Abstract: This paper examines the heterogeneous effects of information acquisition on presidential approval at the individual level. Specifically, I argue that informational differences influence the variances in presidential approval, such that media exposure and sophistication/information variables provide insight into the distribution of this variance. Testing the theory that presidential approval should be connected to the ability of the American electorate to assess information about the president, I use a heteroskedastic probit to model the variance in approval through information as measured through uncertainty. Testing my theory of heterogeneity using NES data from 1996, I find support for my hypotheses.
Introduction

The rise and fall of presidential approval has been of interest to scholars since polling organizations began publishing their findings. Presidential approval is an important political resource that is influenced by numerous exogenous and endogenous factors. Presidents rely on support from the public for power (Neustadt 1990), and to pursue their legislative and political agendas (Rivers & Rose 1985; Simon & Ostrom 1989). Presidential approval can be measured at both the aggregate and individual levels.\(^1\) However, approval ratings are meaningless unless the aggregate public has clear opinions that can be deciphered by the president. Volatile public opinion can have detrimental effects on presidential policy and decision-making.

Most scholars beginning with Mueller (1970, 1973) have modeled changes in aggregate level approval at the mean by relying upon economic indicators, “rally events” and time (Ostrom & Simon 1985; Simon & Ostrom 1989; Brody 1991; Brace & Hinckley 1992; Kernell 1978, 1997). What resulted from aggregate level studies was the inability to differentiate between individual levels of approval. The public is not a monolith. This distinction between individual versus aggregate approval is significant if we consider the fact that approval is not simply just a dichotomous variable of approve or disapprove. Rather, approval and disapproval are continuous, such that the distribution of approval varies from the extremes of approve to disapprove. “Yet, just as individuals differ in their policy opinions, partisan loyalties and reactions to economic growth and decline, so we should expect some level of differentiation in public evaluation of presidential performance, certainly more than is captured by the conventional “approve/disapprove” dichotomy” (Gronke 1999). Theoretically this distinction may have implications for deciphering and explaining approval of the president at the individual
level. Approval levels that change suddenly or those that are highly volatile can import uncertainty and instability into the political system because public opinion that moved toward the president could just as quickly move away from the president.

Former President Bush’s approval ratings provide an example of the problems of studying aggregate approval. During the Gulf War, Bush’s approval scores were extensive but shallow. The magnitude of support did not matter because his support was not deep and could not be maintained. However, the variance in support is important to consider because there were individuals and groups who switched from approve to disapprove and vice-versa. Just as President Bush’s support varied throughout his term, so too does the support of all presidents. Some have smaller but deeper levels of support than others but it is these changes in depth of support that are important to consider. Informational changes provide us with one opportunity to measure variations in approval at the individual level because individuals are exposed to different levels of information and thus have varying levels of political sophistication.

Although the mean value of approval is most often studied, the overall variance (movement away from the mean) in approval is important for presidents who hope to be reelected or to maintain their legacy. “The variance corresponds to individual uncertainty about the attitude object (Alvarez and Brehm 1995); in this case, whether a respondent approves or disapproves of presidential performance” (Gronke 1999). Recent scholars who have assessed how different individuals and groups evaluate presidents (Gronke 1999, 1997, 1996; Hibbs, Rivers, and Vasilatos, 1982) indicate that individuals demonstrate inconsistency (and thus significant variance) in their views and support of the president over time.

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1 Numerous studies have used aggregate approval measures, only a few have studied approval from the individual level approach (Mutz 1992; 1993; Gronke 1999; 2000). Individual level measures of presidential approval provide greater substantive information about preferences for the president.
According to Brehm & Gronke (2000), a volatile public can cause opinions for and against the president to shift very quickly. As opinions rapidly shift, uncertainty manifests itself in the electorate.² Conversely, stability in presidential approval often leads to consistency in individual attitudes. While stability is the preferred outcome, increased volatility in approval has become a norm due to shifts in partisan attachments (Brehm & Gronke 2000). Approval differences can also be found through the level of sophistication and the level of awareness about politics and through influences in the political environment. Sources of volatility in the electorate can be found through partisanship, personal characteristics and economic circumstances.

Political parties structure the flow of information to the electorate and help reduce uncertainty. “Strong partisans of either party, are more likely to access and interpret political news in light of their partisan affiliation, and thereby reinforce prior held political expectations” (Gronke 1999). Strength of partisanship conditions the role that information plays in the political process by serving as a screen through which presidents are evaluated and assessed.³ “[P]artisan attachments influence voters’ perception and interpretation of politically relevant information” (Hibbs 1982). Partisan strength also contributes to presidential approval ratings such that the strength of the relationship should influence approval.⁴ Overall individuals with well-developed party structures are better able to process information and use that information to evaluate politicians than those without these structures (Lau 1986).

Personality and other personal characteristics also influence evaluations of the president (Sniderman 1975, 116-163; Rahn, Aldrich, Borgida & Sullivan 1990; Miller, Wattenberg &

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² “[W]hen looked at from the perspective of a rational political actor trying to decide whether to support or oppose the president, the possibility for future changes in approval introduces uncertainty” (Brehm & Gronke 2000, 3).
³ Lau (1986) finds that individuals with well-developed party structures are better able to process information and use that information to evaluate politicians.
⁴ Weak partisans should be less likely to form consistent opinions about the president due to informational disadvantages that occur between them and the strong partisans (Gronke & Newman 2000).
Mlunchuck 1986; Kinder, Peters, Abelson & Fiske 1980). Leadership abilities, as well as trust in the president or the government, also influence presidential approval (Edwards 1983). Economic circumstances and international events also can lead to presidential approval shifts. Although many variables can affect presidential approval, party identification should be the strongest determinant of changes in popularity.

Among the many factors that can influence individual variance in approval, one of the most important variables is information. In this context, information can be defined as the relative amount news, statistics, facts, figures and overall knowledge that is available to individuals about the president. The level of uncertainty that individuals have toward a President will systematically influence their assessment of the president. The uncertainty inherent in individual assessments of the president’s job, which may be based on prior assessments of the president that may be filtered through the media or political parties, likely stems from a lack of information about the president and the costs of obtaining information. As the amount/flow of information increases, presidential approval variance should tighten and uncertainty should decrease as individuals become more certain in their assessments of how good a job the president is doing. Uncertainty can also result from imperfect information. “Whether for lack of complete information about government, lack of theory with which to evaluate politics, or lack of information about the views and reactions of others, uncertainty is pervasive when voters think about and evaluate government” (Popkin 1991, 44-45).

The theoretical ground for these assertions is that information decreases uncertainty and enables individuals to make more informed decisions. Consequently, those individuals who are predisposed to gather more information, who have access to technology and who rely on that
technology to gather information and form opinions about the president, will exhibit tighter variances in approval than those who are not exposed to information.

Information is an important and essential resource in everyday life but like most resources, due to the cost, information is often selective and scarce. Consequently, those individuals who are advantaged and receive the most information gain greater knowledge than those who do not. Knowledge is a critical component of effective citizenship\(^6\) because information enables individuals to make informed policy decisions that are important for achieving democratic efficiency.\(^7\) Political knowledge can affect the direction of public opinions of the president as well as opinions about government in general. “Clearly, knowledge is an important factor in forging a link between views on issues and one’s choice of a party. This, in turn, suggests that the value of partisanship as a short cut to political decision making is dependent upon citizens’ ability to base that partisanship on more specific political information” (Delli Carpini & Keeter 1996, 252). Presidential approval is somewhat more dependent upon short-term factors than is partisanship. Approval acts as an indicator of satisfaction when it depends on individuals’ views on issues. “Political knowledge increases the likelihood that approval ratings are tied to citizens’ views on issues, sharpening the communications between the public and elected officials by providing more substantively meaningful cues to political elites” (Delli Carpini & Keeter 1996, 253).

Arguably, due to technological innovations (i.e., computers, multimedia devices and other communication mediums), the amount of information has flowed more freely and has

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\(^5\) Individuals with tight variances around the mean level of approval are thought to be more certain of their own predispositions toward the president. Conversely, individuals with wider variances around the mean can be considered as less certain and are likely to be influenced by other effects.

\(^6\) “Political information is to democratic politics what money is to economics: it is the currency of citizenship” (Delli Carpini & Keeter 1996, 8).

\(^7\) According to Delli Carpini & Keeter, following J.S. Mill, “democracy functions best when its citizens are politically informed” (1996, 1).
increased over time. This has enabled the electorate to base approval/disapproval choices on more complete information (and more certainty). More complete information paths theoretically should increase the level of sophistication within the electorate.\footnote{See Abramson, Arterton and Orren 1998; Barber 1984; and Toffler 1980.} Despite the increased channels of communication, individual decision-making is not the same from one person to the next. While there is little doubt that increases in information influence electoral assessments of politicians, it is less clear how newly acquired information predisposes assessments of the president. Since Zaller’s (1992) work, scholars have emphasized that preference formations are affected by available information (Alvarez 1998; Gronke 1999, 2000; Brehm & Gronke 2000). However, there is less certainty about how information affects individual assessments of the president. In this research, I incorporate uncertainty into a model of information acquisition and presidential approval that is based upon Zaller’s notion of uncertainty. I argue that individual assessments of the president are conditioned by differences in levels of information, media exposure, political efficacy & trust, and demographics. Although mean level approval changes are not typically caused by these variables, it is probable that the effect of these variables will be seen through changes in the variance.

My work elaborates on Gronke (1999, 2000) and Brehm & Gronke (2000), by expanding the theoretical explanation for presidential approval and uncertainty\footnote{Gronke’s model provides substantive evidence for mean and variance changes in presidential approval but his work excludes variables that substantive theory suggests to be included in a model of presidential approval. Moreover, these authors have been unable to conclude much beyond the affects of partisanship on presidential approval.}. Of critical interest is ascertaining how information affects volatility in approval and determining how technological advances have contributed to assessments of the president. In my examination of the relationship between approval and uncertainty, I will first draw upon the literature on social cognition and on
presidential approval to determine how information affects individual choices. Second, I will set up a model for information acquisition and specify how this affects individual assessments of the president. Third, I will test my theory using a heteroskedastic probit analysis. Finally, I will discuss my results and provide some final thoughts about the implications of my findings.

### Information Theory and Acquisition

Information has been described by our Founders\(^{10}\) as a necessary condition for voting and making choices, and as essential for the basic principles of democracy. According to Downs (1957, 238), “citizens acquire political information for two main reasons: (1) to help them decide how to vote, and (2) to form opinions with which they can influence government policy formation during the period between elections”. Clearly information is the crucial first step for voting, so we would expect that the costs of obtaining the information to vote and participate in politics are greater than the actual costs of voting. Nevertheless, the costs of obtaining information can be compared to the costs associated with voting. Even though every citizen hypothetically has one vote, not everyone has equal access to information. The costs of voting are just as serious but must be considered in light of the fact that the costs are second to those of information\(^ {11}\).

Hamilton’s elitist preferences were furthered by E.E. Schattschneider (1960), and Berelson et. al (1954), who believed that without perfect information, decision-making was difficult. Early studies of political participation concluded that individuals knew very little about politics (Campbell et. al 1960; Converse 1964; Sniderman 1993). More recent analysis by Zaller (1992) has hypothesized that although tendencies toward “cognitive engagement” were present

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\(^{10}\) See Federalist #68 for a more complete discussion of the impact of information in a democracy.

\(^{11}\) “Information and transaction costs involved in voting favor those best able to pay them: the well educated, the wealthy, organized groups, large corporations. They introduce class biases into the electoral system, so that those
within society, the insufficient supply of information as well as the costs of obtaining information negatively affected the political system. Many scholars agree that there are few incentives for acquiring information because the opportunity costs associated with obtaining information far exceed the benefits and it is therefore irrational for citizens to become completely knowledgeable. Because information is costly, what typically results is sub-optimal levels of information exchange and acquisition (Bryce 1904; Lippmann 1922; Downs 1957).

Consequently, we are left with imperfect information, which has a negative effect on presidential approval because individuals must base their decisions on insufficient information. As a result, assessments of the president are sub-optimal. Because information acquisition and incompleteness of information are different for everyone, variance in presidential approval is affected. There is heterogeneity in individual-level decision-making, which prevents information from being interpreted homogenously across the electorate.

There is great variance among individuals in their acquisition of information that is due to differences in educational levels, social structures, and other environmental and contextual factors. Consequently, the breadth of individual level knowledge varies based upon the interactions and exposure that a person has to the media and to political groups. Therefore, uncertainty is present at any given time in the electorate due to the varying degrees of sophistication and information.

One of the major consequences of informational disparities, and of the difficulty and cost of acquiring information, is that the public must rely on heuristics to get information and to make choices. Informational shortcuts are a norm because individuals seek to maximize the acquisition who are on top in terms of wealth and other resources also come out on top in terms of political influence” (Page 1978, 190).
but minimize the costs of staying informed12. Information is acquired through inferences that we make about the society at large, with these inferences varying between individuals. The knowledge that we obtain influences our ability to perceive and gather further information. Additionally, our value structure aids in the acquisition of information, such that political views may color or distort our perceptions of individuals (West 1981, 43; Key 1966, 150). Although differences in understanding information exist, sources of information are similar because linkages are made from one source to another to establish chains of information.

Popkin (1991) introduces the concept of “low-information rationality” to describe the means by which the public acquires information. This symbolizes the acquisition of information in an economic fashion that is characterized by the recollection of past experiences, media biases and life in general. However, the reality is that most individuals rationally choose not to make costly investments of time or energy to obtain political information (Popkin, Gorman, Phillips & Smith 1976). Because direct information can be difficult and costly to obtain, individuals must find a proxy source, such as party identification, to serve as a default value source. Votes are seen as uncertain investments made with costly and imperfect information (Popkin 1991, 10). Approval measures of public officials can be seen as a benchmark of the perceived investment by providing an opportunity for feedback and exchange.

**Hypotheses**

Hypothesis 1: (a) An individual’s uncertainty about the political system is related to the flow of information in the political environment. (b) An individual’s uncertainty about the political system is related to individuals’ personal information cost. (c) An individual’s uncertainty about the political system is related to exposure to information about politics.

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12 “Just as fire alarms alert fire fighters to fires, saving them the effort of patrolling to look for smoke, so do information shortcuts save voters the effort of constantly searching for relevant facts. Since they are uncertain about the accuracy or meaning of information anyway, it makes more sense for them to act like fire fighters rather than like police – to use the information shortcuts provided” (Popkin 1991, 49).
Voters with lower information costs, and who have a greater exposure to the information and to the political world are more likely to have more solidified opinions (hence express greater certainty about whether or not they approve or disapprove of the job that the president is doing). Consequently, respondents’ levels of information, attachment to political parties as well as personal economic conditions will influence approval ratings for the president. Furthermore, individual attachments to the political world influence the flow of information in politics. Individuals employ a preferential calculus that enables them to make decisions based upon individual choices.\(^{13}\)

Hypothesis 2: (a) An individual’s trust in government conditions the individual’s capacity to consume information to assess the president’s job approval. (b) An individual’s trust in government conditions the individual’s capacity to retain information to assess the president’s job approval. (c) An individual’s disapproval of the president will cause an increase in the individual’s cynicism about government

Hypothesis 2 presumes that a respondents’ level of trust or feeling of political efficacy will influence presidential approval (Erber & Lau 1990). This hypothesis is based upon the idea that individual’s who have negative feelings toward government and who feel like the government and/or other people are out to get them should consequently elicit similar behavior toward the president.

One can derive from Alvarez (1998, 36) that individual uncertainty affects overall assessments of the president. Expression of uncertainty about a president and his policies diminishes the individual’s expected utility gained from approving of the president. Therefore,\(^{13}\)

\(^{13}\) Unfortunately by testing these hypotheses using one NES study, I will be unable to assess the real flow of information in the political environment because this concept is dynamic rather than static and consequently, the affects of this variable will be unobservable by looking at this one point in time
Hypothesis 3: Expression of a high degree of uncertainty toward the president and his preferred policy positions decreases the probability of approving the president.

Hypothesis 3 presents a partisan and ideological basis for approval uncertainty, such that vote choice as well as partisanship and ideology should be strong predictors of approval. I would expect that the strength of partisan identification should be related to presidential approval such that as the percentage that identify themselves as independents increases, so should volatility in presidential approval concurrently increase. Consequently, it can be determined that ambiguity will have a negative impact on approval.

Hypothesis 4: Some individuals are more systematically exposed to information than others due to increased opportunities

Systematic differences are likely in the acquisition of information as individuals use the information that they have available to them to make relative assessments of the president and of politics in general. Because information is less than perfect, there cannot be a level playing field or in this case a level “acquisition field”. It just so happens that some people are predisposed to more information than others, this is thought to be the case because of different levels in education, different opportunities and different motivations.

Hypothesis 4 presents an interesting controversy in the public opinion and social cognition literature. Asymmetries in information distribution and acquisition cause there to be information rich and poor segments of the population. Some of the systematic causes of the informational disadvantages are socio-demographic variables. Social characteristics (such as income, education, and partisanship) provide a basis for determining life situations, which may influence information and approval. The level of education is considered to be the main factor inhibiting equal consumption of information. The level of education that an individual has should impact that individual’s capacity to receive and comprehend information. Gender and Race
differences may also be influencing the education variable and may have an indirect affect on information consumption because for minorities in society, the opportunities to access and be exposed to information may be significantly less than for white males. Socio-economic status should also influence uncertainty. The lower status individuals may be less informed due to decreased opportunities to receive information. Age and Geographical region are two additional variables that may provide clues for likely behaviors.

Uncertainty within the electorate affects individuals’ decision-making. Individuals with high levels of uncertainty about the president’s relative job performance are likely to base their approval or disapproval of the president on observable factors such as the context and the president’s characteristics. The characteristics that would help decrease uncertainty and would therefore explain variation in approval include information, technology, and media influences.

Hypothesis 5: (a) High levels of uncertainty about the president’s job is negatively related to basing approval on the average distance between the individual’s policy preferences and the president’s preferences.
(b) High levels of uncertainty about the president’s job leads to basing approval on context and the president’s characteristics.
(c) Variation in approval is related to information.
(d) Variation in approval is related to technology.
(e) Variation in approval is related to media influences.

Hypothesis 6: (a) Strength of partisanship predicts the level of uncertainty an individual asserts in assessing the president.
(b) The closer the relative proximity of the president to the individual’s partisan and ideological attachments, the higher the individual’s evaluation of the president.

Hypothesis 6 is contrary to Alvarez’s results (107), which imply that the greater the level of independence, (i.e., the less attached a voter is to the political system or a political party), the more certain the individual is of their assessments of the president’s approval ratings. Campbell, et. al (1960) argued, “Identification with a party raises a perpetual screen through which the individual tends to see what is favorable to his partisan orientation. The stronger the party bond,
the more exaggerated the process of selection and perpetual distortion will be. Without this psychological tie, or perhaps with commitments to symbols of another kind, the Independent is less likely to develop consistent partisan attitudes” (133). However, Keith et. al, (1986) argue that independents have greater political knowledge and are more active participants in the political process than are partisans.

Characteristics of the president such as his personality, is an important variable in the assessment of presidential approval. An individual’s perception of whether the president is someone who can get the job done is another such variable, as is the individual’s cumulative assessment of the president’s character. One can presume that those with less knowledge lack the sophistication and information to approach the evaluation of the president on any level beyond that of such observable and identifiable variables such as character and personality.

Hypothesis 7: Individuals with lower levels of information and less exposure to the media are more likely to use non-policy and more personal variables in assessing the president than are individuals with higher levels and more exposure.

Variables, Data, & Methods

In order to examine the relationship between individual-level measures of information acquisition and job approval of the president I used the 1996 National Election Study (NES). The dependent variable is presidential approval measured as approval or disapproval of the president. While approval of the president is conditioned by the amount of uncertainty that an individual has toward the president’s positions and by the president’s political party, these types of variables should not directly influence the mean value of approval. Therefore, the main independent variables of interest are: the seven-point party identification scale, seven-point

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14 The survey is based on a national sample of 1714 respondents, and contains measures of political information. While more recent NES data (from 2000) are available, the 1996 data are preferable because the sample has been
ideology, the respondent’s socio-tropic and pocketbook retrospective policy views of the
president, the respondent’s 1992 vote choice, the respondent’s race, gender and income levels
and the respondent’s view of Clinton’s character. (For a complete description of variables, see
Appendix). Partisan attachments should be the strongest indicators of presidential approval
because the identification with a political party should condition the approval or disapproval of
the president. Uncertainty should also affect these variables but only through the variances in
approval. Consequently, uncertainty will be modeled into the variance equation and will be a
function of: strength of partisanship and ideology, education, long-term information, short-term
information (exposure to the media), interest, vote choice for 1992 and general information about
politics.

**Descriptions of the Models and Included Variables**

Presidential approval is not distributed homogenously across individuals. Rather, there is
heterogeneity in decision-making. As a result, heteroskedastic probit can be used to model the
uncertainty/variance in individual approval ratings. The heteroskedastic probit model has two
components, the model of choice (“the systematic component”) and the model of the response
variance (“variance component”).

\[ \text{Model of Choice} \]

The model of the mean considers the “systematic” impact that each of the independent
variables has on the dependent variable presidential approval. Each of the independent variables
within the model – Partisan Identification, Ideology, Clinton Character, Pocketbook

\[ \text{used in other literature to test similar concepts and because the questions addressing political information are present.} \]

\[ \text{See Alvarez and Brehm 1995 and Alvarez and Katz 2000.} \]
Retrospective voting and Sociotropic-Retrospective voting, Gender, Race, Income, and 1992 Vote Choice are all considered as factors that can affect mean levels of presidential approval.

Partisanship, ideology and character represent the long-term stable components of presidential approval. However, aggregate approval studies have demonstrated that presidential approval has become more volatile in the post-war era and that the increase in volatility is related to a change in partisan attitudes (Brehm and Gronke 1999). Therefore, while partisanship may have been seen as a “long-term” component of approval, the increased volatility of partisanship provides support for the variables placement in the variance model. Nevertheless, despite the increased volatility, party identification (as measured here through the direction of party) is still the strongest predictor of whether or not someone approves or disapproves of the president. I expect that it will be directly related to presidential approval, such that Democrats are more likely to approve of Democratic presidents than Republican presidents and vice-versa. Parties help structure and organize attitudes and provide a screen/filter through which information is interpreted and cues are given to aid in the decision-making process. Campbell et al (1980, 132-133) argued that associations with political parties provide a set of mechanisms by which voters could evaluate, process, and structure their political thinking; and voters without such attachments (independents) would have more difficulty evaluating and voting for presidential candidates. Ideological attachments can be linked to presidential approval through a similar path as partisanship. Respondents who identify with an ideology should be more certain in their decision to approve/disapprove of the president than those who are not ideologues.
Assessments of presidential character, as measured through an additive scale of character values, should play an important role in determining presidential approval. “A president’s character traits and ability to evoke positive emotional responses play an important role in mediating the effects of policy performance and partisanship on presidential vote choice” (Gronke 1999). As the assessment of whether or not the president is a good leader with strong values increases, I expect that approval for Clinton should correspondingly increase. More simply stated, presidents who have positive character evaluations should have higher approval levels. Individuals who are more certain in their assessment of the president due to presidential character should have tighter variances in approval than those with more negative views of the president’s character.

Economic conditions, as a policy issue, are short-term influences that affect presidential approval and voter decision-making. Socio-tropic and pocket-book retrospective judgments, as short-term variables will play a role in this analysis. These “performance measures” should correspond to approval because after all, if a president fulfills his promise to maintain the economy then the performance evaluations should be positive and increase approval, if not, then the approval may decline (Gronke 1999). Because overall the economy improved during Clinton’s term, I expect that this improvement was reflected in higher approval ratings. Consequently, respondents who state that the overall economic situation within the United States

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16 The factor analysis of the 8 components of the Clinton Character Scale demonstrated that there is only 1 eigenvalue greater than 1 (4.65297). In simplistic terms, this indicates that the scale only measures one dimension or one latent construct, which, based on theory, is an assessment of Clinton’s Character.

17 My measure of sociotropic economic conditions is measured retrospectively, which contradicts Gronke (1999, 2), who argues that the “policy dimension of presidential approval is prospective: what are you going to do for me tomorrow?”. I believe that while individuals may consider what a president will do for them in the future, the ratings are indicative the month’s prior assessment of the overall job that the president has done and thus consequently retrospective judgments should be used for personal financial variables. Moreover retrospective models have been proven to be successful with models that use individual attitudes of the president (Fiorina 1981). Additionally,
has gotten better, will place Clinton higher on the job approval ratings than respondents who state that the economic situation in the US has gotten worse. Thus, retrospective economic judgments that suggest a positive direction for the economy should be positively correlated with presidential approval. I expect that perceived future economic conditions for the country might provide an indication for presidential approval because if the response is that the economy will get better, then the president’s approval ratings should reflect satisfaction as well as a sense of hope for the future that is reminiscent of confidence in the president.

Finally socioeconomic variables should also help explain why respondents approve or disapprove of the president. Like partisanship and ideology these variables provide rather stable predictors of presidential vote choice and approval. The respondent’s gender, race and income all provide supplementary information that may help explain approval or disapproval of the president. These variables do not explain the magnitude or variance in support, rather they only provide insight into the approve/disapprove dichotomy. According to Delli Carpini and Keeter (1996), “males are generally more informed than females” (145) and males are more psychologically engaged in politics and are more likely to be politically informed (205). Consequently, approval decisions should be more stable for males than females. Race represents another demographic variable that may serve to explain the certainty surrounding the mean presidential approval ratings. Non-whites should be less variable (i.e., more certain) in their approval decisions than whites because non-whites display greater tendencies toward voting as a group than do whites.

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Downs (1957) suggests that retrospective judgments are made by voters for party performance because these assessments act as good indicators as to how the party will perform in the future.

18 This variable is coded as 1 for the category that I would expect to be the most certain in their approval for Clinton, thus the non-whites. Consequently, those categories that should be less certain in their assessments of the president are coded zero.
Income may also influence a respondent’s decision to approve of the president if we can assume that increased incomes are associated with approval for Republican presidents and disapproval for Democratic presidents. However income also implies opportunity and access, those individuals who have higher incomes may just simply have the economic and social means to acquire the information needed to base their approval decision upon.

Another variable, like the SES variables serves as a proxy for political awareness, the respondent’s vote choice in 1992 indicates participation and involvement in politics even through voting symbolizes awareness. This retrospective variable also helps to explain why or why not an individual approves of the president. Respondents who voted for Clinton in 1992 should be more certain about his job approval than those who voted for another candidate or who did not vote.

Model of Uncertainty

Presidential approval is typically studied through the mean because the values are readily available. Although inferring statistical relationships via the mean is conceptually easier to understand; only looking at mean level changes in approval does not help us explain why variations in approval occur. Presidential approval represents more than just a simple approve or disapprove dichotomy. The distribution of approval or disapproval varies from individual to individual. Therefore, the variance is unequal for individuals and exogenous factors outside of the model of the mean may lead to different variances in approval. As Gronke proposed (1999) the relative size of the distribution will be contingent upon the amount of uncertainty that is present. Individuals who are more certain about the president’s positions should have a tighter
variance than those who are less certain. I expect those respondents who are more uncertain to have approval distributions that are wider to account for significant variance in their responses.

Significant variance in presidential approval can be hypothesized because many of the components of approval involve short-term shocks (such as economic indicators or rally points) or changes due to both endogenous and exogenous factors. Gronke (1999) argues for modeling the variance in aggregate approval ratings as a means to capture the underlying variables that influence the spread of the approval scores around the mean. By employing a individual-level, variance-based model of presidential approval, I am able to capture changes in approval that occur through factors besides those found through variables such as partisanship and ideology and thus an able to include the variables that influence the spread of approval.19 Moreover, through the variance model I am able to demonstrate the role that uncertainty and information play in the assessment of presidential approval. Increases/decreases in the volatility of support can have negative/positive implications on the president’s ability to be an effective leader.

The model of the variance includes the following variables: strength of partisanship, strength of ideology *political information, political information/sophistication (long-term information), media exposure (short-term information), efficacy in government, confidence in government, general information about politics, and education. Several of the variables within the model of the variance were constructed from questions measuring the desired variables. These variables were then used to create scales to determine whether or not the amounts of each one influenced the variance in approval.

Two variables incorporated within the variance model also contribute to the choice model. The strength of partisanship and ideology must be included in the variance equation

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19 Although, it can also be argued that volatility impacts partisanship by causing stronger partisans to be less supportive of the president (Brehm & Gronke 2000).
because strong partisans and ideological extremes should elicit tighter variances in approval than independents or moderates. While the choice model argues that Democrats should approve of Clinton more than Republicans, the variance model implies that the strength of the respondent’s partisan and ideological attachments should contribute to the shape of the distribution of presidential approval. Strong Democrats should be more likely to have a higher regard for the president than will weak partisans or independent Democratic leaners. However, strong partisans in general, whether Democrats or Republicans should have stronger and less variant opinions toward the president. A similar hypothesis can be stated for ideology, such that respondent’s who are more Liberal are more likely to support Clinton but the variance surrounding individuals who identify strongly with one ideology or another should be tighter than those who weakly identify with an ideology. Ideological extremes should be more certain in their evaluations of the president than moderates, therefore, their variances should be much tighter (Alvarez 71). The strength of ideology measure was multiplied by partisanship to test the hypothesis that strong ideologues should possess greater information than weaker ideologues.

The political information variable is measured through the respondent’s summary score obtained through factual questions testing basic political facts.20 This variable measures general political information/awareness and tests what has been retained by individuals to be used for intellectual political engagement. These political facts can serve as measures of long-term information because the questions ask people to recall things that are theoretically stored in their long-term memory (such as which office does Gore hold?). The greater the political awareness or sophistication, the more likely that respondents are to resist information that is inconsistent with their basic political values (Zaller 266). I expect that the level of political sophistication should
be related to the variance surrounding approval of the president. Respondent’s who are more politically aware (i.e. the respondent gets more correct answers) will be more certain in their assessment of the job approval of the president and will consequently display tighter variances than those who are less aware. The expectation for the positive relationship between long-term information and a tighter variance of presidential approval stems from the premise that more informed respondents are able to build upon preexisting attitudes and information when making decisions and are consequently able to make decisions with increased certainty than the less informed respondents.

As Mutz (1993) and other scholars have hypothesized, individuals with “high levels of political knowledge, heavy use of the mass media, high levels of political interest, and regular involvement in the political process are expected to differ in their decision-making processes from those who are less knowledgeable, less educated, less interested or less involved.” Thus resulting in potential relationships between this as well as my other cumulative interest/information variables.

Media exposure serves as a proxy for the affect of short-term information on the respondent’s distribution of presidential approval. The variable measures an individuals ability to pay attention to politics and the more time that is dedicated toward politics, the better able the respondent is to make a decision about approval of the president. Like Zaller’s (1992) measure of “awareness” the Media Exposure variable was formed to ascertain the impact that political information, as received through the media and other people has on uncertainty. The Media

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20 Like Gomez and Wilson (2001), I am operationalizing this variable to capture the respondents’ awareness and knowledge of the political domain. The information variable combines the “correct responses” to questions on political knowledge, such as which party has the majority in the House.

21 Although the media exposure variable may provide indicators for the political sophistication of the public, the reality is that the NES survey measurements occur in and around election times when the coverage of politics increases. Neuman (1986, 15) states that as a result the results that we receive may consistently underestimate public ignorance and un-sophistication.
Exposure variable cumulates the responses to variables that measure each individual’s exposure to the media through TV, radio, newspaper and discussions with family and friends. I expect that as individuals are exposed to additional information through the media, they will become more certain in their decision to approve/disapprove of the president. Consequently, the variances in approval should be tighter than for individuals who are more exposed to media sources than those less exposed. Thus, the coefficient on media exposure should be positive. The greater the exposure to the media, the more certain respondents will be about their assessment of the president. Respondents with the least exposure to the media will be the most susceptible to changing their views of the president.

Political efficacy and confidence in government are both included in the variance model because an individual’s variance in approval of the president may be explained by his/her efficacy and trust of government and politics. These variables measure the respondents’ feelings of trust toward people and the government system as well as account for overall feelings toward the political system. According to Lipset and Schneider (1983), the sources of trust in government can be measured through a series of questions that can be merged together to create a confidence in government variable. The confidence in government variable combines measures that assess the respondents’ feelings of trust in government. The efficacy variable differs from the confidence variable by providing a combination of external and internal efficacy measures which includes variables that question whether individuals have a say in government, the complexity of

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22 Confidence in government and political efficacy are included in the variance model, rather than the choice model, because I cannot make the assumption that more confident or more efficacious individuals approve of the president more than individuals who express less efficacious and less confident attitudes toward government. Presidential theory suggests that while presidents are “blamed” for what goes wrong, they are not “credited” for what they do right. Consequently, instilling trust in government or maintenance of that trust in no way implies that the president will be “credited” with increased approval scores. Rather, these measures can only serve as explanations as to why some respondents “vary” in their approval/disapproval of the president and not as to why they initially choose to approve or disapprove of the president.
government, how much public officials care and whether or not elections make a difference. As confidence and efficacy in government increases, the variance around approval should decrease because individuals who are more confident or efficacious toward the government should be more certain in their assessments of the president. Whether or not the individuals approve or disapprove of the president is not of critical interest because those who are more confident should be more certain about their decision to approve/disapprove and should consequently have tighter variances than those who are less confident and efficacious.

The respondent’s overall interest in politics can be hypothesized to effect the variance surrounding presidential approval. As political interest increases, the uncertainty and consequently the variance surrounding the presidential approval ratings should decrease because an individual’s interest in politics may encourage them to become more politically aware. As stated previously, as awareness increases, respondents obtain information that should decrease the uncertainty surrounding their assessment of the president. Interest in politics is included because people with a greater interest in politics are more likely to obtain the information that is necessary for them for decision-making in politics (Petty & Cacioppo, 1979).

Education (as a proxy for political sophistication) may also help explain the variance in approval because as education increases, information increases. As the political awareness increases, through increases in education, individuals can be more confident in their decision to approve or disapprove of the president. The increased education provides additional information that enables individuals to make more informed decisions about presidential job approval. Consequently, individuals with more education should elicit tighter variances around approval.

23 The complexity in government variable was added to the cumulative measure of trust and efficacy toward government because the question “tap[s] political estrangement and identify those pathologically alienated and marginal citizens who had withdrawn from public life” (Neuman 1986, 12).
than those with less education because they are more certain that their approval decision is “correct”.

The final variable in the model of the variance represents the classification of the respondent’s general information about government and politics assessed by the National Election Study. Respondent’s who are perceived to have more information about government and politics should be more likely to display less variance in their approval or disapproval of the president than those perceived to have less information because information can be equated with increased certainty in decision-making.

Methods

The dependent variable – presidential approval, is a dichotomous variable, which necessitates a model utilizing probit rather than ordinary least-squares regression analysis. In the classical linear regression model, the assumption is one of homoscedasticity, whereby all of the disturbance terms appearing within the population have the same variance. However, when the conditional variance of the dependent variable increases as the independent variables also increase, there is heteroscedasticity. Within my model, heteroscedasticity is thought to be present as a result of the variation in the levels of information that individuals possess that cause them to have different variances within their approval of the president. Preferences for the president are not identically distributed, rather, the process of individuals evaluating the president’s job performance is heterogeneous. The differences in the variance should primarily be a consequence of the amount of information that is available to individuals within the electorate. Individuals who can designate reasons (stemming from amounts of information) why they approve/disapprove of the president have wider preference distributions than those who only approve or disapprove of him.
In order to model these differences, it is necessary to follow the model utilized by Alvarez & Brehm (1995, 1061), which is characterized by a variation of Harvey’s (1976) “multiplicative heteroskedasticity” approach (1976). The Alvarez & Brehm model includes several equations that estimate the impact that the variance has on the dependent variables within the model. My model consists of all variables included in both the choice and variance equations.

Results

The heterogeneous theory of presidential approval suggests that individuals rely different types of resources to determine their variances in approval of the president. The amount of information available within the electorate should influence the respondents’ ability to make certain or uncertain assessments of the president. Those who have more information should be more likely to be certain (thus have tighter variances) in their approval or disapproval of the president. However, individuals do not have the same opportunities or resources to make informed opinions about the president.

Table 1 shows the results of the complete model with all of the variables. Relying upon the NES indicators and combined variables accounting for sophistication within the electorate, I find support for my overall theory of heterogeneity.

For the choice model, the coefficients on ideology, character, vote choice 1992, and socio-tropic retrospective views are all significant. Party identification, however, does not appear to have significant explanatory power for predicting approval or disapproval of the president. Neither do pocketbook retrospective viewpoints. The SES variables do not appear to be strong predictors of a respondents decision to approve or disapprove of the president. All of the variables within the model of the choice are in the hypothesized direction except for pocketbook retrospective voting. Although I hypothesized that a respondents own economic situation (i.e. –
pocketbook) should affect the approval or disapproval of the president, it seems that those individuals who believe that their own economic situation in the past year has gotten worse are more likely to approve of the president. Perhaps these respondents who saw their own economic situation deteriorating were able to see past their individual circumstances and not blame the president for their problems.

For the model of the choice, the coefficients on information, education, confidence in government and strength of ideology \* information all are significant. Based upon these results it can be concluded that information and the other informational variables provide some explanatory power for explaining the variance in presidential approval. The coefficients for information, education, political interest and confidence in government are all negative. The fact that these coefficients are negative signifies that those individuals with less information, education and political interest are more likely to exhibit wider variances in their approval of the president. The same can be said for the confidence in government measure. Those respondents who are less confident about the government and its leaders are more likely to display increased variance surrounding presidential approval than those who are more confident. The variables within the model of the variance that are not significant are the strength of partisanship, exposure to media, political interest, efficacy government and general information about politics and government. The fact that some of these variables were not significant was somewhat surprising. I had hypothesized that as exposure to media increases the variance surrounding approval should decrease. The fact that the coefficient on this variable was not significant may imply that the effects of this variable are being conditioned by the information variable.
Discussion and Conclusions

Information was hypothesized to have an impact on presidential approval through the variance. While this may be the case, I am not completely satisfied with the information variable within my model because I am not confident that it completely captures uncertainty. There may be some problems of multi-collinearity between my information and interest variables that may be impacting the overall effectiveness of my model. Moreover, the larger problem for my research is that it only includes one study in a single time period, 1996 and as with most survey findings, caution must be exercised in generalizing the results from this one point in time. Consequently, the ability to make generalizations to other years as well as measures of information or knowledge that exceed the ones within this dataset are difficult to make.

Generally it can be stated that sophistication/ information provides the most explanatory power for predicting the volatility and the variance in presidential approval ratings. Not surprisingly ideology also has important explanatory power for presidential approval but shockingly, the strength of partisan identifications does not, which is contrary to what the presidential literature suggested. Clinton Character also provides significant explanatory power for presidential approval. Sociotropic retrospective evaluations by the respondents are also influential sources of presidential approval. Information can explain differences in approval ratings through the variance. Confidence in government does appear to have some explanatory power for predicting the volatility in presidential approval. Finally, it seems that the variables within my model do account for some of the volatility in presidential approval, unfortunately though, the model does not explain all of the variance in approval, perhaps there are other factors that are influencing the volatility in presidential approval that have not been explained within my model.
The consequences for increased volatility in presidential approval are very serious. Primarily, volatility in presidential approval should correspond with strategic differences in the assessments of the president, such that “high” approval ratings may not have as significant of an impact as they could have because of the volatility, which discourages individuals from being swayed by opinion ratings. Strategic actors should be able to recognize that high approval ratings that occur due to volatility in approval are less significant than high ratings that occur after a steady increase in approval over time. Consequently approval ratings that remain relatively stable overall with very few peaks and troughs, have a greater chance of affecting the president’s policy program than ratings that fluctuate a lot. Moreover, volatile public opinion of the president can also have a negative impact on the strength of the presidents’ partisan support.

Nevertheless, it can be concluded that presidential approval is conceptually difficult to ascertain. While the approval question asks whether or not the respondent approves or disapproves of the job that the president is doing, it does not ask the respondent to approve or disapprove of the economy, character of the president or policies but yet as scholars we deduce that approval symbolizes those things. Perhaps they do, but it is difficult to determine what approval represents because it means different things to different people.

Imperfect information is a constant problem within the political system. Even with technological advances, newly formed networks, social structures and the like still mean that the market for political information is imperfect. Consequently, true democracy can neither be realized in practice nor in principle. Information may be for sale or available but to the average every-day consumer, additional information is needed so that he knows what information to buy.

Overall, it can be concluded that presidential approval levels are influenced by the level of information within the electorate about the president’s policies, character, the state of the
economy as well additional information about government. Changes in approval are substantively interesting because they imply that the public has changed their perception of the president from one month to the next. The volatility in approval acts as a barometer for policymakers, media, Congress and the public because it serves as an indicator of how good of a job the president is doing. With increased information about the president, policy judgments can and often times do change. This study does advance our study of the presidency by providing additional support for the hypotheses that suggest that information affects assessments and judgments of presidents.
### TABLE 1: Heteroskedastic Probit Estimates of Approval, 1996 National Election Study

#### Choice Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-1.404</td>
<td>.6452**</td>
</tr>
<tr>
<td>Sociotropic Retro</td>
<td>.2163</td>
<td>.1087**</td>
</tr>
<tr>
<td>Pocketbook Retro</td>
<td>-.0272</td>
<td>.0325</td>
</tr>
<tr>
<td>Party Id</td>
<td>.0488</td>
<td>.0285*</td>
</tr>
<tr>
<td>Ideology</td>
<td>.1189</td>
<td>.0565**</td>
</tr>
<tr>
<td>Clinton Character</td>
<td>.0733</td>
<td>.0331**</td>
</tr>
<tr>
<td>Race</td>
<td>-.1478</td>
<td>.1186</td>
</tr>
<tr>
<td>Income</td>
<td>-.0152</td>
<td>.0152</td>
</tr>
<tr>
<td>92 Vote</td>
<td>.0514</td>
<td>.0395*</td>
</tr>
</tbody>
</table>

#### Variance Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media Exposure</td>
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<td>.0761</td>
</tr>
<tr>
<td>Soph-Information</td>
<td>-.1532</td>
<td>.0767**</td>
</tr>
<tr>
<td>Confidence Govt</td>
<td>-.1187</td>
<td>.0451***</td>
</tr>
<tr>
<td>Efficacy Govt</td>
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<td>.0426</td>
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<tr>
<td>Strength of Party</td>
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<td>.0861</td>
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<tr>
<td>IdeologyStrength*Info</td>
<td>.0411</td>
<td>.0185**</td>
</tr>
<tr>
<td>Education</td>
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<td>.0485**</td>
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<tr>
<td>Gen Info Politics</td>
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<td>.0984</td>
</tr>
<tr>
<td>Int in Politics</td>
<td>-.1080</td>
<td>.1364</td>
</tr>
</tbody>
</table>

#### Heteroskedasticity Test

- Log Likelihood Ratio Test ($\chi^2$ df=8) = -203.1864 Wald Chi2(8)=5.26 Prob>chi2=.7299
- N = 795
- Goodness of Fit ($\chi^2$ df=9) = 20.09 (prob>chi2 =.0173)

Note: Standard errors are in parentheses next to the MLE coefficients

- *** p< .01, one-tailed test
- **  p< .05, one-tailed test
- *    p< .10, one-tailed test
References


Dependent Variables.” *Social Science Quarterly* 51(4): 889-899.


236-253.


Krause, George A. 1997. “Voters, Information Heterogeneity, and the Dynamics of


Appendix: Description of Variables

**Media Exposure:** measures the relative influence of the media on opinions. All values coded 0 – none; 1 occasionally (1-2 days per week); 2 few times per week (3-4 days per week); 3 most days (5-6 days per week); 4 every day (7 days per week). The combined values range from 0-20 (20=complete media exposure). The variable was further divided into 4 categories from low (0-5days); medium-low (6-8); medium high (9-11) and high (12-20).

\[
\text{Media Exposure} = \text{Days Watch National TV (V960242)} + \text{Days Read Paper (V960246)} + \text{Days Watch Local News (V960244)} + \text{Days Talk Politics (V961005)} + \text{Political Radio (V961156)}
\]

**Political Efficacy & Trust:** coded from low to high trust (0-low to 3-high). The combined values ranged from 1-21 (21=complete trust). The variable was further divided into 4 categories from low (1-7); medium low (8-11); medium high (12-14); high (15-21).

\[
\text{Political Efficacy & Trust} = \text{Trust in Government (V960566)} + \text{Trust People (V960567)} + \text{No Say in Government (V960568)} + \text{People Advantage (V960569)} + \text{Similar Attitudes & Beliefs (V960570)} + \text{Public Officials Care (V961244)} + \text{Complex Government (V961246)}
\]

**Confidence in Government:** coded from 0 (low confidence) to 2 (high confidence)

\[
\text{Confidence2} = \text{Trust Gov't (V961251)} + \text{Waste in Gov't (V961252)} + \text{Gov't Run By Big Interests (V961253)} + \text{Crooks in Gov't (V961254)} + \text{Gov't Pay Attention (V961256)}
\]

**Efficacy in Government:** coded from 0 (low efficacy) to 2 (high efficacy)

\[
\text{Internal Efficacy} = \text{No Say (V961245)} + \text{Complicated (V961246)} + \text{Attention w/ Elections (V961255)} + \text{External Efficacy} = \text{Public Officials Don't Care (V961244)}
\]

**Media Information:** coded 0-4 (0-none to 4-a great deal) represents the amount of attention paid

\[
\text{Media Information} = \text{National News (V960243)} + \text{Local News (V960245)} + \text{Newspaper Articles (V960248)} + \text{Political Talk Radio Programs (V961157)} + \text{Magazine Articles (V961334)}
\]

**Information:** Additive measure 1 point given for each correct response. The combined values range from 0 to 10 (10-high information). This variable was further divided into 4 categories from low (0-3); medium low (4-5); medium high (6-7); high (8-10).

\[
\text{Information} = \text{Correct Office (V961189 (Gore)+V961190 (Rehnquist)+V961191 (Yeltsin)+V961192 (Gingrich)} + \text{Majority Party in House (V961072)} + \text{Majority Party Senate (V961073)} + \text{TV personalities & networks (V961239 (Tom Brokaw)+V961240 (Peter Jennings)+V961241 (Dan Rather)+V961242 (Bernard Shaw)}
\]

**Pocket-Book Voting:** coded by directionality 1=better off, 0 =same, -1=worse
1. Retrospective (V960337)
2. Prospective (V960339)

**Sociotropic Voting:** coded by directionality 1=better off, 0 =same, -1=worser
1. Retrospective (V960385)
2. Prospective (V960387)

**Vote:**
1. Did R Vote (V961074) 1-Yes; 0-No
2. Who R Vote For 1996 (V961082) 0 -other; 1-Clinton; 2-Dole; 3-Perot
2. Who Did R Vote for 1992 (V961082) 1-Bush, 2-Perot, 3-Clinton, 0-other

**Clinton Character:** all coded 1-not well at all, 2 not too well, 3 quite well, 4-extremely well

\[
\text{Character} = \text{Intelligent (V960421)} + \text{Compassionate (V960422)} + \text{Moral (V960423)} + \text{Provides Strong Leadership (V960426)} + \text{Really Cares About People Like You (V960427)} + \text{Knowledgeable (V960428)} + \text{Honest (V960429)} + \text{Gets Things Done (V960430)}
\]

**Gender** (V960066) 1-females, 0 males

**Race** (V960067) 1-non whites, 0 whites

**Education** (V960610) Summary R’s Education (as coded by NES)

**Clinton Approval** (V960295) 1-approve, 0-disapprove

**Clinton Approval Strength** (V960296) range 1-disapprove strongly to 4-Approve Strongly

**Ideology** (V960365) Strength of ideology +3 – 0 (strong liberal = +3)

**Party Identification** (V960420) Strength of Pty +3 to 0 (strong Rep/Dem +3 and 0 Indep)

**Party Identification** (V960240) Direction of Pty +3 to –3 (Strong Democrat to Strong Republican) 0-moderate

**Interest in Politics:** Political Interest (V961001) 3-Very Interested; 2-Somewhat Interested; 1-Not much Interested
**Income** (V960701) coded into groups of income 1(0-9999) 2(10-19999) 3(20-29999) 4(30-39999) 5(40-49999) 6(50-74999) 7(75000 and up)