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Following the Opinion Leaders?:  
The Dynamics of Influence among Media Opinion,  
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# Following the Opinion Leaders?: The Dynamics of Influence among Media Opinion, Politicians, and the Public

## Abstract

Media elites strive to shape the policy preferences of their audience through the publication of their opinions. Scholars, however, have not fully distilled whether the opinions communicated by media elites are successful in moving the public or politicians toward their preferred policy position, or whether media is responsive to these actors. This paper offers a means of assessing media influence. We provide measures of the policy preferences of two leading newspaper editorial pages, the *New York Times* and the *Wall Street Journal*, and we employ these scales in a dynamic time series analysis. We find that the announced positions of the media have minimal influence. Rather, we find evidence of a movable media, where media opinion shifts in response to changes in the policy positions of politicians.

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The media perform two critical democratic functions: they report the news, and they offer opinions. Scholars know a great deal about the influence of the media through news reporting. Indeed, the media are the principal source for much of what citizens know about the world, and what is reported and how the information is framed has implications for both the public and policy agendas. Considerably less, however, is known about the latter function, the influence of the media's opinions and commentary. Such commentary can take the shape of newspaper editorials and op-eds, radio talks shows, television programs, blogs, or otherwise. Conventional wisdom suggests the opinions circulated by media elites in such venues have important implications for both public opinion and public policy.

The opinion sections of newspapers and opinion programming offer media elites unique opportunities to persuade others. It is through such mediums that elites can voice their preferences openly and unabashedly with as much fervor as they deem appropriate. Unlike news reporting, where norms of objectivity and timeliness constrain producers and editors, opinion programming and op-ed pages offer elites discretion over the topics they cover and the position they announce. Media elites are at liberty to ignore certain policies or events entirely, even if these issues dominate the news; or alternatively, commenters can take up matters that have not solicited interest elsewhere (Vermeer 2002). Although Page (1996a) urged scholars to consider the implications of media opinion, scholars remain dubious over whether such opinions move their audience.

This paper addresses the role of media opinion, examining the extent to which the media's announced policy positions shape those of the public and policymakers.

We argue that the literature presents competing theoretical expectations over the direction of causal influence. Some work suggests that the media act as an independent intermediary, potentially moving their audience toward their preferred position; other literature suggests that the media are reactive, that politicians views can affect those presented on opinion pages. We then offer a method for indexing the policy positions of two recognized opinion leaders, the editorial pages of the *New York Times* and the *Wall Street Journal*. We employ these indices with comparable metrics for policymakers and the public in a time series analysis, unraveling the dynamics of influence among media opinion, the public, and policymakers. Rather than media acting as opinion leaders, our study finds evidence for a movable, reactive media.

## 1 The Influence of Biased Media

Media publishers and producers devote substantial time and resources to their opinion sections. In the public's mind, organizations such as Fox News are closely associated with their opinion programming, led by the likes of Bill O'Reilly, Glenn Beck, and Sean Hannity. Newspapers such as the *New York Times*, the *Wall Street Journal*, and the *Washington Post* have fostered reputations for the ideological perspectives voiced on their respective editorial pages. Although conventional wisdom suggests such commentary is critical to politics, the academic literature on this question is underdeveloped. To the extent that scholars have examined the influence of media opinion, much work surrounds a relatively narrow question: whether candidate endorsements by editorial pages matter for voters. Evidence sug-

gests that candidates endorsed on editorial pages enjoy a 1 to 5 percent increase in their vote share (Erikson 1976, Robinson 1974, Hollander 1979, Dalton, Beck & Huckfeldt 1992, Krebs 1998, Ansolabehere, Lessem & Snyder 2006), although Ladd & Lenz (2009) find that influence could be considerably larger. Exploiting a shift in editorial endorsement by several newspapers in Great Britain in 1997, the authors estimated that between 10 to 25 percent of voters altered their preference. Beyond endorsements, several recent studies observed that introducing citizens to media with an ideological reputation had an effect on political attitudes. According to DellaVigna & Kaplan (2007), the introduction of *Fox News* to a media market shifted voters preferences, benefiting the Republicans (DellaVigna & Kaplan 2007). The second study, utilizing a field experiment design, found that news readers' attitudes changed as a result of exposure to the *Washington Post* or the *Washington Times* (Gerber, Karlan & Bergan 2009). Barker & Lawrence (2006) found that exposure to conservative talk radio had implications for voters' decisions in the 2000 primary elections.

Empirical evidence suggests that opinions expressed in editorials capture the attention of politicians. For example, members of Congress are regular contributors to the letters to the editor page of major national newspapers. Examining the archives of the *New York Times* for four selected years—1985, 1989, 1993, and 2001—revealed that 239 letters to the editor were published by then-current members of Congress.<sup>1</sup> And perhaps the strongest evidence that editorials provoke reactions from policymakers comes from the statements made by members of Congress on the floors of

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<sup>1</sup>One year was selected from each presidential administration since Reagan. 68 letters were published by members of Congress in 1985; 65 in 1989; 61 in 1993; and 45 in 2001.

the House and Senate. Representatives and Senators referred to *NYT* and *WSJ* editorials 595 times over four selected years (1985, 1989, 1993, 2001) during their arguments, an impressive total given that Congress was in session for 600 days over that time.<sup>2</sup>

Studying media opinion is all the more consequential given emerging evidence that the bias in editorials may spill over into the news. Apparently, the “wall of separation” between the editorial pages and the news is not insurmountable. Druckman & Parkin (2005a, 2005b) explore campaign coverage from two newspapers operating in the same metropolitan area with distinct candidate endorsements, the *Minneapolis Star Tribune* and the *St. Paul Pioneer Press*.<sup>3</sup> The authors find that this endorsement decision had implications for how the candidates were covered by their respective newspapers in the news, and that this coverage mattered subsequently for voter evaluations. Kahn & Kenney (2002) reached similar conclusions in their study of over 60 Senate races, demonstrating that when the incumbent is endorsed, s/he receives more favorable coverage in the news, and subsequently, more favorable evaluations among citizens. Considering that opinions communicated on editorial pages may spill over to affect the news, media opinion should command more attention from scholars.

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<sup>2</sup>229 references occurred in 1985, 133 references in 1989, 155 in 1993, and 78 in 2001. Data were compiled using the archives of the *Congressional Record* found at LexisNexis Academic Universe.

<sup>3</sup>In the 2000 Senate election, the Tribune endorsed a candidate while the Pioneer Press did not.

## 1.1 An Adversarial or Reactive Media?

Media elites announce their policy positions with the intent of moving their audience. The philosophy statement of the *Wall Street Journal* reads “We often take sides on the major issues of politics and society, with a goal of moving policies or events in what we think is the best direction for the country and world.”<sup>4</sup> Benjamin Page (1996b) offers a more academic perspective: “Certain media outlets...actively work to shape political discourse to their own purposes” (116). Are media elites successful? The extant literature suggests that at least during times of elections, editorial pages influence voters. And as we have shown, politicians attend to opinions voiced by the media, which allows for the possibility of influence. Moreover, a large body of research on news effects suggests that the media can influence their audience through the framing or priming of issues, and that slanted news coverage can matter for consumers. We might expect, then, to see stronger effects when examining media opinion, where messages are crafted with the intent of driving the audience and where bias is the norm.

However, rather than an autonomous, adversarial media, the media may reflect the views and arguments of public officials. The theory of *indexing* stipulates that the opinions communicated by the media are not exogenous to those expressed by policymakers. First raised by Bennett (1990), the indexing literature finds that rather than media elites offering an independent and critical voice, both editorials and the news index the range of viewpoints to those advocated in official circles (Bennett, Lawrence & Livingston 2006, Cooke 2005). The media, then, are limited

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<sup>4</sup><http://www.opinionjournal.com/about/philosophy.html> Accessed February 2008.

in their ability to move politicians, given that politicians determine the relevant views on a given issue. Recent additional evidence points to a responsive media. Simon and Jerit (2007) find that the word choice of members of Congress on issue of the partial-birth abortion ban—that is, whether they used “fetus” or “baby”—drove the framing of the partial birth abortion ban in editorial and news coverage, and that this framing mattered for public attitudes toward the procedure. These studies suggest that the opinions communicated by the media are influenced by politicians, despite media elites desire to move their audience.

Taken together, the effect of media opinion on policymakers and the public remains uncertain. Some scholars have argued that the media serve as the fourth institution, and potentially move politicians and the public, both through news coverage and through opinion. Others have provided an alternative account of media opinion, where we might expect media are reactionary. These perspectives have not been adequately reconciled; they exist in part because scholars have failed to test whether media follow or lead. This is our aim. We focus on media opinion related to a broad constellation of policies over a prolonged time period. Our focus presents a novel test of influence, disentangling whether media are adversarial or reactive by looking for evidence of “macro influence,” the degree to which changes in the liberal/conservatism of the media matter for shifts in the liberal/conservatism of politicians and public opinion.

The exploration of aggregate, macro influence is advantageous for several reasons related to media studies.<sup>5</sup> Most of the literature on media influence focuses on specific

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<sup>5</sup>See Stimson 1999 and Erickson, MacKuen, & Stimson 2002 for a discussion of the value of “macro” research in studies of representation.

policies or sets of policies. While one should not discount the value of such exercises, it can be difficult to generalize from such findings to the broader relationship among media, politicians, and the public. Here, our focus is explicitly on this broader relationship. Similarly, if scholars find evidence of media influence over a limited time period, it is still dubious as to whether they play an important role in the political process across time. Moreover, cross-sectional research designs or limited panel designs raise concerns over endogeneity bias and reciprocal causality. That is, it is nearly impossible to disentangle the opinion relationship among media, politicians, and opinion using a cross-sectional research design, because the preferences of media may be endogenous to those of politicians.<sup>6</sup> Our analysis attenuates such concerns by adopting a longitudinal perspective, focusing on the effect of shifts in media preferences on changes in the policy preferences of politicians and the public over the past 60 years.

## 2 The Policy Positions of Two “Opinion Leaders”

Our study focuses on the influence of two opinion leaders, the *New York Times* and the *Wall Street Journal*. First, if media opinion influence is to be found, it is likely to stem from these prominent, widely-circulated newspapers that have dominated the political landscape for decades. Scholars have suggested that the views of newspapers such as the *Times* may trickle down to subnational newspapers (Woolley 2000).<sup>7</sup>

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<sup>6</sup>Due to such concerns over endogeneity, studies of the effect of the influence relationship among the public and policymakers have adopted a similar methodological approach (Stimson, MacKuen & Erikson 1995, Erikson, MacKuen & Stimson 2002).

<sup>7</sup>Woolley (2000) also notes that the empirical evidence for this theory remains lacking.

Hall Jamieson and Capella (2008) show that the positions communicated on the editorial pages of the *Wall Street Journal* have direct implications for the arguments disseminated by other conservative media, including Fox News programming and conservative radio. Such outlets rely on the messages communicated on editorial pages, so much so that we find evidence of an “echo chamber” among ideological media. Second, these pages espouse competing ideological perspectives, which allows for one to consider whether liberal or conservative thought has had greater influence on the public or policymakers. Finally, it may be that the ideological bent of outlets such as the *Times* and the *Journal* shift in similar ways over time. That is, the newspapers could maintain their respective ideological identities, but nonetheless grow more liberal or conservative in their policy positions over time. If true, then it could very well be that other media outlets show similar patterns in their ideological shifts.

To understand the views of the media and to subsequently model their influence, we develop a means of scaling the policy positions of the editorial pages, applying the rating scales of the Americans for Democratic Action (ADA). ADA scores have been used by congressional scholars to assess the liberalism/conservatism of individual legislators or of the chambers. Scholars have used ADA chamber medians to represent policy change, given that changes in the medians—the median member of the chamber becoming more liberal or conservative—translates to more liberal or conservative public policy. I take advantage of the ADA metric to construct measures of the policy positions of the *New York Times* and *Wall Street Journal* editorial pages, as described in the sections that follow.

These ADA ratings have particular value in the study of media opinion influence. First, they reflect the policy positions of the newspapers on a broad constellation of public policies ranging from national defense to education to social welfare. Related, the votes used each year by the ADA are typically the most pressing policy decisions facing politicians. For one to claim that the media are important in the policy process, it should over such votes. Second, we know that ADA ratings are a valid reflection of the policy preferences of members of Congress. These ratings are highly correlated (i.e. .95 or higher) with measures constructed using all votes in Congress, such as NOMINATE (Groseclose, Levitt & Snyder 1999). In other words, the ADA scales are general measures of ideology—they are generalizable beyond the specific votes used to construct the ratings. Thus although we have information on the newspapers' preferences on roughly 20 votes or less each year, we can assume that the liberal/conservativeness of the newspaper's ADA rating reflects the liberal/conservatism of all editorials written by these outlets.<sup>8</sup> Finally, as we will show, ADA ratings for the *Times* and the *Journal* can be used along with equivalent ratings for Congress and the President—and with public opinion (as measured by *public policy Mood*)—to address whether the media are opinion leaders or opinion followers.

Scholars have previously made use of the ADA rating scales to measure the policy positions of presidents (Zupan 1992) and of editorial pages (Permaloff & Grafton

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<sup>8</sup>Of course one could construct the equivalent of NOMINATE scores for newspapers—measures that take into consideration all expressed preferences by the media (Poole & Rosenthal 1997). This would require a tremendous data collection and coding effort over time, as these newspapers typically craft 3 to 5 editorials per day, meaning one would need to code, at the minimum 65,000 editorials for the *New York Times* alone.

2006). The logic is straightforward. Each year ADA selects a set of prominent and often controversial votes upon which to rate members of Congress. The votes cover a diverse set of policies such as social welfare, civil liberties, and national defense (Fowler 1982). Members of Congress are awarded points for votes cast in favor of the organization's interest, and 0 points for votes that are opposed. Fortunately, newspaper editors often publish editorials on the same sets of votes, announcing positions that either concur or conflict with the ADA's interests (Permaloff & Grafton 2006). Thus we treat editors' expressed preferences as if they were voting members of the House and the Senate.<sup>9</sup>

We employ this method, locating *New York Times* and *Wall Street Journal* editorials on all available ADA votes from 1952 to 2006 in both the House and Senate, a considerable data collection.<sup>10</sup> The ADA used a total of 978 votes to rate members

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<sup>9</sup>We illustrate the method with a brief example. In 2001, the ADA selected House Resolution 1836—the Bush sponsored tax cuts—as one of the votes used to rate legislators in both the House and Senate. Those legislators who voted against HR 1836 were treated as favorable to ADA's interest and awarded 5 points. In 2001, members of the House were rated on 20 votes, as were Senators. Thus each vote was worth 5 points in the House and 5 points in the Senate for a maximum score of 100. (The number of points awarded is dependent on the total number of votes in a given year. ADA treats all votes equally.) The Senate voted on the legislation on May 21, and the House of Representatives on May 26. Near the date of the vote, the editorial pages of the *New York Times* and the *Wall Street Journal* articulated their views. The *Times* published an editorial entitled, "The Four Trillion Tax Cut" on May 20, stating, "This tax cut is so costly...that few Americans who had a chance to scrutinize it would let Congress get away with it." The *Wall Street Journal*, on the other hand, argued in editorial entitled, "A Real Tax Cut" on May 22, "It is clear the U.S. economy could use a boost, and the Bush tax bill has it within its power to deliver it." We assume that if the *Times*' editors had been present in Congress, they would have voted against the bill, whereas the *Journal's* editors would have supported it.

<sup>10</sup>To be clear, editorials are the published opinions of the editors of the editorial page. Editorials are identified as unsigned opinion statements that typically appear on the far left side of the editorial page. We excluded the opinions of weekly or invited columnists and any letter written to the editor. Editorials were located through the electronic archives of ProQuest Historical Newspapers and Lexis-Nexis Academic Universe. These archives were searched over a period of roughly 8 months prior to and after an ADA vote, as at times the editors would announce positions on legislation in one chamber, although the stated position also spoke to an earlier or later vote in the other chamber.

of the House and 1007 votes for the Senate across the 54 year period.<sup>11</sup> We located and coded the content of 1574 editorials for the *New York Times*, and 1322 editorials for the *Wall Street Journal*, and then tabulated annual scores for each newspaper by chamber.<sup>12</sup>

Because the ADA selected different votes by year and chamber, and the set of votes in certain periods was more liberal/conservative than in others, it is necessary to modify ADA scores to render them comparable over time. Groseclose, Levitt, and Snyder (1999) and Anderson and Habel (2009) offer a remedy, a method similar conceptually to converting historical dollar values to present day values, that is, an “inflation” adjustment. We make use of inflation-adjusted scores through 2006 (Anderson & Habel 2009). We present the newspaper adjusted scores in Figure 1, where the two bolded series represent values for the *New York Times* in the House and Senate, and the nonbolded series represent the *Wall Street Journal*.<sup>13</sup>

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The procedure for locating editorials was as follows: We began by searching using key words found within ADA vote descriptions. We then filtered through the search returns to determine if an editorial existed that was related to the ADA vote.

<sup>11</sup>Today the ADA has settled on using 20 votes each year, although at times in the past, particularly in the early period of this analysis, the number fluctuated.

<sup>12</sup>Of all ADA votes in the House and Senate, the *New York Times* crafted editorials announcing their preference on about 79%, and the *Wall Street Journal*, between 64% and 69%. See Table 4 in the Appendix for details. In order to tabulate scores, we calculated the percentage of editorials favorable to the ADA’s interest based on the total number of editorials written on ADA votes, not the total number of ADA votes. That is, we do not punish the editorial pages for not offering an opinion on a given vote, unlike members of Congress who are penalized for abstentions. Concerning the coding, each editorial was read and categorized as either consistent with the ADA’s preference, antagonistic to it, or neutral. (At times the editors wrote on legislation without voicing a clear preference. These editorials were coded as neutral.) Following an initial code by a principal investigator, a research assistant was employed for the purposes of inter-coder reliability. Without prior knowledge of the principal investigator’s coding, the research assistant assigned a judgment according to the ADA scale. In the rare instances of disagreement, an additional research assistant was employed as a tie-breaker. As Appendix Table 5 makes clear, instances of disagreement requiring a third coder were rare; the two initial coders agreed 94.3% of the time.

<sup>13</sup>Because the ADA scores are adjusted, it is possible for scores to exceed 100 or fall below 0.

[Figure 1 about here.]

Three noteworthy findings emerge. First, as conventional wisdom suggests, the editorial voice of the *New York Times* is more favorable to the interests of the ADA (interpreted as more liberal), and the voice of the *Wall Street Journal* is opposed to the ADA (more conservative) (Permaloff & Grafton 2006).<sup>14</sup> Second, there is substantial variance in each of the series over time. That is, although the ideological reputations of the newspapers are deserved, the level of liberalism/conservatism espoused by these editorial pages changes over time, which can be exploited in a time series analysis. To illustrate, the *Journal* moderated its views in the late 1960s and the late 1970s, and the *Times* was considerably less liberal in the late 1950s.<sup>15</sup> Finally, there appears to be some covariance in the two newspaper series, and perhaps even responsiveness of one series to the other. If the newspapers move together, as subsequent statistical tests will show, then one can surmise that many other opinion outlets exhibit similar shifts in ideology over time.

The newspaper ADA scores have the virtue of being directly comparable to extant ratings for Congress and the president. That the policy positions of the president, Congress, and the media can be measured on the same metric offers superior leverage

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<sup>14</sup>Despite the use of the Groseclose, Levitt, and Snyder (1999) method to render scores comparable, the two newspapers have very similar, but not identical, scores in each chamber.

<sup>15</sup>To offer some context explaining a part of the cross-time variation, one can consider the *New York Times* and national minimum wage policy. The *Times* shifted from advocating increases in the minimum wage in the 1960s to calling for the abolition of the wage altogether in late 1970s and 1980s in such editorials as “The Right Minimum Wage \$0.00.” Published January 14, 1987. By the mid1990s, the *Times* altered its stance again, now strongly in favor of increasing the wage (McKenzie 1994). Moreover, the *Times* advocated tax cuts in the 1980s in response to Republican initiatives, and the *Journal* concurred with a number of the Great Society proposals of the late 1960s.

in modeling influence.<sup>16</sup> We add to these series a suitable measure of public opinion, *public policy Mood*, which like the ADA ratings, reflects a preference for more or less government policy. Public policy Mood, compiled from attitudes on a range of policies similar to those that the ADA selects to scale members of Congress (Stimson 1991, Stimson 1999), has been used together with modified ADA scores in previous analyses of policy influence (Stimson, MacKuen & Erikson 1995).<sup>17</sup>

### 3 Do Media Lead or Follow?

Modeling the influence of media opinion on politicians and the public raises both theoretical and methodological concerns. Theoretically, the expectation for media opinion influence is unclear: numbers of studies suggest that we should expect media opinion to drive the public and/or policymakers, while other work finds evidence of a reactive media. Thus positing a direction of causality—that is, modeling media opinion as the dependent variable in a regression or, alternatively, as an explanatory variable—does not appropriately address the question of who influences whom. Such a model cannot disentangle the competing accounts of an adversarial or reactive media. Fortunately, there is a statistical procedure that is well suited for this task, namely vector autoregression and subsequent tests for Granger causality.

Given the competing expectations concerning the direction of causality among

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<sup>16</sup>Although ADA scores for Congress are readily available, presidential ADA scores were first introduced by Zupan (1992). We supplement these ratings with our own data collection through 2006, locating President Clinton's and Bush's policy positions through exhaustive searches of *New York Times* news articles.

<sup>17</sup>Our Mood series is updated from James A. Stimson. 1999. *Public Opinion in America: Moods, Cycles, and Swings*, 2nd Ed. Boulder:Westview Press.

media opinion and politicians and the public, we adopt a framework that imposes few parametric restrictions, and we test for who influences whom. Vector autoregression and tests for Granger causality, allow the data to speak, revealing whether past and present quantities of one variable predict future values of another (Granger 1969, Freeman 1983, Freeman, Williams & Lin 1989, Stock & Watson 2001). Simply stated, Granger causality offers a means to assess the influence of one variable on another in time series analysis.<sup>18</sup> Here, where the direction of causal influence is uncertain, vector autoregression [VAR] is the modeling tool of choice (Freeman 1983, Freeman, Williams & Lin 1989). Thus we adopt the VAR framework, treating media opinion, politicians, and the public as endogenous. This also serves to attenuate the concern over simultaneity bias common to the literature on elite-mass linkages (Kuklinski & Segura 1995, Manza & Cook 2002*a*, Manza & Cook 2002*b*). Thus we look to the results of the VAR estimation to inform us as to who moves whom.

We include in the dynamic analysis annual measures for media opinion, the president, the House and Senate, and public policy Mood. It is important to recognize that each of the models includes lagged values of the dependent variable, so that we are looking for the extent to which other variables predict the dependant variable, *above and beyond* the extent to which the dependant variable predicts itself. Concerning the appropriateness of annual measures, ADA scores cannot feasibly be disaggregated into more finite units, neither for the media nor politicians. Moreover, previous work addressing the elite-mass linkages have proceeded with annual observations (Stimson, MacKuen & Erikson 1995, Erikson, MacKuen & Stimson 2002). For

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<sup>18</sup>According to Freeman (1983), “A variable  $x$  is said to ‘Granger cause’ another variable  $y$ , if  $y$  can be better predicted from the past of  $x$  and  $y$  together than the past of  $y$  alone...” (328).

the media and presidential ADA series, we use an average score of their respective values in the House and Senate.<sup>19</sup> For the House and Senate, we use inflation-adjusted ADA medians.

A final comment concerns two considerations relevant to how the series are treated in the vector autoregression. The first important consideration is whether to difference each series or to proceed without differencing, which is to model in “levels.” Both choices raise concerns: modeling in levels can risk spurious correlation and false inferences if serial autocorrelation is present, but modeling in differences removes the low frequency component of a series, and colloquially, risks “throwing out the baby with the bathwater,” potentially failing to find an influence relationship where one exists (Box-Steffensmeier & Tomlinson 2000, Box-Steffensmeier, Darmofal & Farrell 2009). Fortunately, recent advances in time series methodology permit a more nuanced approach: fractional integration. Series are considered fractionally integrated when the order of integration,  $d$ , is between 0 and 1, where 0 represents a series with no long-term memory (where shocks to the system die quickly) and 1 represents a series with permanent memory, where shocks to the system perpetuate indefinitely (Box-Steffensmeier & Tomlinson 2000, Lebo, Walker & Clarke 2000, Box-Steffensmeier, DeBoef & Lin 2004). Theoretically, one would expect that each series in this model—the preferences of politicians, newspapers, and the public—have persistent, but not permanent, memory. Shocks such as changes in liberal/conservatism of another institution or a worsening economy should have long-term, but not per-

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<sup>19</sup>As described earlier, the newspapers and the president each voice their preferences on ADA votes in both the House and the Senate. Thus we have two ADA scores for each newspaper and for the president, one for each chamber. Our newspaper and presidential series use an average of these two scores.

sistent implications. Statistical tests reveal that this is the case.<sup>20</sup> Thus we proceed by transforming each of the fractionally integrated series to purge autocorrelation and ensure stationarity, and subsequently estimate a “fractionally-integrated” VAR model.<sup>21</sup>

A second important consideration is the number of lags to include in the VAR, which is based on both theoretical and methodological concerns. Theoretically, one would expect that responsiveness by politicians to media opinion or (or vice versa) would be fairly immediate, that last year’s value of opinion would have a greater effect, and that opinion from years prior would be limited. Methodologically, several diagnostic tests, including a likelihood ratio test and SBC and HQIC criterion, can be used to determine the appropriate number of lags. Such tests indicate that the use of one lag is appropriate. Moreover, the cost in degrees of freedom in incorporating multiple lags is not trivial.

We estimate four VAR models. The first model includes measures of the media, policymakers, and the public. Because the president’s ADA scores fluctuate considerably by administration, as is apparent in Appendix Table 2, we estimate a second

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<sup>20</sup>Moreover, nominal ADA scores (from which the adjusted scores are derived) and Mood are bounded, meaning that their variance cannot be infinite, and thus the series cannot be first order integrated. Yet postestimation diagnostics reveal that proceeding in levels, where  $d$  is assumed to be 0, is inappropriate. Models estimated in levels reveal a serious concern over serial autocorrelation. Fortunately one can test for the presence of fractional integration via Robinson’s semiparametric estimator (Box-Steffensmeier, Darmofal & Farrell 2009). We find that each series, media opinion, the House, the Senate, the president, and Mood, have values of  $d$  between 0 and 1 (Robinson 1995). Table 6 in the Appendix lists the  $d$  values for each series. Among the various estimators for fractional integration, Lebo, Walker & Clark (2000) run Monte Carlos on 17 series and conclude that Robinson’s method is preferred.

<sup>21</sup>Transforming the series comes with the loss of some data. The first 12 observations are used as starting values, given that the transformation involves an infinite order lag distribution of each series. See <http://ideas.repec.org/c/boc/bocode/s413901.html> for details.

model that excludes the presidential series. Models 3 and 4 include indicators of the economy, namely the annual unemployment and inflation rates, as it is theoretically plausible that media opinion, politicians, and the public respond to changes in economic conditions (Erikson, MacKuen & Stimson 2002).<sup>22</sup> To summarize, Models 1 and 3 include the presidential series [2 and 4 exclude these], and Models 3 and 4 include the economic indicators [1 and 2 exclude these]. As it will be shown, the substantive results are consistent across all specifications.<sup>23</sup>

In these models, a statistically significant explanatory variable is one that influences the dependent variable. For example, if we find that the media measures are significant in the regressions where politicians are the dependent variable, then media move politicians. That is, rather than presenting the customary block F-tests for Granger causality, we present regression coefficients, as the explanatory variables that are statistically significant predictors are also those that Granger cause the dependent variable. Table 1 presents the results of the fractionally integrated VAR. We begin with a discussion of whether the institutions and the public are moved by media opinion, and then we turn to who moves media opinion.<sup>24</sup> Together this study presents a comprehensive look at the influence of media opinion on politicians and

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<sup>22</sup>The unemployment series is fractionally differenced, and the inflation series, first-differenced. Both economic indicators are modeled as exogenous, given that one should not expect that our quantities of interest drive the economy.

<sup>23</sup>Some studies using a similar methodological approach sometimes include additional variables for wars or other major events. We choose not to include such variables. It is theoretically unclear as to how conflicts such as Vietnam, the first and second Iraq War, the war in Afghanistan, or even the Cold War matter for media opinion, politicians, or public opinion. Moreover, it unclear why international conflict should be modeled as opposed to more domestic events such as the Civil Rights movement, the equal rights for women movement, or the event of 9/11. The loss in degrees of freedom for including such additional variables is great.

<sup>24</sup>Estimation of the VAR and the diagnostics tests were conducted in Stata 9 and also in Win-RATS 5.1

the public across a diversity of policies over the past six decades.

[Table 1 about here.]

### 3.1 Politicians and the Public

We begin with the discussion of media opinion influence over politicians, followed by the public, and we then turn to who moves the media. The upper portion of Table 1 presents the results of the VAR estimation, beginning first with the results for the president as the dependent variable, followed next by Congress, then public opinion, and finally, media opinion. Because the presidential series were not included in Models 2 and 4, we discuss the results of Models 1 and 3. Here we find that the president stands alone, that neither media opinion (as expressed by the *New York Times* and *Wall Street Journal* series), nor the House and Senate medians, nor the public, move the president's policy preferences at an appreciable level. Of course this finding does not negate the literature that suggests that at certain times Congress has influence over the president, or that public opinion could matter on particular issues, but it does show that annual changes in the president's policy positions are not predicted by other actors, including media opinion.

Turning to the House and Senate as dependent variable models, we again find little evidence of media opinion influence. Despite the attention that members of Congress pay to editorials published by these newspapers, as based on their frequent statements on the floor and their published letters to the editor, neither the *New York Times* nor the *Wall Street Journal* cause shifts in House and Senate medians. In other words, changes in the policy positions of the House and the Senate medians are

not accounted for by shifts in media opinion. What does matter for these chambers, consistent with work by Stimson, Erikson, and MacKuen (1995, 2002), is public opinion. Mood drives both chamber medians at a significant level across Models 1, 2, 3, and 4.<sup>25</sup> Concerning the public, we once more find little evidence of media opinion influence. Although editorials are consequential for the public during campaigns, the policy positions of these newspapers do not have a statistically significant effect on public opinion more broadly and over time. Taken together, a more liberal (or conservative) media does not translate to more liberal (or conservative) public policy.

### 3.2 Media Opinion

We turn lastly to the determinants of media opinion. Thus far we have seen evidence that the opinions of the media do not influence others. Is it the case, then, that politicians or the public drive the media? Generally speaking, the finding from Table 1 shows limited external influence on media opinion from politicians and the public. Aside from the president's influence on the *Wall Street Journal*, the policy positions of the media are not influenced by politicians nor the public. Concerning the *Wall Street Journal*, in Models 1 and 3, we see that the president's views can explain changes in the *Journal's* preferences, with the sign of the coefficient being negative. In other words, the conservative *Journal* becomes more adamantly opposed to presidents who attempt to move policy in the liberal direction, and in turn, the newspaper moderates as the president's ADA score becomes more conservative. Models 3 and 4

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<sup>25</sup>Models 3 and 4 also reveal that the Senate is responsive to changes in the economy, as increases in these economic indicators—that is, a worsening economy—move the Senate in a more liberal direction.

also demonstrate that the *Journal* is responsive to changes in the economy, as it favors greater government activism when the economy sours. Finally, we do find evidence that the media matter for one another, that is, that the *Times* and the *Journal* express similar changes in their liberal/conservatism over time. After controlling for changes in the economy, Models 3 and 4 show that the *Journal* is responsive to shifts in the policy positions of the *New York Times*. Figure 1, discussed earlier, showed the series displayed some covariance. The results of Models 3 and 4 demonstrate that the *New York Times* can lead the *Wall Street Journal*. That these two opinion leaders of distinct ideological perspectives shift preferences in similar ways over time—albeit with the *Times* moving first—suggests that other media opinion may experience similar ideological changes.

## 4 Media Opinion and Politicians, A Second Look

It is quite evident from the earlier discussion of Figure 1 that the *New York Times* and the *Wall Street Journal* announce liberal and conservative policy positions respectively. One wonders, then, whether in the aggregate these competing views “cancel” one another. Perhaps it is more appropriate to examine their respective ideological audiences. That is, it is plausible that *Times* does not move aggregate opinion or Congress, but that they could drive liberals in the public or in Congress, and vice versa for the *Journal*. Or in turn, consistent with a reactive media account, perhaps these voices in Congress have the greatest implications for the views disseminated on editorial pages. Therefore, we consider the influence of *New York Times*

on the median House and Senate Democrat, and the *Wall Street Journal* on the media House and Senate Republican. Ideally, we would also consider the influence of media on the opinions of liberals and conservatives in the public, respectively, but such opinion data are unavailable.<sup>26</sup> The results of this second vector autoregression model with fractionally-differenced series are displayed in Tables 2 and 3. Model 1 in both tables exclude the exogenous indicators of the economy, whereas Model 2 includes the unemployment and inflation series.

[Tables 2 and 3 about here.]

The results of both VAR estimations offer new evidence of a movable, reactive media. Despite editors desires of persuading their audience, these models show that media opinion is responsive to shifts among politicians of similar ideological leanings. In both models in Table 2, the *Times* responds to the Democratic party median in the House and the Senate at a statistically significant level. In both models in Table 3, the *Journal* is influenced by the median Republican House member. Neither newspaper drives partisans in the House or the Senate. Thus the argument that the media act autonomously, shaping the views of policymakers and the public over a broad set of policies, does not find empirical support. Instead, politicians' policy preferences drive media ideology.

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<sup>26</sup>One cannot estimate the effect of media opinion on a public stratified by party or ideology, as Mood has not been disaggregated in this way. Stratifying the presidential ADA series by party is also infeasible, as too few data points are available to conduct a time series analysis.

## 5 Discussion

Media perform two critical functions for democracy: they publish the events of the day in the form of news, and they offer their unique commentary. Much attention has been focused on the former function, with a volume of evidence showing that media can frame issues and prime their audiences. Less attention has focused on the latter media function and its effects beyond demonstrating that candidate endorsements matter to voters. Here we might expect that the so-called “fourth estate” offers an independent, adversarial voice that moves the views of both politicians and the public, and ultimately, changes the course of public policy. Others portray the media as reactive, that their views can be influenced by policymakers. Our study has tested these two perspectives simultaneously. We provided a means of assessing the policy positions of the media through the use of the ADA ratings—a method that could be extended to other media including editorial pages, radio personalities, syndicated columnists, pundits, bloggers, or other media elites—and we modeled these indices together with metrics for policymakers and the public in a dynamic, time series analysis.

The substantive story for media opinion is one of the dog whose bark is more than its bite: editors offer their views daily with the intent of moving policy and the public, but their aggregate influence across a broad constellation of policies over the past sixty years is negligible. The liberal/conservativeness expressed on the editorial pages of two prominent newspapers (whose views move together over time) do not affect the liberal/conservativeness of the other institutions. In this regard, the evidence—particularly from the models focusing on influence by newspaper and chamber of

Congress—is that these so-called “opinion leaders” may be better conceived of as “opinion reactors.”

Of course our results do not negate the possibility of media influence by other channels. We have focused on media opinion and not on the news-making function of the media, where a myriad of studies—particularly related to framing and priming—offer support for influence. It may be the case that these opinion outlets are also successful in framing or priming political issues or events, and that these attempts matter for public policy or opinion. And in the same way that the news can act as agenda-setters, so too we might expect that media opinion can set the agenda for policymakers and the public. Media elites can use editorials to draw attention to the issues of their choice and to make their views transparent. It is plausible that targeted or strident editorials on the same political issue may be “surprisingly successful” in influencing the agenda of policymakers or the public. This could be particularly true in instances where a number of opinion outlets voice similar concerns. Third, it could be that media opinion drives the opinions of partisans, which could not be tested due to limitations in data availability. Finally, related to each of these caveats, it may be that certain dynamics of the influence relationship that have not been detected here can be captured in the short-term. That is, in certain periods—perhaps on certain days or weeks, or over the course of several weeks or months—media opinion drive policymakers or the public.

The results raise additional important questions. If not media opinion, then who are the movers of politicians and the public? And related, if neither politicians nor the public are being moved by editorials at the aggregate level over time,

then why do publishers and editors invest substantial resources in crafting them? Whether another motive drives the decision to write—perhaps the recognition in policy debates or perhaps the goal of giving politicians something to think about—is unclear. Or it may be that other policy elites—be it interest groups, think tanks, or bureaucrats—are responsive to such arguments. And here again we may find evidence of agenda-setting or short-term influence, with opinions mattering for the time and attention politicians devote to certain issues at particular times. Our study offers these avenues as possibilities for future research.

## References

- Anderson, Sarah & Philip Habel. 2009. "Revisiting Adjusted ADA Scores for the U.S. Congress, 1947-2007." *Political Analysis* 17:83–88.
- Ansolabehere, Stephen D., Rebecca Lessem & James M. Snyder. 2006. "The Political Orientation of Newspaper Endorsements in U.S. Elections, 1940-2002." *Quarterly Journal of Political Science* 1:393–404.
- Barker, David C. & Adam B. Lawrence. 2006. "Media Favoritism and Presidential Nominations: Reviving the Direct Effects Model." *Political Communication* 23(1):41–59.
- Bennett, W. Lance. 1990. "Toward a Theory of Press-State Relations in the United States." *Journal of Communications* 40:103–125.
- Bennett, W. Lance, Regina G. Lawrence & Steven Livingston. 2006. "None Dare Call it Torture: Indexing and the Limits of Press Independence in the Abu Ghraib Scandal." *Journal of Communications* 56:467–485.
- Box-Steffensmeier, Janet M. & Andrew R. Tomlinson. 2000. "Fractional Integration Methods in Political Science." *Electoral Studies* 19:63–76.
- Box-Steffensmeier, Janet M., David Darmofal & Christian A. Farrell. 2009. "Aggregate Dynamics of Campaigns." *Journal of Politics* .
- Box-Steffensmeier, Janet M., Suzanna DeBoef & Tse-Min Lin. 2004. "The Dynamics of the Partisan Gender Gap." *American Political Science Review* 98:515–528.
- Cooke, Timothy. 2005. *Governing with the News: The News Media as a Political Institution*. 2 ed. Chicago: University of Chicago Press.
- Dalton, Russell J., Paul A. Beck & Robert Huckfeldt. 1992. "Partisan Cues and the Media Information Flows in the 1992 Presidential Election." *American Political Science Review* 92:111–126.
- DellaVigna, Stefano & Ethan Kaplan. 2007. "The Fox News Effect: Media Bias and Voting." *Quarterly Journal of Economics* 122.
- Druckman, James N. 2005. "Media Matter: How Newspapers and Television News Cover Campaigns and Influence Voters." *Political Communication* 22:463–481.
- Druckman, James N. & Michael Parkin. 2005. "The Impact of Media Bias: How Editorial Slant Affects Voters." *Journal of Politics* 67:1030–1049.
- Erikson, Robert S. 1976. "The Influence of Newspaper Endorsements in Presidential Elections: The Case of 1964." *American Journal of Political Science* 10:207–233.

- Erikson, Robert S., Michael B. MacKuen & James A. Stimson. 2002. *The Macro Polity*. New York: Cambridge University Press.
- Fowler, Linda L. 1982. "How Interest Groups Select Issues for Rating Voting Records of Members of Congress." *Legislative Studies Quarterly* 7:401–412.
- Freeman, John R. 1983. "Granger Causality and the Time Series Analysis of Political Relationships." *American Journal of Political Science* 27:327–358.
- Freeman, John R., John T. Williams & Tsemin Lin. 1989. "Vector Autoregression and the Study of Politics." *American Journal of Political Science* 33:842–877.
- Gerber, Alan, Dean Karlan & Daniel Bergan. 2009. "Does the Media Matter? A Field Experiment Measuring the Effect of Newspapers on Voting Behavior and Political Opinions." *American Economic Journal: Applied Economics* 1:35–52.
- Granger, C.W.J. 1969. "Investigating Causal Relations by Econometric Models and Cross Spectral Methods." *Econometrica* 37:424–438.
- Groseclose, Timothy, Steven D. Levitt & James M. Snyder. 1999. "Comparing Interest group Scores across Time and Chambers: Adjusted ADA Score for the U.S. Congress." *American Political Science Review* 93:33–50.
- Hall Jamieson, Kathleen & Joseph N. Cappella. 2008. *Echo Chamber: Rush Limbaugh and the Conservative Media Establishment*. New York: Oxford University Press.
- Hollander, Sidney. 1979. "On the Strength of a Newspaper Endorsement." *Public Opinion Quarterly* 43:405–407.
- Kahn, Kim F. & Patrick J. Kenney. 2002. "The Slant of the News: How Editorial Endorsements Influence Campaign Coverage and Citizens' Views of Candidates." *American Political Science Review* 96:381–394.
- Krebs, Timothy. 1998. "The Determinants of Candidate Vote Share and the Advantages of Incumbency in City Council Elections." *American Journal of Political Science* 42:921–935.
- Kuklinski, James H. & Gary M. Segura. 1995. "Endogeneity, Exogeneity, Time, and Space in Political Representation: A Review Article." *Legislative Studies Quarterly* 20:3–21.
- Ladd, Jonathan McDonald & Gabriel S. Lenz. 2009. "Exploiting a Rare Communication Shift to Document the Persuasive Power of the News Media." *American Journal of Political Science* 53:394–410.
- Lebo, Matthew J., Robert J. Walker & Harold D. Clarke. 2000. "You Must Remember This: Dealing with Long Memory in Political Analyses." *Electoral Studies* 19(1):31–48.

- Manza, Jeff & Fay Lomax Cook. 2002a. "A Democratic Policy? Three Views of Policy Responsiveness to Public Opinion in the United States." *American Politics Research* 36:630–667.
- Manza, Jeff & Fay Lomax Cook. 2002b. The Impact of Public Opinion on Public Policy: The State of the Debate. In *Navigating Public Opinion: Polls, Policy and the Future of American Democracy*, ed. Jeff Manza & Fay Lomax Cook. Oxford: Oxford University Press.
- McKenzie, Robert B. 1994. *Times Change: The Minimum Wage and the New York Times*. San Francisco: Pacific Research Institute for Public Policy.
- Page, Benjamin I. 1996. "The Mass Media as Political Actors." *PS: Political Science and Politics* 29:20–24.
- Permaloff, Anne & Carl Grafton. 2006. "ADA Policies and the Editorial Positions of Four Publications." *Social Science Journal* 43(2):303–314.
- Poole, Keith T. & Howard Rosenthal. 1997. *Congress: A Political-Economic History of Roll Call Voting*. New York: Oxford University Press.
- Robinson, John P. 1974. "The Press as King Maker." *Journalism Quarterly* 51:587–594.
- Robinson, Peter. 1995. "Log-Periodogram Regression of time Series with Long Range Dependence." *Annals of Statistics* 23:1048–1072.
- Simon, Adam F. & Jennifer Jerit. 2007. "Toward a Theory Relating Political Discourse, Media, and Public Opinion." *Journal of Communication* 57:254–271.
- Stimson, James A. 1991. *Public Opinion in America: Moods, Cycles, and Swings*. Boulder, CO: Westview Press, 1991.
- Stimson, James A. 1999. *Public Opinion in America: Moods, Cycles, and Swings*. 2nd ed. Boulder, CO: Westview Press.
- Stimson, James A., Michael B. MacKuen & Robert S. Erikson. 1995. "Dynamic Representation." *American Political Science Review* 89:543–565.
- Stock, James H. & Mark Watson. 2001. "Vector Autoregressions." *The Journal of Economic Perspectives* 15:101–115.
- Vermeer, Jan P. 2002. *The View from the States: National Politics in Local Newspaper Editorials*. Lanham: Rowman and Littlefield Publishing Group.
- Woolley, John T. 2000. "Using Media-Based Data in Studies of Politics." *American Journal of Political Science* 44(1):156–173.

Zupan, Mark A. 1992. "Measuring the Ideological Preferences of U.S. Presidents: A Proposed (Extremely Simple) Method." *Public Choice* 73:355–61.

# Tables and Figures

Figure 1: Adjusted ADA Scores for the *New York Times* and *Wall Street Journal*, 1952-2006

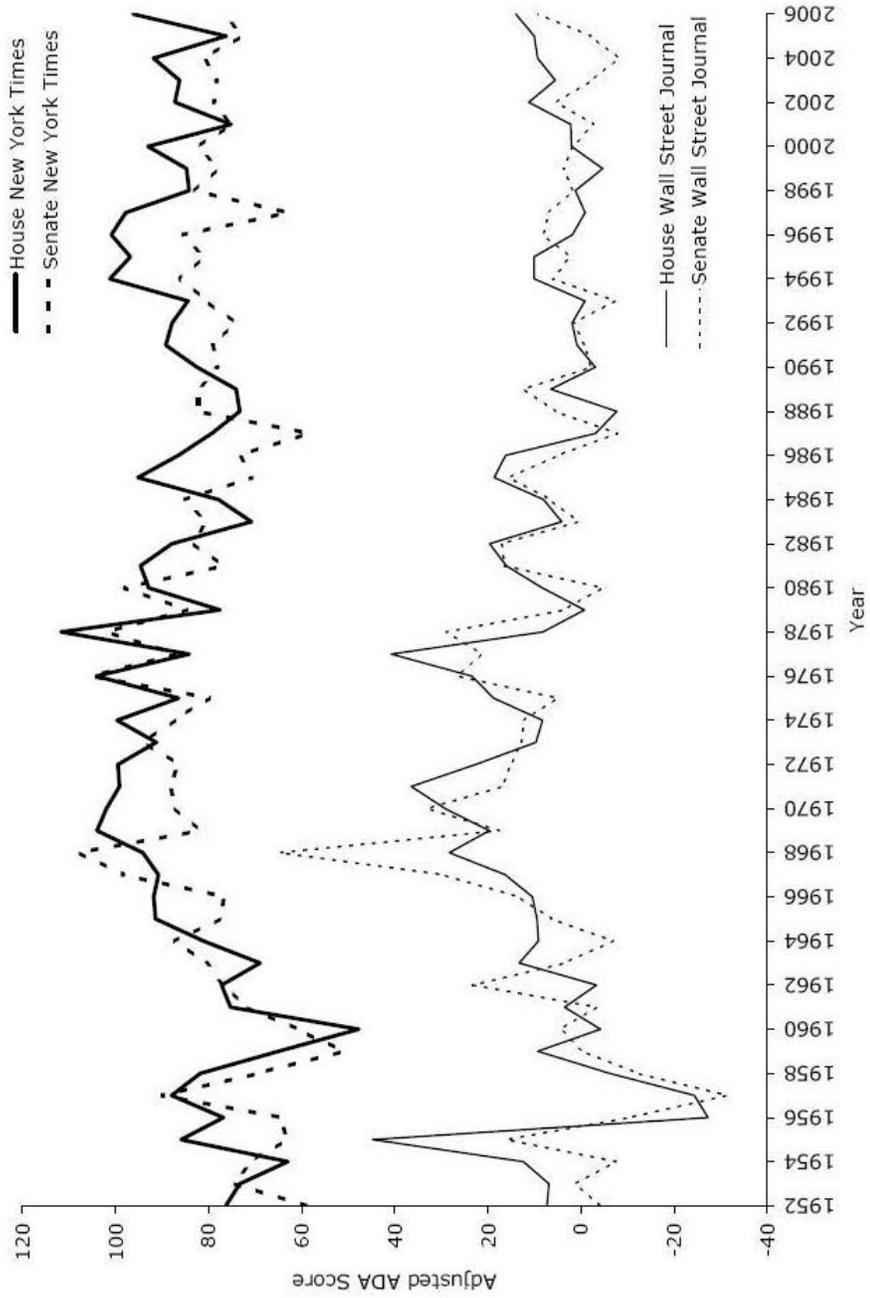


Table 1: Fractionally Integrated Vector Autoregression of Politicians, Press, and the Public, 1952-2006

Dependent Variable	Explanatory Variable	1	2	3	4
President <sub>t</sub>	President <sub>t-1</sub>	.05 (.16)	. .	-.09 (.17)	. .
	House <sub>t-1</sub>	.71 (.65)	. .	.55 (.65)	. .
	Senate <sub>t-1</sub>	-.35 (.75)	. .	-.39 (.75)	. .
	Mood <sub>t-1</sub>	-.78 (1.90)	. .	-1.13 (1.86)	. .
	New York Times <sub>t-1</sub>	.18 (.52)	. .	.15 (.55)	. .
	Wall Street Journal <sub>t-1</sub>	-.04 (.55)	. .	.07 (.55)	. .
	Unemployment Rate <sub>t</sub>	. .	. .	-5.85 (5.58)	. .
	Inflation Rate <sub>t</sub>	. .	. .	2.44 (2.72)	. .
	Constant	-3.03 (14.81)	. .	.24 (14.63)	. .
	House <sub>t</sub>	President <sub>t-1</sub>	-.03 (.04)	. .	-.01 (.04)
House <sub>t-1</sub>		.03 (.16)	.01 (.16)	.07 (.16)	.07 (.16)
Senate <sub>t-1</sub>		.04 (.18)	.04 (.18)	.03 (.18)	.03 (.18)
Mood <sub>t-1</sub>		.85 <sup>†</sup> (.46)	.89 <sup>†</sup> (.46)	.94* (.46)	.95* (.46)
New York Times <sub>t-1</sub>		.03 (.13)	.02 (.13)	.01 (.14)	.01 (.13)
Wall Street Journal <sub>t-1</sub>		-.15 (.13)	-.16 (.13)	-.16 (.14)	-.16 (.13)
Unemployment Rate <sub>t</sub>		. .	. .	1.37 (1.39)	1.45 (1.28)
Inflation Rate <sub>t</sub>		. .	. .	-.16 (.67)	-.17 (.67)
Constant		-3.19 (3.60)	-3.00 (3.61)	-3.45 (3.63)	-3.43 (3.63)

Standard errors in parentheses; \*  $p < .05$ ,  $\dagger p < .10$

Table continued on the following page

Table 1: Fractionally Integrated Vector Autoregression of Politicians, Press, and the Public, 1952-2006

Dependent Variable	Explanatory Variable	1	2	3	4
Senate <sub>t</sub>	President <sub>t-1</sub>	-.01 (.04)	. .	.01 (.04)	. .
	House <sub>t-1</sub>	.06 (.15)	.06 (.15)	.14 (.14)	.14 (.14)
	Senate <sub>t-1</sub>	.06 (.17)	.06 (.17)	-.05 (.16)	-.05 (.16)
	Mood <sub>t-1</sub>	.77 <sup>†</sup> (.43)	.77 <sup>†</sup> (.43)	.92* (.41)	.90* (.40)
	New York Times <sub>t-1</sub>	.02 (.12)	.02 (.12)	-.10 (.12)	-.10 (.12)
	Wall Street Journal <sub>t-1</sub>	-.06 (.12)	-.07 (.12)	.01 (.12)	.01 (.12)
	Unemployment Rate <sub>t</sub>	. .	. .	2.56* (1.22)	2.43* (1.12)
	Inflation Rate <sub>t</sub>	. .	. .	1.39* (.59)	1.39* (.59)
	Constant	-4.14 (3.34)	-4.10 (3.34)	-2.48 (3.18)	-2.51 (3.18)
	Mood <sub>t</sub>	President <sub>t-1</sub>	-.02* (.01)	. .	-.03* (.01)
House <sub>t-1</sub>		.02 (.04)	.001 (.04)	.01 (.04)	.002 (.04)
Senate <sub>t-1</sub>		-.002 (.04)	.001 (.05)	.001 (.04)	-.001 (.05)
Mood <sub>t-1</sub>		.67* (.11)	.70* (.12)	.65* (.11)	.70* (.12)
New York Times <sub>t-1</sub>		-.004 (.03)	-.01 (.03)	.0003 (.03)	-.01 (.03)
Wall Street Journal <sub>t-1</sub>		-.0002 (.03)	-.01 (.03)	.002 (.03)	-.01 (.03)
Unemployment Rate <sub>t</sub>		. .	. .	-.35 (.33)	.02 (.33)
Inflation Rate <sub>t</sub>		. .	. .	.04 (.16)	.02 (.17)
Constant		1.78* (.85)	1.93* (.91)	1.84* (.86)	1.95* (.94)

Standard errors in parentheses; \*  $p < .05$ ,  $\dagger p < .10$

Table continued on the following page

Table 1: Fractionally Integrated Vector Autoregression of Politicians, Press, and the Public, 1952-2006

Dependent Variable	Explanatory Variable	1	2	3	4
New York Times <sub>t</sub>	President <sub>t-1</sub>	.03 (.05)	. .	.04 (.06)	. .
	House <sub>t-1</sub>	.08 (.21)	.10 (.21)	.11 (.22)	.12 (.22)
	Senate <sub>t-1</sub>	.21 (.24)	.21 (.24)	.18 (.25)	.18 (.25)
	Mood <sub>t-1</sub>	.60 (.61)	.56 (.61)	.66 (.62)	.59 (.61)
	New York Times <sub>t-1</sub>	.07 (.17)	.08 (.17)	.03 (.18)	.05 (.18)
	Wall Street Journal <sub>t-1</sub>	.21 (.18)	.22 (.18)	.22 (.18)	.24 (.18)
	Unemployment Rate <sub>t</sub>	. .	. .	1.11 (1.84)	.53 (1.71)
	Inflation Rate <sub>t</sub>	. .	. .	.38 (.90)	.42 (.91)
	Constant	18.33* (4.74)	18.11* (4.75)	18.77* (4.84)	18.61* (4.87)
Wall Street Journal <sub>t</sub>	President <sub>t-1</sub>	-.11* (.05)	. .	-.13* (.05)	. .
	House <sub>t-1</sub>	.08 (.21)	-.004 (.22)	-.01 (.20)	-.04 (.21)
	Senate <sub>t-1</sub>	-.07 (.24)	-.06 (.25)	-.06 (.23)	.05 (.25)
	Mood <sub>t-1</sub>	.12 (.60)	.24 (.63)	-.05 (.57)	.15 (.61)
	New York Times <sub>t-1</sub>	.25 (.17)	.21 (.17)	.41* (.17)	.35† (.18)
	Wall Street Journal <sub>t-1</sub>	.06 (.17)	.02 (.18)	-.03 (.17)	-.07 (.18)
	Unemployment Rate <sub>t</sub>	. .	. .	-2.85† (1.72)	-1.22 (1.69)
	Inflation Rate <sub>t</sub>	. .	. .	-1.84* (.84)	-1.95* (.89)
	Constant	-5.71 (4.67)	-4.96 (4.94)	-7.94† (4.51)	-7.48 (4.81)

Standard errors in parentheses; \*  $p < .05$ , †  $p < .10$

$N = 56$  prior to fractional differentiation, 42 post

Durbin Watson Model 1 = 2.02; Model 2 = 1.87, Model 3 = 1.87, Model 4 = 1.98



Table 2: Fractionally Integrated Vector Autoregression of the *New York Times* and Democrats in Congress, 1952-2006

Dependent Variable	Explanatory Variable	1	2
House Democrats <sub>t</sub>	House Democrats <sub>t-1</sub>	-.54* (.14)	-.54* (.14)
	Senate Democrats <sub>t-1</sub>	.14 (.17)	.14 (.17)
	New York Times <sub>t-1</sub>	-.04 (.07)	-.04 (.07)
	Unemployment Rate <sub>t</sub>	. (.71)	.96 (.71)
	Inflation Rate <sub>t</sub>	. (.38)	-.04 (.38)
	Constant	1.57 (2.29)	1.57 (2.24)
	Senate Democrats <sub>t</sub>	House Democrats <sub>t-1</sub>	-.15 (.12)
Senate Democrats <sub>t-1</sub>		-.22 (.15)	-.22 (.15)
New York Times <sub>t-1</sub>		-.05 (.06)	.04 (.06)
Unemployment Rate <sub>t</sub>		. (.62)	.31 (.62)
Inflation Rate <sub>t</sub>		. (.33)	.03 (.33)
Constant		7.92* (1.95)	7.95* (1.97)
New York Times <sub>t</sub>		House Democrats <sub>t-1</sub>	.72* (.29)
	Senate Democrats <sub>t-1</sub>	.56 <sup>†</sup> (.34)	.56 <sup>†</sup> (.34)
	New York Times <sub>t-1</sub>	.38* (.14)	.38* (.15)
	Unemployment Rate <sub>t</sub>	. (1.47)	-.22 (1.47)
	Inflation Rate <sub>t</sub>	. (.79)	.09 (.79)
	Constant	9.88* (4.62)	9.95* (4.67)

$N = 42$

Standard errors in parentheses; \* $p < .05$ ,  $†p < .10$

Durbin Watson Model 1 = 2.15; Model 2 = 2.20



Table 3: Fractionally Integrated Vector Autoregression of the *Wall Street Journal* and Republicans in Congress, 1952-2006

Dependent Variable	Explanatory Variable	1	2
House Republicans <sub>t</sub>	House Republicans <sub>t-1</sub>	-.16 (.14)	-.18 (.14)
	Senate Republicans <sub>t-1</sub>	.31* (.07)	.31* (.07)
	Wall Street Journal <sub>t-1</sub>	.05 (.04)	.05 (.04)
	Unemployment Rate <sub>t</sub>	. (.41)	-.03 (.41)
	Inflation Rate <sub>t</sub>	. (.22)	.14 (.22)
	Constant	-1.85* (.69)	-1.84* (.69)
	Senate Republicans <sub>t</sub>	House Republicans <sub>t-1</sub>	.52* (.23)
Senate Republicans <sub>t-1</sub>		.39* (.12)	.35* (.11)
Wall Street Journal <sub>t-1</sub>		.09 (.07)	.12 <sup>†</sup> (.06)
Unemployment Rate <sub>t</sub>		. (.65)	1.64* (.65)
Inflation Rate <sub>t</sub>		. (.34)	.51 (.34)
Constant		4.63* (1.16)	4.93* (1.09)
Wall Street Journal <sub>t</sub>	House Republicans <sub>t-1</sub>	1.35* (.53)	1.86* (.51)
	Senate Republicans <sub>t-1</sub>	.03 (.27)	.09 (.25)
	Wall Street Journal <sub>t-1</sub>	.02 (.15)	-.09 (.14)
	Unemployment Rate <sub>t</sub>	. (1.47)	-2.20 (1.47)
	Inflation Rate <sub>t</sub>	. (.77)	-2.37* (.77)
	Constant	-.21 (2.70)	-.77 (2.46)

$N = 42$

Standard errors in parentheses; \* $p < .05$ ,  $†p < .10$

Durbin Watson Model 1 = 1.91; Model 2 = 1.95

## Appendix for Reviewers with Additional Tables and Figures

Table 4: Frequency of *New York Times* and *Wall Street Journal* Editorials Relevant to ADA Votes, 1952-2006

	House	Senate
Total ADA Votes	975	1007
Total <i>New York Times</i> Editorials	773	801
Corresponding to ADA Votes	(79.3%)	(79.5%)
Total <i>Wall Street Journal</i> Editorials	629	693
Corresponding to ADA Votes	(64.5%)	(68.8%)

Table 5: Intercoder Reliability for *New York Times* and *Wall Street Journal* Editorials Relevant to ADA Votes, 1952-2006

Coder 1 Favorable, Coder 2 Favorable	1473
Coder 1 Favorable, Coder 2 Opposed	33
Coder 1 Favorable, Coder 2 Neutral	18
Coder 1 Neutral, Coder 2 Neutral	54
Coder 1 Neutral, Coder 2 Favorable	10
Coder 1 Neutral, Coder 2 Opposed	24
Coder 1 Opposed, Coder 2 Opposed	1217
Coder 1 Opposed, Coder 2 Favorable	41
Coder 1 Opposed, Coder 2 Neutral	26
Percent Agreement	94.8%
Percent Agreement Expected by Chance	47.3%
Cohen's Kappa	.90* (.01)

Figure 2: Adjusted ADA Scores for the *New York Times*, *Wall Street Journal*, Congress and the President, 1952-2006

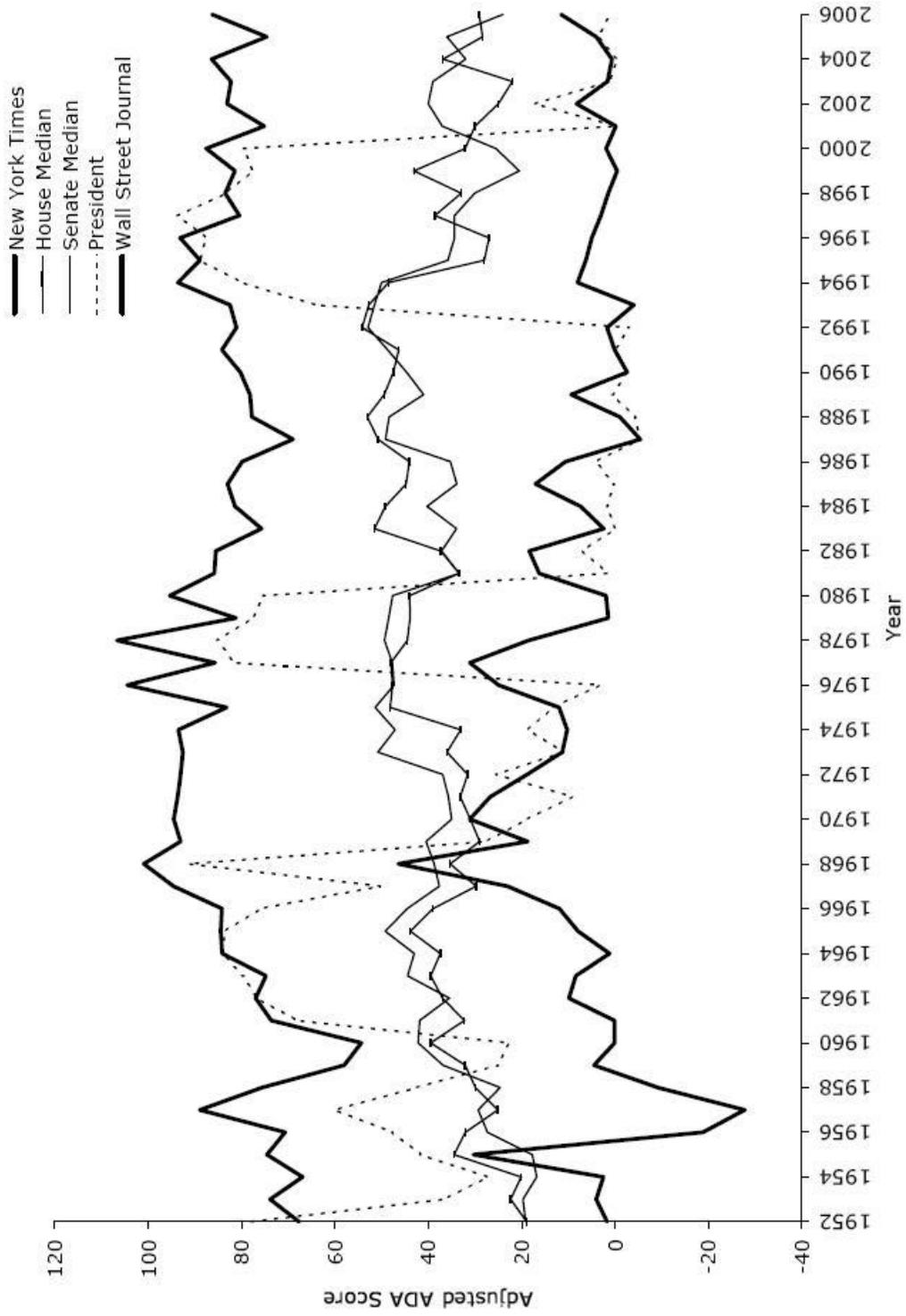


Table 6: Robinson's Estimator for the Order of Integration of the Adjusted ADA Series and Public Policy Mood

Series	Estimated $d$	$t$
President	.7364 (.16)	4.53*
House Median	.5920 (.11)	5.79*
Senate Median	.6995 (.12)	6.03*
Public Policy Mood	.5051 (.12)	4.13*
New York Times	.3047 (.12)	2.63*
Wall Street Journal	.4723 (.11)	4.13*

Standard errors in parentheses

\* $p < .05$

$H_0: d = 0$