Policies, Prototypes, and Presidential Approval

by

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August, 1999

I must thank John Aldrich and Jim Stimson for two long conversations that helped me crystallize my ideas about presidential approval, policy performance, and partisanship. At the price of a few cups of coffee, they came cheap! I would also like to thank Nancy Burns, Reneé Smith and Chris Zorn for comments on an earlier version of this paper, and Michael Alvarez, John Brehm, Neal Beck, Janet Box-Steffensmeier, Robert Francesze, and Brad Gomez for advice, and Brian Newman and Brad Gomez for research assistance. The data used in this paper were made available by the InterUniversity Consortium for Social Research. The author encourages downloading of this paper from the APSA Political Methodology web site `http://polmeth.calpoly.edu` *or from the author's homepage,* `http://www.duke.edu/~gronke/research.html`*. This research was supported in part by National Science Foundation grant SBR-97-30854 and the Duke University Arts and Sciences Council.*

Abstract

American presidents, like all democratic political leaders, rely on popular support in order to promote their political agenda, gain legislative victories, and succeed at the ballot box. Extant studies of approval, however, focus resolutely on aggregate values, while individual level determinants, and variation, have been ignored. This paper redresses this imbalance, and in doing so speaks to the outstanding questions in studies of presidential approval.

Individual level presidential approval is a product of three dimensions of evaluation: prospective policy judgements (what are you going to do for me tomorrow?), retrospective assessments (what did you do for me yesterday?), and personality assessments (what kind of leader are you?). In addition, the model draws on new models of uncertainty in the survey response, testing the hypothesis that weaker partisan attachments and lower levels of chronic political information will lead to greater uncertainty about presidential performance.

The model is tested using NES studies from 1980–1996. The overall performance is superior (predicting from 40-70% of the variance in individual scores), and the primary hypotheses are confirmed. Retrospective, but not prospective, judgements drive individual level presidential approval, thus challenging the "bankers" model of approval, and personality assessments play a central role in approval.

Finally, strong evidence is found of heteroskedasticity in the approval models, and political information, interest in the presidential contest, and strength of partisan attachments all lead to lower levels of uncertainty. Variations in the role played by party during the Reagan years, compared to the presidencies of Carter, Bush, and Clinton, suggest a complex interaction between partisan ties, presidential performance, and the personality of the particular individual occupying the oval office.

In an era of the "public relations" presidency (Kernell 1993), public support for the President has become more crucial than ever. As a consequence (or perhaps a partial cause), presidential approval is measured, reported, and dissected like clockwork. The aggregate level of presidential approval is an attractive lure for anyone wishing a concise "snapshot" of a presidency at a particular time point, a way to summarize the highs and lows of an administration, or even to compare the success and failures of different presidential administrations. The political science literature utilizing the presidential approval series is far too voluminous to cite here (For reviews, see Brody 1991, Brace & Hinckley 1992).

The public is not a monolith, however. A review of the extant literature on presidential approval, starting with Mueller (1973) reveals two, related oversights. The individual basis for presidential approval has been left largely unexamined, save for important contributions by Mutz (1992, 1993) and some scattered recent work (e.g. Jackman 1999, Nagler & DeBoef 1999, Clarke, Ault, Elliott & Stewart 199x).[1] 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 evaluations of presidential performance, certainly more than is captured by the conventional "approve/disapprove" dichotomy.

In this paper, I develop a more fully articulated model of mean presidential performance assessments than has been presented elsewhere. I model presidential approval as a function of three distinct and important dimensions: policy, performance, and personality. The policy dimension of presidential approval is *prospective*: what are you going to do for me tomorrow? Individu-

[1] All of these works focus solely on the economic determinants of presidential approval, save Jackman's (1999) attempt to model approval during the Lewinsky scandal.

als are assumed to prefer (and thus to give higher approval ratings to) Presidents whose stances on important issues are in accord with their own. Thus, the less ideological and policy distance between the respondent and the President, the higher the individual's rating of presidential performance should be. Equally significant, however, are affective personality assessments. As has been demonstrated previously (e.g. Aldrich, Gronke & Grynaviski 1999, Rahn, Aldrich, Borgida & Sullivan 1990, Miller, Wattenberg & Malunchuk 1986, Kinder & Abelson 1981, Kinder, Peters, Abelson & Fiske 1980), 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. I consider whether personality assessments play a similar role shaping incumbent performance evaluations. Finally, and perhaps most importantly, I expect that assessments of the incumbent President's actual performance in office, particularly in managing the national economy, powerfully influence his standing with the public. It would be surprising, to say the least, if retrospective assessments, a central part of most models of presidential vote choice, did not also alter individual levels of job approval.

The second consequence of the focus on aggregate level approval is that we have little insight into potential heterogeneity in approval. If we accept the model of the survey response not as a true mapping of an unobserved value, but instead a reflection of the mix of considerations that the respondent draws upon at the time of the interview (Feldman & Zaller 1992, Zaller 1992), then there is a straightforward extension of that theory to the variance portion of an individual-level model of presidential approval. The variance corresponds to individual uncertainty or ambivalence about the attitude object (Alvarez & Brehm 1995), in this case, whether a respondent approves or disapproves of presidential performance.[2]

In this paper, I test whether the chronic political information, the salience of political parties as a structuring component to an individual's political opinions, and evaluations of the performance of the economy serve as a base of predispositions for attitudes about presidential performance. My expectation is that among more informed respondents, among respondents for whom political parties are salient political objects, and respondents with extreme (highly positive *or* negative) opinions about the performance of the macroeconomy will be more confident or certain in their as-

[2]See (Brehm & Gronke 1999, Brehm & Gronke 1995) for a fuller theoretical argument and empirical examination of heterogeneity in the distribution of presidential approval.

sessments of the performance of the president. This effect should obtain regardless of the particular occupant of the oval office.

In the sections that follow, I describe my individual level model of presidential approval. I add to that model a specification for uncertainty (essentially a model of the variance portion of the equation), providing explanation and justification for the hypotheses already presented. Finally, I present estimates of this model using data from the 1980–1996 National Election Studies.

Policy, Performance, and Prototype

The vagaries of public approval of the president are well documented – presidents profit from economic growth, are penalized for downturns, and benefit differentially from war and peace, depending on how the country's role is perceived. We also know, from aggregate results, that the approval series and the macropartisanship series are cointegrated ((Mackuen, Erikson & Stimson 1989), but see (Green, Palmquist & Schickler 1996)). Previous work, using aggregate data, documents that presidential approval has become more volatile in the postwar era, and that the increased variability is related to changes in partisan attachments (Brehm & Gronke 1999, Brehm & Gronke 1995). At least at the aggregate level, partisanship, economic performance, and presidential approval are closely linked.

It is surprising, then, that so little is known about the individual level determinants of presidential approval. One might assume that aggregate levels findings reflect the dynamics of individual opinion formation and change, but there is good reason to be doubtful. First, there is the well–known paradox in congressional voting: at the aggregate level, midterm seat gains and losses are strongly correlated with macroeconomic indicators (e.g. Kramer 1973), yet voters seldom cite economic concerns when explaining why they voted (or failed to vote) for a particular candidate. This seeming paradox resulted in Jacobson and Kernell's seminal theory of "strategy and choice in congressional elections" (Jacobson & Kernell 1983). The same sort of paradox is likely to emerge when comparing individual level and aggregate level presidential approval. Second, while the "miracle of aggregation" may be a way produce "rational" aggregate public opinion from unstable individual level responses (Page & Shapiro 1992), aggregating individual survey responses can obscure more than it reveals. Berinsky demonstrates that aggregation can result in bias, overrep-

resenting those individuals with more stable opinions (Berinsky 1997). Aggregate level approval results thus provide an obvious starting point for an individual level model of presidential approval, but only a starting point. And we must be sensitive to ways that the individual level opinion process may induce important departures from the aggregate level model.

I consider two departures here. First, drawing on the rich literature on presidential voting, I adapt the traditional three–pronged approach to presidential candidate assessment, most commonly referred to as the "Michigan" approach, to presidential approval . Thus, I incorporate aspects of policy performance, both retrospective and prospective; candidate characteristics, in this context personality and trait assessments of the president; and, not surprisingly, individual level partisanship, along with other demographic and attitudinal controls. Second, I consider individual level heterogeneity and uncertainty as an integral part of the opinion formation process.

I label these three components to the individual's assessments of the president's job performance policy, performance, and prototype. Two of the dimensions of evaluation — policy and performance – are policy oriented. The third is personality oriented. One dimension of evaluation, policy, is based on prospective forecasts of what the president might do in the future. The second — performance — draws upon restrospective evaluations of the administration's performance over the past two (or more) years. The third — prototype — compares actual character and trait impressions of a president to an ideal standard. Thus, policy and prototype and future and past are all in the model.

Policy is firmly rooted in Downs's (1957) conception of political choice. In the Downsian approach, voters base their choices on the relative expected utility gained from selecting a particular party or presidential candidate. Downs's approach has been criticized on many fronts, most importantly because in unamended form, it predicts that on one will turn out to vote. Amendments have substantially salvaged the theory (Hinich & Munger 1994, Aldrich 1993), but it is not clear that this concerns me here. I am only interested in *individual evaluations* of the president's performance, not whether performance is enough to motivate an individual to turn out and vote. There is no reason, then, not to take relatively unmodified the spatial approach to voting and apply it to presidential job evaluations. In addition, we know from empirical results that prospective policy evaluations matter in congressional vote choice (Lockerbie 1991), party identification (Lockerbie 1989), and individ-

ual level gubernatorial and presidential job approval (Mutz 1993, Mutz 1992). Finally, MacKuen, Erikson & Stimson (1992) argue that, in the aggregate, American voters are "bankers," in that they use prospective economic assessments when evaluating the performance of the president(but see Clarke & Stewart (1994) for a contrasting view).

For a single voter and a single policy proposer (the president), then, the relationship is relatively straightforward.[3] Let x_i be a vector of preferred policies by the i_{th} voter in some policy space Ω, ω_p be the president's proposals in that same policy space, and U_i be the individual's utility gained from particular public policies. Then:

$$U_i = f(x_i, \omega_p)$$

I assume that U_i is positively related to presidential job approval. I do not have observations on any of these measures. For surrogates, I assume that the individual's own placement on a series of policy items (e.g. how much should the government spend on services versus cut spending) corresponds to x_i, the *median* placement by the survey respondents corresponds to the president's true position on the same policy dimension, and that the functional relationship between these two is the simple absolute difference. Thus, practically speaking, I calculate a conventional policy distance measure as

$$Policy_i = |x_i - med(x_{president})|$$

and these distance measures are added to my approval equation.[4]

Performance may also trace its routes to Downs, in particular, the second part of his book, where he suggests that voters employ retrospective assessments of a party's performance as their best estimates of how the party may perform in the future. Retrospective performance assessments additionally perform well in individual level models of attitudes toward the president (Fiorina 1981). And as has been frequently demonstrated (e.g. Abramson, Aldrich & Rohde 1999, Alvarez & Nagler 1998, Kinder, Adams & Gronke 1989, Fiorina 1981), retrospective assessments of incumbent performance are central to an individual's choice among presidential contenders. Fi-

[3]For convenience, I have borrowed notation from Hinich & Munger (1994).

[4]Using the median sample placement recovers a significant proportion of the sample in the years I examine. The largest decline in valid responses occurs when respondents are asked to place candidates. Using a median placement items also averages out idiosyncratic and uninformed placements, as well as controlling for projection effects. Thanks are due to John Aldrich for pointing out this measure.

nally, as already noted, Diana Mutz's (1993, 1992) models of incumbent approval also included a retrospective component.

Ideally, I would prefer a measure of performance that represents the president's fulfillment of his promises. If a policy analyst asks "what are you going to do for me," than a performance evaluator wonders "what have you done for me lately?" Of course, this would require both some measure of what a president promised, what he did in office, and how the individual rates that performance. It is difficult to obtain this kind of domain specific measurements of performance, although Jackman (1999) makes a valiant effort. For the purposes of this paper, I will rely on that most central of retrospective evaluations, national economic performance. I hypothesize that positive assessments of the national economy, in general, and positive assessments of the president's handling of the economy, will be positively related to job approval.

Prototype is the third component of my evaluative model. If issue distances and retrospective economic performance represent the policy based components of presidential approval, drawing on the rational choice tradition, prototypes draw on the rich tradition of political person perception that emerges from social psychology. Kinder and Abelson apply scholarship on person perception to the study of politics by arguing that citizens have meta-theories (Kinder & Abelson 1981) or prototypes about what constitutes leadership. An ideal presidential prototype in particular consists of the features that citizens believe define an exemplary president (Kinder et al. 1980). Prototypes are evaluative rulers against which presidential candidates and presidents are measured. Prototypes include traits (personality characteristics ascribed to leaders), affective reactions (patterns of emotional responses elicited by leaders), behavioral expectations (understandings of what actions presidents take), and ideal types (beliefs about what the president should be and do). Rahn et al. (1990) applied these ideas to a specific task, the presidential vote.

Thus, the individual who is assessing the president according to the prototype standard asks: how does the president's leadership qualities match with my ideal expectations? Again, the actual operationalization is related, but is missing one key component, the ideal type. Without access to a specialized survey which not only asks the trait and affect battery, but also questions designed to evoke the "ideal" type (Rahn et al. 1990), I am forced to rely on the measures available in the National Election Study. I construct a simple additive scale of the "trait" and "affect" batteries

(described in more detail below), on the theory that president's who display positive personality traits and evoke positive emotional responses will enjoy higher levels of job approval.

Shaky Support? Heterogeneity and Approval

When we are examining individual attitudes, however, we have to be concerned with attitude stability as well as attitude level. We cannot assume, as in the aggregate, that idiosyncracies, accidents, and measurement error cancel each other out (see Berinsky (1997) for a nice discussion of the aggregate-individual link). It is unrealistic to assume that our survey measures reflect precisely the underlying attitude held by an individual. That has long been recognized. More recent developments in survey theory, however, go further. In the survey interview, as conceptualized by Feldman and Zaller (1992), a respondent draws upon a pool of considerations that are evoked by the stimulus (the question). Respondents apply some weighting to these considerations, produce an average, and provide a response. The mix of considerations will vary based on predispositions of the individual, individual exposure to political information, and the nature of the survey.[5]

This description of the survey interview has intuitive appeal. Yet the model has something of a mindless quality about it. Respondents are trapped by their own predispositions and the mix of elite debate. More recent applications by Alvarez and Brehm (1997, 1995) have added a more dynamic element to opinion formation. In their formulation, a respondent weighs various arguments, pro and anti, balances considerations, and explicitly wrestles with situations of uncertainty, ambivalence, and equivocation.[6]

In the realm of presidential approval, I believe that the salience or centrality of partisanship and party images is the key predisposition (thus mirroring Zaller (1992)) that leads to greater or lower levels of certainty in the approval response. Partisanship has long been recognized to play a central role in structuring individual attitudes. It is well established that partisanship responds, albeit slowly, to political experiences, but also shapes the way an individual views those experiences. Partisanship provides an inertial base to political attitudes, helping individuals organize, understand, and react to political information.

[5]Multiple applications of this model are presented in Zaller (1992).

[6]For other demonstrations of respondents wrestling with conflictual positions and uncertainty, see Kinder & Sanders (1996), Sniderman, Brody & Tetlock (1991) and the candidate placement results in Bartels (1986).

If partisanship stands at the center of political attitudes, then the presidency stands at the nexus of political experiences that individuals are exposed to and learn from. The president plays a role in children's political socialization. Satisfaction (and dissatisfaction) with presidential performance forms the centerpiece of Fiorina's (1981) reformulation of partisan change. For better or worse, the President is the most recognizable party leader for most Americans. He is where Americans project many of their complaints about the political system (Kinder & Fiske 19xx, Popkin 1994, Kramer 1973), and party realignments seem to turn in large part on presidential elections and presidential performance in office (Aldrich & Niemi 1990).

That party and president are intertwined is well established. It is the nature of their interaction that concerns me here. If partisanship forms a stable core to political attitudes, there is no reason it ought not operate the same way with regards to the central attitude object in American politics, the sitting President. Thus, strong partisans, who have well developed partisan schemas, and who will tend to read new political news in light of their prior beliefs, should have an easy time "averaging" their considerations about the President. Generally, they love him or they hate him, and the clear majority of their considerations are on one side of the ledger. With weaker partisan attachments, however, ancillary attitudes may be less firmly grounded. When weak partisans are asked to evaluate the president's performance, their responses will tend to be less certain, either because they are based on a mix of conflicting considerations (i.e. they are cross–pressured) or because the partisan coloration of that information is lacking.

At the same time, partisanship has direction as well as strength. We would not expect strong Democrats and strong Republicans to process information relevant to the evaluation of the same president in the same way. While aggregate results tell us, for example, that good economic conditions increase overall levels of presidential approval, the effects of favorable economic news should not be uniform across all individual respondents. Citizens of the President's party will, not surprisingly, give him more credit for the nation's prosperity than will citizens of the opposing party. Likewise, the good economic news will not create any internal conflicts for the President's co- partisans, but will subject members of the other party to cross- pressure in their evaluations of presidential performance. The bottom line, however, is that individuals with strong partisan attachments will tend to process political information through a well-developed partisan schema.

Their attitudes will be more certain and less likely to change over time.

This leads to a simple set of hypotheses about partisanship and presidential approval. Individuals with well developed partisan schema – as measured by the strength of their partisan attachments – should be more certain when asked to evaluate the president. Also, individuals whose partisan affiliation matches the President's – measured by partisan agreement[7] will be subjected to fewer cross-pressures and thus be more certain in their evaluations.

In addition, I test a complementary hypothesis, that is it not partisan strength per sé, but the salience of political parties that help structure individual attitudes. As Wattenberg (1996) has argued, it is not just the direction of partisan attachment that has changed in our political system over the past three decades, it is also the declining relevance of parties to the way that people think about politics and solving political problems. This leads to a second hypothesis. Individuals for whom parties are more salient — as measured by the total number of mentions that they make about political parties in the "likes and dislikes" items — should be more certain about their presidential job approval.

In the next section, I show how the idea of certainty can be captured via the variance portion of an heteroskedastic regression model.

Measuring Uncertainty via Variance

Most scholars focus resolutely on mean presidential approval, for good reasons. First, presidential approval is a proportion (e.g. "Clinton's approval rating stands at 55%"), and it is well known that the variance of a proportion is a simple mathematical transformation of the proportion ($var_p = \frac{p(1-p)}{n-1}$). Second, presidential approval is often available at the aggregate level only, through sources such as *The Gallup Monthly* or more recently on the World Wide Web. Even if there were a way to extract cross-sectional variation from these data, individual level scores are unavailable.[8] In this paper, I take a different approach. I turn to a four–point scale of presidential approval, which both contains more information than the traditional dichotomy, and can (with some trepidation) be

[7] This is simply the party ID scale, strong Democrat to strong Republican, interacted with the party of the president. Therefore, if the president is a Republican, then strong Republican is 1 and strong Democrat is zero; for Democratic presidents, the scale is reversed.

[8] There are multiple strategies for extracting variation from dichotomous scores. See Gronke (1996) for a discussion.

analyzed using a normal distribution, as well as with ordered probit.[9]

I assume that presidential approval is not really a four point scale, but rather a continuous distribution from which we force the respondent to give one of four responses, hoping that the response categories capture roughly the contours of the underlying concept. For some individuals – those who are quite uncertain about how they feel about the President – the underlying distribution will be very wide. Even though their true "mean" value may be "somewhat disapprove," the relatively flat shape of their distribution of approval (or the wide spread of their relevant considerations) means that they might err (deviate from their mean position), and tell us "somewhat approve" or "strongly approve." On the other hand, individuals who are very certain about the President will draw their response from a tight underlying distribution (or a narrow set of considerations), and the likelihood of a response error is consequently lower.

The innovation of Franklin (1991) and Alvarez & Brehm (1995) was to realize that the amount of individual certainty about a candidate's position (Franklin 1991) or the number of underlying considerations (Alvarez & Brehm 1995) is analogous to the variance portion of a regression. Assume for the moment that we have a well specified model of the mean for presidential approval. Under standard regression assumptions, the error variance for such a model should be homoskedastic. If it is not, then the estimates for the standard errors are inefficient. Standard solutions can be applied to these kinds of data (these are listed below). However, if our theory leads us to expect unequal variance among individuals, we can model that directly.

For ease of presentation, I shall only present the first of the two models that I consider, the heteroskedastic regression case. The heteroskedastic ordered probit case is significantly more complicated; the exposition can be found in Alvarez & Brehm (1998). The standard ordinary least squares regression:

$$Y_i = X_i\beta + \varepsilon_i' \tag{1}$$

is easily estimated, but my theory predicts that the residuals will display heteroskedastic. A set of exogenous indicators Z_i, which may or may not be part of the model of the mean, can be entered

[9] All estimations in this paper were replicated using STATA and LIMDEP. All heteroskedastic regression equations were estimated in both packages, with results that varied only in the fourth decimal point, at most. Thanks to John Brehm and Michael Alvarez for helping me with the ordered probit analyses.

into a model for the variance. In likelihood notation, I estimate this model:

$$logL\tilde{\beta}, \tilde{\sigma}^2|y = -\frac{1}{2}\sum_{i=1}^{N} ln(\tilde{\sigma})^2 - \frac{1}{2}\sum_{i=1}^{N}\frac{(y_i - x_i'\tilde{\beta})^2}{(\tilde{\sigma})^2} \tag{2}$$

$$logL\{\tilde{\beta}, \tilde{\alpha}|y\} = -\frac{1}{2}\sum_{t=1}^{T} ln(exp(z_t'\alpha)) - \frac{1}{2}\sum_{t=1}^{T}\frac{(y_t - x_t'\beta)^2}{(exp(z_t'\alpha))} \tag{3}$$

In Equation 2, Y_i, presidential approval, is measured as a four point scale, X_t is a matrix of independent variables, and β is a vector of parameters to be estimated. $Exp(z_i\alpha$, from Equation 3, is estimated along with the mean, in a maximum likelihood setup. I assume that errors are exponentially heteroskedastic (the particular specification of heteroskedasticity is not important, other possibilities include heteroskedastic with respect to the standard deviation or the variance of ε. The exponentiated and variance forms are preferred because they restrict the estimated variance to be positive.[10]

This approach has two great benefits. First, the log likelihood ratio provides a simple test of whether the variance model adds anything to the fit beyond the standard regression or ordered probit model.[11] Second, this approach requires the analyst to specify the nature and cause of uncertainty (the variance portion of the model). This is in contrast to the common solution for heteroskedasticity, robust regression, which, although improving the precision of our estimates, does little to help us understand the attitudinal underpinnings of variable responses. Finally, of course, this approach allows us to test specific hypotheses about the impact of individual, contextual, and historical influences on response stability.

[10]The standard form of heteroskedasticity that many are familiar with is the case in which the variance of the error term varies with respect to the values of one of the independent variables (Hanushek & Jackson (1977), p. 157–163; Greene (1993), Ch. 14).

$$h_i = (X_t'\beta)^2\alpha^2 \tag{4}$$

where α is a scalar parameter. Another commonly seen specification in the weighted least squares context (Judge, Griffiths, Hill, Lütkepohl & Lee 1985) is:

$$\hat{\beta} = (X'\Omega^{-1}X)^{-1}X'\Omega^{-1}y \tag{5}$$

where the analytic problem is specifying the contents of Ω in a feasible manner such that we can make inferences about β. In these cases, heteroskedasticity can be easily remedied, even if we are unable to specify the particular form, by dividing by the offending variable or by the square of the estimated variance from the first stage estimate (weighted least squares) (Judge et al. 1985). A more robust specification uses "White's" robust standard errors (Greene (1993); (Judge et al. 1985), p. 422–427). This produces more efficient estimates, but it does not allow us to test specific hypotheses about the underlying variance process.

[11]Users of Stata may know that the program does not provide a log–likelihood for a linear regression. Using the REGHV ADO program and specifying unit heteroskedasticity is identical to linear regression with homoskedastic errors. You can obtain the root log likelihood in this way.

Variable Descriptions

The analysis will proceed in three steps. First, I describe my model for the systematic component of presidential approval. The model incorporates the major theoretical components of presidential approval (policy, personality, and performance) outlined above. Second, I will show how the regressions estimated from these models display heteroskedasticity by all of the standard diagnostic tests. Finally, I will add partisan strength and partisanship as exogenous determinants of heteroskedasticity to the model specified above.

Variables in the Model of the Mean

- *Presidential Approval* is a four point scale, running from strongly disapprove to strongly approve.
- *Party ID* is the standard NES six point scale, coded in the -1 to 1 range, and in the direction of the president's party. Thus, a strong Democrat is coded 1.0 and a strong Republican is coded -1 when there is a Democratic president. Pure independents are always coded zero.
- *State of Economy* is a five point measure of national economic performance evaluation, running from "strongly approve" to "strongly disapprove". This has been recoded to the 0-1 range.
- *Distance measures* consist of four variables, the absolute value of the difference between the individual's position on three policy scales, *defense spending*, *government aid to minorities*, *government services vs. spending* and *ideology*, subtracted and the median sample placement of the president on these same scales. All measures were not available in all years. These variables range, in theory, from 0 (exact fit) to 7 (as distant as possible), but the actual range was much more constrained. See Table 5 in the Appendix.
- *Traits* is an additive scale of the presidential "trait" battery. Each of these items are four point measures asking the respondent "In your opinion does the phrase [Hard-Working] describe Reagan? 1) Extremely well; 2) Quite well; 3) Not too well; 4) Not well at all?" The number of traits varied from eight to four across the eight NES studies. I converted each variable into a 0-1 measure, where 1 = "extremely well," summed the responses, and divided by the number of items for each year. Therefore, a response of "1" means that a respondent in a particular year felt that the president displayed all positive traits "extremely well."
- *Affects* is an additive scale of the presidential "affects" battery. Each of these items are two point measures asking the respondent whether "Ronald Reagan has ever made you feel [Proud]?" I recoded all variables so that 1 equaled a more positive response (e.g. for "angry," 0 equaled "yes") summed the responses and divided by the number of items (4). Therefore, a response of "1" means that a respondent in a particular year felt that the president evoked all possible positive emotional responses.
- *Political Interest* is a five point scale measuring the respondent's expressed interest in politics.

- *Demographics*: Race, sex, and region are dummy variables, with race interacted with a variable representing the president's party (-1=Democrat, 1=Republican), under the assumption that Blacks rate Democratic presidents more highly than Republican presidents. Education is coded as reported in the NES codebook.

The cross–sectional determinants of the level presidential approval which I draw upon here are quite straightforward. As noted above, I hypothesize that a respondent's level of approval of presidential performance is determined by four general effects: policy proximity, retrospective evaluations of economic performance, personality assessments, and partisan and other background characteristics (primarily demographics). I will only briefly review my main hypotheses; these have been explicated in more detail above. Ideological (liberal-conservative) and policy proximity is theorized to have a linear influence on approval. The farther away a respondent places themselves from the position of the president, the less likely they are to approve of presidential performance. I expect that strong partisans of the president's party, all else being held equal, will be more likely to approve of his performance in office. Retrospective economic assessments should be positively correlated with presidential approval. Finally, positive personality assessments will lead to higher levels of approval. The rest of the model is made up of a basic set of demographic indicators, gender, race, region, and income. I have no *a priori* expectations about the direction of these effects, other than my belief that Blacks will rate Republican presidents (1982 – 1992) and Democratic presidents (1980, 1994, 1996) higher than Whites.

In the model for the variance, I used a different set of indicators. These were variables that I believed most reasonably reflected my theoretical expectations about when respondents would be more or less confident in their evaluations of the president's performance. The variables in this portion of the model were all coded such that I expect a *negative* relationship between the

variable and the variance. It is important to note what a negative coefficient means in this context: a higher score on the variable in question, say chronic political information, is associated with *lower* variance and thus *higher* levels of certainty. The variables in this portion of the model are:

Variables in the Model of the Variance

- *Chronic Political Information* is an additive scale made up of self expressed interest in politics, interest in the campaign, education, number of days reported watching television news, and number of days reported reading a daily newspaper. Not all variables were available for all years. Exploratory factor analysis was used to establish weights for the set of variables for each year, and the SCORE procedure in Stata was used to create the scales.
- *DemPID and RepPID* is a strength of partisanship measure, split by party. For example, Democrats and pure Independents score 0 for Reppid, Republican leaners score 1, weak Republicans score 2, and strong Republicans score 3. The DemPID measure is the Democratic analogue (e.g. all Republicans and pure Independents score 0, etc.). This measure was employed because it became evident that a combined measure, the conventional strength of partisanship scale, disguised important differences by presidency. These differences will become clear in the results.
- *EconFold* is the five point measure of national economic performance evaluation, folded about its midpoint. Thus "strongly (dis)approve" scores 2, "weakly (dis)approve" scores 1, and "neither approve nor disapprove" scores 0. This measure is intended to capture the intensity of economic evaluations.
- *CarePrez*: is a dichotomous measure of the respondent's interest or concern over who would win the presidential election.

Results

Evidence for Heteroskedasticity?

In the first stage of the analysis, I tested for the presence of heteroskedasticity in each year. For OLS, the tests is termed the Cook–Weisberg test. You can conduct the test manually by running a regression then regressing the squared residuals on a set of covariates (in my case, chronic political information, strength of economic opinions, and democratic and republican partisan strength). The Cook–Weisberg statistic provides a simple test of the primary hypotheses. These results are reported in the first two columns of Table 1. In the third and fourth columns of the table, I present

Table 1: Heteroskedasticity Tests

	Heteroskedastic Regression Cook-Weisberg Test		**Ordered Probit** Lagrange Multiplier Test	
Year	**χ^2(4 d.f.)**	**Prob $>\chi^2$**	**LM Statistic**	**Prob>LM**
1980	25.50	0	12.51	.005
1982	21.97	0	5.32	.10
1984	54.51	0	13.45	.001
1986	18.14	.001	8.45	.03
1988	25.73	0	7.75	.05
1990	25.54	0	2.39	<.10
1992	16.04	.003	20.01	.001
1994	5.68	.2244	4.89	<.10
1996	36.01	0	2.76	<.10
pooled	96.78	0		

The Cook–Weisberg tests were estimated in Stata and Limdep, run with and without covariates (see text for details). The reported figures are for the tests with covariates. The Lagrange multiplier tests were estimated in Limdep, the probabilities were not calculated exactly, but are just estimates.

an analogous test statistic for ordered probit, the Lagrange multiplier. The calculation of this test statistic is relatively easy in Limdep, but the mathematics are more complex. I refer the interested reader to Greene (1993, Ch. 22) for a clear exposition.

Based on the linear regression results, there is strong, consistent evidence of heteroskedasticity with respect to my set of covariates in each year except 1994. The test statistic far surpasses conventional statistical significance levels. The ordered probit results, on the other hand, are far more mixed. Even using a quite generous statistical significance level of .10, there is no discernible evidence of heteroskedasticity in three of the years (1990, 1994, and 1996), contradicting the OLS results. There are some explanations for these discrepancies. First, presidential approval is a categorical variable, so ordered probit is the more appropriate specification. It may be that forcing a linear regression line through what is really four clusters of points may be inducing heteroskedasticity, thus stacking the deck in favor of my hypothesis. It is encouraging, however, that the OLS

and ordered probit tests for heteroskedasticity agree at least for six of the nine elections. Second, it is possible that a more discerning test statistic, such as the Wald test, might reveal a favorable result. In the end, because of the recency of the development of a heteroskedastic ordered probit estimator, as well as the obviously complex likelihood function that is being estimated, I proceed with the analysis, albeit with some caution when using ordered probit.[12]

I tested other potential predictors for heteroskedasticity, including strength of partisanship (untransformed into separate party measures), race (under the assumption that whites, as a group, would be more variant in evaluations of at least two political figures, Reagan and Clinton, than Blacks), and salience of parties (respondents who have more to say, positive or negative, about political parties will be less variant in their evaluation of the primary leader of the party). The only variable which was regularly associated with lower variance was the party salience variables. I chose to report the party strength measures instead.

The evidence thus far supports my hypothesis that there is evidence of heteroskedasticity in presidential approval over most if not all of these years. My hypothesis is that partisan ties, chronic political information, and strongly held economic attitudes will provide attitudinal anchors for individuals, increasing the certainty with which they evaluate the president, and thereby decreasing the variance. I expect that those respondents who are less well informed,with weaker partisan attachments, and who have more moderate opinions on economic performance will have less well rooted attitudes about the president. The variation among these respondents should be higher. In

[12]Alvarez & Brehm (1998) provide the first, and only, published use of heteroskedastic ordered probit. A Stata maximum likelihood routine, generously provided by John Brehm, was very slow to converge for my models, if it converged at all. Limdep often did not converge cleanly, but output can be obtained from the last iteration once certain tolerances are reset. The heteroskedastic regression models, in contrast, all converged very rapidly. For this reason, in the results that follow, I have reported the heteroskedastic ordered probit results only for the pooled model. The full heteroskedastic results are available from the author.

the next section, I test whether these conclusions are borne out in a more fully specified model.

Full Regression Results: The Model of the Mean

In Tables 2 and 3, I report the results from a heteroskedastic regression model which includes a model for the variance as specified in equation 2. I begin with the estimates for the model of the mean. Rather than focus on particular years, given the number of estimates, I will summarize across the years. In general, the results for the model of the mean are uniformly positive. In most cases, the coefficients are correctly signed and are statistically significant, and in many cases are strongly statistically significant. Deviations from my expectations are mostly understandable after reflection.

Performance, or retrospective economic assessments, is strongly related to presidential approval, but only in the 1980, 1984, 1992, and 1996 presidential elections, and most strongly in the two Reagan elections. A move from the most pessimistic to the most optimistic forecast of economic performance over the next 12 months is associated with between a third to over a half a point movement on the approval scale, *ceteris paribus*.

It is interesting to find that positive national economic performance does not seem to benefit the president in midterm election years. We know that good economic performance aids the president's party in Congress, and that macroeconomic performance is part of any model of aggregate presidential approval. Perhaps the link between the presidency and economic growth and decline is not salient, except when made so by campaigners during the presidential campaign. More likely, as we shall soon see, other aspects of presidential evaluation, specifically personality assessments, are overwhelmingly important explanatory variables. It could be that positive economic times

Table 2: Presidential Approval: Heteroskedastic Regression Model (1980–1988)

	1980	1982	1984	1986	1988
Variable	**Coeff** (SE)	**Coeff** (SE)	**Coeff** (SE)	**Coeff** (SE)	**Coeff** (SE)
Party ID	**.208** (.035)	**.414** (.039)	**.177** (.026)	**.124** (.042)	**.209** (.031)
Nat'l Economics	**.632** (.109)	**.436** (.086)	.055 (.065)	.082 (.103)	-.013 (.082)
Distance: Defense	.036 (.021)	.018 (.019)	**-.918** (.057)	**-.939** (.083)	**-1.406** (.065)
Distance: Gov't Aid	-.009 (.019)	.018 (.025)	**-.032** (.013)	-.036 (.019)	**-.039** (.016)
Distance: Ideology	**.036** (.011)	-.039 (.023)	**-.051** (.016)	-.025 (.024)	.000 (.019)
Personality Traits	**1.444** (.137)	-.030 (.018)	-.009 (.014)	-.021 (.019)	-.019 (.020)
Affective Reactions	**1.069** (.087)	**1.358** (.139)	.016 (.010)	**1.229** (.171)	**-.030** (.014)
Race (Black)	**.313** (.080)	**1.243** (.099)	**1.276** (.100)	**.893** (.118)	**1.043** (.123)
Education	-.029 (.022)	-.153 (.083)	**.880** (.066)	-.158 (.084)	**.578** (.080)
Gender (female)	**.130** (.042)	**.053** (.022)	**-.197** (.055)	.021 (.025)	**-.194** (.063)
Region (south)	.005 (.048)	-.022 (.044)	.001 (.014)	.025 (.047)	**-.051** (.017)
Constant	**-.414** (.112)	.009 (.049)	-.004 (.027)	.058 (.053)	**-.073** (.034)
Variance Model					
Chronic Information	**-.122** (.056)	**-.200** (.056)	**-.185** (.047)	**-.165** (.065)	.011 (.050)
Economics (folded)	-.038 (.063)	.013 (.059)	**-.146** (.056)	-.072 (.072)	-.047 (.056)
Democratic PID	.000 (.046)	.035 (.048)	.048 (.043)	.031 (.056)	.031 (.045)
Republican PID	**-.194** (.053)	**-.125** (.055)	**-.193** (.045)	**-.178** (.060)	**-.161** (.047)
Constant	**-.477** (.122)	**-.588** (.123)	**-1.006** (.096)	**-.613** (.118)	**-.637** (.097)
N of obs	1132	1134	1509	820	1371
Model χ^2	909.967	1176.077	2334.157	876.083	1788.245
P$>\chi^2$	.000	.000	.000	.000	.000
Pseudo R^2	.271	.3203	.4997	.3428	.4088
VWLS R^2	.5521	.6584	.7904	.6543	.7307

All estimates were produced using the REGHV procedure in Stata, and replicated in Limdep 7.0. Coefficients in boldface are more than two times their standard error.

Table 3: Presidential Approval: Heteroskedastic Regression Model (1990–1996)

	1990	1992	1994	1996
Variable	**Coeff** (SE)	**Coeff** (SE)	**Coeff** (SE)	**Coeff** (SE)
Party ID	**.298** (.032)	**.214** (.029)	**.177** (.030)	**.230** (.031)
Nat'l Economics	.068 (.104)	**.310** (.076)	-.052 (.075)	.124 (.077)
Distance: Defense	**-1.411** (.061)	**-1.102** (.062)	**-1.092** (.063)	**-.874** (.063)
Distance: Gov't Aid	**-.115** (.019)	**-.037** (.016)	.010 (.016)	.002 (.018)
Distance: Ideology	-.008 (.023)	.021 (.017)	-.023 (.016)	-.017 (.015)
Personality Traits	-.019 (.023)	-.007 (.012)	**.011** (.009)	**-.065** (.017)
Affective Reactions	-.021 (.014)	**1.479** (.107)	**1.213** (.115)	-.015 (.008)
Race (Black)	**-.150** (.068)	**.699** (.068)	**.787** (.075)	**1.371** (.118)
Education	.010 (.021)	-.094 (.051)	**.119** (.055)	**.739** (.071)
Gender (female)	**-.126** (.040)	**-.031** (.015)	-.026 (.018)	.044 (.048)
Region (south)	-.042 (.047)	**.072** (.031)	-.032 (.034)	**-.073** (.028)
Constant	**1.553** (.093)	.050 (.034)	.002 (.036)	.027 (.031)
Variance Model				
Chronic Information	-.029 (.044)	-.088 (.045)	.036 (.047)	-.064 (.047)
Economics (folded)	**.124** (.049)	.019 (.045)	-.025 (.060)	-.013 (.059)
Democratic PID	.052 (.039)	-.058 (.038)	-.077 (.045)	**-.232** (.045)
Republican PID	**-.127** (.045)	-.084 (.042)	**-.121** (.045)	-.022 (.048)
Constant	**-.504** (.098)	**-.641** (.106)	**-.787** (.097)	**-.852** (.098)
N of obs	1642	1762	1365	1364
Model χ^2	941.476	1929.980	1637.289	1838.767
P$>\chi^2$	.000	.000	.000	.000
Pseudo R^2	.1906	.3626	.3937	.4433
VWLS R^2	.4306	.6788	.7029	.7354

All estimates were produced using the REGHV procedure in Stata, and replicated in Limdep 7.0. Coefficients in boldface are more than two times their standard error.

simply washes over into character assessments. Yet why would this occur only in the off year elections? Furthermore, the weak relationship during 1984, an election most often appealed to as demonstrating the power of good economic performance for the incumbent (Abramson, Aldrich & Rohde 1999, Kinder, Adams & Gronke 1989), is also an anomaly. (In fact, the importance of national economic assessment basically disappears after 1984, only to reemerge in Clinton's first election of 1992.) Still, at least in four of the presidential years, positive economic assessments provide a significant boost to job approval.

My *policy* measures perform far less admirably. Twenty of the twenty–seven coefficients are correctly signed (negative) and eleven pass conventional (.05) statistical significance levels. The most notable finding, however, concerns defense spending. Starting in 1984, and continuing throughout the rest of the time period, respondents who saw themselves as closer to the president on the defense spending dimension were *far* more likely to give him a positive approval rating. The defense policy distance measure ranges, roughly, from zero to 4.5 during this period (see Table 5 in the Appendix). Using 1984 as an example, this implies that a respondent who viewed himself close to the president on defense spending rated him 4.2 (-.918 * 4.6, the maximum distance for that year) points higher than a respondent who saw the president as most distant.[13] Still, the findings regarding defense spending support much of what we know about the presidency generally, and what we know about presidential politics during and after the 1984 election.

The seminal "two presidencies" thesis (Wildavsky 1975) has structured much of our theorizing about the presidency. The defense spending has much to recommend it as evidence of the two

[13]This prediction is out of the valid range of the variable, one of the reasons why ordered probit is a more appropriate specification.

presidencies thesis. Defense policy is viewed as a presidential perogative, closely tied to his role as commander in chief and leader in foreign affairs. So it is encouraging that, of all the policy dimensions upon which individuals might evaluate presidential performance, defense policy ranks number one. The timing of the change, at least in the data that I am using, is also reasonable. The 1984 election was fought, in part, on claims of a reinvigorated American international posture. These results indicate that defense spending has remained an important part of presidential politics. Reagan really did change, in a fundamental way, the terrain of presidential politics.

Furthermore, his predecessors benefit in ways that are not immediately evident until you examine the means as well as the ranges of the defense distance item. Reagan received very "high" median scores on this item (peaking at 6.02 in 1986), meaning that 50% of the sample placed Reagan *higher* than 6 on a seven point scale! The practical impact of this on Reagan was a very large drag on his approval rating among respondents who were liberal on defense spending. The Reagan "penalty" is transformed into a Bush and Clinton reward. Their more moderate stances on defense spending (at least as perceived by the NES sample) translates into generally lower distance scores, on average, and consequently fewer respondents who are "far away" on defense, the single most important policy dimension.

Finally, the results for *prototype* also present a mixed set of results. These measures were developed in the late 1970s, and seemed to work best when applied to Ronald Reagan. Insofar as personality traits help us understand individual level presidential approval, the answer would have to be not very much. In 1980, trait evaluations were very important in determining Carter's level of approval; a move from the least positive to the most positive trait profile is associated with a 1.4 unit shift in approval. The results for the other years are almost all insignificant, and incorrectly

signed in 1994 and 1996. This is particularly surprising for the 1982 through 1988 surveys, a period Ronald Reagan was riding high, a period, according to the reexamination of the social cognitive model of voting in Aldrich, Gronke & Grynaviski (1999), when these measures were powerful predictors of vote choice. If, however, the particular causal ordering posited by the social cognitive model is accurate, then these results should have been expected. In the social cognitive model, performance evaluations occur quite early in the candidate evaluation process, whereas affective reactions occur much later, most proximate to the vote (Aldrich, Gronke & Grynaviski 1999, Rahn et al. 1990). The findings here reinforce that claim: personality assessments show a small and inconsistent relationship to the most direct assessment of the president's performance, presidential approval.

There are, however, still some problems with this argument. Aldrich, Gronke & Grynaviski (1999) argue that a subset of the trait battery comprises a "performance" dimension, a particular aspect of the presidential prototype. If this is true, then it would be surprising if this were not closely related to the approval rating. Furthermore, affective reactions (positive emotions that are elicited by the president) show a far more consistent and strongly positive relationship to approval. This is ironic, and bears further scrutiny. Trait assessments, features of a leader's personality, show a weak relationship to performance assessments, while emotional reactions show a mostly strong positive relationship.

I will briefly review the rest of the results. The powerful impact of party identification comes as no surprise; the estimates imply that individuals who more closely identify with the party of the president are more likely to rate his performance positive, *ceteris paribus*. The substantive impact, however, is relatively low (party is coded from -1 to 1), ranging from a low of .248 (1986) to .828

(1982), on a four point dependent variable. Race also shows a noticeable effect.[14]

In my final analysis, Table 4, I report the results from pooled models. There are four different specifications in this table. I report heteroskedastic regression results for "all years" and for "presidential election years."[15] Note that some important predictors, such as "How well is the president managing the economy," is only asked in presidential election years. Second, I report a parallel set of analyses using heteroskedastic ordered probit. The reader will remember in an earlier portion of this paper where I indicated that the ordered probit analyses did not converge on a consistent basis during analysis of the individual years. However, this problem was not evident in the pooled analyses, undoubtedly due to the additional analytic power lent by the large number of cases. I report these results mainly to reassure readers that the linear regression estimates are not wildly off the mark, either in identifying levels of statistical or substantive significance. Finally, I have chosen not to code statistical significance levels in this table because, with nearly 10,000 cases, statistical significance is easily obtained. Instead, the few italicized coefficients are the only estimates that fail to exceed *three times* their standard error.

When we pool the data across the years, we of course lose the chance to interpret (and overinterpret?) patterns of coefficients across the surveys. On the other hand, the pooled results are far cleaner (lower standard errors, more explicable patterns of results) and are uniformly favorable to my theory. A number of important findings are contained in this table. First, I am very encouraged that the set of substantively and statistically significant coefficients are almost identical across the four different specifications.[16] Second, I note that all models provide good fits to the data. While

[14]The estimates here are somewhat confusing because, in anticipation of a pooled analysis, race is interacted with the party of the president, so that the expected coefficient is positive for Democratic presidents and negative for Republican presidents. This needs to be corrected in a subsequent version.

[15]There are no results available for 1990 due to missing data.

Table 4: Pooled Results, Heteroskedastic Regression and Ordered Probit

	Linear Regression				**Ordered Probit**			
	All Years		**Pres Election Years**		**All Years**		**Pres Election Years**	
Party ID	.337	.012	.332	.014	.619	.038	.431	.043
Nat'l Economics	.471	.031	.552	.038	1.105	.087	.382	.096
President Mgmt Econ			1.088	.026			2.057	.129
Distance: Defense			-.370	.008	*-.005*	.009	*-.020*	.012
Distance: Ideology	*-.002*	.004	*-.001*	.005			-.077	.019
Traits	1.792	.045	1.818	.055	3.842	.187	3.132	.215
Affects	1.068	.030	.996	.036	1.914	.101	1.327	.110
Race (Black)	-.069	.022	*-.073*	.026	.361	.048	.278	.059
Education	*-.013*	.007	-.034	.009	*-.041*	.016	-.093	.021
Gender (female)	*.006*	.013	*.024*	.016	*.020*	.029	*.042*	.037
Region (South)	*.036*	.015	.050	.018	*.090*	.032	.137	.040
1982	.183	.030			.381	.065		
1984	.307	.030	.282	.030	.651	.073	.603	.067
1986	.329	.033			.679	.071		
1988	.280	.029	.265	.029	.582	.064	.485	.038
1990								
1992	.097	.026	*.086*	.026	.199	.059	*.221*	.078
1994	.248	.029			.395	.064		
1996	.433	.030	.374	.031	.809	.074	.901	.093
Constant	-.516	.037	.403	.045	-2.794	.146	-1.393	.151
Variance Equation								
Chronic Pol Info	-.113	.017	-.079	.022	-.046	.012	-.015	.015
Opposition Party ID	-.034	.016	-.047	.020	-.030	.011	-.041	.014
Incumbent Party ID	-.127	.016	-.138	.020	-.020	.011	-.019	.016
Econ. Folded	.009	.019	-.003	.022	.227	.051	.086	.067
Constant	-.591	.035	-.505	.046				
Threshold 1					.867	.017	1.129	.073
Threshold 2					2.314	.024	3.069	.180
Num of obs	10694		7241		11709		6006	
χ^2(d.f. 20)	11159		7876		11311		7186	
Prob$>\chi^2$	.000		.000		.000		.000	
Pseudo R2	.332		.347					
VWLS R2	.657		.675					
Perc Pred					61%		67%	

All heteroskedastic regression results were produced in Stata using the REGHV procedure and replicated in Limdep 7.0. All heteroskedastic ordered probit results were produced in Limdep. Coefficients that are italicized are *not* more than three times their standard error. All other coefficients are strongly statistically significant.

high chi-squares are uninteresting, given the case count, I am able to predict an impressive amount of variance in the regression models, and predict correctly over 60% of the cases using ordered probit.

These results primarily reinforce what I have already reported. The performance measure, national economic assessments, is unsurprisingly strong and positive. The addition of an item that asks specifically about the president's performance in managing the economy is, not surprisingly, even more strongly related to approval. In the perfect world, we would have access to similar performance–based measures on a wide variety of issues. These speak more directly to the theoretical claims spelled out in the introduction. The distance measures all have the correct sign, but fail to consistently pass conventional statistical significance levels. Finally, at least when pooled, the results for the personality measures are as predicted: a strong, positive relationship between traits, affects, and presidential approval. The size of the effects in the pooled model are far closer to what I anticipated, given the lasting strength of these measures as predictors of vote choice.

I presented a three–legged model of approval, where individuals rely on their expectations about presidential policies in the future, their retrospective evaluations of past policy performance, and their assessment of how well the president fits an "ideal type" personality profile. While individual years varied from expectations, sometimes in explicable and other times in inexplicable fashion, in general the model performs admirably. In the final section of results, I turn to the model for the variance.

[16]The race coefficient flips sign and significance, and must be examined more closely.

Uncertainty in Approval

In a standard regression, we predict a score for the "average" case with a given set of scores on the independent variables. We are also provided an average amount of "error", the standard error of the regression. However, as shown above, the ordinary least squares standard error is biased — among strong partisans, our predictions are actually better than the "average" error forecasts, and for weaker partisans, our predictions are actually poorer. The variance equation puts an estimate on the amount of difference.

The use of heteroskedastic regression reduces the range of predicted values ($\hat{Y}$) and lends precision to our estimates. In some years, it provides a significant difference in the accuracy of our forecasts. For example, in 1988, we cannot say with 95% confidence that a randomly selected individual will approve of the president's performance. Even if we forecast the expected approval score for a strong Republican in 1988, we cannot say with 95% confidence that the approval score is on the positive side of the ledger (holding all other variables at their mean). However, once we account for the lower variability of approval scores among strong partisans, we are able to forecast, with 95% confidence, that a strong Republican in 1988 would approve of Bush's performance. Of course, this increased accuracy comes with a price — among weaker partisans, we decrease the level of confidence we have in any particular forecast.

In the bottom panel of Table 3 and 4, I report the estimated coefficients from the variance equation. A quick overview shows that the estimates support my expectations in all regard, excepting economic attitudes. Individuals with higher levels of chronic political information and with stronger partisan affiliations display lower variance in presidential approval. If we are willing to

accept the "sampling" model of the survey response (Zaller 1992), the implication is that these respondents draw upon a more consistent set of considerations when asked to evaluate presidential performance.

The results from the separate estimations (Table 3) tell a somewhat different story than the one I just spun. In these models, it is strong *Republican* identifiers who are most certain in their levels of approval. The only year when this estimate fails to meet statistical significance levels is 1996 (a year, ironically, when one would expect that most Republicans were quite certain how they felt about Bill Clinton). Democratic identification, in contrast, is not even consistently negatively related to variance until 1992 (implying that, throughout the 1980s, stronger Democratic identifiers were more variant in their opinions on Reagan's and Bush's performance).

One possible reason for these results draws on the literature on realignment, or at least partisan disequilibrium during this period. During the 1980's, arguably starting in 1980, Democratic partisanship was in flux. In 1980, the *more* Democratic your affiliation, the *less* certain you were about Carter's performance. Democrats were very much at sea during the Reagan years, with partisanship providing little guidance to help them evaluate the President. By the close of the Reagan years, and certainly by the first two Clinton elections, party has returned to its expected, complementary role. Both strong Democrats and strong Republicans are more certain of their evaluations of the President.[17] These tale of realignment, while perhaps convincing, is tentative. It would be far better to have extended the comparisons backwards, into the Carter years, where I would expect to find a "normal" pattern of partisan evaluations, and forward into 1998, where again I would expect

[17] Aldrich and Niemi (199x, 1990) argue for a different timeline. The 1970s and 80s were periods of partisan stability. If, as Aldrich (1997) suggests, we are witnessing a critical era today, then I expect to again see a breakdown in symmetry.

a continuation of "normality."[18]

A second implication of the variance results concerns how we think about party identification. The specification of partisanship in Table 3 reflects a particular model of partisanship. The partisanship scale that has been reported in the NES since 1952 is unidimensional, running from "strong Democrat" through "Independent" to "strong Republican." It assumes that an individual placement on this scale reflects a policy or affectively based attachment to one of the two main political parties. By the late 1970s, however, it was clear that something was awry in the partisanship measure. The tides of partisan change, particularly increases in negative feelings toward both political parties, brought into serious question the unidimensional conceptualization of party. Some scholars suggested that partisan attachments were multidimensional. The affective and and policy/membership components were distinct. "Democrat," "Republican," and "Independent" are separate attitude objects, and individuals can have a mix of reactions to the parties (e.g. positive toward both, neutral or negative toward both, etc., as well a positive/negative orientation implicitly assumed by the conventional coding)(Wattenberg 1996, Weisberg 1980).

The results show that assuming linear effects across a party "dimension" that runs from strong Democrat to strong Republican is not just incorrect, it is deceptive. For the years 1980, 1984, 1986, and 1990, the estimated effect of partisan strength on uncertainty is almost completely driven by Republicanism. 1986 is particularly striking: both strength and direction of partisanship are strongly related to certainty in approval, yet the true effect, when separated by party, is completely one of Republican identification. Therefore, partisanship, at least as it functions as a guide to attitude formation in this context, does not operate in a unidimensional fashion. Instead, as Fiorina

[18]I have already begun analysis of the 1998 NES data.

suggested 15 years ago, there is an interaction between the party loyalty, attitude formation, and the political context. And for presidential approval, the obviously central feature of the context is the nature of presidential leadership.

Finally, as before, the pooled models (Table 4 provide a cleaner pattern of results, but in this case, perhaps clarity is deceptive. The negative coefficients are "Opposition Party ID" and "Incumbent Party ID" are obviously being driven by Republican identification; the previous table makes that clear. So while these findings could be read as a strong endorsement of my model of uncertainty, I would like to leave them aside for now.

Conclusion

This paper confirms long held notions about the role of partisanship. The decades long debate over partisanship turned in part on the centrality of partisan identification to an individual's belief system. In this paper, I address the implications of partisan centrality for mass opinion about other political objects. Holding all else that we know about a group of individuals constant, how do strong and weak partisans differ? At least as a group, strong partisans are more certain in their opinions about presidential performance. At the same time, partisanship as an issue position functions much as we might expect other issue positions to function (and as economic evaluations function in this model). Partisan *agreement*, along with a positive evaluation of the economy, are also associated with less variant opinions. I started this paper by speculating on the causes of presidential approval, and end it with a comfortable finding: strong partisans and informed citizens lend stability to presidential approval.

Partisan attachments have often been conceptualized as a screen on information reception and

retrieval (Zaller 1992). 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. While I do not have data that would directly address this question, the indirect evidence is supportive. Strong partisans of both coloration are less variant in their assessments of presidential performance relative to weak partisans and independent affiliators. Strong partisans form the bulwark of a president's support (and opposition), and our regression models ought to take this increased confidence into account. Similarly, president's are not only less likely to gain approval from weaker partisans, but they ought to be less confident in any particular expectation, even given other events that may play in their favor (e.g. good economic news and beneficial issue positions).

Partisanship is multidimensional, acting more as an issue placements than as a surrogate for partisan information processing and retrieval. Those who place themselves closer to the president's party have an easier time evaluating his performance. One might surmise that partisan agreement and positive economic assessments makes it much easier for a respondent to calculate an "average" approval rating out of the store of considerations that might be brought to mind (Zaller 1992) or that they are less likely to encounter uncertainty (e.g. I might like presidential performance in domestic areas, but dislike the president's foreign policy or party, as Wildavsky argued decades ago in the "Two Presidencies.") In either case, those with policy and party positions favorable to the president would display lower variability in their responses.

The models and results presented here dovetail nicely with some scholarly claims about partisan change during this period, and demonstrate that modeling variance is more than just a methodological exercise that tightens regression estimates. It can provide us with new insights into the process of opinion formation and change.

This paper does not speak to the impact of declining partisan affiliations on presidential approval. However, they provide important circumstantial evidence that a public which has a relatively higher proportion of weak partisan identifiers will be more volatile. In every year but one, the stronger your attachment, the more precise my statistical forecast of approval. The opposite is also true – the weaker your affiliation, the less confident I am in any forecast. Generalized over time, this implies that presidents will have a reduced ability to predict approval for any particular subgroup, and thus be less able to expect popular support for their policies from groups, as the population becomes less partisan. One might also speculate that the relationship between attitudes and stability help politicians choose a course of action during periods of rapid partisan change. Aldrich (1995), see also Aldrich & Niemi (199x)) has described realignment as a period of "disequilibrium," implying increased uncertainty among political leaders. However, my results show ways that politicians may benefit during periods of partisan flux. As the proportion of strong identifiers increases, politicians not only can predict changes in support, but can be more confident in their predictions, both for supporters and the opposition.

The implications of these findings for the study of presidential approval, however, might not be so comforting. The last forty years have seen dramatic shifts in the distribution of partisan loyalties in the United States. Over the same time period, presidential approval has become more volatile (Brehm & Gronke 1999). The confluence of these two trends may not be coincidental. If the long–term, stable components of presidential approval, such as party affiliation and ideological beliefs, have declined in the postwar era, the short term forces will drive approval, resulting in a more volatile public opinion. The consequences for presidential governance may be severe, as a president who enjoys a groundswell of support after initial election or a positive series of events, is

unable to capitalize on that support because the public is so divided, and then watches that support just as rapidly ebb away.

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Appendix: Diagnosing Heteroskedasticity

For readers who are unfamiliar with tests for heteroskedasticity, I will briefly outline the most common diagnostics. Familiarity with these should make the analysis in this paper easier to follow. Tests for heteroskedasticity are readily available in the regression procedures for all popular statistical packages. I elaborate on only two here, because they appear in the tables. A standard technique is to save the residuals from the regression and regress these against the predicted values, $ee' = d(\hat{Y})$. No particular form is imposed on d, though the most popular variants are heteroskedasticity with regards to the standard deviation, variance, and exponent ("multiplicative heteroskedasticity"). The mean regression sum of squares is distributed as χ^2 with one degree of freedom, where H_0 posits no relationship. A rejection of the null in this situation points to the benefits of robust standard errors, but does not provide any guidance if a model of the variance is desired.

A more robust and flexible test is Breusch-Pagan. Here, in conventional form, the squared residuals are regressed against all of the independent variables, assuming for the moment that any one could be the cause of heteroskedasticity. From (Judge et al. 1985), p. 446, the LaGrange multiplier statistic for the null, $\alpha^* = 0$ (where α is as defined above), is given by:

$$\eta = \frac{q'Z(Z'Z)^{-1}Z'q}{2\hat{\sigma}^4} \tag{6}$$

The denominator for this calculation is obtained by squaring the standard error of the regression from the first stage equation, and the numerator can be estimated by the regression sum of squares from the regression $ee' = (X\beta)$. (Judge et al. 1985) also show that an even simpler estimate is the squared coefficient of determination (R^2) from the regression $ee' = (X\beta)$. The reason to apply either of these estimators is that they allow the analyst to test sub-hypotheses about heteroskedasticity. For example, if one supposes that there is a subset of variables, Z^* that are causing heteroskedasticity, then three η's can be calculated, one for the full set of Z (to generally diagnose heteroskedasticity), one for the subset Z^* (to identify Z^* as the cause), and one for the remaining exogenous variables Z'. If η^* is significant and η' is not, this gives at least some verification to the hypothesized causes of heteroskedasticity.

Appendix: Ranges of the Policy Distance Variables

Table 5: Distance Measures: Empirical Ranges, 1980–1996

Variables	**1980**		**1982**		**1984**		**1986**		**1988**	
	min	max	min	max	min	max	min	max	min	max
Defense $	.271	3.271	.123	4.877	.331	4.669	.058	5.058	.449	4.551
Ideology	.261	5.261	.306	4.306	.036	4.036	.049	4.049	.193	4.193
Gov't Aid	.102	3.898	.126	3.874	.435	3.565	1	7	.177	3.823
Gov't Services	—	—	.268	4.268	.105	4.105	.182	3.818	.478	3.522
	1990		**1992**		**1994**		**1996**			
	min	max	min	max	min	max	min	max		
Defense $	.135	4.135	.204	3.796	1	7	.054	3.054		
Ideology	.148	4.148	.047	4.047	.008	6.008	.152	5.848		
Gov't Aid	.496	3.496	1	7	.348	3.652	.316	3.684		
Gov't Services	.397	3.397	.314	3.686	.124	3.876	.089	3.911		