Who’s the Fairest of them All? An Empirical Test for Partisan Bias on ABC, CBS, NBC, and Fox News

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While accusations of media bias have long been a staple of partisan discourse, a number of issues have generally undermined their scholarly validity. While some have unearthed specific instances of biased story construction or patterns of bias in news content, these examples tend to be undermined by the inherent subjectivity of defining “bad” news. Moreover, these studies are generally unable to test for selection bias because they cannot observe the characteristics of stories that were not selected for broadcast. This study is designed to overcome these problems and allow for a more comprehensive test for detecting bias in television news. In particular, this study examines coverage of presidential approval polls on Fox News’ flagship news program, Special Report, as well as on ABC, CBS, and NBC’s evening newscasts over the last decade. The results provide substantial evidence for bias in the news choices across the four news outlets, although somewhat surprisingly, the results are stronger for some of the networks than for Fox.

“We [Democrats] stayed off FOX for a long time because your news department is, in fact, biased . . . there are some things in the news department that have really been shockingly biased, and I think that’s wrong. And I’ll just say so right up front.”

—Howard Dean, appearing on Fox News Sunday, May 4, 2008.

“I think Fox News has come on the scene and identified itself as ‘fair and balanced.’ We try to do that every day. I think others, instead of trying to get more fair and balanced, probably are offended by that or worried about it . . . What they’re trying to do is say that Fox News is mixing opinion and fact. That’s just simply not true . . . Bias can be a lot of different ways—story selection, story placement, story emphasis . . . I looked at other people’s polls, national polls, and most of the people thought the news was either biased or boring or both. And they generally thought it was biased in one direction.”

—Fox News Chairman Roger Ailes, interview with C-SPAN’s Brian Lamb, 2004.

For many decades, Republicans have repeated a mantra alleging that the media as a whole are biased against their party and their politicians. This attitude toward the
media was perhaps best exemplified by a popular 1992 Republican bumper sticker that said, “Annoy the Media: Re-elect George Bush.”

However, with the rise of new media such as conservative websites, talk radio, and especially the Fox News Channel, Republicans have seen Democrats begin to embrace and extend their complaints of bias in the news. In the run-up to the 2008 elections, those complaints only increased in volume and ferocity. In early 2007, these complaints actually affected the conduct of the campaign when liberal activists pressured the Nevada Democratic Party to cancel a Fox-sponsored Democratic candidate debate. In launching the successful campaign to drop Fox as a debate sponsor, liberal blogger Chris Bowers of MyDD.com argued that, “. . . instead of giving [Fox] a golden opportunity to further distort the image of Democratic presidential candidates, and instead of providing them with credibility for all of their past and future attacks against Democrats, it would be best if the Nevada Democratic Party chose a different media partner to broadcast this debate” (Bowers 2007).

In this study, I will attempt to empirically measure whether Fox News has, in fact, systematically skewed its news over the past decade, and compare its news choices to those of the network evening newscasts. Specifically, I will be examining whether Fox’s Special Report, ABC’s World News Tonight, the CBS Evening News, and the NBC Nightly News presented biased portrayals of public opinion regarding the president in their coverage.

Empirically Examining Media Bias

Claims of media bias raised by politicians from either party should be regarded as exceptionally suspect for several reasons. First, politicians might prefer that a news source be perceived as biased against them, even if the source is actually unbiased. As Matthew Baum and I demonstrate elsewhere (Baum and Groeling forthcoming), when members of the public perceive the news to be biased against a candidate or party, harmful messages from that outlet are discounted, while favorable messages are seen as particularly credible. Similarly, partisans might strategically choose to allege bias—even in the absence of such bias—in an attempt to “work the ref”—i.e., vociferously protest a “close call” in an attempt to have the next one go “your way.” And, because of well-documented cognitive biases—such as confirmation and disconfirmation biases, selective perception, anchoring,

1. A particularly piquant critique of Fox News was put forward by MSNBC’s Keith Olbermann, who complained that, “[Rupert Murdoch’s] covey of flying monkeys do something journalistically atrocious every hour of the day” (Lamb 2006). Of course, as will be discussed in the conclusion, such claims of bias are only the most recent in a long, distinguished line stretching back to the veritable roots of the American media.

2. Bowers is also a member of the Pennsylvania State Democratic Committee. The cited cause for the cancellation was a joke by Fox News chairman Roger Ailes, conflating Barack Obama with Osama Bin Laden. Ailes responded to the boycott by complaining that pressure groups were now urging candidates to “only appear on those networks and venues that give them favorable coverage” (Whitcomb 2007). While Fox and the Congressional Black Caucus (CBC) later agreed to co-sponsor one Republican and one Democratic candidate debate, activist groups immediately sought to pressure both the CBC and Democratic candidates to withdraw from the debate (Phillips 2007). The Democratic National Committee subsequently declined to sanction it, and the three major Democratic candidates also declined to participate, leading to the cancellation of the debate.
attention bias, the clustering illusion, and selective perception, among others—partisans might sincerely perceive news as being biased against their preferred stance, even when it is actually unbiased (See Hastorf and Cantril 1954, Dalton et al. 1998, and Baum and Groeling n.d.) The possibility that perceptions of bias rest in the eye of the beholder is not lost on journalists, who readily turn to that explanation to blunt charges of favoritism. In so doing, they typically echo longtime CBS anchor Walter Cronkite’s aphorism that, “Our job is only to hold up the mirror—to tell and show the public what has happened. Then it is the job of the people to decide whether they have faith in their leaders or governments” (Quoted in Alan and Lane 2003, 139-140).

Establishing the presence or absence of partisan bias in news content has proven difficult. Self-described media watchdog groups such as Media Matters, the Media Research Center (MRC), the Center for Media and Public Affairs (CMPA), and Fairness and Accuracy In Reporting (FAIR) claim to objectively analyze media content, yet they routinely disagree on the incidence, severity, and direction of bias in the media.3

Most scholarly attempts to assess media bias are similarly inconclusive (e.g., Efron 1971, Patterson 1993, Sutter 2001). Among the principal difficulties in demonstrating the presence or absence of media bias is establishing a clear definition of what exactly constitutes bias. Several recent studies (Groseclose and Millyo 2005, Gentzkow and Shapiro 2006) have sought to empirically measure mainstream news media content against various standards, and have done so with varying results. However, perceiving an ideological slant in media content is one thing; attributing such a slant to politically biased editorial judgment by the media is another. After all, as journalists are quick to point out, the observed patterns of coverage might simply represent a fair reflection of reality. For example, if one observes that 90% of the stories appearing on a TV news program were “bad” news for the president, that could reflect biased story selection by that program, or it may simply reflect the president only doing a good job 10% of the time. In such a case, this hypothetical 90% anti-presidential skew in media coverage would represent an accurate reflection of the president’s performance.

Thus, two classes of problems confound bias research. The first concerns the inherent subjectivity of bias. As has been discussed above, identical stories are often perceived as having diametrically opposed “biases” depending on who is viewing them. While scholars do attempt to use rigorous standards and procedures for coding the content of the news, ultimately these procedures will confront the researcher with seemingly arbitrary choices, which subsequently expose the results to criticism from those who find them disagreeable. For example, if President Bush is reported to be

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3. For example, CMPA’s website (http://www.cmpa.com/about.html) claims that their goal is “to provide an empirical basis for ongoing debates over media fairness and impact through well-documented, timely, and readable studies of media content” and that their “scientific approach” distinguishes them from “self-appointed media ‘watchdog’ groups.” FAIR’s site (http://www.fair.org/index.php?page=100) does emphasize their opposition to censorship and support of diversity, but stresses their “well-documented criticism of media bias” as core to their mission. Media Matters (http://media matters.org/about_us) identifies itself as a “progressive research and information center dedicated to comprehensively monitoring, analyzing, and correcting conservative misinformation in the U.S. media.” The MRC site (http://www. mediaresearch.org/about/aboutwelcome.asp) acknowledges their primary interest in tracking liberal bias, but defends their “thorough, comprehensive, and ongoing analysis based on quantitative and qualitative research.”
standing by his Secretary of Defense, who is being pressured to resign, that stance could
be interpreted as positive (a man who sticks with his convictions and by his allies) or
negative (a man who ignores reality or is foolishly stubborn). In aggregating such codes
across multiple stories and outlets, researchers are also forced to combine disparate units.
For example, does a negative story showing incompetent disaster response by a trusted
official count the same as a positive story about throwing out the first pitch at a baseball
game?

The second problem concerns selection bias. By examining only those news stories
that are actually reported, one cannot determine whether any observed distribution of
favorable and unfavorable presidential news accurately portrays real world conditions or
instead reflects bias on the part of journalists (Hofstetter 1976, Groeling and Kernell
1998, Niven 2002, Baum and Groeling forthcoming, Baum and Groeling n.d.). If so,
research based exclusively on content analysis of reported news commits the fallacy of
drawing inferences from data that has been selected on the dependent variable. The issue
of selection bias presents scholars with a serious conundrum. How can one assess the
representativeness of a news sample when the population is comprised mostly of stories
that were never reported and thereby cannot be observed? To establish bias one must also
somehow measure these nonevents. 4

To address these concerns, I return to a method Sam Kernell and I first used a decade
ago to study negative bias in network news (Groeling and Kernell 1998). In that research,
we minimized these methodological and evidentiary problems by limiting our analysis to
stories reporting the public’s assessment of the president’s job performance. Such polls
represented a subset of presidential news that minimized subjective coding and for which
we could observe the population of potential news stories as well as those actually
reported. Containing quantitative information about the current state of public opinion,
they were particularly well-suited for formulating defensible definitions of good and bad
presidential news: decreases in the president’s approval rating constituted bad news,
and increases, good news. Beyond the direction of shifting public opinion, the percent
approving identified the magnitude of the change.

Finally, with approval stories, we could easily identify and measure the population
of potential news from which that reported by journalists was chosen. With each
network’s in-house public opinion surveys publicly archived, we could identify the full
population of approval ratings—that is, potential news stories—and compare those
selected for broadcast with those that were not. Figure 1 illustrates four general types of
patterns one might expect to observe in those decisions. 5

The first general pattern of poll story selection, Preference for Change, simply
predicts that the greater the change in presidential approval a poll shows, the more likely

4. For other approaches to this problem, see Harrington (1993), Bartels (1995), Behr and Iyengar
(1985), and Bosso (1989).

5. A fifth possible general pattern would be a bell-shaped curve, in which the greatest likelihood of
broadcasting a poll result occurs with the smallest changes in approval, and the greatest changes in approval
would lead to the smallest likelihood of airing the result. Unlike the other four general patterns identified
in Figure 1, there appears to be no reasonable a priori reason to expect this pattern to occur at a news
organization and it has therefore been omitted.
Preference for Change:
Polls become increasingly likely to be aired as they become either more negative or more positive; polls showing no change in approval are least likely to be aired.

Preference for Negative:
Polls with negative results are increasingly likely to be aired as they become more negative; polls with positive results are increasingly unlikely to be aired as they become more positive.

Preference for Positive:
Polls with negative results are increasingly unlikely to be aired as they become more negative; polls with positive results are increasingly likely to be aired as they become more positive.

Null Preference:
There is no significant relationship between poll results and the decision to air them.

FIGURE 1. Systematic Patterns of Poll Story Selection.
that poll will be aired. Here, "news" value derives from a departure from the status quo, regardless of whether that departure is favorable or unfavorable to the president (and regardless of the president’s party).

In contrast, the second graphic in Figure 1 illustrates the news pattern politicians often allege the "nattering nabobs of negativism" (i.e., journalists, in the eyes of former Vice President Spiro Agnew) favor: a strong preference for negative news. As Bill Clinton alleged shortly into his first term in office, for journalists, “success and the lack of discord are not as noteworthy as failure” (Clinton Press Conference, May 7, 1993).

In contrast, the third chart shows a state of the world most politicians would label as fantasy: a positive bias, in which good news about the president is considered more newsworthy than bad. Bias in favor of presidents in general would present this pattern for politicians of both parties, while partisan bias would presumably simply be a case where positive polls were preferred for one party, while negative polls were preferred for the other.

The final possible pattern is the null relationship, in which networks choose to air poll results regardless of the magnitude or valence of the results. A show that incorporated the results into a recurring feature or which ran polls only when they intended to broadcast the results might produce such a pattern.

Operationally, we can define the following four cases as follows (assuming a case where we have Republican and Democratic presidents):

**Change** Result: For both Republican and Democratic presidents, a substantial increase in approval should statistically be just as likely to be broadcast as is the equivalent decrease in approval, and both should be statistically different from a result showing unchanged approval.

**Pure Negative** Result: For both Republican and Democratic presidents, a substantial decrease in approval should statistically be more likely to be broadcast than the equivalent increase in approval.

**Pure Positive** Result: For both Republican and Democratic presidents, a substantial increase in approval should statistically be more likely to be broadcast than the equivalent decrease in approval.

**Pro-Republican Bias** Result: For Republican presidents, a substantial increase in approval should statistically be more likely to be broadcast than the equivalent decrease in approval, while for Democratic presidents, a substantial decrease in approval should statistically be more likely to be broadcast than the equivalent increase in approval.

**Pro-Democratic Bias** Result: For Democratic presidents, a substantial increase in approval should statistically be more likely to be broadcast than the equivalent decrease in approval, while for Republican presidents, a substantial decrease in approval should statistically be more likely to be broadcast than the equivalent increase in approval.

**Null** Result: For both Republican and Democratic presidents, changes in approval poll results are statistically uncorrelated with their selection for broadcast.

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6. For those wishing to experience the full force of Agnew’s alliteration, an MP3 version of his speech is archived online at http://www.earthstation1.com/History/America/SpiroAgnew70Fall-'PamperedProdigies&'ProfessionalPessimists'.mp3
Data and Methods

Testing the actual patterns of poll story choices thus requires gathering two separate datasets: One that tracks the polls conducted by each network—and characteristics about each poll—and another that tracks the poll results broadcast by each news program—and the characteristics of those. The poll dataset was drawn from online archives, while the broadcast dataset used Lexis-Nexis’ online transcripts to search for any Fox or network evening news reports citing public opinion polls related to the presidency. To qualify for inclusion in the poll dataset, the polls had to draw a national sample, be sponsored by a specific network, and have a specific end date listed in the archive. To qualify as a valid broadcast survey story, coders recorded any instance of a network/Fox evening news program that cited a specific numeric poll result showing the president’s overall job approval rating. For example, coders would include a poll that asked, “Do you approve or disapprove of the way President Bush is handling his job as president?” but exclude “Do you approve or disapprove of the way President Bush is handling the economy?”. Coders would also exclude vague generalities, such as “everyone knows the president’s approval is in the cellar these days.” These restrictions were put in place to better allow conclusive matches with the polling dataset, and to maximize the comparability of poll results within the poll database. The broadcast database included programs airing January 1, 1997 through February 1, 2008, except for Fox News, for which transcripts were unavailable prior to June 1, 1998. To perform the

7. The main source for these polls was the presidential approval series assembled by pollingreport.com for Bush and Clinton. This listing was also spot-checked against the Roper archive’s holdings.

8. In addition to the three network evening newscasts, the sample included Fox News’ Special Report (with Brit Hume). The search terms varied slightly by network to account for the different show names, and included the “!” wild card character to include variations in key terms. For example, the ABC search term was show ((world news with Charles Gibson or world news Saturday or world news Sunday) and (((favora! or approv! or disapprov! or rate! or rating or ratings or handl!) w/50 (poll! or survey!)) w/100 (bush! or president!)). I initially planned to include CNN in the analysis, but was blocked by unacceptably wide variation in evening news program lineups over the course of the sample, as well as surprisingly widespread gaps in CNN’s coverage in Lexis-Nexis. Lexis-Nexis searches were conducted online between January 2006-February 2008.

9. Sub-national samples, such as a poll that only solicited respondents from Iowa or New Hampshire, would thus be excluded. I also counted exit polls conducted in partnership with other networks as “outside” polls for all networks. In some cases, networks reported sub-samples from a single large poll as both individual daily results and as an overall pooled result. In such cases, I counted the overall sample. Re-interviews of prior poll respondents were allowed, as long as the original samples were drawn from a national sample. I also elected to include national polls of likely and registered voters, despite the relatively skewed nature of the sample, in part because such polls were typically isolated during presidential election cycles, which were controlled for separately in the fully-specified models later in the analysis.

10. Note that the data also included specific polls citing numeric levels of presidential disapproval, as well, such polls allowed an exact match.

11. While coders also separately collected data on “near miss” citations, such as issue-specific approval (e.g. “handling of the economy”), sub-samples (e.g. “Iowa voters”) or ones that did not include a specific numeric result (e.g. “a sizable majority of Americans now support Bush’s handling of his job”), those results fall beyond the scope of this article.

12. Note that CBS and NBC transcripts were unavailable from Lexis-Nexis prior to January 1, 1997, although ABC transcripts were available substantially before that date. The ProQuest transcript database, which was used to code the prior iteration of this project, is apparently no longer being produced. Coding took place in two waves in 2007 and 2008.
broadcast coding, pairs of UCLA undergraduate students conducted searches of the
news transcripts and coded each story separately online, then met to determine
the correct final coding. Valid broadcast poll citations were then matched against the
list of the network’s internal polls, so that polls that were broadcast could be identified
in that database. Such matches were then recorded as a valid broadcast in the poll
dataset, which serves as the main binary dependent variable for this study: Poll Aired.
Because the news programs aired a surprisingly large number of poll results sourced
from outside organizations, I have also included a secondary descriptive analysis
of the broadcast database results that attempts to explore how and when such polls
were used.

As noted previously, the main independent variable of this study is the change in
the president’s approval. The most straightforward way of determining that change
would be to simply subtract the news organization’s prior approval rating from the
new value. However, it is unclear whether a news organization would account only for
their internal polling data in determining how new or unexpected a poll result was. In
other words, if a network showed a five-point gain compared to their own prior result,
but that internal poll was 40 days old (the average time between polls for NBC under
Bush, for example) and three other networks had already reported a six-point gain,
it seems clear that the newsworthiness of the poll would likely be affected. Because
modern news programs operate in a state of heightened competition and regularly
monitor (and cite, as it turns out) polls from competing polling organizations, some
method of accounting for these external shifts in opinion seems to be required. Here,
I created a moving average of the last four approval poll results, pooled from the
networks, Fox, and CNN’s polls, and then subtracted it from the network’s own most
recent result. The resulting variable, Poll Differences, substantially outperformed the
change measure built on each network’s own prior polls, as well as a third specification
built on the network’s last broadcast poll result. The base model for this analysis is
thus a logit model that attempts to predict the probability a Poll Aired based on the
Poll Difference for that poll. As will be discussed shortly, I also created a version
of this variable called Negative Poll Difference, which takes on the negative values
of Poll Difference, and a value of zero for all non-negative values of Poll Difference.
This variable allowed for the modeling of logit curves with separate positive and
negative probability contours, which will be come into play in subsequent
models.

Control Variables

While the literature has suggested many factors that might affect approval of the
president, it is not clear whether such variables would be appropriate to include in this
model, which already internalizes the output of such factors. In other words, variables
that attempt to predict changes in approval should be superfluous, as journalists will
already have the actual approval change in hand at the time they are trying to decide
whether to air the results of the poll.
A more relevant set of circumstances would seem to be cases where presidential approval itself might be regarded as a predictor of some important outcome. In midterm elections or elections with an incumbent, for example, approval of the incumbent president has been observed to influence his own prospects for re-election, as well as the likelihood of his fellow partisans winning election (Tufte 1975, Kernell 1977, Campbell 1993, Groeling n.d.). Conversely, presidential elections where the incumbent is a lame duck will probably shift polling attention from the president to the major contenders to replace him, especially once the party nominees have been selected or voted into office.

In addition, during scandals, crises, economic turmoil, or other critical periods, approval might be considered a barometer for establishing how well the president has weathered the storm, even if the approval rate remains unchanged. Similarly, in periods where reports expect the president to receive a public opinion “rally,” even unchanged approval might become noteworthy (Mueller 1973, Kernell 1978, Groeling and Baum 2008).

Thus, following a presentation of the basic logit analysis for each network and president, I repeat the analysis controlling for a variety of political, crisis, and economic variables, including:

- **Change in Consent**: This variable subtracts the prior month’s University of Michigan Index of Consumer Sentiment score from the current month’s score.\(^{13}\) I expect that larger drops in consumer sentiment will make journalists more actively monitor the president’s approval rating for movement.

- **Election 2000, Election 2004, Election 2008**: Binary variables that take a value of 1 for the year prior to the date of a presidential election. I expect that non-incumbent elections will decrease demand for approval stories, and incumbent elections will increase it (assuming horserace polls are not substituted there, as well).

- **Bush Transition**: Binary variable that takes a value of 1 for the period following George W. Bush’s November 7, 2000 election until his inauguration on January 20, 2001.

- **Midterm**: Binary variable that takes a value of 1 for the six months prior to the date of a congressional midterm election. I expect that midterms will increase the newsworthiness of presidential approval polls.

- **Lewinsky, Impeachment, Senate Acquittal**: Binary variables that control for the major developments of the Monica Lewinsky scandal. Take a value of 1 during the first month of the scandal, and during the House and Senate impeachment hearings. I expect that such dramatic political developments will increase the newsworthiness of presidential approval polls.

- **Columbine, Katrina**: Binary variables that take a value of 1 during the month following the Columbine Massacre and Hurricane Katrina, respectively. Both crises were national media events that became closely associated with the president in power, and thus should have increased the salience of his approval rating.

\(^{13}\) Data were downloaded from http://www.economagic.com/em-cgi/data.exe/fedstl/umcsent. The base index is scored such that 1966 = 100.
September 11 Attacks, Afghan Invasion, Iraq Force Authorization, Iraq War, Capture Of Baghdad, Capture Of Hussein, Surge Announced14. Binary variables that take a value of 1 during major foreign policy events (and the month following their occurrence). I expect that such dramatic foreign policy developments should increase the newsworthiness of journalists seeking to track potential opinion “rallies.”

Finally, the fully-specified model accounts for the “freshness” of the current poll result for the network by including two controls: Days Since Last Poll, which indicates how many days have passed between the current poll and the prior result; and Days Since Last Report, which indicates how many days have passed between the date of the current poll and the most recent specific report of the president’s overall national approval rating. In both cases, I expect that—all else equal—longer periods without a poll or report should marginally increase the newsworthiness of new results.

Results

In this section, I will first review some of the basic descriptive statistics of each network’s polling activity during the period of this study. I will then present the core logit tests, beginning with a simple base model and moving to one with full controls. Finally, I will return to a more descriptive analysis and discuss the networks’ surprisingly common use of outside polls.

Descriptive Results

Table 1 presents basic descriptive statistics for all four networks, broken down by presidential administration.

Table 1 shows some interesting differences in polling behavior across networks. Beginning first with the decision to air poll results, Table 1 shows that—with two notable exceptions—the programs typically air between a quarter and a fifth of their presidential approval poll results. The two exceptions to this are NBC and Fox under George W. Bush, where both organizations aired the approval results of over 40% of their polls.

Every organization shows Bill Clinton with a higher average approval rating than George W. Bush during the period of this study, and most organizations put polls into the field at similar intervals, regardless of which president they were studying. However, it should be noted that NBC actually runs such polls less than half as frequently as CBS and Fox, typically waiting more than a month to launch the next poll after getting a result. Finally, Table 1 shows the average, maximum, and minimum changes in approval (both in comparison to the network’s own most recent result and compared to the

14. Note that Operation Desert Fox, in which the U.S. and U.K. bombed Iraq for several days during December 1998, overlaps with the Impeachment control and is not included separately.
### TABLE 1

Descriptive Statistics, Key Variables

<table>
<thead>
<tr>
<th></th>
<th>Bill Clinton ($n = 68$)</th>
<th>George W. Bush ($n = 101$)</th>
<th>CBS</th>
<th>George W. Bush ($n = 132$)</th>
<th>NBC</th>
<th>George W. Bush ($n = 64$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Poll Aired</td>
<td>0.235</td>
<td>0.427</td>
<td>0</td>
<td>1</td>
<td>0.257</td>
<td>0.439</td>
</tr>
<tr>
<td>Approval</td>
<td>60.559</td>
<td>4.009</td>
<td>51</td>
<td>69</td>
<td>55.436</td>
<td>15.690</td>
</tr>
<tr>
<td>Change in Approval Since Own Last Poll</td>
<td>0.088</td>
<td>2.971</td>
<td>-7</td>
<td>8</td>
<td>-0.220</td>
<td>4.403</td>
</tr>
</tbody>
</table>

Note: The numbers in the table represent descriptive statistics for key variables, including poll airing dates, approval ratings, days between polls, change in approval since own last poll, and poll difference vs. moving average.
four-poll moving average of recent broadcast polls). Note that news organizations that poll less frequently will sometimes be late to poll and report major shifts in opinion, such as NBC’s delayed reporting of Bush’s skyrocketing approval following the 9/11 attacks. While other networks showed double-digit gains following the attack, NBC’s internal polls (and, to a lesser degree, Fox’s) were scooped on magnitude of the initial jump by polls from ABC, CBS, and CNN.

In Figure 2, I present a comprehensive chart of all polling activity by Fox and the networks during the time of this study, which allows the reader to easily view some of the major trends in the data.

In Figure 2, each network’s approval series is represented by a light blue line, with each poll that was identified as coming from the network’s own polling shown on the chart as a black diamond. Valid national overall approval results sourced from other organizations are represented with green plusses. Each network series has a horizontal line showing the 50% approval level, and a vertical gray line showing the end of the Clinton/beginning of the Bush presidencies.

Even a cursory glance at Figure 2 shows major differences in polling behavior across networks. First and foremost, it appears that (at least since the 2000 presidential election) Fox News’ Special Report is exceptionally likely to air presidential approval results. In contrast, Figure 2 also shows another outlier: NBC, with its generally smaller volume of polling activity and curious poll reporting during the Clinton presidency. Somewhat shockingly, NBC not only fails to report any of the drops in Clinton approval during his

<table>
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<th>TABLE 1 (continued)</th>
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<tbody>
<tr>
<td><strong>Fox</strong></td>
</tr>
<tr>
<td>Bill Clinton (n = 53)</td>
</tr>
<tr>
<td>Poll Aired</td>
</tr>
<tr>
<td>Approval</td>
</tr>
<tr>
<td>Days Between Polls</td>
</tr>
<tr>
<td>Change in Approval Since Own Last Poll</td>
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<tr>
<td>Poll Difference vs. Moving Average</td>
</tr>
<tr>
<td>George W. Bush (n = 139)</td>
</tr>
<tr>
<td>Poll Aired</td>
</tr>
<tr>
<td>Approval</td>
</tr>
<tr>
<td>Days Between Polls</td>
</tr>
<tr>
<td>Change in Approval Since Own Last Poll</td>
</tr>
<tr>
<td>Poll Difference vs. Moving Average</td>
</tr>
</tbody>
</table>

15. One might be confused by the surprising number of black diamonds that are not on the blue approval line for the network in question—particularly in the case of NBC. For the other networks, these generally appear to be minor adjustments in the final poll data or weighting before they were archived. In the case of NBC (particularly in the Clinton presidency—to the left of the vertical gray bar), the cluster appears to be the result of overzealous reporting of partial or incomplete, small-n results (“overnight tracking poll”), for which the approval results shift markedly after gathering a complete sample.
FIGURE 2. Approval Poll Reporting, by Network and Date.

Diamonds are citations of the network's own surveys;
Plusses are citations of outside organizations' polling.
last three years in office, they also conspicuously reported results that exceeded the levels recorded on their archived polls.  

Finally, Figure 2 helps show the surprisingly common citation of outside polls. Because such polls offer, in effect, free advertising to competing news and/or polling organizations, their common use here is unexpected enough to justify further analysis later in this article.

Of course, most of the patterns in Figure 2 are too dense or unwieldy to visually interpret, much less interpret for statistical significance. Thus, in the next section I turn to logistic regression analysis of the core dependent variable: Poll Aired.

Logit Analysis

In this section, I will be presenting tests of three different model specifications examining the relationship between changes in poll approval and the likelihood that a poll will be selected to be aired on the sponsoring outlet. Beginning with the first (and simplest) model, Figure 3 shows the predicted likelihood of Poll Aired (and 95% confidence intervals), broken down by administration, network, and by Poll Difference. The top third of Table 2 then presents the predicted difference of probability and statistical significance of Poll Aired when shifting Poll Difference from a value of −5 to +5.  

Beginning with ABC, Figure 3 shows a nearly flat relationship between changes in approval and their likelihood of being selected for broadcast. The first two rows of Table 2 confirm that initial view, showing that while a gain in approval of five points is 16 percent more likely (or 9 percent less likely, in the case of Bush) to appear than the equivalent drop in approval, the differences are insignificant.

16. The missing results did not appear in either pollingreport.com or on the WSJ/NBC poll archive at http://interactive.wsj.com/documents.pollhome.htm and appear to be the result of small-n overnight samples. The February 7, 1998 result, for example, (found at the Wall Street Journal site) appears to be a 407-person single-day survey with a ±5 point margin of error. This archived result is interesting, in that it references some of the unarchived results cited on the broadcasts. The wording of the broadcast citations also reflects some of this confusion about the validity of prior poll results. For example, NBC’s story on the (unarchived) 1/28/98 poll result characterized them thusly: “As for the president, a big vote of confidence. It seems that Americans have never been happier with the way the president is doing his job. According to a new NBC News poll, President Clinton’s job approval rating stands at an all-time high of 68 percent.” That’s up nine points in the past month alone.” (bold added) The following week, another unarchived result was broadcast thusly: “Tom, the latest poll from NBC News shows President Clinton with his highest job approval rating ever, 72 percent. And aides here at the White House think despite the scandal, they’re in a pretty good negotiating position on this budget.” (bold added) The aforementioned 2/7/98 result, which was a small-n overnight sample, was described thusly: “Regardless of the conflicting stories, Mr. Clinton’s job-approval rating in the latest NBC News poll now stands at 79 percent, leaving Republicans frustrated and dismayed.” (bold added) This result is a spectacular outlier in the polls, with only one other network showing a result above 69% approving in January or February 2008. Curiously, this poll wasn’t identified as an all-time high, even though it was higher than the previous two reported highs, and even higher than the next citation of an all-time high the next year on 1/20/99: “BLOOM: But most Americans evidently liked what they heard. In an NBC News poll taken overnight, Mr. Clinton’s job approval rating climbs to a record high 76 percent.” (bold added)  

17. See the Appendix for the 24 sets of logit results presented graphically here in figures 3-5 and Table 2. Logit results were transformed into predicted probabilities using simulations generated by CLARIFY.
FIGURE 3. Basic Model Predicted Probability of Broadcasting an Internal Poll Result, by Network, President, and PollDifference.¹

¹ The approval change is measured by subtracting a four-poll cross-outlet moving average from the network’s own current poll result. Predicted values and confidence intervals generated by CLARIFY.
On CBS and NBC, in contrast, both curves for Clinton and Bush are significantly related to PollDifference, albeit in opposite directions across administrations, providing the first statistical evidence thus far for Pro-Democratic Bias. Specifically, Table 2 shows that while the \(-5\) result is 35% less likely to appear on CBS for Clinton than the 5 point rise in approval, the equivalent drop is 33% more likely than the equivalent gain to be broadcast on CBS for Bush. Similarly, NBC is 55% more likely to feature Clinton’s 5% increase, while they’re almost 55% more likely to instead feature Bush’s 5% decrease. Ironically, while Fox News’ Special Report does show mild signs of Pro-Republican Bias (26% more likely to report Clinton’s drop; 18% more likely to report Bush’s rise), neither result is statistically significant.

However, one potential problem with the results shown in Figure 3 is that the underlying assumed form of the curve (the logistic function) is ill-suited for producing the u-shaped distribution or others where probabilities rise on both tails. To allow “separate” curves for both the positive and negative values of PollDifference, I have
created a separate variable, NegPollDifference, which takes values of PollDifference when negative, and reports them as zero otherwise (See Groeling and Kernell 1998 for further discussion of this modeling choice). In brief, this modeling choice trades off a degree of freedom and multicollinearity (and potentially decreased estimates of statistical significance) in favor of a more flexible functional form, shown in Figure 4. Interestingly, NBC’s coverage of Clinton breaks this new model by failing to broadcast a single instance of dropped approval in the entire three-year period, forcing me to fall back on the single-curve model for that chart (duplicating the equivalent chart from Figure 3).

While most of the results in Figure 4 closely resemble those of Figure 3, there are some interesting differences. First and foremost, ABC’s coverage of Bush, which had previously appeared relatively flat (if somewhat tilting toward negative coverage), has now developed entirely different curves for positive and negative changes in approval. Table 2 shows that there is, in fact, nearly a 67% decrease in airing a story about a poll when it shifts from being a drop to a gain of five approval points. Despite the multicollinearity, the difference is quite significant. CBS’s curves are relatively similar, although they, too, have lost some significance with the specification change. The NBC Bush curve has actually increased the difference in likelihood of coverage across the positive and negative results for Bush, making the negative tilt even more pronounced, although the curve is now statistically insignificant (again, probably because of the changes to the model specification). Fox, in contrast, actually gains a slight level of statistical significance in the differences in their coverage of Clinton, which show the network as being nearly 40% more likely to air a five-point decrease than the equivalent increase. Fox’s coverage of Bush also becomes more sharply curved in favor of positive changes in approval, although those changes are still insignificant.

In Figure 5, I test whether these findings remain the same in the face of drastic changes in the model’s specification by adding in the full array of control variables identified earlier. In cases where the control variable perfectly predicted either the use or non-use of polls, it was excluded from the analysis and those observations were dropped.18 Obviously controls are also excluded when they fall outside the time period of the administration being analyzed.

18. Dropping observations in such a low-n situation is obviously not an ideal solution, but the tactic appears to be necessary to ensure the patterns observed in the base model are not simply a function of exogenous events or circumstances. Perfect predictors included the following:

ABC Clinton: Senate Impeachment (1 failure); Columbine (1 failure); 2000 Election (5 failures).

ABC Bush: Invasion of Afghanistan (1 failure); Iraq Vote (2 failures); Surged Announcement (1 failure).

CBS Clinton: Lewinsky (4 failures); Columbine (1 failure)

CBS Bush: 9/11 Attack (4 failures); Invasion of Afghanistan (2 failures); Iraq Vote (2 failures); Iraq War (7 failures); Capture of Baghdad (1 failure), Surge Announcement (1 success); 2008 Presidential Election (3 failures).

NBC Clinton: Lewinsky (1 success); Bush Transition (2 failures). In addition, Negative Poll Difference perfectly predicted 14 failures, but those observations were not dropped from the model because they also counted toward the Poll Difference variable.

NBC Bush: 9/11 Attack (1 failure); Invasion of Afghanistan (1 failure); Iraq Vote (1 success); Hussein Capture (2 failures); Katrina (1 success); Surged Announcement (1 failure); 2004 Election (10 failures); 2008 Election (3 failures).

Fox Clinton: House Impeachment (1 failure); Senate Impeachment (2 failures); 2000 Election (18 failures).

Fox Bush: 9/11 Attack (2 successes); Iraq Vote (1 failure); Iraq War (1 success); Capture of Baghdad (5 failures), Hussein Capture (1 success); Surged Announcement (1 success); 2008 Election (3 failures).
FIGURE 4. Basic Two-Curve Model Predicted Probability of Broadcasting an Internal Poll Result, by Network, President, and PollDifference.¹

¹ The approval change is measured by subtracting a four-poll cross-outlet moving average from the network’s own current poll result. Predicted values and confidence intervals generated by CLARIFY.
FIGURE 5. Fully-Specified Two-Curve Model Predicted Probability of Broadcasting an Internal Poll Result, by Network, President, and Change in Presidential Approval.\textsuperscript{1}

\textsuperscript{1} The approval change is measured by subtracting a four-poll cross-outlet moving average from the network’s own current poll result. Predicted values and confidence intervals generated by CLARIFY.
Figure 5 and the last third of Table 2 show that adding in the additional controls (and eliminating cases where the controls were perfect predictors of polls’ use or non-use) produces surprisingly small changes to most of the models: ABC remains basically unchanged (and actually gains a bit of statistical significance in their Bush result); CBS is similar, but loses significance; and NBC is similar for Clinton (but loses a level of significance). The last three results, however, show some interesting shifts. In the fully-controlled model, NBC increases their likelihood of airing a $-5$ Bush result to nearly 90%, but also increases their likelihood of airing a $+5$ result to over 1/2, leading to an insignificant gap. Fox, in turn, achieves marginal ($p \leq .10$) significance in their results for the first time. With the added controls (and dropped cases), Fox’s predicted likelihood of airing a five-point drop by Clinton has more than doubled versus the base model, while their likelihood of airing a poll showing a five-point increase only goes up by around 7 points. Conversely, Fox’s likelihood of airing a five-point Bush decrease has decreased about 7 points from the dual-curve base model, while their likelihood of airing a five-point Bush increase has itself increased by 10 points over that same model, achieving marginal significance for the first time.

Use of Outside Polls

In an attempt to measure potential selection bias without falling prey to the “unobserved population” problem, the above analysis has analyzed the complete set of all network and Fox presidential approval polls. However, as was shown earlier in Figure 2, the four news programs being studied here sometimes choose to report opinion results from outside organizations, in addition to ones from their internal polling operations. Such citations would appear to be costly for the network in question, both because they offer “free” advertising to a competitor, and also because they implicitly undermine the perceived value of the network’s own polling content or competence (Metaphorically, this appears to the equivalent of a story showing the CEO of General Motors driving a Toyota).

In the predecessor to this study (Groeling and Kernell 1998), we found such outside citations to be relatively uncommon, occurring only 13 times across every network during the five years of that study (less than once per year, on average). In contrast, in the current study, I observe 96 instances where a network cited an outside polling organization’s overall presidential approval result (more than doubling to 2.4 times per year).

However, a closer examination of the outside citations shows fairly drastic cross-network differences. CBS, which has the most prolific internal polling (220 polls in the timeframe of this study), actually cites outside polls less than once per year, on average, as does ABC (169 internal polls conducted; 8 external polls cited). NBC, which had the smallest number of internal polls conducted (103 . . . about half the tally of CBS and Fox) cites 19 external polls: almost two per year. Fox ran 192 surveys (despite starting their series 18 months later than the other networks in this sample), but went to outside polling sources a whopping 62 times over that same time period—nearly twice as often as the other networks combined.
Because the primary test of this article (predicting which internal polls by a network are used) is “blind” to these outside polls, the possibility remains that a network might systematically skew their reported polling by “cherry-picking” the best (or worst) outside polls to substitute for their own relatively innocuous internal results. While it is impossible to replicate my “full population” selection tests against the vast array of outside survey sponsors, by examining the difference between these outside polls and the citing network’s own most recent internal polls, I can get a sense of whether the networks were shopping around for the most negative (or positive) results. Figure 6 displays the result of these tests for each network and administration.

Beginning with ABC, Figure 6 shows that for both Clinton and Bush the network actually selected outside polls with higher average approval than their own equivalent results, and that the differences across administrations are statistically insignificant. For both CBS and NBC, there are insufficient outside polls to generate confidence intervals for the Clinton administration, but both networks cite outside Bush polls that are, on average, lower than the network’s own equivalent result. Fox cites only four outside polls for Clinton, but they are far more negative than the network’s own most recent result (an average of nearly seven points more negative). In contrast, Fox’s 58 external poll citations of Bush’s approval are mildly more positive than their internal results. The difference across administrations is significant at p ≤ .05, giving credence to the notion that (at least under Clinton) Fox was especially willing to cite outside polls if they were damaging.

**FIGURE 6.** Average Difference in Cited Outside Poll Versus Current Network Poll.¹

By Network and President

(Bars show 95% confidence intervals)

¹ Network polls begin on January 1, 1997; Fox begins June 1, 1998 because of unavailability of news transcripts. All series end on February 1, 2008.
Analysis

The results shown here provide substantial evidence for the validity of politicians’ protests regarding bias in the media. Across the different model specifications, only ABC’s coverage of Bill Clinton failed to register at least marginal significance in any model specification. Further, in every case, the differences found were consistent with the partisan’s stereotypes: ABC, CBS, and NBC all appeared to favor “good” news for Clinton and “bad” news for Bush, while Fox appeared to favor the reverse (even in the aggressively-controlled fully specified model). ABC is also the only network that appeared to favor positive outside polls for both presidents (Fox favored mildly positive polls, but only for Bush).

However, there are some important limitations in these conclusions. First, it should be noted that this study used a relatively rigorous standard for what counted as a valid citation of a network’s poll results. In particular, networks seldom ask the overall presidential approval question in isolation; rather, they also often ask a series of related approval questions, including ones targeted specifically at the major issues of the day. In collecting these data, coders observed 189 instances where the overall approval number was not cited, but specific approval regarding the economy, foreign policy, Iraq, scandals, disasters, energy policy, etc., were used instead. Coders also identified 102 “near miss” stories, in which the approval citation did not give a numerical description of the result (e.g. “most Americans,” “a clear majority”), and 25 more that only presented results for a demographic subset (e.g. “citizens of New Hampshire,” “Republicans,” “African-Americans”). Unfortunately, excluding these citations was necessary to ensure the comparison of equivalent units in the analysis.

Another potential issue with this study lies in the exclusion of other programs produced by each network. While it is intuitive to view the news choices of each network’s “flagship” news program as representative of the choices of the other programs appearing on that network, this study has not examined any of the other programs by each network. Thus, extrapolation to each network’s programming as a whole should be done with due caution, particularly in the case of Fox’s 24-hour programming, much of which is explicitly opinionated. Similarly, during crises periods like 9/11 or times of war, the networks often shifted to round-the-clock coverage of events that might have included valid poll citations that are excluded here. In addition, it should be noted that Fox’s Special Report has a different format than the three traditional evening newscasts, both by virtue of its hour-long format (double that of the network news programs) and its greater focus on national politics.

Finally, all of the programs being studied here have had major personnel changes in the last decade (including anchor changes, most obviously), and all of the organizations have faced a rapidly changing commercial marketplace for their products. Particularly in

19. The most common topics were Iraq (48 internal polls) and the economy (also 48 internal polls), with the War on Terror (19), ethics and/or scandals (17), foreign policy (16) and energy and/or the environment (12) following. The programs also cited 109 similar polls from outside organizations, with a similar breakdown of issues covered.
the case of the three traditional evening news programs, the networks have seen drastic changes in the size and demographic composition of their audience in the last decade—
trends that appear to be accelerating with the rise of news online. Thus it remains unclear whether past patterns of behavior will truly be generalizable to future network choices.

Conclusion

Near the end of the 2008 Democratic presidential primary, New York Senator Hillary Rodham Clinton’s (D-NY) campaign chairman Terry McAuliffe argued the former first lady had been “hamstrung” by pervasive bias in the media against her candidacy, estimating that 90% of the media were “in the tank” for her competitor, Sen. Barack Obama (D-IL). McAuliffe then praised the coverage on Fox News, which he identified as “one of the most responsible [media outlets] in this presidential campaign” (Marre 2008). In contrast, Obama attributed his double-digit losses in states such as Kentucky and West Virginia in part to the fact that “…there are a lot of voters who get their news from Fox News. Fox has been pumping up rumors about my religious beliefs or my patriotism or what have you since the beginning of the campaign” (Alessi 2008).

While McAuliffe and Obama clearly have an interest in having the media be viewed as biased, based on the results presented here, their protests should not be dismissed out of hand. Much like the old adage, “even paranoid people can have enemies,” the results of this study show a surprisingly pervasive pattern of bias across media outlets. Despite testing for bias using an objective (dare I say, “fair and balanced?”) methodology, all of the outlets demonstrated what appeared to be at least some selection bias that matched the popular caricature of their supposed prejudices.20

Despite this evidence, however, it remains unclear whether politicians actually have enough power to do much about their situation. As was discussed in the introduction to this article, in 2007, the Democratic candidates united in their boycott of Fox News, arguing that they should not aid the network’s supposed efforts to boost Republican fortunes. Despite that early resolve, in the heat of the 2008 primary election campaign, the two Democratic frontrunners and the Chair of the Democratic National Committee all sat down for in-depth interviews on Fox News in quick succession. Obama, in particular, had refused requests to appear on Fox for 771 days before finally relenting. Ultimately, however, Fox’s appeal among swing voters in key primary states like Indiana pressured the Democratic candidates to reach out to that audience (NPR 2008).

As media increasingly fragment and strive to control niche markets, it seems probable that at least some news organizations might choose to overtly market their ideological viewpoint as a means of attracting a reliable audience. If the results presented here are to be believed, the major evening newscasts should be pleased with that path, as they appear to already have a head start in that direction.

20. Again, the results for ABC’s coverage of Clinton, while tilted in the “expected” direction, did not approach statistical significance.
Bibliography


### Table A1

Logit Results, Clinton (1/1997-12/2000)

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<th>NBC Base</th>
<th>Fox Base</th>
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Note: Fox begins in June 1998.
## TABLE A2

Logit Results, Bush (1/2001-2/2008)

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1
AUTHOR QUERY FORM

Dear Author,

During the preparation of your manuscript for publication, the questions listed below have arisen. Please attend to these matters and return this form with your proof.

Many thanks for your assistance.

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