primary, point to similar effects in the New Hampshire primaries of 1980, 1992, and 1996 (597). Furthermore, this relationship appears to follow the bandwagon effect, wherein positive coverage leads to increased support—especially as regards horse race coverage, wherein the media focus solely on who is leading and who is trailing in the polls (Bartels 1985). This effect is magnified in light of the tendency of television media to focus on such horse race coverage (Buhr 2001).

2.4 “Dynamic Momentum”¹

One vital issue of the pre-primary season that must be addressed prior to any predictive analysis is the potential for an endogenous relationship between the three primary actors during this phase of the election: money, media and existing voter preference. Such an attempt at causal ordering is inherently subject to endogeneity (van der Eijk 2002, 197). As Arterton (1984, 25) explains, “dynamic momentum” refers to the notion that higher levels of name recognition can invite more media coverage which then leads to greater recognition, leading to greater support, which ultimately leads to greater financial support—and the process repeats itself. But there exists no definitive explanation, theoretically or empirically, for which of these actors precedes the others in beginning this process. This is a crucial point to determine since subsequent hypotheses presume the

¹ See Arterton (1984).

effects on primary outcomes are created by the media. If media coverage is a result of increases in campaign fundraising, then the forthcoming analysis may suffer from autocorrelation and/or endogeneity problems.

Supporting the theory that the media act as the genesis of this dynamic momentum, Dowdle, Adkins, Steger (2009, 84) find that a candidates' support in national Gallup polls in a given quarter is significantly related to the volume of network news coverage in the previous quarter. In addition, they find that, after controlling for prior levels of public support, network news coverage of the candidates has the second greatest effect on public support for candidates. And while it might be inferred that public opinion is the spark that lights the fire, it is important to understand that, in low information settings such as pre-primary phases of elections, public information is provided by the media (Lippmann 1922; Patterson 1980; McCombs and Estrada 1997).

Furthermore, Mutz (1995, 1018) applies the strategic voter theory to the fundraising process in the sense that would-be donors may be inclined to give to "viable" candidates – as determined through "horse race" coverage. This cognitive effect should exist even more so in crowded, low-awareness pre-primaries where "information conveyed about candidates through the news media takes on greater import" (Dowdle, Adkins, Steger 2009, 85). Perhaps the most striking evidence for the media's causal role comes from Donovan and Hunsaker (2009, 48) who found that, with respect to outcomes in Iowa caucuses, "when press attention to candidates is used to estimate results, the effects of money are eliminated, and the effects of poll standing disappeared."

Existing research points to a relationship among the media, the electorate, and the candidates that suggests fertile ground for influencing voters' perceptions of candidates. Low information settings with a media that, in essence have a monopoly on the flow of information, result in presidential candidates being reliant upon such media for conveying their messages to the electorate. The fact that the electorate is highly impressionable during the early stages of the election cycle exacerbates the influence that the media has—especially since voters tend to seek out viable candidates whom they can support with their votes and their wallets. These realities suggest that such influence could have a measurable effect on vote choice and, ultimately, election outcomes.

CHAPTER 3: HYPOTHESES

The literature provides ample support to suggest numerous theories of the interaction among the principal factors at work during the pre-primary phase of presidential elections. First, the relationship between media coverage and campaign contributions implies a strategic donor theory, which asserts that voters tend to donate to a candidate who they deem has the best chance of winning.² Therefore, it is hypothesized that:

H₁: An increase in the volume of media coverage of a candidate will result in an increase in campaign contributions in the concurrent quarter of the year

Furthermore, as noted previously, low-information settings create a structure whereby the media provide the vast majority of information to the electorate about the candidates. The second relationship supported by the literature suggests a strategic voter theory such that:

H₂: An increase in the volume of media coverage of a candidate will result in an increase in a candidate's support as measured by polling percentage

The first two hypotheses are tested in Model 1.

While the literature provides clear and substantive evidence for the existence of an impact of media on voter behavior, it stops short of addressing the most critical question: Do the media provide a measurable effect on the outcomes of presidential elections? In light of the dependence of candidates upon the media, the perceived credibility of negative

² Mutz (1995, 1018) refers to this person as a "strategic contributor."

voter impressions of candidates (Cusumano and Richey 1970), and a highly impressionable electorate (Belt, Just, and Crigler 2012), the following is hypothesized:

H₃: The greater the positive rating (tone) of media coverage for a candidate during the pre-primary season, the greater the candidate's chance of winning their respective party's New Hampshire primary

Additionally, or perhaps alternately, the quantity of media coverage could have a significant impact on success, regardless of the tone (Benoit, Hemmer, and Stein 2010). Therefore, the following is hypothesized:

H₄: The greater the total volume of media coverage regarding a candidate, the greater the candidate's chance of winning their respective party's New Hampshire primary

These hypotheses are tested in Model 2.

The results of Model 1 are necessarily applied to the analysis conducted in Model 2. This is required due to the potential spuriousness that would result if not previously addressing the possible endogeneity within Model 1. Mere correlation among media coverage, money raised and poll results does not provide a causal relationship. Simply put, whatever variable is determined to be the primary causal factor in Model 1 would necessarily be considered (and tested as) the primary causal factor in Model 2. Again, hypothesis suggests the primary causal factors to be volume and tone of media coverage.

CHAPTER 4: DATA AND METHODS

Using data from the Pew Research Center's Project for Excellence in Journalism (PEJ), the Center for Media and Public Affairs (CMPA) and Vanderbilt University's Television News Archive, media coverage data were obtained showing total volume of coverage as well as positive and negative tone of the coverage of candidates.³ Tone is measured as the net positive (or negative) score across the entire timeframe of coverage.⁴

Using the Federal Election Commission's website (fec.gov), data were obtained for each of the included candidate's quarterly fundraising totals during the year immediately prior to each election year.⁵ For this analysis, quarterly reports from April, July and October were used. There are two reasons for using these reports in the model. First, they provide for a consistent measurement of creating lagged variables for the regression. The FEC requires any declared candidate to report campaign finances on a quarterly basis. Second, these reports are publicly reported and are used as a means to measure the "horse race" evolving during this early process. Quarterly reports represent measurements of the viability of a candidate from one quarter to the next.

While opinions differ on the exact time frame for calculating this pre-primary season, most subscribe to using varying lengths of time that incorporate all or part of the

³ Sources varied from year to year, but are representative of overall coverage at the time. Sources include ABC, CBS, NBC, CNN and, when available, FOX News.

⁴ For tonal measure, Pew employs Crimson Hexagon, a computer coding software which categorizes stories as positive, negative, or neutral (PEJ 2011). This system has resulted in a 97% accuracy rate when compared to human coding.

⁵ Total contributions (line 17a on form 3P).

year immediately preceding an election year (Norrander 2010; Mutz 1995; Collingwood et al 2012). For the purposes of this analysis, the pre-primary season will be operationalized as beginning on April 15 of the year prior to the election year and concluding with the New Hampshire primaries in January of the election year. The rationale for this operationalization of the time parameters is two-fold. First, regarding campaign funds, the required quarterly reporting by the FEC allows for consistent data sets across all election years when performing the necessary time series regressions. The last six months (third and fourth quarters) of the year provide the quarter-to-quarter lagged variables leading up to the New Hampshire primary. Measuring poll preferences prior to the April 15 FEC deadline (first quarter), along with measuring media coverage beginning the day of disclosure, provides a starting point for analyzing the causal process. Therefore, media coverage measured from one reporting date to the next can be directly tied to the candidates' support in polls and financial disclosures. Second, regarding candidate activity, this timeframe accounts for what can be considered the active campaigning phase of the pre-primary season and better captures later entry candidates (Haynes, Flowers, Gurian 2002, 636).

The elections occurring between 1988 and 2012 were selected for two reasons. First, the structure of the data used limited the analysis to these elections.⁶ Valid comparable data for the positive/negative content analysis as well as the quantity of coverage necessarily limited the data to this time frame. Any data collected for earlier

⁶ FEC data for elections prior to 1992 are available on microfilm at the Federal Election Commission headquarters in Washington, D.C. All other data are available online at www.fec.gov.

election cycles would risk the validity of the results as alternate means of measuring content tone would have to be obtained from sources different than the three used here.

Second, notwithstanding the previous limitation, this timeframe allows for a broad collection of primary circumstances which provide for a more thorough analysis. Specifically, the data include election years wherein the primaries (1992 and 2004) are Democrat-only (Republican incumbent), two (1996 and 2012) are Republican-only (Democrat incumbent), and three (1988, 2000 and 2008) have both parties staging primaries (no incumbent). This provides an inherent control for the argument of some (Agnew 1969a, 1969b; Efron 1971; Keely 1971; Bozell and Baker 1990; Bozell 1992) for the existence of a partisan media bias. Essentially, by providing data that include all three partisan scenarios, the results of the analysis will test, if present, any discrepancy of the hypothesized relationships between Republican and Democratic candidates. The popular theory of the existence of a liberal bias in the media is a separate empirical question that requires a thorough analysis independently. However, the results here may provide a starting point for such research.

For this analysis, the number of cases was determined by including all candidates who met the following conditions: they were officially declared candidates by filing with the FEC; they submitted financial statements for at least two quarters of the year prior to election year; and, they earned at least one percent of the New Hampshire primary vote. This resulted in a total of 50 presidential candidates. Those candidates who do not meet all three characteristics were excluded, because accurate financial data are not available for

these candidates, making valid analysis of their results impossible. Similarly, third party candidates were not included since a primary contest was not available for analysis.

The first two hypotheses suggest a causal relationship between media coverage and contributions (H₁) as well as between media coverage and voter preference—as measured by support in polls (H₂). The first concern regarding these variables is the high potential for endogeneity. One prevailing theory holds that media coverage simply follows as an effect of poll preference and fundraising (Steger 2000). In essence, the media merely report what is newsworthy—likely “horse race” coverage. First, a Pearson’s correlation will be performed among these three variables. Donovan and Hunsaker (2009, 48) have shown in similar research that these statistics tend to range between .53 and .63.⁷ Model 1 will consist of a correlation such that:

$$r = \frac{n(\Sigma xyz) - (\Sigma x)(\Sigma y)(\Sigma z)}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2][n\Sigma z^2 - (\Sigma z)^2]}} \quad (1)$$

Where x = volume of media coverage

y = financial contributions

z = voter support (polls)

Following the correlation, a two-stage least squares regression will be performed that measures the effect of media coverage on both campaign funds and public opinion. This specification is based on the potential of the violation of OLS assumptions (such as reciprocal causation) between the variables and potential for selection bias as only

⁷ Donovan and Hunsaker (2009) performed logistic regression to estimate success in Iowa caucuses measuring poll preference, campaign contributions and media coverage.

candidates who earned a minimum share of the vote are included in the analysis. Model 1 will consist of a two-stage least squares regression such that:

$$y = \beta_0 + \beta_1(x_1) + \beta_2(x_2) + \beta_3(x_3) + e \quad (2)$$

Where: x_1 = Media coverage (volume),

x_2 = Campaign funds,

x_3 = Voter support (polls)

Step 1 regresses X_1 (the endogenous variable) such that:

$$\text{for campaign funds: } \hat{x}_2 = y_0 + y_1(z_1) + e \quad (3)$$

$$\text{for voter support: } \hat{x}_3 = y_0 + y_1(z_1) + e \quad (4)$$

Where: $z_1 = x_{1(t-1)}$ (the instrumental variable - lagged)

Step 2 regresses the new values of \hat{x}_2 and \hat{x}_3 such that:

$$y = \beta_0 + \beta_1(x_1) + \beta_2(\hat{x}_2) + \beta_3(\hat{x}_3) + e \quad (5)$$

Several notes regarding the data and methods here are important. First, because many of the assumptions here are not testable, such recursive models “rarely, if ever...result in an unambiguous, unique causal” relationship (James and Singh 1978, 1105). This is due to the limitations on non-experimental data such as the absence of non-treatment subjects. Second, following Bolens (1996), the instrumental variable is required to possess two primary characteristics: 1) that it is correlated with x_1 and 2) that it is uncorrelated with both y_1 and y_2 (110).

Once the model 1 results are estimated, they will be applied to the model 2 regression. To reiterate, high levels of endogeneity among the model 1 variables could

distort the empirical findings of model 2. Having addressed the endogeneity in model 1, model 2 will consist of a logistical regression analysis, measuring media coverage tone as well as media volume on vote totals in the New Hampshire primary.

However, it would be careless and naïve to assert that either an overabundance of positively toned news coverage or sheer volume of media coverage could in and of itself provide the means for primary success. Undoubtedly, other factors are at play. Each election provides inherently peculiar aspects that may limit the generalizability of the results. Therefore, several other potential factors must be addressed and controlled if a valid measure of the impact of the media is to be obtained. These factors include name recognition, previous public service (Dowdle, Adkins, and Steger 2009, 81), and the occurrence of scandals and/or controversies that may derail a candidacy regardless of one's relative standing in the polls (Kahn and Kenney 2002). Furthermore, the popular "liberal media bias" charge could also have an effect in this type of analysis (Bozell 1992). Therefore, the model will also control for party identification.

In light of these factors, Gallup measured name recognition of candidates early in their respective campaigns.⁸ Some candidates start out as frontrunners merely because high name recognition gives them an aura of viability compared to others (Abramson et al. 1992; Mutz 1997; Haynes et al. 2004; Dowdle, Adkins, and Steger 2009). Thus, initial name recognition could foster news coverage as the mass media deem low-recognition candidates non-viable from the outset (Dowdle, Adkins, and Steger 2009).

⁸ Name recognition is measured as the percentage of respondents who report having heard about the candidate. Polls were taken at differing points for each election; however, all were recorded prior to July's FEC disclosures as well as any media coverage data recorded here.

Additionally, the possibility of a candidate's previous public service could potentially skew the perception of media bias for or against a candidate as well as allowing the more "skillful campaigners to capture more media attention" (Kahn and Kenny 2002, 383). While this could be construed as having a collinear relationship with name recognition, it is important to note that image information is significantly important during the initial phase of creating an impression (Choi and Lee 2007). For example, an experienced congressperson could be relatively unknown on a national scale, providing him (or her) with a still formative image, while a celebrity candidate, with no previous political experience, most likely enters the race with high name recognition and, subsequently, little room for maneuvering on image. Therefore, prior service as an elected official and name recognition must be treated as separate factors.

The final variable for which a control is required is the effect that controversies and scandals have on a candidate's viability. This measure can be a cause for concern as such a variable has no universally accepted metric, especially in light of framing actions of the media and political elites (Woessner 2005, 104). Scandals are often subjective in their severity, even to the extent that they are considered scandals at all. However, for the purposes of this analysis, a scandal is operationalized in accordance with the existing literature on the subject, broadly defining it as "accusations of misconduct...of a personal nature" (Woessner 2005, 96). Therefore, the variable of scandal will be assigned to any candidate against whom an accusation arises that concerns personal conduct and garners sufficient media coverage as to result in a candidate's explicit and direct response to the

allegations (Peters and Welch 1980; Abramowitz 1988, 1991; Krosnick and Kinder 1990; Dimock and Jacobson 1995; Woessner 2005).

Because the final two hypotheses (H₃ and H₄) enlist a dichotomous dependent variable (electoral success), Model 2 will consist of a logistical regression such that:

$$\text{Logged odds of success (NH vote \%)} = \hat{\alpha} + \hat{b}_1(\text{media tone}) + \hat{b}_2(\text{volume}) + \hat{b}_3(\text{name recognition}) + \hat{b}_4(\text{previous office}) + \hat{b}_5(\text{scandal}) + \hat{b}_6(\text{party ID}) \quad \mathbf{(6)}$$

Success is defined simply as whether a candidate wins his/her party's New Hampshire primary.

CHAPTER 5: RESULTS AND DISCUSSION

As Table 5-1 shows, the correlations among campaign contributions, volume of media coverage and percentage in polls range between 0.491 and 0.587, which comport with Donovan and Hunsaker’s (2009) findings and, according to the classifications of Salkind (2014), can at best be described as “moderate relationship[s].” It is important to note that these data are aggregated across the entire set of primary elections. Certainly no causal conclusions should be made from this data. However, the lack of higher correlation values (especially between money and media coverage) does, at the very least, question the conclusiveness of findings that the media are merely reactive to financial disclosures. Certainly, a reactive media would result in much higher values.

Table 5-1: Aggregated Correlation (Pearson’s r)

	Correlation		
	<i>Contributions</i>	<i>Media (volume)</i>	<i>Poll %</i>
Contributions	1		
Media (volume)	0.587	1	
Poll %	0.514	0.491	1

What remains to be estimated are the regressions for each of the models. Yet some interesting findings can be elicited from a cursory analysis of the raw data. On initial observation, the raw data (see Table 5-2) indicate that in the 10 primaries analyzed, on only one occasion did the candidate with the highest positive media coverage rating (tone) win their respective party’s New Hampshire primary (which was Al Gore in 2000). The

implications of this finding are even greater in light of the fact that in the 2000 Democratic primary, only two declared candidates were in the race—a statistical toss-up. Conversely, three out of the 10 New Hampshire primary winners actually received the most *negative* coverage during the pre-primary process.

Table 5-2: New Hampshire Primary Results—quality/quantity media (1988-2012)

Data Results for Pre-primary season (1988-2012)		
1988 (Dem)	1988 (Rep)	1992 (Dem)
Dukakis* Quality (+) Jackson Quantity - Gephardt	Bush* Quality (+) Dole Quantity - Bush	Tsongas* Quality (+) Brown Quantity - Clinton
1996 (Rep)	2000 (Dem)	2000 (Rep)
Buchanan* Quality (+) Dole Quantity - Dole	Gore* Quality (+) Gore Quantity - Gore	McCain* Quality (+) Bush Quantity - Bush
2004 (Dem)	2008 (Dem)	2008 (Rep)
Kerry* Quality (+) Edwards Quantity - Dean	Clinton* Quality (+) Obama Quantity - Clinton	McCain* Quality (+) Romney Quantity - McCain
2012 (Rep)	Scandals	*NH primary winner
Romney* Quality (+) Perry Quantity - Romney	'92 - Clinton (Dem)	Bold indicates winner received highest quality/quantity

Sources: New Hampshire Dept. of State (sos.nh.gov), Gallup, Vanderbilt Television News Archive

As Table 5-3 shows, the correlation between tone of media coverage and results of the New Hampshire primary is only 0.11—essentially a non-existent relationship.

Furthermore, when tone was correlated with all other variables, no relationship attained a value higher than 0.20. Such findings, although they do not confirm or invalidate claims of the existence of media bias, certainly call into question the effectiveness of that bias. Essentially, even if the media portray certain candidates in a negative tone, such tactics do not appear to be effective.

Table 5-3: Correlation Between Tone of Media Coverage and NH Primary Result

	Media Tone	NH Result
Media Tone	1	
NH Result	0.1131	1

Regarding quantity of coverage, Table 5-2 shows that five candidates with the highest overall media coverage eventually claimed victory in New Hampshire. Additionally, although not shown in Table 5-2, for the five remaining elections, all five candidates who had the highest quantity of media coverage placed second in New Hampshire, with Clinton in 1992, and Bush in 2000 eventually winning the presidency (although such extrapolations to the general election are not analyzed here). Therefore, *ceteris paribus*, having the highest total quantity of media coverage during the pre-primary season correlates with all 10 candidates either placing first or second in the New Hampshire primary.

Furthermore, the data show that three candidates with the *second* highest total quantity of media coverage eventually were victorious in New Hampshire (Buchanan in

1996, McCain in 2000, and Kerry in 2004). In sum, candidates who earn either the most or second most total media coverage during the pre-primary season account for 80 percent of the first or second place positions in the New Hampshire primaries from 1988 to 2012, regardless of the tone of the coverage. Certainly, as Gary Hart in 1984 and Herman Cain in 2012 can attest to, that is not to say that negative coverage fails to have deleterious effects on a campaign. As Table 5-2 also notes, Bill Clinton was the only candidate to survive a scandal and make it to the primary stage of an election. There is no doubt the moniker, “Comeback Kid” is apropos (Dann 2008).

The effect of previous election to office at first glance seems to correlate with success in the New Hampshire primary (see Table 5-4). In fact, only Pat Buchanan was able to claim victory in New Hampshire without previously holding an elected position. Yet, when the entire field of 50 cases is analyzed, causality appears to be supplanted by statistical odds. A total of 43 candidates previously held a prominent elected office as defined by those previously elected to a governorship, Congress, or the Vice Presidency.

Table 5-4: Previously Elected Candidates

1988 (Dem)	NPE*	1996 (Rep)	NPE*	2004 (Dem)	NPE*	2008 (Dem)	NPE*
Dukakis	x	Dole		Kerry		Obama	
Jackson		Alexander		Dean		Clinton	
Gore		Buchanan		Edwards		Edwards	
Gephardt		Forbes		Kucinich		Kucinich	
Simon		Keyes		Lieberman		Richardson	
		Lugar		Clark	x		
1988 (Rep)	NPE*					2012 (Rep)	NPE*
Bush		2000 (Rep)	NPE*	2008 (Rep)	NPE*	Romney	
Dole		Bush		McCain		Santorum	
Kemp		Bauer	x	Romney		Paul	
duPont		Forbes	x	Huckabee		Gingrich	
Robertson		Keyes	x	Paul		Huntsman	
		McCain		Thompson			
1992 (Dem)	NPE*	2000 (Dem)	NPE*	Giuliani	*Not previously elected to any office		
Brown		Gore					
Clinton		Bradley					
Kerrey							
Harkin							
Tsongas							

When running for the highest office in the land, previous elected experience could be regarded as a pre-requisite. With such a high percentage of the total candidates having elected experience, the odds are high that the winner will have previous elected experience. From time to time, an outsider or single-issue advocate candidate will make a run for the presidency. None have yet found the success that the politically experienced candidates tend to garner.

Regarding the qualitative data, Table 5-5 shows the effects of media coverage and polling preference on money raised. The results show that, in each quarter, the effect of

media coverage on money raised reaches statistically significant levels. While in the second quarter, polling preference reaches significance, it does not hold for the third and fourth quarters.

Table 5-5: Effects of Media Coverage and Poll Preference on Money Raised (2SLS)

2Q Money Raised	β	Std. Err.	Sig.
2Q Media Coverage	0.148	0.036	.000*
July Poll %	0.126	0.063	.046*
R ² =.57			
3Q Money Raised	β	Std. Err.	Sig.
3Q Media Coverage	0.109	0.02	.000*
October Poll %	0.062	0.051	0.225
R ² =.65			
4Q Money Raised	β	Std. Err.	Sig.
4Q Media Coverage	0.097	0.017	.000*
December Poll %	0.043	0.072	0.555
R ² =.49			

The effect, then, that media coverage has on money raised is clarified in Table 5-6. For each story that is broadcast, a candidate can expect an increase in financial support of \$148,000 in the second quarter, \$109,000 in the third quarter, and \$97,000 in the fourth quarter (all values are in 2012 dollars). Therefore, H₁ is supported. It is important to note that these data do not include campaign advertisements. They are limited to broadcast and cable news reports.

Table 5-6: Financial Donations per Story Broadcast (by quarter)—aggregated

2Q (dollars/story)	\$148,000
3Q (dollars/story)	\$109,000
4Q (dollars/story)	\$97,000

It is interesting to note that, as time goes by, the value, and thus, financial effect that the media have on campaign coffers, diminishes. One seemingly constant conclusion would be that, as the election cycle progresses, prospective voters are both becoming more aware and more certain of candidates. As has been discussed, earlier in the season fewer pre-conceived notions of candidates exist, and, thus, greater reliance is placed on the media to inform the voting public. As the pre-primary season ends and the primary season begins, voters are now becoming more confident in their independent opinions of various candidates.

A second aspect of this trend involves the sheer volume of media coverage that is produced in the latter stages of the early season—specifically the fourth quarter of the year. A simple calculation using the raw data (see Appendix A) finds that slightly over 50% of the total media coverage for the entirety of the years analyzed was broadcast in the fourth quarter. Effectively, the total individual contribution amounts will necessarily reach a relative ceiling, regardless of media coverage. This further supports the theory that the media’s effect is maximized earlier in the process.

Table 5-7 shows the effects of media coverage and campaign contributions on polling preference, measured quarterly. For the second quarter, the effect of media

coverage on polling preference reaches statistically significant levels. However, in the third quarter, media coverage loses significance, as money raised now becomes statistically significant. Finally, as the year ends, both variables lose their significance. The results indicate that, for each story broadcast during the second quarter of the year, a candidate can expect an increase in polling preference of .3% over that timeframe.

As with any statistical finding, this measurement should not be misconstrued as absolute and boundless. As previously noted, quarterly values of polling are highly correlated and, thus, dependent upon the previous quarterly value. However, because the two-stage regression provides instrumented variables to account for the endogeneity, the .3% value applies to a direct measure in the *change* in media coverage from the previous quarter to the next, and not the media coverage in its entirety.

Table 5-7: Effects of Media Coverage and Money Raised on Poll Preference (2SLS)

July Poll %	β	Std. Err.	Sig.
2Q Media Coverage	0.315	0.131	0.016*
2Q Money Raised	-0.016	0.538	0.976
R ² =.30			
October Poll %	β	Std. Err.	Sig.
3Q Media Coverage	0.047	0.106	0.66
3Q Money Raised	1.54	0.675	.022*
R ² =.36			
December Poll %	β	Std. Err.	Sig.
4Q Media Coverage	-0.015	0.089	0.866
4Q Money Raised	1.48	0.775	0.056
R ² =.20			

Again, it would appear that there is something to be said for the effects of media coverage on potential voters early on in the pre-primary season. However, that effect appears to diminish as the primary season draws closer. Therefore, H₂ is supported with a time-bound caveat.

It is important to note that, prior to the application of the instrumental lagged variable in Model 1, the independent variable of media coverage shows high levels of correlation with the dependent variable of money raised (between 0.717 and 0.793 for each quarter). These high levels support the use of the two-stage least squares regression. After the instrumental variables are applied, the correlation values drop to the moderate values noted previously.

The final two hypotheses address the predictive powers of the data on success in New Hampshire. Table 5-8 provides the results of the logistical regression using the three main variables of media coverage, campaign contributions, and polling preference as well as the aforementioned control variables. What is noticeable from the outset is that no coefficient estimate attained statistical significance. Furthermore, the odds ratios for most variables do not show much of an effect over the value of 1, indicating that, even had they gained a statistically significant value, the odds of success would not necessarily increase to a point that would give a candidate victory in New Hampshire. In fact, most of the results do not approach a level of statistical significance on which they could be relied for their predictive values.

Table 5-8: Effects on Chance of Success in New Hampshire Primary

	Democrat			Republican		
	Effect	Std. Err.	Sig.	Effect	Std. Err.	Sig.
Campaign Contributions	-1%	0.09	0.326	5%	0.049	0.315
Media Coverage	2%	0.018	0.298	0%	0.007	0.6
Poll Preference	7%	0.058	0.215	-3%	0.055	0.551
Name Recognition	-1%	0.037	0.699	5%	0.043	0.178
Previous Office	n/a	n/a	n/a	26%	4.32	0.669
Tone	2%	0.035	0.471	-7%	0.046	0.195

The data in model 2 (as well as the correlation in Table 5-3) do not support H₃ as tone of coverage clearly has no effect on success in New Hampshire. Regarding H₄, the data are again clear—as far as a direct relationship between total quantity of coverage and a measurable increase in the chance of success in New Hampshire and controlling for all relevant variables, the hypothesis is not supported.

That is not to say that media coverage does not have any impact as it relates to success in New Hampshire. As shown above, there exists a strong statistically significant relationship between media coverage and campaign contributions. Furthermore, those presidential candidates who eventually find success in New Hampshire do so while almost always accruing the highest total media coverage during the pre-primary season. The data here merely limit the extent to which total volume of coverage can effectively provide a measurable influence that can push a candidate over the top in the New Hampshire primary.

CHAPTER 6: CONCLUSION

While the media play a specific and necessary role during presidential elections, the effect they have is heightened during the primary process and, even more so in the pre-primary season when a large majority of potential voters are not yet attuned to the election process (Patterson 1980, 68; Belt, Just, and Crigler, 2012). The effects of this condition create a hierarchy of the candidates so that, as the primary season advances, prospective voters are introduced to candidates already labeled as viable or non-viable, thus heavily affecting the outcome of early season contests. Concluding his research, Bartels (1993, 275) admits that, in his limited analysis of the effects of media exposure on voting opinions, “considerably longer time periods” are required. The research performed here is a step in that direction.

The initial data suggest that the role of the media in this early pre-primary season is important, as a common factor in successful candidates in New Hampshire is the quantity of media coverage that they garnered over the year. This partially supports Benoit, Hemmer and Stein’s (2005) findings that volume of media coverage affects voters’ perceptions of candidates (261). However, it should be noted that their conclusion also included tone of coverage as a statistically significant effect—which has been clearly refuted here both in the raw data as well as the quantitative analysis.

Arguably the most interesting finding in this research is the diminishing effect that media coverage has on campaign contributions over time. The direct dollar value per media story decreased from the second quarter to the third and from the third quarter to the

fourth. One theory that might serve to explain the observed phenomenon is that, in the earliest phase of the pre-primary season, voters “[know] the least” about candidates and, therefore, rely more heavily on the media for queues (Buell 1991, 150). As the season moves closer to the primaries, voters not only begin paying more attention to the campaign, but also are beginning to cement their own opinions about candidates, such that the effects of media coverage actually diminish as the election draws closer.

The media’s continual desire for stories that are new, exciting, or groundbreaking often lead them to focus more time on some candidates and less on others. For those who may doubt this reality, simply consider the example of John Edwards. As a white, male candidate in a primary battling both a female candidate and an African-American candidate, Edwards’ early polling was not too far behind Barack Obama. Yet, the media coverage that he garnered remained essentially half of what either Obama or Hillary Clinton drew throughout the early primary season. Clearly, newsworthiness is subjective, yet it remains a substantial factor in deciding who or what to cover.

Some have rightly argued that the influence and, therefore, validity of conclusions based solely on television media coverage fail to account for the meteoric rise in internet-based media. And while this is certainly true, television, arguably for the time being—and undoubtedly for the time bound data measured here—remains a significant source of political information for a large portion of the voting public. As one *New York Times* reporter noted, “television is the ultimate recovered-memory therapy, imposing an ordered narrative to diverse, dispersed moments... [such that] an isolated segment, shown over and

over again, can distill, oversimplify and in some cases distort” (Stanley 2011). Howard Dean’s post-Iowa scream is a case in point.

Future research may focus on improving the data collection methods that account for the growing effects of web-based media as well as addressing the impact of PAC money and advertising. These are factors not included in this research and may perhaps account for the failure of some of the coefficient estimates to reach statistically significant predictive findings. Furthermore, taking this analysis forward into the primary season could prove beneficial to predictive research; however, such attempts must be executed with caution as the primary season would seem to be much more volatile given the frontloading trend which finds states continually pushing up their primary dates earlier in an effort to increase their impact on the remaining contests in other states.

Taken with the extant research, which is ever-searching for ways to improve predictive models of election outcomes, the research here provides a key aspect in comprehensive estimate models that more accurately explain factors in voter behavior and, ultimately, voter choice. As Donovan and Hunsaker (2009, 49) found, results in the New Hampshire primary are strong predictors of future primary success – especially when compared to the Iowa caucus. Prediction, after all, is the elusive third step of the science of politics, preceded by description and explanation. This research will further assist in attaining that goal as it relates to presidential elections in the United States.

APPENDIX A: PRIMARY DATA

Table A-1 Primary Data, 1987-1999

Name	Dem?	Year	4/15 \$*	7/15 \$*	10/15 \$*	12/31 \$*	Media 4/15- 7/14	Media 7/15- 10/14	Media 10/15- 01/09
Bush	0	1987	4.36	6.9	3.2	12.87	39	46	108
Dole	0	1987	1.782	2.9	3.9	12.67	22	52	120
Kemp	0	1987	0	3.1	2.8	3.76	9	23	35
duPont	0	1987	2.57	0.9	1.1	2.57	0	1	19
Roberston	0	1987	0	0	11.1	9.5	7	15	34
Dukakis	1	1987	0	4.2	3.5	4.95	16	23	45
Gephardt	1	1987	1	1.1	1.2	5.35	24	22	52
Simon	1	1987	0	0.9	1	2.97	15	15	41
Jackson	1	1987	0	0	1	1.98	20	31	41
Gore	1	1987	0	1.4	1.3	2.18	11	20	27
Tsongas	1	1991	0	0.84	1.27	0.46	7	14	28
Clinton	1	1991	0	0	5.45	1.5	7	16	59
Kerrey	1	1991	0	0	0	1.23	0	5	42
Harkin	1	1991	0	0	3.28	0.43	3	17	36
Brown	1	1991	0	0	0.86	0.32	0	7	24
Buchanan	0	1995	1.39	1.271	2.093	3.57	6	11	33
Dole	0	1995	6.02	8.723	8.724	8.18	92	88	215
Alexander	0	1995	7.52	2.325	1.073	2.14	1	11	30
Forbes	0	1995	0	0	0.009	2.21	0	6	38
Lugar	0	1995	0.62	2.459	0.863	0.99	8	6	14
Keyes	0	1995	0	0.056	0.506	1.24	0	2	6
Gore	1	1999	11.99	8.655	6.754	5.25	29	51	82
Bradley	1	1999	5.8	7.416	7.306	11.34	7	30	75
McCain	0	1999	2.27	2.441	2.953	8.41	12	14	85
Bush	0	1999	10.09	28.753	19.672	13.38	25	40	98
Forbes	0	1999	0.02	2.722	1.538	1.44	0	8	34
Keyes	0	1999	0	0	0.579	1.43	0	0	15
Bauer	0	1999	1.85	2.06	1.921	2.01	3	2	14

Table A-2: Primary Data, 2003-2011

Name	Dem?	Year	4/15 \$*	7/15 \$*	10/15 \$*	12/31 \$*	Media	Media	Media
							4/15-	7/15-	10/15-
							7/14	10/14	01/09
Kerry	1	2003	8.56	5.815	3.85	2.8	18	40	153
Dean	1	2003	3.22	7.597	14.801	19.19	22	37	208
Clark	1	2003	0	0	3.491	12.5	4	31	106
Edwards	1	2003	9.05	4.494	2.089	2.118	8	20	93
Lieberman	1	2003	3.62	5.127	3.619	2.63	9	31	106
Kucinich	1	2003	0.21	1.537	1.651	1.65	0	9	24
Clinton	1	2007	28.01	26.997	27.228	29.04	126	166	240
Obama	1	2007	27.89	32.889	20.652	24.79	97	133	234
Edwards	1	2007	15.22	9.028	7.092	5.24	56	77	146
Richardson	1	2007	6.71	7.016	5.259	4.23	25	14	29
Kucinich	1	2007	0.37	0.785	1.026	1.86	11	9	11
McCain	0	2007	13.8	11.26	5.698	7.42	88	67	130
Romney	0	2007	22.61	14.061	9.803	9.84	59	88	166
Huckabee	0	2007	0.57	0.764	1.038	7.21	13	20	141
Giuliani	0	2007	0.69	2.366	5.233	15.38	73	93	153
Paul	0	2007	0	0	12.815	21.66	9	68	63
Thompson	0	2007	15.93	17.47	12.71	9.68	33	93	147
Romney	0	2011	0	18.234	14.068	24.084	58	73	164
Paul	0	2011	0	4.536	7.672	13.317	19	16	60
Huntsman	0	2011	0	0	2.218	1.097	16	15	29
Santorum	0	2011	0	0.581	0.631	0.915	11	11	62
Gingrich	0	2011	0	2.075	0.793	9.746	41	11	155

APPENDIX B: SECONDARY DATA

Table B-1: Secondary Data, 1987-1999

Name	April %	July %	Oct %	Dec %	NH (pos)	NH %	Name*	Office^	Tone (% +)	Scandal Y?
Bush	34	49	39	40	1	38	93	1	-10	0
Dole	18	27	21	19	2	29	90	1	8	0
Kemp	9	13	8	9	3	13	83	1	8	0
duPont	2	1	1	2	4	10	63	0	-5	0
Roberston	4	8	5	8	5	9	85	0	-3	0
Dukakis	7	11	13	8	1	36	17	1	5	0
Gephardt	6	7	6	4	2	20	15	1	5	0
Simon	0	7	7	6	3	17	45	1	5	0
Jackson	27	18	19	16	4	8	91	0	19	0
Gore	6	5	8	4	5	7	22	1	0	0
Tsongas	1	4	4	9	1	33.2	47	1	24	0
Clinton	1	5	6	42	2	24.8	25	1	-18	1
Kerrey	0	0	0	10	3	11.1	26	1	6	0
Harkin	0	4	7	9	4	10.1	48	1	4	0
Brown	0	6	15	16	5	8.1	81	1	40	0
Buchanan	8	5	7	4	1	27.3	90	0	-12	0
Dole	46	51	31	34	2	26.2	96	1	-8	0
Alexander	3	3	2	2	3	22.6	33	1	-22	0
Forbes	0	0	3	5	4	12.2	24	0	-32	0
Lugar	5	3	1	1	5	5.2	16	1	0	0
Keyes	1	1	0	1	6	2.7	20	0	0	0
Gore	54	64	51	52	1	50	92	1	32	0
Bradley	34	28	39	38	2	46	67	1	2	0
McCain	5	5	8	17	1	49	56	1	20	0
Bush	53	59	60	60	2	30	95	1	26	0
Forbes	0	6	4	9	3	13	84	0	10	0
Keyes	0	0	3	4	4	6	32	0	0	0
Bauer	2	2	3	2	5	1	39	0	0	0

Table B-2: Secondary Data, 2003-2011

Name	April %	July %	Oct %	Dec %	NH (pos)	NH %	Name*	Office^	Tone (% +)	Scandal Y?
Kerry	17	13	10	7	1	38.4	68	1	28	0
Dean	6	6	13	22	2	26.3	58	1	14	0
Clark	0	0	19	17	3	12.4	58	0	34	0
Edwards	9	7	5	7	4	12.1	58	1	72	0
Lieberman	23	20	12	10	5	8.6	83	1	44	0
Kucinich	3	1	3	2	6	1.4	35	1	12	0
Clinton	38	29	47	45	1	39.1	96	1	-11	0
Obama	19	30	26	27	2	36.5	76	1	31	0
Edwards	15	11	11	15	3	16.9	79	1	-6	0
Richardson	2	3	4	2	4	4.6	60	1	-3	0
Kucinich	0	0	1	2	5	1.3	56	1	-3	0
McCain	16	19	16	14	1	37.7	82	1	-36	0
Romney	6	12	9	14	2	32.2	42	1	3	0
Huckabee	1	2	7	16	3	11.4	47	1	20	0
Giuliani	38	32	32	27	4	8.7	85	1	-9	0
Paul	2	1	2	3	5	7.8	56	1	20	0
Thompson	10	11	20	14	6	1.2	69	1	42	0
Romney	13	27	20	22	1	39.4	83	1	-1	0
Paul	6	8	8	8	2	22.8	76	1	4	0
Huntsman	1	2	2	2	3	16.8	21	1	4	0
Santorum	2	6	18	4	4	9.5	42	1	-3	0
Gingrich	6	9	7	31	5	9.4	86	1	-20	0

APPENDIX C: VARIABLES AND DESCRIPTIONS

Table C-1: Variables and Descriptions

Variables and Descriptions		
Model 1		
Variables	Measured	Source
Media Coverage	Total volume	Vanderbilt TV archive (http://tvnews.vanderbilt.edu/)
Campaign Funds	Quarterly funds raised	Federal Election Commission (line 17a, Form 3) (www.fec.gov)
Vote Preference	Percent garnered in polls	Gallup (The Gallup Polls, 1988-2012)
Model 2		
Variables	Measured	Source
<u>Dependent</u>		
Candidate's chance of success in NH	Logged odds	—
<u>Independent</u>		
Media Coverage (Volume)	Total volume	Vanderbilt News Archive (http://tvnews.vanderbilt.edu/)
Media Coverage (Tone)	Net % positive	Center for Media and Public Affairs (www.cmpa.com)
Campaign Funds	Quarterly funds raised	Federal Election Commission (line 17a, Form 3) (www.fec.gov)
Vote Preference	Percent garnered in	Gallup (The Gallup Polls, 1988-2012)
<u>Controls</u>		
Name Recognition	Initial % at/near	Gallup (The Gallup Report, 1988-2012)
Previous Service	Yes/No	—
Scandal	Yes/No	—
Party ID	Dem=1, Rep=0	—

APPENDIX D: DESCRIPTIVE DATA

Table D-1: Descriptive Data

	<i>April \$</i>	<i>July \$</i>	<i>Oct \$</i>	<i>Dec \$</i>	<i>Media 2Q</i>	<i>Media 3Q</i>	<i>Media 4Q</i>	<i>April %</i>	<i>July %</i>	<i>Oct %</i>	<i>Dec %</i>
Mean	4.274	5.235	5.167	7.014	23.18	33.96	81.4	11.18	12.82	13.26	14.84
S.E.	1.004	1.08	0.839	1.003	4.09	5.037	9.044	2.057	2.21	1.979	2.038
Median	0.595	2.345	3.076	3.995	11.5	20	59.5	6	6.5	8	9
Mode	0	0	1	1.24	0	11	34	0	0	7	2
S.D.	7.104	7.636	5.933	7.097	28.926	35.623	63.952	14.549	15.631	13.993	14.415
Sample Var.	50.471	58.32	35.204	50.375	836.72	1269.02	4089.96	211.701	244.35	195.828	207.81
Kurtosis	4.022	4.855	3.677	1.546	3.26	3.407	-0.131	1.854	2.988	2.524	1.489
Skewness	2.091	2.238	1.901	1.436	1.901	1.801	0.918	1.645	1.851	1.7	1.434
Range	28.01	32.889	27.228	28.72	126	166	234	54	64	60	59
Minimum	0	0	0	0.32	0	0	6	0	0	0	1
Maximum	28.01	32.889	27.228	29.04	126	166	240	54	64	60	60
Sum	213.74	261.753	258.39	350.73	1159	1698	4070	559	641	663	742
Count	50	50	50	50	50	50	50	50	50	50	50
95.0% level	2.019	2.17	1.686	2.017	8.22	10.124	18.175	4.135	4.442	3.977	4.096

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