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The Aggregated Consequences of Motivated Reasoning and the Dynamics of Partisan Presidential Approval

Matthew J. Lebo
Stony Brook University

Daniel Cassino
Fairleigh Dickinson University

Research in political psychology has shown the importance of motivated reasoning as a prism through which individuals view the political world. From this we develop the hypothesis that, with strong positive beliefs firmly in place, partisan groups ignore or discount information about the performance of political figures they like. We then speculate about how this tendency should manifest itself in presidential approval ratings and test our hypotheses using monthly presidential approval data disaggregated by party identification for the 1955–2005 period. Our results show that partisan groups generally do reward and punish presidents for economic performance, but only those presidents of the opposite party. We also develop a model of presidential approval for self-identified Independents and, finally, a model of the partisan gap, *the difference in approval between Democrat and Republican identifiers.*

KEY WORDS: presidential approval, motivated reasoning, partisan groups

The polarization of the American electorate has become an important aspect of American politics and a staple of political commentary. The gulf between how Democratic and Republican partisans interpret political events, understand the state of the economy, and evaluate the president has perhaps never been wider. Nevertheless, how the dynamics of presidential approval differ between partisan groups remains largely unanswered in extant research.

The vast literature on the determinants of presidential approval has greatly benefited from attempts to explain differences between various groups within the

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electorate. The study of aggregate presidential approval is limited in its ability to tell us whom within the electorate responds most to new political and economic events. Rather than assume homogeneity in the political economy of approval, scholars have looked at differences between genders (Box-Steffensmeier, De Boef, & Lin 2004; Clarke, Stewart, Ault, & Elliott 2004; Winder 1992), occupation classes (Hibbs 1982a), and political information (Krause & Granato 1998). From these studies a simple fact emerges: economics and events affect different types of people in different ways. For this paper, the important distinction is that of party identification.[1]

Self-identified Democrats and Republicans look upon the president from very different viewpoints. Naturally, each group begins with either a basic empathy or aversion towards a president depending upon the president's party. Beyond these initial attitudes, there is also the likelihood that the two groups of partisans will disagree about what actions the government should take and what public goods it should deliver. Additionally, new information may affect each differently and be integrated dissimilarly into their opinions about the president.

In this paper, we investigate differences in the dynamics of presidential approval between self-identified Democrats, Republicans, and Independents. We look not only at differences in their evaluations of presidents but also at differences in the effects of objective economic indicators and political events on presidential approval. In particular, we pay attention to the asymmetries in the reactions of in-group and out-group partisans. Using theories developed from the motivated reasoning literature of political psychology as well as previous work in economic voting, we develop hypotheses and test them using fifty years of monthly approval data aggregated by partisan group. We find strong evidence that changes in economic performance are applied dissimilarly by partisan groups to their evaluations of the president such that partisans of the president's party are mostly unmoved by measures of inflation and unemployment. At the same time, those partisans not of the president's party do adjust their evaluations of the president in light of changes in these objective economic indicators. This is true during both Democratic and Republican administrations, creating what we might call *symmetric asymmetry*. In short, the blind loyalty of the president's partisans seems more resistant to change than is the blind hostility of his opponents. These patterns offer a means of explaining the dynamics of the partisan gap, the difference in the level of approval between Democrats and Republicans—a gap that under the presidencies of Bill Clinton and George W. Bush has reached new heights of polarization for the American electorate.

[1] Party identification has, of course, become an essential control variable in cross-sectional and pooled-cross sectional studies of government and presidential approval (see, for example, Fiorina 1981; Kinder & Kiewiet 1981). Hibbs (1987) is the only study that disaggregates approval by partisan group but he uses quarterly data ending in 1984.

Republicans vs. Democrats, In-Party vs. Out-Party, and Presidential Approval

Understanding how partisan groups evaluate the president asymmetrically involves several layers of explanation that we discuss in this section. Certainly, we expect that party identification creates an initial affect towards the president. Additionally, people who define themselves as Democrats and Republicans are likely to have different expectations for the president (Kiewiet 1983). Beyond these starting points, however, explanations become more complicated. Following a brief discussion of partisanship and economic preferences, we turn to the literature of motivated reasoning to learn about how the reactions of in- and out-group partisans will differ.

According to Flanigan and Zingale (1999, p. 53), "Partisanship is the single most important influence on political opinions and voting behavior." No model of voting behavior or public opinion is complete without some measure of party identification. Though divided by partisanship, we might expect that Democrats and Republicans will respond to the economy in similar ways. For many reasons, however, the relationships are far more complex. Governments of the left can be expected to pursue different policies than will those of the right (Hibbs 1977, 1979). Specifically, Hibbs (1992) argues that "policy should be more expansionary, output growth (and inflation) should be higher, and unemployment should be lower under left parties than right ones." Tufte (1980, p. 74) shows that these classic differences between left and right are also present in the United States. From this, Kiewiet (1983) argues the conventional wisdom that those more concerned with unemployment support Democratic candidates and those concerned with inflation support Republicans.

How does this transfer into opinions of the president? Strictly relying on Kiewiet's traditional viewpoint, we might suppose that under all circumstances changes in unemployment will affect Democrats more so than Republicans who are more sensitive to changes in inflation. Hibbs (1982b) looks at approval data over the 1961–1979 period and finds that, in terms of evaluating the president, Democrats use the inflation rate less and the unemployment rate more than do Republicans. Hibbs (1987) revisits these questions using 89 quarters of data of approval separated by partisan group for the 1961: 1 to 1984: 1 period and again finds Democrats to prefer lower unemployment to lower inflation. Thus, some asymmetry of rewards may occur as partisans focus on different aspects of the economy.

Several limitations with Hibbs' studies (1982b and 1987) are worth noting here. The first is the chance that they are time-bounded as the 1960s and 1970s were decades of political and economic turmoil typified by long periods of very unpopular presidents. These events include OPEC oil shocks and stagflation in the 1970s, the Viet Nam war in the 1960s, and Watergate in the 1970s. Relative to those that followed, these decades were also characterized by low partisan

polarization in the electorate. Indeed, as much polarization may have existed *within* the parties as *between* them. An additional limitation is that these studies do not allow for the possibility that the reactions of Democrats and Republicans to political and economic events may be different depending on the party of the president.[2] Certainly, partisans' evaluations of the economy have been found to differ based on their own party, the party of the president, and a number of other factors (Rudolph 2003). Here, to improve our understanding of these relationships, we add some theoretical basis to make predictions about these dynamics. In addition, we more than double the length of the time studied, switch to the monthly level of analysis, and look separately at effects during presidencies of either party.

Indeed, our research design allows us to ask and answer in a unique way the question: "do partisans respond objectively to objective measures of the economy?" More likely, partisans' translation of economic news into political opinions is heavily filtered through their initial opinions of what aspect of the economy matters most as well as their opinions of political leaders, especially the president. In this sense, the punishment and rewards they dole out to presidents must be understood within the framework of motivated reasoning.

Motivated Reasoning

Traditional models of opinion formation posit that a person's like or dislike of something is based on their rational and objective evaluation of information. Individuals are thought to act as rational Bayesian updaters who adjust their existing evaluations of candidates on the basis of new information they encounter (Gerber & Green 1999).

These models have been challenged by theories of motivated reasoning which hold that the process of evaluating candidates involves two goals that are frequently at odds (Kunda 1990; Taber & Lodge 2006; Taber, Lodge, & Glather 2001). First, an evaluation should be correct—if an individual finds out that she disagrees with a candidate on an important issue, she should like the candidate less than before. Yet, despite a general preference for correctness, the second important factor is that an evaluation should be in accord with existing evaluations. All else equal, people seem to prefer not changing their opinions to changing them (Kruglanski & Webster 1996; Taber & Lodge 2006), a hardly surprising fact in a world of cognitive misers. In motivated reasoning then, it is important not just to get the right outcome, but also to get to a certain preferred outcome, regardless of its correctness.

Thus, bias plays an important role in the evolution of opinion. Exactly *how* this occurs can be separated into at least three different mechanisms: selective

[2] Hibbs includes intercept dummies for each president but not interaction terms that would allow the effects of regressors to vary across individual presidencies or the party of the president.

exposure, selective judgment, and selective perception. We outline each of these in turn and then discuss how they may play a role in the evaluations of the president by in- and out-group partisans.

The first possible mechanism, selective exposure, would involve an individual engaging in a biased information search, seeking out that which will support their existing opinions (Lodge et al. 1999; Schulz-Hardt, Frey, Luthgens, & Moscovici, 2000; Sweeney & Gruber, 1984). In an early study, Mills and Jellison (1968) found that initial preference for one alternative led individuals to avoid information advocating another outcome.[3] Schulz-Hardt et al. (2000) corroborate this and show that emotions can lead individuals away from considering readily available and relevant information. When experimental participants are allowed to choose which information to view, Taber and Lodge (2006) find that they tend to seek out information that will support their existing views. Similarly, Sweeney and Gruber (1984) find that out-party partisans are more likely than in-party partisans to seek out negative information about a candidate's personal characteristics.

A second mechanism, selective judgment (or *motivated skepticism*), could involve the use of counter-arguments (Lodge & Taber 2000; Rucker & Petty 2004) or the downplaying of dissonant information (Ditto & Lopez 1992; Ditto, Munro, Apanovitch, Scepansky, & Lockhart 2003; Fischle 2000; Taber & Lodge 2006). Lavine, Sullivan, and Sullivan (2000), for example, find that participants in an experiment tend to uncritically accept information supportive of their views and put great effort into generating reasons not to accept contrary information. Ditto and Lopez (1992) show that individuals who receive unfavorable news take longer to examine it and are more likely to question its accuracy—subjects receiving unfavorable news from a medical test were more likely to question the results than subjects who received favorable news. In politics, Fischle (2000) showed that Republicans were more likely to believe negative revelations about the president during the Monica Lewinsky scandal. More generally, individuals think that arguments against their current positions are weaker than those that support them (Ansolabehere & Iyengar 1995; Lodge, Taber, & Galonsky, 1999).

A third possible mechanism for motivated reasoning is selective perception. Rather than ignoring or counter-arguing information, individuals can simply view unfavorable information as actually being in agreement with their existing beliefs. Bartels (2002) argues that perceptions of candidates tend to alter the way in which people see political events. In the same vein, Redlawsk (2002) finds that individuals less engaged in their thinking about candidates—presumably, most people, most of the time—tend to increase their evaluation of a liked candidate upon encountering information that should have led them to like her less.[4] Rather than

[3] A practical example: In April 2004 59% of Republicans said they were following the Iraq War "very closely" but this had fallen to just 41% by April 2006 (Pew Research Center).

[4] Here we think of the four percent of Republican respondents in an October 2006 CNN poll who said that the possibility of a Republican cover-up of the Mark Foley scandal made them *more* likely to vote Republican in the upcoming Congressional elections.

leading people to re-evaluate their existing views, information is twisted by the motivation to maintain existing evaluations and serves to reinforce the view that it should undermine. In this way, attitudes can become more polarized even when people are exposed to both pro and con arguments in equal measure (Taber & Lodge 2006).

Given the possible ways in which motivated reasoning can occur, we should next ask *when* will it occur? Psychologists have found that such biases are not nearly ubiquitous, but depend upon a variety of factors, including attitude strength. In terms of evaluating political leaders, Lodge and Taber (2005) find that stronger attitudes are more likely to have an impact on information processing and behavior than are weaker attitudes. This impact may be manifest in attitude-based biases in perception, judgment, and memory. Taber and Lodge (Hypothesis 5, 2006) tell us that stronger attitudes lead to an increased tendency for motivated reasoning (see also: Houston & Fazio 1989). Holbrook, Berent, Krosnick, Visser, & Boninger (2005) discuss the results of nine studies showing that people with stronger attitudes about an issue are more likely to engage in selective exposure and selective perception on that issue. As increased attitude strength and extremity tend to push individuals towards motivated reasoning and the maintenance of current evaluations rather than the incorporation of dissonant information (Kunda 1987, 1990; see Bassili 1996 on extremity), we should see that stronger attitudes will magnify partisan bias.

Turning to the dynamics of partisan approval, we expect that asymmetry exists in the strength of attitudes such that the attitudes of the in-party are much stronger than those of the out-party. Essentially, we expect the blind loyalty of the president's partisans to be a stronger force overall than the negative feelings of those in the out-party. This pattern can be observed in a number of contexts.

For example, asymmetry between strength of sentiment can be seen in the standard feeling thermometer questions asked by the National Election Study in election years since 1968, shown in Figure 1. In that period, the average feeling thermometer rating for the president by a partisan (including leaners) of the out-party ranges from 33.9 to 56.8, with an average of 45.6, close to the midpoint of 50. Average feeling thermometers of the president's partisans, however, range from 66.7 to 81.7, with a mean of 74.6, more than twenty points above the midpoint. For whatever reason, it is consistently—though perhaps not presently—a fact that members of the in-party like the president more than members of the out-party dislike him.[5]

Further, rally-around-the-flag effects have repeatedly shown the ability of the out-party to support their president during crises. As shown below, in every administration, the out-party has rallied around the president and given him major

[5] For instance, demonstrations that occur on the outside of rallies and national conventions rarely match what is happening on the inside in terms of fervor and scope. Our findings may be argued to show that positive affect is simply more prevalent, rather than intrinsically more powerful, than negative affect. Refinement of this point is well beyond the abilities of our aggregated data.

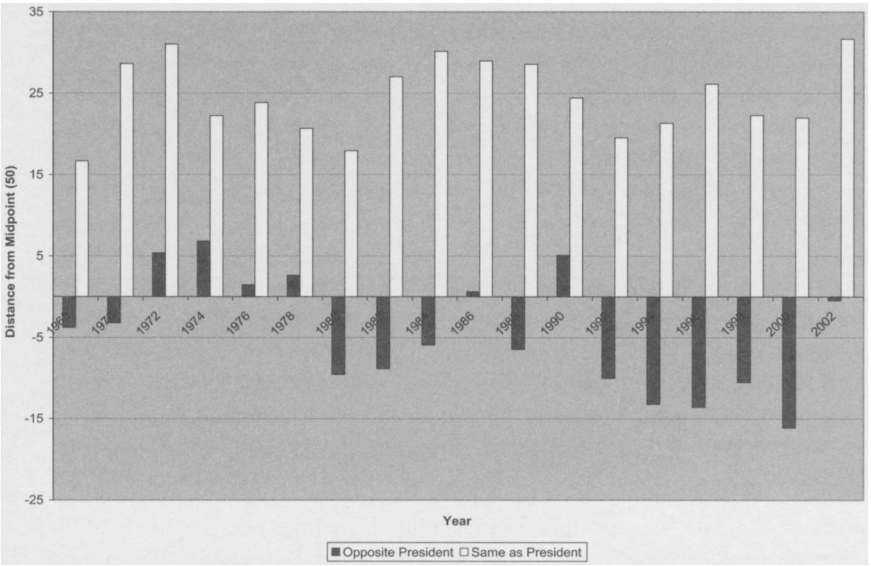

Figure 1. NES Mean Presidential Feeling Thermometer, by Party Identification, 1968–2002
Values are difference between partisan groups' mean thermometer score and the midpoint of 50.

boosts in approval. The reverse is seldom, if ever, true. Negative events do not cause similarly sized effects in the opposite direction for the in-party. Indeed, the size of positive changes provided by the out-party in response to events like the Cuban Missile Crisis dwarfs the negative changes of in-party partisans in response to events like the Bay of Pigs incident and scandals like Iran-Contra and the Clinton impeachment trial. Even during the worst of times, such as the last months of the Watergate crisis, a president manages to hold onto a majority of his base.[6]

That partisans of the out-party are more open to overcoming their initial affect is also apparent when presidents are rewarded for overseeing long-term growth in the economy. Bill Clinton's experience in the late 1990s is a case in point—with approval already quite high among Democrats, Clinton's overall approval rating continued to climb as more and more Republicans were impressed with the state of the economy.

Thus, if we are correct that the attitudes of the in-partisans are stronger than are those of the out-partisans, the strength of attitudes will play a significant role

[6] Note, however, that appearances in partisan approval can be deceiving as partisan change can play a role. Presidential stumbles can have more than one type of negative effect on partisans—they can lead to disapproval or outright loss of partisan identity. Although partisan approval may not change from month to month, the size of the group may, in fact, be changing. For example, self-identified Republicans consistently rated Richard Nixon at 53–54% between December 1973 and April 1974 and at 50% in July 1974, right before he resigned. This relative stability masks the likely fact that the *number* of Republicans that these numbers represent was shrinking.

in the movement of partisan approval ratings over time. Indeed, given the effect of extremity in the magnitude of bias, we expect motivated reasoning to be a major factor in explaining the ups and downs of partisan approval but we expect asymmetry in the degree to which it is an unconscious force for members of the in- and out-party. Individuals should evaluate a president of the opposing party much differently than they evaluate a president of their own party. Specifically, we expect individuals to incorporate economics into their evaluations of the president, but only when the president is of the opposing party.

An additional factor, anxiety, should contribute to the asymmetry of in- and out-party responses to new information. In a series of articles, Marcus and his colleagues (Marcus 1988; Marcus & MacKuen 1993; Marcus, Neuman, & MacKuen 2000) contend that much of how individuals process political information is determined by emotional systems that lead them to experience either anxiety or enthusiasm. Anxiety leads individuals to pay more attention to the political landscape and to contemporary political information in judging candidates. These anxious voters are thus more likely to make use of substantive factors such as candidate issue positions and candidate qualities and less likely to rely on easy heuristics, such as party identification (Marcus et al. 2000). Enthusiasm, on the other hand, leads individuals to rely upon existing evaluations and pay less attention to new information.

Marcus' data shows that individuals with higher reported levels of anxiety are more interested in the election and its results, pay more attention to media coverage, and are able to give more responses to open-ended questions about likes and dislikes (Marcus et al. 2000). In particular, these authors studied anxiety targeted at the in-party candidate and found that voters pay more attention when that candidate makes them feel anxious. Democrats were more likely to report anxiety caused by the Republican candidate and Republicans were more likely to report anxiety caused by the Democratic candidate. Thus, it seems plausible that Democrats are more anxious about a Republican President, pay more attention to substantive details in the political environment regarding the evaluation of that president, and are thus more likely to incorporate those details into their evaluation. Similarly, to the extent that the same Democrat is less anxious, and perhaps more enthusiastic, about a president of their own party, they should pay less attention to details of the political environment, and rely instead on heuristics such as party identification.

While much of the literature on motivated reasoning relies on experimental results, here we are interested in explaining trends on a larger scale. That is, how does motivated reasoning at the micro-level translate into opinion at the macro-level? Can we find evidence of these tendencies in aggregated approval ratings of the American president? Our expectations are that we should indeed see stronger reactions to economic changes among the out-party partisans than among those of the in-party. Those in the out-party will hold weaker opinions, be more anxious, and thereby be less likely to engage in motivated reasoning. Thus, they should, at

least temporarily, respond to changes in objective economic conditions. When out-party partisans do respond to new information we should see rebound effects. That is, updated evaluations of a political figure should quickly revert to initial levels. As individuals are motivated to maintain their existing attitude, any deviation from that—perhaps due to inescapable positive news regarding a disliked figure—should be quickly corrected, as the individual seeks out contradictory evidence, or a new reason to dislike the candidate. Further, Independents will have weaker attitudes and show less bias in how they interpret new information. In contrast, those in the in-party should engage in motivated reasoning, using any or all of the mechanisms described above, and be less responsive to changes in the economy.[7]

Thus, we should see that when a Democrat holds the presidency, changes in economic indicators will affect the approval ratings of Republican partisans, but not Democrats. With a Republican holding office, the economy should move approval among Democrats, but not Republicans. The movement of the Independents should correspond more closely with the out-party than with the in-party. We now turn to a discussion of the aggregated data we use to test these hypotheses.

Data

We employ monthly data of presidential approval from January 1955 to April 2005 constructed as the monthly percentage of people responding "approve" to Gallup's standard question "Do you approve or disapprove of the way _____ is handling his job as President?"[8] These polls are separated out into *Republican*, *Democratic*,[9] and *Independent* identifiers.[10]

In order to study the responsiveness of these groups to objective economic events we use as independent variables monthly measures derived from inflation and unemployment rates.[11] Lau (1985) is one of several researchers who point out that individuals weigh negative information more heavily than they do symmetric

[7] Of course, experimental research will be more able to identify the individual-level sources of bias. Also, our data do not allow us to measure the impacts of political knowledge and interest. We assume that each of our monthly samples has a distribution of these factors roughly similar to that of the general population. We expect that the movement of knowledgeable and interested voters should be enough to move the margins in the aggregated data even when these individuals' responses are mixed with those of the less interested or knowledgeable.

[8] Quarterly data from CBS/NYT for the 1977 to 2004 period yield very similar results.

[9] "Republicans" and "Democrats" include strong and weak identifiers but not leaners. Many of the surveys used to construct the series included questions that identified leaners out of the non-identifiers, but most did not, thus making their inclusion impossible for the series as a whole.

[10] Of our 604 months of data, 345 are available in Edwards' (1990) *Presidential Approval: A Sourcebook*. Other months were either provided by Gallup (146 months), constructed from individual-level Gallup surveys provided by the Roper Center (36), constructed from individual-level CBS/NYT polls at ICPSR (30), or imputed as the average of adjacent months (47). Data are available at: http://ms.cc.suny.edu/~mlebo/details.htm.

[11] Both are available from the Bureau of Labor Statistics. Inflation was calculated as the monthly change in the Consumer Price Index.

positive information.[12] Thus, we may expect different reactions to economic changes depending on both the party of the president and on whether the change is positive or negative. To make our study sensitive to these differences, we create four separate variables out of each of our initial inflation and unemployment series. Each series runs the full length of our data, 1955–2005. Thus, *Republican Positive Unemployment* is a monthly time series that reports the change in the unemployment rate in months where unemployment decreased with a Republican president and is zero otherwise. *Republican Negative Unemployment* gives the change in the unemployment rate in months where it increased under a Republican president and is zero otherwise.[13] In a similar fashion, we measure *Republican Positive Inflation, Republican Negative Inflation, Democratic Positive Unemployment, Democratic Negative Unemployment, Democratic Positive Inflation*, and *Democratic Negative Inflation*. Separating the economic series makes analyses somewhat more complicated but allows us to investigate asymmetries depending on both voters' affect towards the president and the type of information to which voters are responding.

We rely on these objective measures rather than the subjective measures that are prevalent in aggregate studies of presidential approval (such as MacKuen, Erikson, & Stimson 1992 and Norpoth 1996) because we are most interested in how partisans use new information regarding the economy. Certainly, subjective measures are important as the more proximate cause of changes in presidential approval. Yet, the translation of objective economic conditions into subjective evaluations of the economy is likely a process dominated by motivated reasoning. Indeed, Kramer (1983) refers to these subjective measures as "partisanship, thinly disguised." Thus, to see the effects of motivated reasoning at the macro-level, it is best to measure the beginnings (objective measures) and ends (approval) of the process and infer the middle (subjective evaluations).[14] Additionally, using objective measures avoids problems of endogeneity that can occur when higher levels of approval—based perhaps on foreign policy issues—lead to better subjective evaluations of the economy.

To measure the effects of political events we operationalize four series of events variables: *Republican Positive Events*, *Republican Negative Events*, *Democratic Positive Events*, and *Democratic Negative Events*. This allows us to pool events by type, to conserve degrees of freedom, and to see how partisan groups

[12] See Fiske (1981) on negativity bias in the weighing of information. Dividing economic effects in this way also allows us to dismiss the possibility that a lack of findings may be due to ceiling effects. For example, a failure to find that inflation affects approval among Democrats during a Democratic presidency could be dismissed by thinking that, since approval is already so high, it cannot be moved upward. By looking separately at negative changes and not finding effects there either, we can say more securely that Democrats are simply immovable.

[13] As the *change* in these variables, all values are positive and the series are differenced. This overcomes the possible problems of raw economic numbers not being comparable across such a long time span; e.g. 6% unemployment may sometimes be considered good and sometimes bad.

[14] Regardless, creating series of subjective evaluations by party seems an impossible task over the period we study. The University of Michigan's Survey of Consumers does not ask party preference and the Gallup polls do not consistently ask the subjective evaluation questions.

respond differently depending on the party of the president and on the type of event. Major events, including the Soviet invasion of Hungary (December 1956), the introduction of the Eisenhower Doctrine (April 1957), Eisenhower's World Peace Tour (December 1959 to January 1960), the Cuban Missile Crisis (October 1962), Watergate (March 1973 to July 1974), the onset of the Iranian hostage crisis (December 1979 to January 1980), Operation Desert Shield (October to December 1990), Operation Desert Storm (January to April 1991), the attacks on the Al Qaeda camps (August 1998), the September 11th terrorist attacks and aftermath (September to October 2001), and the invasion of Iraq (April 2003) are included as separate interventions to measure their effects.

The Partisan Gap 1955–2005

We begin our analyses by describing the long-term dynamics of presidential approval among self-identified Republicans, Democrats, and Independents. Between Table 1 and Figure 2, a number of interesting stories are evident. Certainly it is obvious that partisans exhibit higher levels of approval for presidents of their own party but also notable is that Republicans are markedly more partisan in their evaluations. For example, Republican approval of Republican presidents topped 90% for 28 months of the post-1954 Eisenhower presidency, 2 months for Nixon, 13 for Reagan, 14 for George H. W. Bush, and 38 months (of only 51) for George W. Bush. By comparison, Democrats were only as enthusiastic about their president for 5 months of the Kennedy and 12 months of the Clinton presidency. Additionally, Republicans have been slightly harsher critics of Democratic presidents (average rating = 36%) than Democrats have been of Republican presidents (average rating = 39%).

As Table 1 shows, the correlations between Republicans and Democrats vary quite a bit between presidents peaking at 0.9 during Nixon's presidency as Watergate sent the ratings of both groups downwards in tandem. Often, however, these correlations are relatively low, hitting bottom at .58 during Reagan's years. This is a sure sign that, beyond any initial feelings towards a president, it is different events that are affecting how approval rises and falls among each group of identifiers.[15] This leads to a great deal of variability in what we term the *presidential partisan gap*—the gap in approval between Democrats and Republicans.

The bottom panel of Figure 2 shows this gap and its wide variation over the sample period. While the pre-Reagan years never saw a presidential partisan gap higher than 54%, the *average* level of polarization in both the Clinton and G. W. Bush years is 56% and, at 83%, reaches a new plateau of polarization in September

[15] By comparison, Clarke et al. (2004) find over the same presidencies that the correlation between men's and women's approval ratings is at its lowest at 0.92 during the Kennedy years. From this we can surmise that the divergence in what Clarke et al. call "process heterogeneity"—differences in the type of economic and political events that drive presidential approval—is of much greater magnitude in the case of the partisan gap than the gender gap.

Table 1. Approval Ratings by President for Republicans, Democrats, and Independents

	All	Eisenhower	Kennedy	Johnson	Nixon	Ford	Carter	Reagan	Bush I	Clinton	Bush II
Average Republicans	64	87	50	39	77	69	30	83	82	26	92
Average Democrats	53	49	84	69	36	37	57	31	45	82	36
Average Gap	43	38	35	31	41	31	27	52	37	56	56
Largest Gap	83	54	49	41	50	40	49	67	62	68	83
	2004:09	1960:10	1963:11	1966:12	1973:05	1976:12	1980:09	1984:08/09	1992:08	1996:09, 2000:10	2004:09
Avg. Independents	55	67	67	49	51	49	42	54	59	54	57
R & D Correlation	0.71	0.67	0.79	0.89	0.90	0.62	0.85	0.58	0.88	0.63	0.73
R & I Correlation	0.82	0.74	0.82	0.92	0.94	0.79	0.93	0.78	0.92	0.71	0.69
D & I Correlation	0.88	0.85	0.82	0.95	0.95	0.90	0.89	0.83	0.96	0.74	0.94

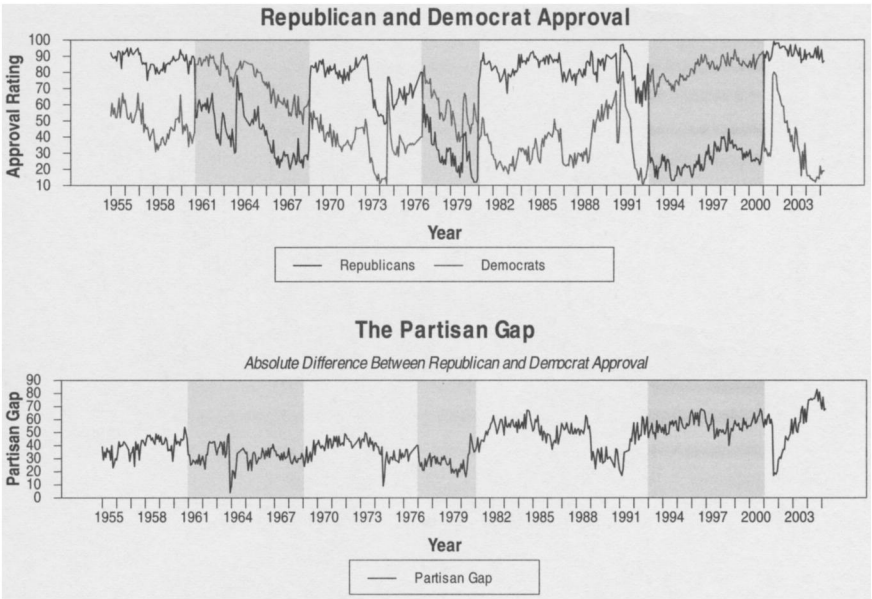

Figure 2. Presidential Approval and the Partisan Gap.

2004. Although our sample period contains some incredibly divisive periods, it is during the terms of Clinton, arguably the most centrist Democratic president of the 20th century, and George W. Bush, the self-proclaimed "uniter," that partisan polarization with respect to the president is at its highest.

The approval level among self-identified Independents is shown in Figure 3. Both as an illustration and for the analyses below, the Independent series is instructive as a natural experiment for the level and causes of approval in the absence of partisanship. The Independent series bottoms out at crisis points in several presidencies and foretells several momentous presidential elections. For example, with approval among Independents at just 21% in March 1968, Lyndon Johnson chose not to run for a second full term. As well, the ratings of 20% in August 1980 and 26 in July 1992 doomed the reelection hopes of Presidents Carter and G. H. W. Bush, respectively. An additional note of interest is that, as shown in Table 1, Independents are almost always more closely correlated to Democrats than to Republicans.[16]

One final point here concerns the variance of the series. Our theory posits that the president's partisans will be unlikely to change their level of approval while the out-party will be responsive to economic and political factors. Thus, we should

[16] Perhaps rather than thinking of the Independent series as non-partisan, this point suggests that individuals with a moderate preference for the Democratic party may be more likely to identify as independents than those with similar views towards the Republican party.

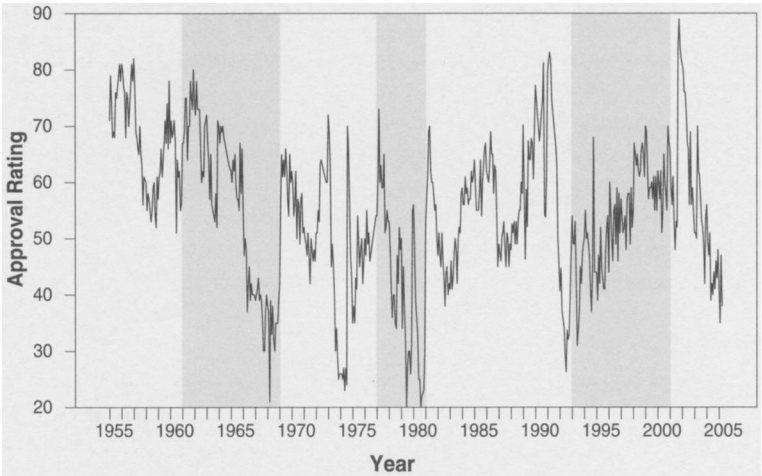

Figure 3. Presidential Approval among Independents.

expect that the variance of approval is much greater for the out-party than for the in-party. Indeed, this is what we find—the standard deviation of the in-party is 12.11 while the standard deviation of the out-party is 14.56. The standard deviation of the Independent series falls between these two at 13.25. This is as we expect—Independents should be more responsive than the in-party but have fewer fluctuations than the out-party for whom rallies can be followed by plummeting support. We now turn to more detailed analyses of the determinants of these series.

The Dynamics of Presidential Approval—for Democrats, Republicans, and Independents

To test hypotheses about differences between partisan groups in the causes of their approval levels, we develop separate models for each of the Republican, Democrat, and Independent series. This allows us to compare the impact of events and economic changes across the groups.

Several recent studies of aggregate levels of partisanship as well as leadership and government approval have found these types of series to be non-stationary and fractionally integrated (Box-Steffensmeier & Smith 1996; Box-Steffensmeier et al. 2004; Clarke & Lebo 2003; Clarke et al. 2004; Lebo & Clarke 2000; Lebo, Walker, & Clarke 2000). We test the stationarity and estimate the degree of fractional integration for each of our series using Robinson's (1995) procedure. Our partisan approval series all appear to be fractionally integrated with $d = 0.85$ (s.e. = 0.04) for the Democratic series, $d = 0.90$ (s.e. = 0.04) for the Republican series, and $d = 0.75$ (s.e. = 0.04) for the Independent series. Following Clarke and

Lebo (2003), we use ARFIMA methods and difference each series by its respective value of d prior to estimating the model parameters. Both Dickey-Fuller tests and Robinson's tests establish that our economic series are stationary after differencing.

Given monthly data, it is prohibitively awkward to specify a priori the lag structure we expect to be appropriate for these models. That is, should we expect our effects to occur with a one month lag or two? Can we expect the same lags for all effects? Since any attempt to choose the correct lags will necessarily involve post-hoc decisions, we instead structure our models with distributed lags of 1, 2, and 3 months for each of our economic variables.[17] Finally, to allow a means for approval to return to any long-run equilibrium value that may exist, we include an error correction mechanism (ECM) in each of our partisan approval models.[18]

Thus, our basic model for Democrats, Republicans, and Independents is:

$$\Delta^d y_{j,t} = \beta_0 + \sum_{l=1}^{3} \beta econ_{t-l} + \sum_{v=1}^{k} \Phi pol_t + \alpha_1 \Delta^d y_{j,t-1} + \alpha_2 \Delta^d ECM_{t-1} + u_t$$

where $y_{j,t}$ represents the approval of partisan group j in month t; β is a vector of coefficients for the economic variables; Φ is a vector of coefficients for k political variables; α_1 measures the effect of a lagged dependent variable that controls for autocorrelation;[19] α_2 measures the effect of the ECM, that is the speed of the long-run return to equilibrium for approval; *econ* is our set of eight economic variables (differenced by construction); *pol* is a series of k interventions for political events; Δ^d indicates that a variable has been fractionally differenced by its own value of d; β_0 is a constant and u_t is the error term $\sim N(0, \sigma^2)$. Since we expect that unmeasured shocks will affect approval for all groups, we estimate our 3 models simultaneously using a seemingly unrelated regression (SUR) technique (Kmenta 1997).[20]

The estimates of the models for Democratic and Republican partisans appear in Tables 2 and 3, respectively. Although each table comprises a single regression,

[17] This lag structure has two assumptions. First, we have no contemporaneous effects since the unemployment and inflation rates of any given time are not known by the public until at least the following month. Second, we do not specify effects beyond a three month lag.

[18] De Boef and Keele (2005) point out that ECMs can be appropriate even in the absence of cointegration. We follow the 2-step fractional approach of Clarke and Lebo (2003) to deal with the non-stationarity of our ECMs. We first regress the dependent variable on the economic series at lags of 0 to 3 months and save the residuals. We then estimate the level of fractional integration for these residuals, difference them by this amount, and include the fractionally differenced residuals as the ECM.

[19] Achen (2000) warns that a lagged dependent variable can bias downward coefficients for other effects in the model when there is correlation between the independent variables and the error term. This is not a problem here as the effects of the lagged dependent variables and the correlations between the errors and the economic effects are small.

[20] The correlations for the residuals are 0.24 between Democrats and Republicans, 0.40 between Independents and Republicans, and 0.42 between Independents and Democrats. The length of our series makes the loss of so many degrees of freedom unproblematic. Models were estimated using RATS 6.1.

Table 2. ARFIMA Model of Approval for Democrats—Republican and Democratic Presidents

Independent Variable	Republican Presidents						Democratic Presidents		
	coeff.	s.e.	*p* value				coeff.	s.e.	*p* value
Inflation†									
Positive News$_{t-1}$	4.99	2.68	*F*				4.95	9.05	*F*
Positive News$_{t-2}$	**–5.48**	**2.77**	**.001****				8.90	9.12	.683
Positive News$_{t-3}$	**–6.85**	**2.62**					3.74	9.05	
Negative News$_{t-1}$	0.01	0.97	*F*				–0.98	1.31	*F*
Negative News$_{t-2}$	–0.67	0.92	.545				–1.63	1.33	.258
Negative News$_{t-3}$	–0.70	0.92					1.20	1.28	
Unemployment									
Positive News$_{t-1}$	–2.34	2.52	*F*				**6.46**	**3.16**	*F*
Positive News$_{t-2}$	**5.94**	**2.39**	**.013***				5.23	3.03	.066
Positive News$_{t-3}$	4.16	2.37					–0.21	2.98	
Negative News$_{t-1}$	**–4.17**	**2.05**	*F*				–0.50	3.67	*F*
Negative News$_{t-2}$	–1.93	1.91	**.011***				4.11	3.56	.564
Negative News$_{t-3}$	**5.91**	**1.94**					2.26	3.51	
Minor Political Events			*t*						*t*
Positive Events	6.42	1.26	.000**				3.24	1.27	.005**
Negative Events	–1.05	1.49	.241				–4.45	1.17	.000**
Major Events									
Eisenhower Doctrine	12.17	2.93	.000**	Cuban Missile Crisis			11.16	4.50	.007**
Eisenhower Tour	15.62	2.95	.000**	Iran Hostages Begins			13.79	3.03	.000**
Hungary Invaded	12.99	4.15	.001**						
Watergate	–8.15	4.42	.033**						
Desert Shield	–25.72	3.56	.000**						
Desert Storm	8.63	3.34	.000**						
September 11 Attacks	45.89	4.46	.000**						
September 11$_{t+1}$	19.82	4.64	.000**						
Invasion of Iraq	14.60	4.58	.000**						
Change of Administration									
Nixon	–3.78	3.11	.113	Kennedy			29.95	3.23	.000**
Ford	50.24	6.27	.000**	Carter			29.95	3.19	.000**
Reagan	–7.04	3.26	.015*	Clinton			56.84	4.42	.000**
Bush II	–59.68	4.58	.000**	Clinton$_{t+1}$			16.95	4.44	.000**
Bush II$_{t+1}$	–18.50	4.65	.000**						
Y_{t-1}				–0.16	0.10	.110			
Error Correction Mechanism				–0.06	0.10	.282			
Constant				–0.85	0.47	.068			
Adjusted R^2					0.64				
S.E.E.					4.07				
Durbin's H (*p*)					.09				
Q-Statistic at 24 lags (*p*)					.20				
N					604				

*$p < .05$; **$p < .01$; two-tailed tests for economic variables and one-tailed tests for political events.
†Economic series are coded as zero for all nonoperative months, i.e., wrong direction or party of the president.

Table 3. ARFIMA Model of Approval for Republicans—Republican and Democratic Presidents

Independent Variable	Republican Presidents						Democratic Presidents		
	coeff.	s.e.	*p* value				coeff.	s.e.	*p* value
Inflation									
Positive News$_{t-1}$	−2.72	2.59	*F*				6.98	8.82	*F*
Positive News$_{t-2}$	1.06	2.69	.494				−2.60	8.90	.177
Positive News$_{t-3}$	−3.01	2.54					**18.54**	**8.82**	
Negative News$_{t-1}$	−0.46	0.92	*F*				0.78	1.26	***F***
Negative News$_{t-2}$	−0.29	0.92	.898				**−4.37**	**1.32**	**.003****
Negative News$_{t-3}$	0.41	0.88					**3.75**	**1.25**	
Unemployment									
Positive News$_{t-1}$	1.46	2.48	*F*				3.19	3.17	***F***
Positive News$_{t-2}$	**4.76**	**2.29**	.167				**−11.15**	**2.95**	**.002****
Positive News$_{t-3}$	−1.35	2.29					−0.23	2.94	
Negative News$_{t-1}$	−2.55	2.21	*F*				1.45	3.70	***F***
Negative News$_{t-2}$	0.65	1.85	.659				**−9.96**	**3.49**	**.004****
Negative News$_{t-3}$	1.49	1.91					0.16	3.42	
Minor Political Events			*t*						*t*
Positive Events	2.89	1.23	.009**				4.75	1.29	.000**
Negative Events	−6.78	1.45	.000**				−4.57	1.15	.000**
Major Events									
Watergate	−5.77	4.31	.090	Cuban Missile Crisis			13.08	4.39	.001**
Desert Shield	−18.48	3.05	.000**	Iran Hostages Begins			8.53	3.02	.002**
Terror Attacks	6.77	4.34	.059	Al Qaeda Camps			13.39	3.98	.000**
Terror Attacks$_{t+1}$	7.91	4.35	.034*						
Invasion of Iraq	6.50	4.58	.073						
Change of Administration									
Nixon (2 months)	23.04	1.93	.000**	Kennedy (2 months)			−17.70	1.96	.000**
Ford	21.50	6.11	.000**	Johnson			42.19	4.42	.000**
Reagan (2 months)	29.37	1.99	.000**	Clinton (2 months)			−26.36	4.25	.000**
Bush II (2 months)	27.28	4.41	.000**						
Y_{t-1}				−0.22	0.07	.002**			
ECM				−0.02	0.07	.374			
Constant				0.01	0.45	.981			
Adjusted R^2					0.65				
S.E.E.					3.95				
Durbin's H (*p*)					.15				
Q-Statistic at 24 lags (*p*)					.20				
N					604				

*$p < .05$; **$p < .01$; two-tailed tests for economic variables and one-tailed tests for political events.

each is separated into effects that occur during Democratic and Republican presidencies. Looking first at the economic effects in the two tables, it is evident that our hypotheses about the aggregated effects of bias have strong support. For each set of 3 lags, we use *F*-tests to test the joint hypothesis that all are equal to zero.

That is, for each X, we test the null $\beta_{X_{t-1}} = \beta_{X_{t-2}} = \beta_{X_{t-3}} = 0$.[21] To begin, Table 2 shows that, for Democratic partisans, three of the four objective economic indicators have significant ($p < .05$) effects during Republican presidencies. During Democratic presidencies, however, Democrats are seemingly oblivious and respond to neither positive nor negative inflation and unemployment news (save a single effect for positive unemployment news at $t - 1$).[22] Note that our null hypothesis in this case is actually that relationships exist. Thus, we should use a higher p-value to minimize the risk of Type II errors. Nevertheless, even using a p-value of .25 we can easily say that there are no evident effects for Democratic partisans for three of the four economic variables. Looking more closely at the left-hand-side with Republican presidents, we see that Democrats are in fact responding in a significant way to both positive and negative unemployment news as well as positive inflation news. Thus, this model does not give much support for the primacy of negative information.

Looking at the individual effects in Table 2, the Democrats reward for good news in their preferred indicator—unemployment—and dole out a short-lived punishment for bad news. That is, losses in support of 4.17% at $t + 1$ and 1.93% at $t + 2$ for a 1% increase in unemployment are reversed (+5.91) at $t + 3$.[23] Interestingly, there is a *punishment* for good news in the less preferred indicator as a decrease of 1% in inflation moves Democrats to ultimately lower their approval of a Republican president ($4.99 - 5.68 - 6.85 = -7.34$). Indeed, Democrats punish Republican presidents for *good* inflation news.[24] One possible explanation relies on Kiewiet and Hibbs' expectation that Democratic partisans prefer unemployment fighting over inflation-based policies. So, good inflation news may be greeted by dissatisfaction with the president because of the belief that he is focusing on the wrong aspect of the economy. This finding may also serve as a macro-level example of selective perception and support for the experimental findings of Redlawsk (2002), who finds that the twisting of information can be so strong that voters will adjust their evaluations in exactly the wrong direction in order to maintain their initial opinion.

Turning to Table 3 and Republican partisans, we see very similar patterns but with the partisan groups reversed. Except for a single slight reward for improvements in unemployment ($\beta = 4.76$, $p = .038$), the president's partisans are not

[21] Lags that are individually significant ($p(t) < .05$) are shown in boldface.

[22] It is quite possible that Democrats here will respond to longer periods of sustained positive or negative news. Thus, Jimmy Carter's poor ratings among Democrats by the end of his term, for example, may demonstrate the long-term effects that our model cannot adequately capture.

[23] To be precise, these coefficients tell us how much the fractionally differenced version of the dependent variable changes in response to a change in the independent variable. These impacts are roughly the same as coefficient values using a wholly differenced dependent variable.

[24] This effect and the negative effect of good unemployment news for Republicans during Democratic presidencies naturally led us to reexamine our data and models in search of some error, artifact, or event that would explain it. The effects proved remarkably consistent. For example, using a split sample, they are significant in each of the 1955–80, 1981–2005, and 1993–2001 periods. The findings are also robust to major changes in the lag and model structure.

reacting to these economic indicators during Republican presidencies. With a lowest p-value of .167, the F-tests show we can comfortably conclude no overall effect for the Republicans. On the other hand, Republican identifiers react strongly to economic effects with a Democratic president. This can be seen in the fact that three of the four measures have significant F tests beyond the .01 level and that, overall, five individual effects are significant. Thus, as with Democratic identifiers, Republican approval is linked strongly to the economy but only when they are the out-party.

Examining the individual effects, we can see that, in terms of inflation, Republicans reward and punish Democratic presidents in predicable patterns. For each 1% decrease in inflation, Republican approval increases by a whopping 18.54% (at $t + 3$, $p = .036$)—a hefty reward for good news in the one indicator with which Republicans are said to be most concerned. The punishment for bad inflation news is not nearly symmetrical and is only short-lived—a 1% increase in inflation costs a Democratic president nearly 4.37 points in Republican approval (at $t + 2$, $p = .001$), but this loss is quickly forgiven the next month with a rebound of 3.75% ($p = .003$). Thus, though Republicans are paying attention, they are not noticeably paying *more* attention to negative news.

As for changes in unemployment during Democratic presidencies, Table 3 shows that Republicans react to both positive and negative news but—as with Democrats responding to good inflation news under Republican presidents—in a very peculiar way. An increase in the unemployment rate is understandably followed (at $t + 2$) by a decrease in Republican approval of 9.96% ($p = .003$). However, an improvement in the unemployment rate is likewise followed by a *decrease* of 11.15% in Republican approval ($p \leq .000$).[25] Once more, this can be interpreted as dissatisfaction with the president for focusing on the wrong aspect of economic performance or as a result of selective perception hard at work.

Tables 2 and 3 also show the effects of major and minor political events on approval.[26] The major events show significant effects on both partisan groups with a few exceptions.[27] For example, the Republican reactions to the major events of George W. Bush's presidency—the September 11th attacks and the invasion of Iraq—hover near the threshold of significance because of the high approval level

[25] This effect is somewhat mitigated by the initial +3.19 boost at $t + 1$ ($p = .314$) leading to roughly an 8 point decrease in approval in the two months following a 1% decrease in unemployment.

[26] To preserve degrees of freedom, events with insignificant effects were dropped when possible. This ensures that the regressors for equations in the SUR model are not identical, aiding the efficiency of the procedure (Kmenta 1997).

[27] Events of longer duration—Watergate, the Iranian Hostage Crisis, Operation Desert Shield, and Operation Desert Storm—are scored as a 1 in the month in which the event began and as a −1 in the month following its end. The fact that Desert Shield ended the month before Desert Storm began explains the less than expected coefficients for the onset of Desert Storm since the effect is split between the two events. For example, among Democrats, Desert Storm increased approval 9.15% *in addition to* the 27.04% it increased with the end of Desert Shield.

Bush already enjoyed amongst his faithful. This points to the fleeting nature of rally-round-the-flag effects. While events may skyrocket a president's popularity, the change will mostly be among those predisposed to dislike him and thereby be temporary. The minor events show some asymmetry in their effects with Democrats failing to punish Republican presidents for negative events while granting decent rewards for good news.

Finally, the presidential transitions show some variation over time in the level of partisan polarization with which presidents begin their terms. For example, while the switch from President Eisenhower to President Kennedy boosted Democrat approval by 30% and lowered Republican approval by about 51%, the switch from Clinton to Bush led to a swing of nearly 80% for both groups between January and February 2001.[28] Indeed, after the 2000 election, partisan ties were as strong as ever in their effect on approval, a pattern that, though interrupted by the war on terror, has become one of the defining characteristics of the Bush presidency and, perhaps, the politics of the new century.

Next we look at Independents, whose results are shown in Table 4. In the absence of partisan bias, we would expect to see Independents engage in little motivated reasoning and to respond to economic news as rational Bayesian updaters regardless of who is president. In terms of unemployment, this is certainly the case as the F-tests clearly show that Independents reward both Democratic and Republican presidents for good unemployment news ($p < .01$).[29] For inflation, the size of the individual effects under Democratic presidents for positive news are large (13.76, 16.21, and 6.67) compared to those of Democratic and Republican partisans (in Tables 2 and 3) but fail to reach significance due to very large standard errors. In the case of Republican presidents, all inflation effects are tiny and not statistically significant. Thus, we have some support for the hypothesis that Independents update their approval more rationally than do Democrats and Republicans—and this is especially true given the occasional punishments doled out by the latter groups for good economic news. The greater focus on unemployment compared to inflation is further evidence of a pattern in the data—that over this time span, Independents seem more in tune with Democrats than with Republicans.[30]

[28] Presidential transitions labeled "2 months" are scored 2 in the first and 1 in the second month of a new administration. Thus, the overall effect is roughly three times the coefficient value.

[29] Political events were included as regressors but these results are not shown. Nearly all of the events appearing in Tables 2 and 3 had significant impacts on Independent approval. One interesting note is that Independent approval increased—by an average of 16 points—with every presidential transition except the switch from Bill Clinton to George W. Bush when it dropped more than 7 points.

[30] Some slight (though not statistically significant) support for this are the correlations between the original series (shown in Table 1) and the correlations between the residuals of the SUR model which show that the correlation between Democrat and Independent approval (0.88 and 0.42) are a bit stronger than between Republicans and Independents (0.82 and 0.40).

Table 4. ARFIMA Model of Approval among Independents—Economic Effects

Independent Variable	Coefficient	s.e.	*p* value *F*-Statistic
Democratic Presidents			
Inflation			
Positive News$_{t-1}$	13.76	9.65	
Positive News$_{t-2}$	16.21	9.73	.136
Positive News$_{t-3}$	6.67	9.64	
Negative News$_{t-1}$	0.70	1.37	
Negative News$_{t-2}$	−1.63	1.41	.689
Negative News$_{t-3}$	0.32	1.35	
Unemployment			
Positive News$_{t-1}$	**10.19**	**3.28**	
Positive News$_{t-2}$	−4.82	3.26	.007**
Positive News$_{t-3}$	−3.80	3.19	
Negative News$_{t-1}$	0.12	3.85	
Negative News$_{t-2}$	−2.82	3.70	.896
Negative News$_{t-3}$	0.00	3.72	
Republican Presidents			
Inflation			
Positive News$_{t-1}$	0.04	2.83	
Positive News$_{t-2}$	−1.41	2.93	.964
Positive News$_{t-3}$	−0.34	2.78	
Negative News$_{t-1}$	−0.69	1.02	
Negative News$_{t-2}$	−1.12	0.99	.437
Negative News$_{t-3}$	0.51	0.96	
Unemployment			
Positive News$_{t-1}$	−3.79	2.50	
Positive News$_{t-2}$	**7.75**	**2.51**	.005**
Positive News$_{t-3}$	3.16	2.50	
Negative News$_{t-1}$	**−5.10**	**2.06**	
Negative News$_{t-2}$	−0.59	2.02	.027*
Negative News$_{t-3}$	**4.93**	**2.07**	
Y_{t-1}	−0.14	0.09	.121
ECM	0.02	0.09	.852
Constant	−0.60	0.50	.228
Adjusted R^2		0.44	
S.E.E.		4.34	
Durbin's H (p)		.14	
Q-Statistic at 24 lags (p)		.13	
N		604	

*$p < .05$; **$p < .01$; two-tailed tests.

Our last model has as its dependent variable the partisan gap itself.[31] The key point of Table 5 is that nearly all of the significant effects, including the economic ones, are negative. That is, the partisan gap is closed by improved economic performance, presidential honeymoons (usually), and rally-around-the-flag events such as wars, uses of force, and the terrorist attacks. The first of these—economic performance—raises the possible contradiction that partisan polarization seemed to be rising under President Clinton while economic conditions improved a great deal. Yet, partisan polarization as measured by the partisan gap did, in fact, close during this time. At the height of the 1990s boom we can see the partisan gap sharply decline, from 68 points in September 1996 to 40 points exactly two years later.[32] As Figure 1 shows, President Clinton never warmed the hearts (or thermometers) of Republican identifiers. But, before the onset of the Monica Lewinsky scandal, he did manage to shrink the partisan gap to a fairly low level by current standards. In fact, it is fair—though a bit unbelievable—to say that, except for the effects of rallies during the presidencies of Bush Sr. and Bush Jr., for a while American Democrats and Republicans were more in agreement on President Clinton's performance than they were for any president at any time since the first months of the Reagan administration.

A last question then is, what increases the size of the partisan gap? Here is that rare case when the estimated constant is of substantive interest. At 1.89 ($p < .001$) this tells us that in a month without economic or political news, the partisan gap will increase substantially.[33] Thus, propelled by a centrifugal-like force, the approval rates of the two partisan groups are naturally moving apart. It is thus only occasional rally effects and good economic news that moderates the partisan polarization of the American electorate with respect to their opinions of the president.

Conclusion

Clearly, there are differences not only in the levels of presidential approval for Democrats and Republicans but also in the factors that affect those levels. Beyond adding to the political economy literature that shows a preference among Democrats for lower unemployment and a preference among Republicans for lower inflation, our aggregated findings suggest the heavy presence of motivated reasoning. Partisans of both parties reward and punish presidents of the opposite party on the basis of economic indicators while remaining largely unresponsive to those measures when their party holds the presidency. While they may not react as perfectly rational, at times partisans seem to be both attentive to economic information and reactive to it. They may not respond in the most normatively desirable

[31] ARFIMA methods are again used with the partisan gap differenced by its value of d, 0.67.
[32] This can be seen somewhat in the last shaded portion on the bottom panel of Figure 2.
[33] Since the dependent variable is fractionally differenced we cannot conclude that this increase is exactly 1.89, but it is close to that number.

Table 5. ARFIMA Model of the Partisan Presidential Approval Gap. 1953:03–2005:04

Independent Variable	Coef.	s.e.	*p* value for *t*
Inflation			
Positive News$_{t-1}$	**–7.22**	**2.60**	**.003****
Positive News$_{t-2}$	1.49	2.68	.578
Positive News$_{t-3}$	1.16	2.63	.659
Negative News$_{t-1}$	–0.19	0.83	.819
Negative News$_{t-2}$	–1.92	0.85	.976
Negative News$_{t-3}$	0.46	0.83	.419
Unemployment			
Positive News$_{t-1}$	0.69	2.05	.739
Positive News$_{t-2}$	–0.80	2.05	.304
Positive News$_{t-3}$	**–4.14**	**2.06**	**.022***
Negative News$_{t-1}$	1.68	1.78	.658
Negative News$_{t-2}$	1.24	1.78	.515
Negative News$_{t-3}$	–0.83	1.77	.359

Political Events			Change of Administration		
	Coef.	*p* value		Coef.	*p* value
Minor Republican Positive	–4.29	.001**	Kennedy	–11.72	.000**
			Kennedy$_{t+2}$	–9.87	.002**
Minor Republican Negative	–3.95	.006**	Johnson	–41.15	.000**
Minor Democrat Positive	–1.33	.175	Johnson$_{t+1}$	–15.53	.001**
Minor Democrat Negative	–0.66	.300	Nixon	–9.08	.011*
Soviets Invade Hungary	–10.64	.016*	Nixon$_{t+1}$	9.53	.983*
Eisenhower Tour	–13.16	.000**	Ford	–29.65	.000**
Cuban Missile Crisis	–6.70	.085	Carter	–10.62	.001**
Cuban Missile Crisis$_{t+1}$	–7.06	.075	Reagan	–3.62	.185
Troops sent to Selma, AL	–15.47	.001**	Reagan$_{t+1}$	10.11	.986
Desert Shield	8.32	.962	Bush I	–9.31	.028*
Desert Storm	–7.12	.037*	Bush I$_{t+1}$	–22.58	.000**
Attack on Al Qaeda Camps	–17.60	.000**	Clinton	–11.29	.011*
Terror Attacks	–42.68	.000**	Bush II	1.38	.779
Terror Attacks$_{t+1}$	–19.27	.000**			
Invasion of Iraq	–4.24	.196			

	Coef.	s.e.	*p* value
Error Correction Mechanism	–0.14	.036	.000**
Constant	1.89	0.50	.000**
Adjusted R^2		0.38	
S.E.E.		4.86	
Durbin-Watson Statistic		2.05	
Q-Statistic at 24 lags (*p*)		0.41	
N		626	

*$p < .05$; **$p < .01$; one-tailed tests.

fashion, but the fact that they do so at all is a source of optimism. Indeed, it is encouraging that the negative mind-set towards presidents of the opposition party is not so strong that bias makes improvement in his standing impossible.

Certainly, political bias and motivated reasoning have their limits. For example, they do not seem to play as strong a part in the processing of political events. Almost uniformly, we see partisans of both the in- and out-party responding in traditionally predictable ways to positive and negative events. One possible explanation is that political events are more starkly revealed than are economic indices. That is, political events such as military interventions or presidential responses to crises are front page events begging for voters to evaluate them and making motivated reasoning a more cognitively taxing process.[34] For example, the search for counterbalancing information in such cases is far more difficult than is the case when economic statistics from a sea of such information are encountered. As experimental designs delve deeper into uncovering what types of information lend themselves to motivated reasoning and find patterns of which particular mechanisms of motivated reasoning are used to deal with which types of information, further studies of aggregated data like ours will bring many of these finer points into sharper focus.

Among these finer points, more significant findings of negativity bias may be teased out of aggregated data. Here, we find no evidence that negative economic news plays a bigger role in determining partisan approval than does positive news. The experimental research on this point simply does not translate to the macro-level.

Trying to bridge this gap between experimental findings and aggregated trends can lead to interesting conjectures. For example, Taber and Lodge (2006, p. 757) find support for attitude polarization, "whereby attitudes will become more extreme, even when people have been exposed to a balanced set of pro and con arguments." Here we find a macro-level analogy where the gap in approval between Democrats and Republicans is naturally growing rather than static. The presidency of George W. Bush seems to support the idea that except for rally-around-the-flag effects, the partisan electorate has a natural tendency to polarize.

Overall, our findings highlight the importance of motivated reasoning in political information processing and demonstrate a need to better understand the individual-level causes and the macro-level effects of political bias. Although our data do not allow us to choose among possible mechanisms for how the former occurs, our suspicion is that the stronger feelings of the in-party serve as greater sources for motivated reasoning. Demonstrating this in the laboratory will be a

[34] We need also to be conscious here of "ceiling" effects. The level of approval among the president's partisans can be so high that positive events cannot significantly improve them (see effects among Republicans of the 2001 terrorist attacks). This does not mean that *all* the president's partisans support him all of the time. If this were true we would expect to not find any positive effects for the president's partisans. Also, the *strength* of approval for individuals can be increased but this will not be reflected in aggregated approval ratings.

natural follow-up to our findings here. To be sure, much more remains to be explained in order to understand individuals' choices of how, or if, to incorporate economic performance into their evaluation of the president. And, of course, we need to be ever mindful of these individual-level sources as we develop aggregate-level theories of opinion formation and change.

Our results here demonstrate again the need to understand the presidential approval series as being composed of many separate series, each of which evolves in its own way. Mashing these groups together makes for an interesting index, but theories need to dig a lot deeper to explain the movement over time of the series as a whole. Thinking about the approval series as the sum of several parts can lead to questions such as: if only the out-party and independents are responding to objective measures of the economy, would it be wise for a president to concentrate on those aspects of the economy that matter *less* to their own partisans in order to improve their standing among the public? Thus, perhaps Bill Clinton's success in keeping inflation low played a large role in reducing the size of the partisan gap and improving his overall approval level, even while his personal favorability ratings reached bottom.

At the same time, Clinton's personal escapades and the impeachment battles that followed may have been chasing some of his Democratic partisans to not only disapprove of him, but to leave the Democratic camp altogether. Indeed, the very factors that promote changes in party approval can also lead to partisan change. Economic news can affect not only the approval of the out-party but may also lead them to question their own party identification. At the same time, the strength of party identification and movements between strong partisans, weak partisans, leaners, and Independents may all be greatly affected by motivated reasoning.

Tying together individual-level processes with models of aggregated series is a natural area of future research. Here we are simply using micro-level theory to explain macro-level patterns in aggregated data, but a great wealth of data is becoming publicly available that will allow a much greater bonding of these two areas of research. In particular, datasets like the National Annenberg Election Study, repeated cross-sections like monthly Gallup and CBS/NYT polls available from Roper, and National Election Study panels all allow a study of individual-level behavior over time. From these data, research can focus on the forgotten gulfs in a literature dominated by studies that seek to explain either the mind of a single voter or the electorate as a whole.

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REFERENCES

Achen, C. (2000). "Why Lagged Dependent Variables Can Suppress the Explanatory Power of Other Independent Variables." Presented at the 2000 annual meeting of the Political Methodology Section of the APSA, UCLA.

Ansolabehere, S., & Iyengar, S. (1995). *Going Negative: How Campaign Advertising Shrinks and Polarizes the Electorate*. New York: Free Press.

Bartels, L. M. (2002). "Beyond the Running Tally: Partisan Bias in Political Perceptions." *Political Behavior 24* (2), 117–150.

Bassili, J. N. (1996). "Meta-Judgmental versus Operative Indexes of Psychological Attributes: The Case of Measures of Attitude Strength." *Journal of Personality and Social Psychology 71* (4), 637–653.

Box-Steffensmeier, J. M., De Boef, S., & Lin, T.-M. (2004). "The Dynamics of the Partisan Gender Gap." *American Political Science Review 98*, 515–528.

Box-Steffensmeier, J. M., & Smith, R. (1996). "The Dynamic of Aggregate Partisanship." *American Political Science Review 90*, 567–580.

Clarke, H. D., & Lebo, M. J. (2003). "Fractional (Co)integration and Governing Party Support in Britain." *British Journal of Political Science 33*, 283–301.

Clarke, H. D., Stewart, M. C., Ault, M., & Elliott, E. (2004). "Men, Women and the Dynamics of Presidential Approval." *British Journal of Political Science 35*, 31–51.

De Boef, S., & Keele, L. (2005). "Taking Time Seriously." Working paper. Penn State University.

Ditto, P. H., & Lopez, D. F. (1992). "Motivated Skepticism: Use of Differential Decision Criteria for Preferred and Non-preferred Conclusions." *Journal of Personality and Social Psychology 63*, 568–584.

Ditto, P. H., Munro, G. D., Apanovitch, A. M., Scepansky, J. A., & Lockhart, L. K. (2003). "Spontaneous Skepticism: The Interplay of Motivation and Expectation in Responses to Favorable and Unfavorable Medical Diagnoses." *Personality and Social Psychology Bulletin 29* (9), 1120–1132.

Edwards, G. C. (Ed.) (1990). *Presidential Approval: A Sourcebook*. Baltimore: Johns Hopkins.

Fiorina, M. (1981). *Retrospective Voting in American National Elections*. New Haven: Yale University Press.

Fischle, M. (2000). "Mass Response to the Lewinsky Scandal: Motivated Reasoning or Bayesian Updating?" *Political Psychology 21* (1), 5–15.

Fiske, S. (1981). "Social Cognition and Affect." In James Harvey (Ed.), *Cognition, Social Behavior, and the Environment* (pp. 227–264). Hillsdale, NJ: Lawrence Erlbaum Associates.

Flanigan, W. H., & Zingale, N. H. (1999). *Political Behavior of the American Electorate 9th Ed.* Washington: Congressional Quarterly Press.

Gerber, A. S., & Green, D. P. (1999). "Misperceptions about Perceptual Bias." *Annual Review of Political Science 2*, 189–210.

Hibbs, D. A. (1977). "Political Parties and Macroeconomic Policy." *American Political Science Review 71*, 1467–1487.

Hibbs, D. A. (1979). "Political Parties and Macroeconomic Policy, Reply to Payne." *American Political Science Review 73*, 185–190.

Hibbs, D. A. (1982a). "Economic Outcomes and Political Support for British Governments Among the Occupational Classes." *American Political Science Review 76*, 259–279.

Hibbs, D. A. (1982b). "The Dynamics of Political Support for American Presidents among Occupational and Partisan Groups." *American Journal of Political Science 25*, 312–332.

Hibbs, D. A. (1987). *The American Political Economy: Macroeconomics and Electoral Politics*. Cambridge: Harvard University Press.

Hibbs, D. A. (1992). "Partisan Theory after 15 Years." *European Journal of Political Economy 8*, 361–373.

Holbrook, A. L., Berent, M. K., Krosnick, J. A., Visser, P. S., & Boninger, D. S. (2005). "Attitude Importance and the Accumulation of Attitude-Relevant Information in Memory." *Journal of Personality and Social Psychology 88*, 749–769.

Houston, D. A., & Fazio, R. H. (1989). "Biased Processing as a Function of Attitude Accessability—Making Objective Judgments Subjectively." *Social Cognition 7*, 51–66.

Kiewiet, D. R. (1983). *Macroeconomics and Micropolitics: The Electoral Effects of Economic Issues*. Chicago: University of Chicago Press.

Kinder, D. R., & Kiewiet, D. R. (1981). "Sociotropic Politics: The American Case." *British Journal of Politic Science 11*, 129–161.

Kmenta, J. (1997). *Elements of Econometrics*. Ann Arbor: University of Michigan Press.

Kramer, G. H. (1983). "The Ecological Fallacy Revisited: Aggregate- versus Individual-level Findings on Economics and Elections, and Sociotropic Voting." *American Political Science Review 77*, 92–111.

Krause, G., & Granato, J. (1998). "Fooling Some of the People Some of the Time? A Test of Weak Rationality with Heterogeneous Information Levels." *POQ 62*, 159–178.

Kruglanski, A. W., & Webster, D. M. (1996). "Motivated Closing of the Mind: Its Cognitive and Social Effects." *Psychological Review 103*, 263–283.

Kunda, Z. (1987). "Motivation and Inference: Self-serving Generation and Evaluation of Evidence." *Journal of Personality and Social Psychology 53*, 636–647.

Kunda, Z. (1990). "The Case for Motivated Reasoning." *Psychological Bulletin 108*, 480–498.

Lau, R. (1985). "Two Explanations for Negativity Effects in Political Behavior." *American Journal of Political Science 29*, 119–138.

Lavine, H., Sullivan E., & Sullivan, J. L. (2000). "On the Relationship Between Attitude Involvement and Attitude Accessibility: Toward a Cognitive-Motivational Model of Political Information Processing." *Political Psychology 21* (1), 81–106.

Lebo, M. J., & Clarke, H. D. (2000). "Modelling Memory and Volatility: Recent Advances in the Analysis of Political Time Series." *Electoral Studies 19*, 1–7.

Lebo, M. J., Walker, R. W., & Clarke, H. D. (2000). "You Must Remember This: Dealing with Long Memory in Political Analyses." *Electoral Studies 19*, 31–48.

Lodge, M., & Taber, C. S. (2000). "Three Steps Towards a Theory of Motivated Political Reasoning." In A. Lupia, M. McCubbins, & S. Popkin (Eds.) *Elements of Reason: Understanding and Expanding the Limits of Political Rationality* (pp. 183–213). London: Cambridge University Press.

Lodge, M., & Taber, C. S. (2005). "Automaticity of Affect for Political Candidates, Parties, and Issues: An Experimental Test of the Hot Cognition Hypothesis." *Political Psychology 26* (3), 455–482.

Lodge, M., Taber, C. S., & Galonsky, A. C. (1999). "The Political Consequences of Motivated Reasoning: Partisan Bias in Information Processing." Presented at the annual meeting of the American Political Science Association, Atlanta.

MacKuen, M. B., Erikson, R. S., & Stimson, J. A. (1992). "Peasants or Bankers? The American Electorate and the U.S. Economy." *American Political Science Review 86*, 597–611.

Marcus, G. (1988). "The Structure of Emotional Response: 1984 Presidential Candidates." *American Political Science Review 82*, 737–761.

Marcus, G. E., & MacKuen, M. B. (1993). "Anxiety, Enthusiasm, and the Vote: The Emotional Underpinnings of Learning and Involvement during Presidential Campaigns." *American Political Science Review 87*, 672–685.

Marcus, G. E., Neuman,W. R., & MacKuen, M. B. (2000). *Affective Intelligence and Political Judgment*. Chicago: University of Chicago.

Mills, J., & Jellison J. M. (1968). "Avoidance of Discrepant Information Prior to Commitment." *Journal of Personality and Social Psychology 8*, 59–62.

Norpoth, H. (1996). "Presidents and the Prospective Voter." *Journal of Politics 58*, 776–792.

Redlawsk, D. P. (2002). "Hot Cognition or Cool Consideration: Testing the Effects of Motivated Reasoning on Political Decision Making." *Journal of Politics 64*, 1021–1044.

Robinson, P. M. (1995). "Gaussian Semiparametric Estimation of Long Range Dependence." *Annals of Statistics 23*, 1630–1661.

Rucker, D. D., & Petty, R. E. (2004). "When Resistance Is Futile: Consequences of Failed Counter-arguing for Attitude Certainty." *Journal of Personality and Social Psychology 86* (2), 219–235.

Rudolph, T. J. (2003). "Who's Responsible for the Economy? The Formation and Consequences of Responsibility Attributions." *American Journal of Political Science 47*, 697–712.

Schulz-Hardt, S., Frey, D., Luthgens, C., & Moscovici, S. (2000). "Biased Information Search in Group Decision Making." *Journal of Personality and Social Psychology 78*, 655–669.

Sweeney, P. D., & Gruber, K. L. (1984). "Selective Exposure: Voter Information Preferences and the Watergate Affair." *Journal of Personality and Social Psychology 46* (6), 1208–1221.

Taber, C. S., & Lodge, M. (2006). "Motivated Skepticism in the Evaluation of Political Beliefs." *American Journal of Political Science 50* (3), 755–769.

Taber, C. S., Lodge, M., & Glather, J. (2001). "The Motivated Construction of Political Judgments." In J. H. Kuklinski, ed., *Citizens and Politics: Perspectives from Political Psychology* (pp. 198–226). London: Cambridge University Press.

Tufte, E. R. (1980). *Political Control of the Economy*. Princeton: Princeton University Press.

Winder, R. (1992). "Presidential Popularity and the Economy: A Note on Demographic Differences." *Journal of Economic Behavior and Organization 38*, 91–99.