Presidential Confidence in Crisis: Blame, Media, and the BP Oil Spill

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Abstract

By combining news coverage and survey data from the BP oil spill of 2010, this study demonstrates how the media played an important role in connecting the disaster to President Obama. Rather than criticizing Obama from the outset, the spill reporting escalated from a period of event-based, factual coverage to a highly politicized phase of governmental blame attribution. We utilize a natural experiment by dividing respondents of the General Social Survey into a pre-spill control group and two treatment phases distinguished by the tone of the news coverage. Using matching, we then estimate the causal effect of the media’s frame on individual-level perceptions of the president. Without the media connecting responsibility to the Obama administration, the public’s confidence in the president was unaffected in the first month of the spill. However, once politicized media coverage escalated in the months following the spill, we find that confidence in Obama decreased significantly.

Keywords: presidential evaluations; blame attribution; media-effects; BP oil spill

Word count: 8347 (with numbers excluded: 8131)
Within days after hitting the Gulf, Hurricane Katrina had become a powerful symbol of the Bush administration’s inability to act. The hurricane marked one of the deadliest natural disasters in American history, and its initial magnitude and subsequent flooding caught government officials at all levels totally unprepared. Nonetheless, it was President Bush that experienced the greatest political fallout (Malhotra and Kuo 2008). In the end, Bush’s own advisors came to see the event as a pivotal moment in which the president lost all credibility with the public.\footnote{As one Bush advisor later recounted, Hurricane Katrina “was the tipping point. The president broke his bond with the public. Once that bond was broken, he no longer had the capacity to talk to the American public.” Bush’s former communications director went so far as to insist that, “Politically, it [Katrina] was the final nail in the coffin” (Murphy and Purdum 2009).} Although reflecting failures at both local and national levels, criticism for the hurricane’s stunning destruction was directed overwhelmingly, and without delay, at President Bush.

If voters attribute blame to presidents for a disaster, as other works suggest (Malhotra and Kuo 2008; Gasper and Reeves 2011), then what accounts for the delayed reaction in response to the Deepwater Horizon oil spill? Compared to President Bush’s experiences with Hurricane Katrina, President Obama’s handling of the crisis did not receive widespread criticism until well after the initial incident. Some pundits went so far as to label the spill as Obama’s “Katrina Moment,” yet the explicit connection came over a month after the explosion. This noticeable delay highlights the need for a richer understanding as to how blame is attached to a specific individual or institution.

In addition to taking longer to develop, the spill’s negative effects were also less
Figure 1: Presidential and Congressional Approval Before and After the Spill

Presidential approval is displayed using a 3-day moving average, Congress is monthly. In addition to the polls, we identify pre and post spill periods (dashed vertical line). Source: Gallup.

pronounced than Hurricane Katrina. Indeed, as Figure 1 shows, both President Obama and Congress exhibit relatively stable approval levels during this period. Does this mean that Obama was unaffected by the spill, a story that led on the nightly news and topped headlines for much of the Summer? Is it fair to assume that the spill produced no effects simply because these aggregate trends exhibit little change? This flatness, we argue, obscures a considerable degree of heterogeneity,
both over time and within different segments of the population.

To tackle these questions about opinion shifts directly, we exploit a natural experiment in which roughly half of the General Social Survey’s (GSS) respondents were questioned before the April 20th spill, and the remainder interviewed in the following months. We can then examine how respondents differed in their perceptions of the president depending on when they were interviewed. Rather than looking at this crisis as simply pre and post-spill, we break the latter into two separate treatment periods in order to show how the crisis’ unfolding media coverage affected respondents in distinct ways.

Before going into greater depth about this identification strategy, we begin with a brief discussion of recent works on blame attribution and media influence, noting a relative lack of attention in the literature to issue applicability. We then examine coverage of the oil spill more closely to show how the media’s framing of the spill shifted over time, and how these alternative frames influenced public opinion in turn. Paying attention to the shifts in media coverage, we break the post-spill sample into two treatment periods: the Crisis Phase and the Politicized Phase. After addressing the spill’s reporting, we then briefly discuss the individual-level data and empirical design we use to test the study’s hypotheses. In the end, we find that presidential confidence does decrease, but this drop is only visible during the Politicized Phase when the media is explicitly targeting the president’s inaction. That is, effects only occurred after the media reframed the story of the spill as a failure by President

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2 Throughout this paper, we refer to the event, scandal, or disaster precipitating blame as an “issue” by which respondents use when evaluating the relevant actor or institution.
Obama to effectively take charge of the situation. Rather than blindly attributing blame to the president, respondents do not link the oil well disaster to the president until after the media makes the connection for them.

**Blame Attribution and the Media**

In analyzing the media’s response to the oil spill, this study speaks to both the long-standing literature on media effects as well as more recent work on blame attribution. We unite these works in studying the process by which blame is linked to political figures through the national media environment.\(^3\) By focusing on temporal variation in the disaster’s applicability to President Obama, we can examine how the media communicates blame to the public, and thus attaches responsibility to a given target. Although some studies have used exogenous events to study blame attribution, none have examined shifts in news coverage to examine the media’s role in this process.

In recent work on natural disasters, for instance, Gasper and Reeves (2011) find that electorates punish presidents for severe weather damage, but the gains attributed to a timely response of disaster aid greatly exceeds this punishment. While Gasper and Reeves posit media as a potential mechanism for how the public gains the necessary information, they do not explicitly explore how media coverage connects governmental relief, or lack thereof, to a respective politician. The literature on media effects helps provide an answer to this important mechanism.

Over five decades after Klapper (Klapper 1960) declared that the media had\(^3\) For recent experimental work on blame attribution, see Malhotra and Kuo’s 2008 study of Hurricane Katrina.

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minimal effects on political choice, few students of the media would accept this reductionist view. A long line of research has sought to revise this original claim in favor of a more nuanced account that conceives of the media’s influence not necessarily as persuading, but as agenda-setting, priming, and framing of an issue (Iyengar and Simon, 1993). The media has a powerful influence over which issues citizens think are important (agenda-setting), what issues citizens use to judge politicians (priming), and how citizens think about issues (framing) (Iyengar et al., 1982, 1984; Krosnick and Kinder, 1990). Valuable accounts of these effects have come from experimental tests, macro stories of media coverage, and quasi-experimental studies alike.

In early experimental work, Iyengar et al. (1982, 1984) demonstrated the existence of priming effects, but only recently have more nuanced experimental tests been able to parse out the underlying cognitive mechanisms by which priming occurs. Building off notions of accessibility from earlier cognitive science work (e.g. Tversky and Kahneman (1973)), these more recent accounts have modified it in developing a more solid micro foundation. For instance, Miller and Krosnick (2000) argue that unlike previous accounts, citizens are not mere “victims” of the media, and that attitude change is moderated by trust in the media and political knowledge. That is, citizens with high levels of trust in the media and high political knowledge are more likely to exhibit priming effects. Furthermore, they find that while accessibility and agenda-setting are thought to be mediators of the effects of priming, accessibility has little influence on the weight people placed on an issue when making judgments of the president. Drawing on these experimental works, others have attempted to test
how the media affects evaluations of governmental officials in response to real-world events. As Table 1 shows, many of these published works have focused on relatively narrow types of events, only a few of which are exogenous shocks. Moreover, in every empirical example in the table, the priming link between an issue and its referent politician is closely tied from the outset.

Table 1: Existing Observational Work on Media Priming

<table>
<thead>
<tr>
<th>Article</th>
<th>Exogenous Event</th>
<th>Variation in Applicability</th>
<th>Respondent Characteristics</th>
<th>Empirical Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Druckman et al. (2004)</td>
<td>X</td>
<td></td>
<td></td>
<td>Nixon Re-election Campaign (1972)</td>
</tr>
</tbody>
</table>

One recurring problem with the studies of media effects and blame from Table 1 is that all the events are inherently political, or at least have a close political link. These works are unable to answer questions about how issues are connected to politicians, and if so, how such an association drives evaluations. Stoker (1993) discusses revelations of Gary Hart’s extramarital affair, which although unexpected, is inherently connected to Hart from the outset. While Druckman et al. (2004) examine how Nixon varied the presentation of different issues and character traits over the course of a campaign, this variance is not exogenous. Indeed, as Druckman and his coauthors convincingly show, the issues and character traits were chosen strategically by Nixon’s campaign. Malhotra and Kuo (2008) provide the best test
of blame attribution so far, utilizing a survey experiment after Hurricane Katrina. They examine how party and other cues affect blame placement on a wide range of political officials, conditional on the actors’ ties to the disaster. The authors do not, however, examine how this link is generated by the events themselves.

Building on Althaus and Kim’s recent reexamination of public opinion from the Gulf War, we argue that changes in issue applicability, driven in large part by media framing, underpin processes of blame attribution. As Althaus and Kim demonstrate, support for offensive force, troop deployment, and evaluations of handling of the Persian Gulf crisis all had differential effects on evaluations of President Bush. That is, if it were mere accessibility and the news dosage prompts a priming response, they would have the same effects. However, how closely related (applicable) the issues are to the president matter greatly in their effect on approval. Still, Althaus and Kim’s work only examines how a cluster of related attitudes vary in applicability according to respondents. The applicability of the events themselves are not exogenously manipulated.

In order to understand how some issues become applicable to political figures, and why the public attaches blame to the target, we must look to the content of the media itself. Zaller (1992) separates media coverage into having two types of effects: mainstream and polarization. Mainstream effects occur when there is elite consensus on an issue and a unified message through all media channels, while polarization effects occur when elites disagree and individuals respond in a manner consistent with their already formed partisan views. This distinction is important for many of these media effects, since the tone and distribution of coverage should govern who
and in which direction someone is affected by the news. Furthermore, if the media is relatively united in its message, and the issue is a valence issue (Stokes 1963), then we should expect blame attribution to occur uniformly. However, if a polarized message is dominant in the media, then partisanship will moderate the response to this message.

But what if the political target is not immediately implicated? We demonstrate here that without the link clearly articulated by the media, voters will not apply the salient information in their evaluations of a political target, namely the US President. Using the Deepwater Horizon oil spill during the Summer of 2010, we examine this process more explicitly by exploiting the different periods of news coverage, specifically the shift from a mainstream message blaming BP for the disaster to a more divisive framing of the spill as a politicized issue of presidential accountability.

Tracking Media Coverage During the Spill

In the following section, we lay out the timeline of the significant events of the Deepwater Horizon oil spill, paying particular attention to when the media shifted its frame from a factual reporting of events, to a story of the president failing to lead. To precisely define our media treatment effects, it is crucial that we analyze the news coverage in a qualitatively rich manner, while also capturing the general reporting trends. To that end, we employed content analysis to identify common themes, and surveyed multiple news-related search engines to generate a fuller image of how the media treated the spill as a whole.
The Deepwater Horizon Crisis

On April 20th, 2010, a massive explosion crippled the Deepwater Horizon drilling rig 50 miles off the Louisiana shore, killing eleven and wounding seventeen. At first the story was reported as a drilling mishap, but with the blowout preventer failing to activate, many quickly became concerned that a potentially large oil spill could result. The well was found to be leaking on April 24th, but it was not until April 28th that the leak’s true spill rate was fully appreciated as being five times greater than first estimated. President Obama finally stepped into the fray, and the story loomed large in national newspapers. In his first public comments on the issue on April 29th, President Obama pledged “every single available resource” to help stop the leak and prevent the spread of oil, also noting that BP would be held responsible for the cleanup.

In ten days the issue had come to dominate the front page of nearly every newspaper. The coverage was primarily focused on the facts of the spill: uncertainty about the damage, the true cost of the cleanup, and which corporate entity deserved the blame. The issue had ballooned to a large media focus not because of its political usefulness but because it was a crisis that had the potential to cripple the economies of multiple Gulf Coast states and cause significant environmental damage. With few exceptions, the media coverage of the oil spill during this period, the “Crisis Phase,” was focused on the need for an end to the spill and a swift cleanup.

4 See the Guardian’s interactive timeline for a good summary of the events of the summer: http://www.guardian.co.uk/environment/interactive/2010/jul/08/bp-oil-spill-timeline-interactive, Guardian (2010).
While some pundits attempted to attach political blame, the Obama administration’s responsibility for stopping the spill, let alone blame for the explosion, did not receive widespread coverage in the first month. Unlike the federal response to Katrina, the government’s role in the Deepwater Horizon disaster was secondary to BP’s initial response and cleanup operations. That is, the link of the spill to a political or governmental target was not inherent in the event itself - the natural link was to blame BP.

The Politicization of the Oil Spill

On May 26th, BP attempted a “top kill” operation, or pumping in mud in an attempt to plug the leak. In the days following, news coverage of the spill turned suddenly with two events. First, the top kill operation failed to plug the leak, essentially guaranteeing that oil would continue leaking for the foreseeable future. Second, this setback occurred nearly simultaneously with a White House leak that quoted President Obama as venting frustration in a staff briefing weeks earlier with a stern command to “Plug the damn hole.” Using Google News stories, Figure 2 shows how these two events precipitated a sharp rise in news coverage during the “Politicized Phase” of the spill.5

5 This shift in news coverage is quite clear in other sources, as well. Appendix 7 shows the number of newspaper stories indexed by Lexis Nexis, which excludes the online content indexed by Google News, and demonstrates a similar pattern. Because Google News changed their algorithm for grouping similar stores in Summer 2011, we also include Appendix 8 which was accessed in August 2011, and generally includes fewer stories due to more strict duplicate filtering. While the magnitudes of the coverage differ slightly, they all demonstrate the clear spike in news coverage
Figure 2: Google News Stories and Phases of Media Coverage

The two lines depict the number news stories indexed in Google News according to two sets of search terms: all general citations of the BP oil spill (in black), and only those stories that explicitly mention the oil spill and Obama (in gray). Source: Google News. Accessed April 2011. Weekends and Memorial Day (May 31st) removed. Google News changed their grouping algorithm that clusters similar stories in Summer 2011. Figures using the new grouping algorithm can be seen in the Appendix.

More importantly, what originally had been a mostly factual story in the previous month quickly took on several different dimensions in terms of both content and frame. Elites were no longer unified on the message, as they were during the linking BP and President Obama in late May 2010.
“Crisis Phase.” While congressional Democrats continued to blame BP and defend the president’s handling of the spill, Republicans by contrast depicted Obama as failing to lead and allowing BP to flounder with the cleanup. This new period was characterized by several events that further spurred partisan conflict, most notably Joe Barton’s (R-TX) apology for the “shakedown” of BP in a congressional hearing on June 17th.

In addition to changes in print and online coverage, we also see a sharp shift in how opinion leaders perceived the event during the Politicized Phase. Looking at the number of editorials in US newspapers, Figure 3 demonstrates a similar pattern where, once again, the number of articles mentioning both “BP” and “Obama” increases in the end of May, and then continues throughout June. After top kill’s failure, discussion on how this disaster might affect President Obama became far more common. As Douglas Brinkley noted on CNN’s American Morning show on May 27th,

“I do think the danger for the Obama administration, if this doesn’t get capped within 48 hours, this well, you’re going to hear a lot of these Katrina language because it’s a feeling of helplessness that’s growing on the Gulf. People aren’t sleeping. People are having Katrina nightmares and the whole region is having a second wave of being traumatized. And they’re looking to blame people. BP has been hammered for a month. The beginning of the new hammering of the Obama administration is upon us right now.”

In order to more rigorously examine how the editorial tone shifted over the Summer of 2010, we collected a sample of editorials that contained both the words “BP” and “Obama.”® After removing irrelevant articles the sample consists of 136 pieces

® Sample frame included all editorials that appeared in the top ten newspapers by circulation.
The three lines depict the number of US editorials indexed in Lexis Nexis according to three sets of search terms: all mentions of BP (in black), those editorials mentioning Obama (the top line in light gray) and only those editorials that explicitly mention BP and Obama (in dark gray). Source: Lexis Nexis. Accessed August 2011. Weekends and Memorial Day (May 31st) removed.


An article was deemed irrelevant if it did not contain a complete statement about the oil
focused on attributing responsibility for the original spill, 62 focused on the spill’s cleanup and capping the well, while 46 articles focused on discussing broader environmental policy. After an initial emphasis on responsibility for the explosion and subsequent spill, the editorial pages began to focus more on issues regarding cleanup, and then eventually turning to arguments for and against stricter environmental regulations.

Table 2: Editorial Blame Placement

<table>
<thead>
<tr>
<th></th>
<th>Blame for the Spill</th>
<th>Blame for the Cleanup</th>
<th>“Could Do More”</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP</td>
<td>76.5%</td>
<td>63.2%</td>
<td>53.7%</td>
</tr>
<tr>
<td>Obama</td>
<td>4.4%</td>
<td>38.2%</td>
<td>59.6%</td>
</tr>
<tr>
<td>Government</td>
<td>18.4%</td>
<td>32.4%</td>
<td>48.5%</td>
</tr>
</tbody>
</table>

These figures show who received criticism during the crisis based on editorials published during the spill (n=136).

As Table 2 shows, few editorials blamed President Obama for the initial oil spill. However, with the spill continuing to leak oil and several efforts at cleanup having failed, the coverage shifted and began to place blame on President Obama for the slow cleanup process. This delay in politicization is likely due to several factors. The first is strategic uncertainty on the part of Republicans. To blame Obama early on spill. For instance, some articles were merely recaps of issues currently on the political agenda, listing the BP oil spill as one, without substantively discussing it. A number of recording units were measured, including if statements placed blame for either the spill itself or the cleanup on BP, Obama, or other political actors. Furthermore, the main topic of the article was recorded, as well as whether analogies to other environmental disasters occurred. Basic counts of the editorials by month and newspaper can be seen in Appendix 7.
was a risky gamble in the event of a successful and quick end to the oil spill, for which Obama could claim credit. Once it was clear the top kill operation had failed, the political floodgates opened. Alternatively, it was simply a question of involvement. Government support for BP-led cleanup operations was relatively quick to begin, but until late May the issue of government participation in the cleanup had not been overtly politicized, with BP largely taking the lead in the spill cleanup. Whatever the source of the shift in the media’s framing of the story, the coverage quickly moved from a unified message blaming BP, to one of divided political blame - a fact reflected in individual-level assessments of Obama.

**Measuring Opinion Shifts During the Spill**

To test our theory of delayed applicability, we exploit a natural experiment much like Krosnick and Kinder’s ANES study of the Iran-Contra scandal. Yet, unlike Reagan and Iran-Contra, the immediate revelation of the spill was not politicized along partisan lines. Indeed, as the left panel of Figure 4 suggests, popular support for the president appears very stable when respondents are grouped as being interviewed either before or after the spill. The panel on the right, however, shows how different this simple comparison looks when the post-spill period is divided into the two media phases. Even at this level of generality, we begin to see the emergence of marked differences in presidential confidence. To unpack these trends further, we use the GSS 2010 to examine how individual characteristics moderate the effects of the disaster.

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8 These differences are more striking when broken into different subgroups, see Appendix 9.
Using the GSS data, the figure on the left shows how respondents differ when divided by pre and post-spill interview dates. The figure on the right, by contrast, groups post-spill respondents into two separate treatment periods based on when they were interviewed.

**GSS 2010**

The shifting media frames during the BP oil spill provide a rare opportunity to test how an issue becomes attached to a political target. Moreover, with fine-grained survey data, we can examine how the spill affects respondents conditional on specific individual characteristics. To capture these individual effects, we use the 2010 General Social Survey (GSS) which happened to be in the field when the Deepwater Horizon exploded. The survey interviewed roughly half the sample before the explosion, and half afterwards. On face value, this division bodes well for a natural experiment. Unfortunately, the GSS’s design poses a number of concerns owing to its sampling procedure and multi-ballot structure.

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9 The GSS is a nationally representative survey that tracks public opinion on a variety of subjects ranging from religious views to drug use. Interviewers conduct the study in person and, because of
2000 respondents, the GSS does not ask every question of all individuals. To save on time and maximize the number of topics covered, the survey is broken into three separate “ballots.” Core demographic variables are asked on all versions, but many specific issues are on only two of the three ballots. Consequently, instead of working with the full GSS sample, the portion that includes both the outcomes and relevant covariates is just over 1300 respondents.

Though primarily interested in measuring presidential effects, we consider two other outcome variables as well. First, we examine views of Congress to serve as a placebo test as to whether contemporaneous events are affecting confidence in the President. Our media framing story posits that, among government institutions, only the President should experience political fallout due to the oil spill. Studying Congress, then, allows for a check of both exogenous events and the theory as it stands. In addition to evaluations of governmental institutions, we also include a question probing the respondent’s satisfaction with their personal financial situation. With the economy shedding jobs over this period, it is possible that economic per-

the numerous questions, each survey can last more than an hour. Given these resource constraints, the GSS uses place proportional sampling to construct a nationally representative sample. The GSS consists of roughly 100 locations intended to approximate the views of small towns, medium-sized counties, and large metropolitan areas. The target households are provided to interviewers on a weekly basis, which helps ensure that there is no correlation between time and any demographic or response-related variables. For more information on this, see http://www.norc.org/GSS+Website/. These confidence variables begin with the interviewer stating, “I am going to name some institutions in this country. As far as the people running these institutions are concerned, would you say you have a great deal of confidence, only some confidence, or hardly any confidence at all in them?”
ceptions could be driving down confidence in the president. Though by no means the best measure of macroeconomic evaluations, using this question as a proxy offers considerable insight into the respondent’s economic views.

In terms of additional covariates, we include traditional demographics as well as a question on media confidence. The basic controls account for sex, race, years of education, and party identification. Because these controls are part of the “core” questions of the GSS, we do not lose any additional data as a result of the multiple ballot system. We also use a regional dummy we termed “gulf” in the hopes of addressing any issues related to proximity to the spill.\textsuperscript{11} Lastly, as a theory of shifts in media coverage, it is paramount that matched individuals are exchangeable in terms of how they interact with the media. This question of media influence is contingent upon two factors: susceptibility and exposure. As \textbf{Miller and Krosnick}\textsuperscript{(2000)} demonstrated using lab experiments, confidence or trust in the media is an important factor that moderates the individual’s susceptibility to news coverage. By balancing on the individual’s level of confidence in the press, the model should provide a better match in terms of comparing treated and control units that are similarly vulnerable to media effects.\textsuperscript{12}

\textsuperscript{11} Instead of coding each individual’s state, let alone district, the GSS 2010 file groups respondents according to 13 different regional blocks.

\textsuperscript{12} The media confidence question is found on the same two ballots as the outcome variables. In other words, we do not lose any additional data by including this term.
Matching Design

The Deepwater Horizon explosion was undoubtedly an event that no one predicted, but do the data justify the assumptions necessary for treating the incident as a pure natural experiment? If there is any significant imbalance between the treatment groups, then analyzing pre and post support levels at the aggregate level would be a gross oversimplification. Furthermore, if the spill’s effects are conditional on respondent characteristics, such as party ID or knowledge, then we might overlook important heterogeneity within these temporal groupings. To maintain the integrity of the individual-level data, and recognizing that the respondent’s traits cannot be simply controlled for, we turn to “matching” as a non-parametric alternative to regression (Rosenbaum and Rubin, 1983).

Matching takes two units, one that received treatment, $T_i = 1$, and one in control, $T_i = 0$, and finds the difference in the measured outcome. The central concern is whether the individual units are appropriately matched such that the two can be considered exchangeable. To approximate this exchangeability, observations are often matched according to a unit’s propensity to receive treatment conditional on its unique set of covariate values. While propensity score matching has its advantages over regression, it can generate misleading results if the propensity score model is wrong or incomplete. Rather than selecting matches using the propensity score alone, in Appendix 10 we present the pre-matching balance plots of the densities for important covariates. For the most part, the GSS’s sampling procedure appears to have produced two fairly representative groups. There does, however, seem to be more Democrats in the control group, which could certainly produce bias in finding a spill effect. This concern further underscores the need for post-experimental adjustment.

13 In Appendix 10 we present the pre-matching balance plots of the densities for important covariates. For the most part, the GSS’s sampling procedure appears to have produced two fairly representative groups. There does, however, seem to be more Democrats in the control group, which could certainly produce bias in finding a spill effect. This concern further underscores the need for post-experimental adjustment.
matching designs can be significantly improved by including the set of covariates used to compute the pscore. One such program, GenMatch, offers a potential improvement to propensity score matching by using a genetic search algorithm that selects the best individual weights for each of the covariates (Diamond and Sekhon 2006; Sekhon and Mebane Jr 2011). By generating a unique set of weights for each variable, GenMatch constructs a matched data set that maximizes covariate balance across the two groups.\footnote{While we considered alternative loss functions, such as only those that monotonically improve balance, we preferred the balance generated by the standard algorithm.}

By matching post-spill observations to pre-spill controls, we recover the individual-level effect of being exposed to treatment. Compared to previous studies of media influence, this design does not simply examine aggregate effects before and after an event. While some have made attempts to divide pre and post samples according to party identification (Krosnick and Kinder 1990), matching allows for a more precise causal effect by balancing on relevant covariates, rather than roughly stratifying by group.

Hypotheses

By analyzing these media phases separately, and interacting them with individual characteristics of the respondent, we can test a number of hypotheses regarding the treatment effects associated with each of the spill’s media phases.\footnote{Again, treatment assignment is simply determined by when the respondent was interviewed. If the interview was conducted before April 20th, the date of the explosion, then the unit is part of the control group. All interviews between the explosion and May 27th, when the media increasingly...} First, we expect
that presidential confidence will significantly decrease in the Politicized Phase, but not in the Crisis Phase. This should occur because of the change in how the story is framed - from one of mainstream agreement on blaming BP, to a politicized story in which President Obama is seen as accountable.

**H1: Politicizing the president.** Compared to control units, respondents from the second treatment group, the Politicized Phase, will be less supportive of the president. Respondents from the Crisis Phase, however, should not differ significantly from the controls.

Second, as a placebo test, we expect that confidence in Congress will not significantly change across treatment groups. While Congress did conduct investigations into the spill, the politicized coverage focused on President Obama, and therefore we expect no change in confidence ascribed to Congress.

**H2: Stability in congressional confidence.** Neither treatment group will differ significantly from the controls in terms of how they view Congress.

In addition to exhibiting no influence on congressional confidence, we would expect treatment (when a subject was interviewed) to have no effect on individual perceptions of the economy. While having nothing to do with the oil spill, the presence of such an effect would be very problematic as it could explain a drop in presidential confidence. To rule out an economic story, we expect to find no change in an individual’s self-assessment of their economic status.

**H3: Stability in economic perceptions.** Neither treatment group will differ significantly from the controls in terms of how they view their own financial

turns its attention to the White House, are considered part of treatment one, the Crisis Phase. Any respondent surveyed after this date is placed in treatment period two, the Politicized Phase. 

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status.

Fourth, we hypothesize that those who have expressed confidence in the media will be more responsive to the shift in news coverage, and thus more likely to exhibit a decline in presidential confidence during the Politicized Phase (Miller and Krosnick, 2000). Specifically, those that trust the media to report the news accurately are more likely to consider media accounts when making political evaluations.

**H4: Trust and influence.** Individuals who self-describe as having “High Media Confidence” are more likely to express lower support for the president during the Politicized Phase.

Fifth, we also expect that strong partisans will respond differently to the change in news coverage. As Zaller (1992) argues, strong partisans are less likely to shift from their original predisposition towards the president, as they will either discount or ignore news that does not fit with their preexisting beliefs. Therefore, we expect that the greatest movement in presidential confidence will occur among true independents (i.e. those respondents who lean neither Democrat nor Republican).

**H5: Partisan predispositions.** Individuals who self-describe as Pure Independents will exhibit the largest drop in presidential confidence during the Politicized Phase.

**Results**

In order to show that early coverage of the spill did not hurt President Obama’s standing, we begin by examining differences in presidential confidence among control units and those interviewed during the Crisis Phase. To demonstrate the negative
effects in later periods of the spill, we then match control units to respondents from the Politicized Phase. Given the politicized media coverage, we expect individuals to respond more negatively to the president. Furthermore, with the executive branch taking the brunt of the attack, we should find null effects for both congressional confidence and personal financial satisfaction measures.

From there, we further analyze different subgroups within the sample to understand which groups are driving these trends. Given sample limitations, it can be difficult to draw firm inferences from these small subsamples. That said, the subgroup analysis supports the notion that the change in spill coverage produced distinct, heterogeneous treatment effects conditional on partisanship and media susceptibility. Lastly, to demonstrate the robustness of the findings, we consider several alternative empirical approaches that yield nearly identical estimates.

**Crisis Effects**

Rather than confining the analysis to the Politicized Phase alone, we begin our quantitative study by examining confidence levels during the Crisis Phase. In addition to presidential confidence, we consider changes in congressional approval, as well as the individual’s own financial satisfaction. Neither the president nor Congress should experience any political fallout during this phase of media coverage.

Before turning to the results, Figure 5 presents the balance between the control and treated units. Prior to matching, the control and treated units were mostly balanced on the demographic covariates, suggesting that the GSS’s sample is quite good at generating a sample that looks consistent across interview dates. Nonethe-
GenMatch balance results during the Crisis Phase. The blue circles and triangles denote the results of a t-test of the means of the treated and control units. The red icons present Kolmogorov-Smirnov (KS) Tests of the distributions of the paired groups.

less, a few covariates, such as the respondent’s race and trust in the media, do appear quite different across the control and Crisis Phase. Using GenMatch, we significantly reduced the discrepancies for these variables. This latter covariate is particularly important to the story of media susceptibility. For instance, if a treated respondent is suspicious of the media, and thus less likely to shift with the changing coverage, then matching them to a control who is trustful of the media could bias the results downward.\footnote{Similarly, a suspicious control matched to a trusting treated unit would bias the effects up.} While generally successful, the matching process did not diminish the
distributional differences of the “education” covariate. This result is troubling, but oftentimes an inevitable consequence of ensuring that other covariates are improved.

Table 3: Crisis Phase Results

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>SE</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidential Confidence</td>
<td>0.0399</td>
<td>0.0474</td>
<td>0.4106</td>
</tr>
<tr>
<td>Congressional Confidence</td>
<td>0.0190</td>
<td>0.0459</td>
<td>0.6793</td>
</tr>
<tr>
<td>Financial Status</td>
<td>0.0478</td>
<td>0.0545</td>
<td>0.3805</td>
</tr>
</tbody>
</table>

Number of observations 1031
Number of treated observations 463
Matched number of observations 463

Average treatment effects for the treated units (ATT) during the Crisis Phase.

As Table 3 shows, confidence in government was unaffected by the spill. When compared to control units from the pre-spill period, respondents interviewed during the Crisis Phase exhibited no statistical difference in terms of expressed confidence levels. This finding is consistent with the media’s relatively un politicized coverage of the event. With the disaster still seen as a technical failure on the part of BP, media and partisan elites had yet to frame the spill’s continuing problems as a failure to lead by the president. Hence, this statistically insignificant finding for presidential confidence is encouraging for our theory. Confidence in the legislative branch, like the presidential measure, appears stable in this period. Moreover, the respondent’s financial satisfaction fails to register any significant changes as well. Though less relevant to this treatment phase, it is encouraging to see that these alternative outcome measures are similarly unrelated to the spill during this initial treatment period.

This “media” covariate is essential to ensure the most accurate matches.
Politicized Effects

To test whether the media’s reframing of the story influenced approval of Obama, we now compare the control units to treated units in the Politicized Phase. Like the balance in Figure 5, differences between the pre-spill and Politicized Phase are relatively minimal to start. Yet unlike the earlier matches, GenMatch improved the balance for every covariate in Figure 6. Most importantly, matching improved the education variable and the regional indicator.

Figure 6: Politicized Phase Balance

GenMatch balance results during the Politicized Phase. The blue circles and triangles denote the results of a t-test of the means of the treated and control units. The red icons present Kolmogorov-Smirnov (KS) Tests of the distributions of the paired groups.
Moving onto the Politicized Phase results in Table 4, we find that the treated units are far more critical of the executive branch than their pre-spill counterparts. Unlike individuals from the Crisis Phase, when the media had yet to attribute blame to Obama, respondents from later in the Summer were much more negative of the president. With media coverage shifting its focus to Obama’s failures to lead, the once technical, factual frame had given way to a much more politicized story characterized by partisan acrimony and accusations of blame.

Table 4: Politicized Phase Results

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>SE</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidential Confidence</td>
<td>-0.1229*</td>
<td>0.0584</td>
<td>0.0353</td>
</tr>
<tr>
<td>Congressional Confidence</td>
<td>-0.0469</td>
<td>0.0500</td>
<td>0.3481</td>
</tr>
<tr>
<td>Financial Status</td>
<td>-0.0373</td>
<td>0.0637</td>
<td>0.5580</td>
</tr>
<tr>
<td>Number of observations</td>
<td>847</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of treated observations</td>
<td>279</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matched number of observations</td>
<td>279</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ATT effects during the Politicized Phase. * indicates significance at $p < 0.05$

While it is certainly possible that other factors may be driving this trend, we find no effects for either of our alternative dependent variables: congressional confidence and personal financial status. Consistent with our theory of presidential blame attribution, respondents from the Politicized Phase exhibit no noticeable change in their perception of Congress. Furthermore, we do not find that respondents from late in the Summer are any more unsatisfied with their financial status. Though far from perfect, this measure casts doubt on the notion that economic evaluations underly
the drop in presidential confidence.\(^{17}\)

### Subgroup Analysis During the Politicized Phase

To further explore which groups shifted their perceptions of Obama, Table 5 reports the Politicized Phase results when the respondents are divided into four subgroups: Democrats, Republicans, Independents, and those expressing High Media Confidence.\(^{18}\)

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>p-value</th>
<th># Treated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democratic Identifiers</td>
<td>-0.1341†</td>
<td>0.0994</td>
<td>118</td>
</tr>
<tr>
<td>Republican Identifiers</td>
<td>0.1024</td>
<td>0.2666</td>
<td>96</td>
</tr>
<tr>
<td>Pure Independents</td>
<td>-0.2808*</td>
<td>0.0148</td>
<td>57</td>
</tr>
<tr>
<td>High Media Confidence</td>
<td>-0.1395*</td>
<td>0.0369</td>
<td>159</td>
</tr>
</tbody>
</table>

Presidential treatment effects among different partisan groups and confidence levels. † significant at \(p < .10\); * indicates significance at \(p < 0.05\).

From a partisan vantage, it appears that much of the movement is occurring among Independents and Democrats.\(^{19}\) The Democratic drop in confidence is on

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\(^{17}\) In addition to treating financial satisfaction as an outcome variable, we also use this economic indicator as a covariate in the propensity score model. Even after matching on the respondent’s economic perceptions, the presidential effects are substantively and statistically significant.

\(^{18}\) The subgroup results were obtained by re-running GenMatch on each of the separate groups. The last group, High Media Confidence, excludes any respondent who gave the lowest possible score when asked about their confidence in the press. To see balance figures for each of these subgroups, see Appendix 11.

\(^{19}\) Respondents who admitted to lean towards a party were grouped along partisan lines. Pure
par with the overall effect, but whether these effects translate into lower vote share is a very different question. Democrats can lose confidence in their president, as the findings suggest, without necessarily breaking from their party. Indeed, having started the time series much higher, this drop reflects, in a sense, a regression to the mean. The much discussed independent voter, on the other hand, is a very different matter. Despite a small sample, the Pure Independents registered a huge drop in support over the course of the spill - more than twice the size of the Democrats. With no partisan allegiances tying them down, Independents are less likely to engage in motivated reasoning, and thus more likely to shift with the politicized media coverage.

Among the partisan subgroups, Republican identifiers are the only ones to not exhibit a significant and negative drop. Given the dependent variable’s minimal range (1-3), it is likely that floor effects have reduced the potential degree of variability. This censoring is particularly problematic for Republican respondents, many of whom would have expressed higher levels of dissatisfaction. Indeed, on a scale of one to three, the mean level of pre-spill support among Republicans was around 1.5, meaning that confidence in the executive had really no where to go but up.

The final subgroup we consider are those respondents who exhibit medium to high levels of confidence in the press. By excluding units with low levels of confidence, we narrow our question of media influence to those individuals most likely to modify their position once the coverage begins assessing blame in the Politicized Phase. As hypothesized, this subgroup is substantially influenced by the politicized media environment. For nearly every subgroup, we failed to find significant results

Independents are only those individuals who claimed that they did not support any party.
in the alternative outcome measures. Given these null findings, it is unlikely that economic evaluations are driving these subgroup results.

Robustness Checks

To confirm the robustness of these findings, we employed several alternative approaches for studying the Politicized Phase. First, to demonstrate that the conclusions were not model-dependent, we analyzed these data using numerous matching designs that included additional covariates. Second, we tested these same models using simple ordinary least squares (OLS). Third, we bolstered the initial OLS model by including the GSS’s own survey weights. In each case, we consistently arrived at the same results, and are thus confident in the paper’s findings.

Alternative matching specifications. As a first step in validating the GenMatch results, we abandoned the present, more parsimonious model in favor of a series of more saturated versions. Given our interest in the effects of media coverage, it is only natural to include additional news related variables. Building on the existing propensity score model, these new specifications include variables regarding the frequency with which the respondent reads a newspaper and watches television. To treat individuals who regularly read and watch the news as the same as those who do not could potentially obscure important distinctions. Different levels of political awareness, as Zaller (1992) asserts, have profound effects on the individual’s propensity to receive and accept a new message.

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20 Congressional confidence among Pure Independents is the only instance in which we find a statistically significant effect.
We also include two covariates that interact media confidence with newspaper readership and television hours. Previous work finds that individuals who are most attentive and trusting of the source are ultimately the most open to media influence (Zaller, 1992; Miller and Krosnick, 2000). By including these interaction terms, the model captures the combined effects of an individual who is both highly aware and susceptible to changes to the story’s frame - those respondents most likely to alter their appraisal of the president along with shifting coverage of the BP spill.

Unfortunately, because of the GSS’s multi-ballot structure, including these additional variables slashes the sample size in half. With the news variables and outcome measures found on different ballots, we can only use one ballot consisting of just under 700 respondents. More importantly, this now means that the treated units in the Politicized Phase are a mere 150 respondents, making subgroup analysis very difficult. Despite this drop, we repeatedly find Crisis and Politicized Phase results consistent with our more parsimonious model\(^{21}\).

**OLS and survey weighting.** For a more radical departure from the matching design, we reanalyzed the Politicized Phase using conventional regression analysis. Using the same covariates matched on earlier, Model 1 in Table 6 presents the results of a simple OLS model with presidential confidence as the dependent variable. The effect of treatment, or being in the Politicized Phase, is only a few hundredths different from the matching results. In Model 2, we include survey weights to accommodate for peculiarities associated with the GSS’s place proportional sampling.

\(^{21}\) Using the most saturated pscore model, we again find no effects for congressional confidence and a drop of $-0.2000$, significant at $p < 0.05$, in presidential confidence during the Politicized Phase.
As with Model 1, we find a treatment effect very similar to the matching results. Compared to the basic OLS results, the addition of survey weights in Model 2 seems to change little, aside from diminishing the effects of race.

Table 6: OLS and Survey Weights

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>0.65 * (0.11)</td>
<td>0.71 * (0.13)</td>
</tr>
<tr>
<td>treated</td>
<td>-0.10 * (0.04)</td>
<td>-0.11 * (0.05)</td>
</tr>
<tr>
<td>sex</td>
<td>-0.01 (0.04)</td>
<td>-0.03 (0.04)</td>
</tr>
<tr>
<td>educ</td>
<td>0.03 * (0.01)</td>
<td>0.03 * (0.01)</td>
</tr>
<tr>
<td>black</td>
<td>0.20 * (0.05)</td>
<td>0.12 † (0.07)</td>
</tr>
<tr>
<td>gulf</td>
<td>-0.06 (0.06)</td>
<td>-0.07 (0.07)</td>
</tr>
<tr>
<td>partyid</td>
<td>0.08 * (0.01)</td>
<td>0.09 * (0.01)</td>
</tr>
<tr>
<td>media</td>
<td>0.25 * (0.03)</td>
<td>0.23 * (0.04)</td>
</tr>
<tr>
<td>N</td>
<td>1310</td>
<td>1310</td>
</tr>
<tr>
<td>AIC</td>
<td>2610</td>
<td>2790</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
† significant at $p < .10$; * indicates significance at $p < 0.05$

Model 1 is a simple OLS regression with presidential confidence as the dependent variable. The second model includes GSS weights, wtssall. Model 2 was created using the R “survey” package.

Conclusion

By combining the delayed politicization of the spill with the fortuitous timing of the General Social Survey, this paper offers a unique test of media effects both over time and across different subgroups. Using the news data, we are able to separately examine two elements of the media’s influence - the sudden increase in salience of an

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22 The GSS weights, wtssall, came included with the publicly available download of the data.
event during the Crisis Phase, and the increased applicability to a political target, seen in the Politicized Phase. Only after the news coverage of the spill turned political do we find an effect on confidence in President Obama. As other works that use the GSS confidence questions attest, these outcome variables are very conservative measures that rarely change in any significant way. (Lipset and Schneider, 1987; Cook and Gronke, 2005) In other words, the very fact that we find significant results is a testament to the potency of the Politicized Phase’s treatment effect.

Our tests have several notable limitations, however. First, because the measure of confidence in the two target groups is coded on a three point scale, we do not have as fine-grained a measure as we would like. This creates floor and ceiling problems for strong partisans, likely decreasing the estimates of the effects we have. Given that many Republicans responded with zero confidence in the control period, they have no ability to articulate lower confidence, thus censoring where we might expect much of the polarization effect to occur. Indeed, this may explain why Democratic identifiers show a larger decline in confidence in the Politicized Phase.

Second, because the media’s content is driven by the events occurring in the real world, we cannot rule out the possibility that individuals are simply changing their minds in response to the factual events of the disaster. Individuals must learn of these events from some media source, which as the content analysis shows, report not only the facts of the oil spill, but the controversy over it as well. While different media sources clearly differ in the amount of blame they placed on President Obama, the coverage as a whole shifted between the Crisis and Politicized Phase. As the subgroup analysis in the results shows, those who had the highest confidence in the
media show strong negative effects on presidential confidence, suggesting that they are buying the media’s discussion of blame on President Obama.

Overall, our results bode well for the democratic competence of the American public. Whereas previous research suggests that any event, applicable or otherwise, can influence citizen’s perceptions of their leaders (Achen and Bartels 2004; Healy et al. 2010), we find that the Deepwater Horizon disaster was not inappropriately blamed on the incumbent president from the outset. Indeed, the public directs its attention to President Obama only after an extended media blitz on the issue’s connection to the executive branch. Without any clear link to President Obama, voters do not use the issue in evaluating the incumbent.

This study’s finding of a delayed effect highlights the theoretical importance of the inherently political nature of previously studied events. In addition to an event being accessible and prominent in the media, the issue must be politicized to be applicable when making judgments of political figures. The events of Summer 2010 and the lagged nature of the BP oil spill in the Gulf of Mexico provide a test of this applicability to political targets. Confidence in legislative branch serves as an important placebo test in this case, as Congress was not implicated in the BP oil spill, and therefore sees no decline in confidence. Furthermore, our results provide support for Miller and Krosnick’s 2000 theory that respondents with high confidence in the media are more likely to shift alongside changing media coverage. Likewise, those individuals with weak partisan identities, pure independents, experienced by far the largest movement in support. Though originally seen as an issue of corporate negligence, eventually the spill came to affect evaluations of President Obama once
media elites reframed the spill as a story of failed executive leadership in the months following the catastrophe.

References


Supporting Information

Figure 7: Lexis Nexis News Stories

The three lines depict the number of US newspaper stories indexed in Lexis Nexis according to three sets of search terms: all general citations of BP (in black), those stories mentioning Obama (in blue) and only those stories that explicitly mention BP and Obama (in red). Source: Lexis Nexis. Accessed August 2011. Weekends and Memorial Day (May 31st) removed.
Figure 8: Google News Stories - New Search Algorithm

The three lines depict the number news stories indexed in Google News according to three sets of search terms: all general citations of BP (in black), those stories mentioning Obama (in blue) and only those stories that explicitly mention BP and Obama (in red). Source: Google News. Accessed August 2011. Weekends and Memorial Day (May 31st) removed. Google News changed their grouping algorithm that clusters similar stories in Summer 2011.
Table 7: Newspaper Editorials by Month

<table>
<thead>
<tr>
<th>Newspaper</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Chicago Sun Times</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>The Chicago Tribune</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Daily News (New York)</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Los Angeles Times</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>San Jose Mercury News</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>The New York Post</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>The New York Times</td>
<td>1</td>
<td>18</td>
<td>20</td>
<td>4</td>
<td>3</td>
<td>46</td>
</tr>
<tr>
<td>The Wall Street Journal</td>
<td>3</td>
<td>10</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>The Washington Post</td>
<td>11</td>
<td>18</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>35</td>
</tr>
<tr>
<td>USA Today</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1</strong></td>
<td><strong>44</strong></td>
<td><strong>66</strong></td>
<td><strong>15</strong></td>
<td><strong>10</strong></td>
<td><strong>136</strong></td>
</tr>
</tbody>
</table>
Plots show the mean levels of presidential support for different subgroups over the course of the spill. The dependent variable is the GSS’s executive confidence question. T1 denotes the Crisis Phase, and T2 the Politicized Phase.
The above density plots compare treated and control groups on each variable used in the analysis. Treated units in this case are those observations from the Politicized Phase, the period with greater imbalance.
Figure 11: Subgroup Balance

Subgroup balance results for the politicized phase. Democratic respondents on the left, Republicans on the right.

Subgroup balance results for the politicized phase. Independent respondents on the left, High Confidence on the right.