

Preaching to the Choir?

The Impact of Cable News on Attitudes Toward Foreign Policy

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Abstract

For decades conventional wisdom in the study of political communication has been that news reporting can significantly raise the salience of particular issues in the public's mind, but that it has little impact on the substance of citizens' attitudes. Most of the research supporting this "agenda setting" hypothesis was conducted during an era of "traditional media" in which news content varied little across outlets. The rise of cable television news over the past two decades has given individuals the opportunity to select news coverage that varies significantly in tone and content. Using genetic and subclass matching techniques to analyze a survey of 4,000 respondents, I find that strong evidence that media self-selection explains the majority of the differences in foreign policy opinions across cable news audiences. Nonetheless, I find that cable news organizations do have a causal impact on public attitudes toward foreign policy even after accounting for self-selection. Moreover, I find evidence that cable news networks influence opinion not primarily by amplifying existing attitudes among a like-minded audience, but by influencing the attitudes of those who are exposed to the media messages despite their low propensity to seek those messages out.

For the past several decades, the conventional wisdom on the impact of news media on public opinion has been succinctly summarized by a widely cited remark from Benjamin Cohen. “The mass media may not be successful much of the time in telling people what to think,” Cohen writes, “but the media are stunningly successful in telling their audience what to think about.” (Cohen, 1962) A number of scholars have continued to dissent from this view, arguing that messages and images from the news media have a substantial impact on public opinion. But the so-called “agenda setting” hypothesis has been corroborated in numerous experimental and observational studies (McCombs and Shaw, 1982; Iyengar and Kinder, 1987, Miller and Krosnick, 2000).

Much of this knowledge about the impact of news reporting, however, comes from an era dominated by the “traditional media” of newspaper reporting and network television news. Forty years ago, for example, TV networks controlled about 90% of the television audience at a time when the overwhelming majority of the public obtained their news primarily through television (Lowry, 1997). Figures like Walter Cronkite dominated the network news airwaves throughout the 1970’s. More importantly, whether viewers selected Walter Cronkite or his competitor, John Chancellor, on NBC, they would experience very similar news broadcasts with only modest variation in tone and content.

With the launching of the Fox News Network in 1996, TV news began a profound transformation in both substance and style. Critics have railed at the conservative bias of Fox News, while its representatives have relentlessly defended Fox’s coverage as “fair and balanced.” While one can debate whether the coverage

on Fox is biased or fair, what stands out clearly is the fact that Fox's coverage differs substantially in tone and style from the delivery of news on the 3 major networks. Emulating Fox's commercial success with its difference in editorial tone and its combative angle on news, MSNBC set out in 2007 to become the liberal counterweight to the perceived conservatism of Fox. At the same time, news shows on the Comedy Central Network – such as the Daily Show with Jon Stewart and the Colbert Report – gained popularity with younger viewers with an irreverent and biting critical comedic perspective on the news.

Popular speculation about the impact of Fox News and other cable networks on public opinion has been widespread. But a number of scholarly studies have also found that Fox News had a substantial impact on viewers' attitudes toward politics and even their voting behavior (Kull et. al., 2004; DellaVigna and Kaplan, 2007). These findings suggest that we may need to revisit the widely held view that that news coverage does not alter the substance of public opinion. Important questions remain, however, regarding the statistical robustness some of these observed effects, the extent to which some studies account for the self-selection of Fox News viewership, and the extent to which the data support the causal inference that Fox viewers' attitudes would have been different had they not exposed themselves to Fox News.

This paper examines the impact of Fox News, MSNBC, and Comedy Central news shows on public attitudes toward the wars in Iraq and Afghanistan as well as the salience of international security issues and terrorism in the public mind. Using genetic and subclass matching techniques to analyze a survey of 4,000 respondents,

I find strong evidence that media self-selection explains the majority of the differences in foreign policy opinions across network audiences. At the same time, however, I also find that cable news organizations appear to have a causal impact on public attitudes toward foreign policy and the popular salience of international issues even after accounting for self-selection. The causal impact of Fox News, in particular, stands out as relatively robust and substantial. The impact of MSNBC and Comedy Central is more ephemeral. Finally, I discover evidence that cable news networks influence opinion not primarily by amplifying existing attitudes among a like-minded audience, but by influencing the attitudes of those who are exposed to the media messages despite their low propensity to seek those messages out.

News Reporting as a Source of Public Opinion

In the wake of Hitler's perceived success in using state propaganda to shape German political attitudes, a number of scholars set out to study the impact of news reporting on public opinion. Many feared that the mass media could have profound substantive effects on the public in ways that could undermine democratic accountability. Much to the surprise of many of these scholars, however, the impact of the mass media was often found to be minimal (Lazarsfeld, et. al., 1944; Hovland et. al. 1949). Indeed, a number of studies suggested that propaganda tended to reinforce public preferences rather than altering them (Katz and Feldman, 1962; Patterson and McClure, 1976; Sears and Chafee, 1978).

To be sure, a number of prominent studies questioned the "minimal" nature of media effects. Page, Shapiro and Dempsey (1987), for example, find that editorial

commentary in the media has a significant long-term aggregate impact on the public's policy preferences. Entman (1989) finds that newspaper editorial slant significantly altered attitudes toward then presidential candidate Jimmy Carter. And turning their attention to foreign policy, O'Loughlin et. al. (1994), Entman (2004), and Aday et. al. (2005), find that strong editorial framing of war coverage can alter public support for conflict (see also Bennett and Paletz, 1994). Nonetheless, by the mid-1990's the so-called "agenda setting hypothesis" had become the dominant view of the impact of news coverage on public opinion (McCombs and Shaw, 1982; Iyengar, Kinder and Peters, 1982; Iyengar and Kinder 1987; Krosnick and Kinder, 1990; Iyengar 1993; Miller and Krosnick, 2000).

The New News Media Environment

But just as the agenda-setting hypothesis became well established, the delivery of news seemed to change dramatically. Between 1990 and 2002 the major networks lost 50% of their audiences (PEW, 2004). The steep decline of traditional news media continued into the 21st century. A recent survey by the PEW Center for Excellence in Journalism indicated that regular readership of newspapers dropped from 58% to 34% of respondents between 1993 and 2008, while regular network news viewership dropped from 60% to 29% over the same period (PEW, 2009a).

Traditional media fell into secular decline in large part because of rising competition from alternative news sources. Chief among these growing alternatives was cable television news. The first cable news network – CNN – was launched in 1980, but only grabbed a significant foothold in the cable news market in the wake

of their round the clock coverage of the Gulf War (Morris, 2005). The cable news environment was further transformed in 1996 with the launching of the Fox News Network and MSNBC. Fox News, in particular, rapidly increased its audience by capitalizing on extensive coverage of major political events such as the 2000 presidential election (and recount), the attacks of September 11th, 2001, and the Iraq War. The growth in cable news viewership continued throughout the following decade. For example, the same Pew study noted above (Pew, 2009a) found that regular viewership of cable news rose from 33% to 39% of respondents between 2002 and 2008. Thus during the 2008 presidential campaign, Americans turned more regularly to cable news for their information than either newspapers or traditional network broadcasts.

While cable news grew generally as a format, Fox News grew more rapidly and successfully than its chief competitors, CNN and MSNBC. Fox's ratings have consistently outstripped MSNBC, and in 2001 Fox began to draw larger audiences than CNN (Morris, 2005; Collins, 2004). Fox gained and kept its viewers by offering a different – and perhaps more editorial – perspective in delivering the news. Numerous critics have characterized Fox's coverage as having a conservative bias (Ackerman, 2001; Alterman, 2003, Franken, 2003). Measuring "bias" is always difficult because it requires an implication of what would constitute "fair" news coverage. Nonetheless, Sean Aday's (2005) assessment of the tone of coverage during the first month of the 2003 Iraq War found that all of the major network news organizations held closely to the norm of "objective" coverage with more than

90% of their stories coded as “neutral” in tone. Nearly 40% of the stories Aday coded on Fox News, on the other hand, had a positive tone.

Beginning in 2007 and 2008, MSNBC sought to increase its ratings by providing news with a liberal editorial slant as a counterweight to the perceived conservatism of Fox. Aday did not measure MSNBC’s coverage of Iraq in his study, since they had not yet adopted a strong editorial tone and were not yet attracting a large audience. But more recent studies of media coverage confirm the continued conservative stance of Fox and the more liberal angle of recent MSNBC coverage. Baum and Groeling (2008), for example, find evidence of partisan filtering in story selection among “new media” news outlets. Similarly, Figure 1 summarizes the rate of negative news coverage of John McCain and Barack Obama during the 2008 Presidential Campaign (Pew, 2009b). Clearly coverage of the candidates differed substantially in tone between Fox and MSNBC. More than 70% of MSNBC’s coverage of McCain had a negative tone, compared to only 40% of Fox’s coverage of the Republican candidate. Conversely, less than 15% of MSNBC’s coverage of Barack Obama was negative, compared to 40% of Fox’s coverage of the Democrat. The three major broadcast networks, on the other hand, were clustered quite close to one another in the tone of their coverage, and all three networks were just about equally placed between the liberal tone of MSNBC and the conservative tone of Fox.

Once again, whether one considers MSNBC or Fox’s coverage of the 2008 campaign was “biased” depends on what one thinks the rate of negative coverage from an “objective” observer would have been. Regardless of the answer to that question, however, one can see that the two cable networks differed substantially

from one another and differed substantially from the shared tone of the 3 major broadcast networks.

The change in tone on Fox and MSNBC was also accompanied by a number of other changes in the delivery of news. Coverage on both networks became increasingly combative. Shows like Hannity and Colmes on Fox, for example, were explicitly structured around ideological clashes, while hosts like Chris Matthews on MSNBC's Hardball gained a reputation for grilling his guests mercilessly. At the same time, many of these hosted news oriented shows became more explicitly editorial. Fox News hosts like Sean Hannity, Bill O'Reilly, and Britt Hume are explicitly partisan and ideological in their commentary, while MSNBC's Keith Olberman and Rachel Maddow are unabashed liberals. This combination of explicit editorializing in a combative format led to very harsh ideological rhetoric from hosts on both sides of the cable news divide – ranging from Olbermann's "special comments" telling President Bush to "shut the hell up," (5/14/2008) to Bill O'Reilly asking his guest Lou Dobbs, "Is [President] Obama the Devil?" (11/17/2009)

As Fox and MSNBC shifted the tone of their coverage away from the broadcast networks, they began to attract increasingly partisan audiences. Morris (2005) finds that the partisanship of Fox viewers did not differ significantly from that of network or CNN viewers in 1998, but by 2004 he observes a significant partisan gap with as Republican viewers flocked to Fox to hear their more conservative message. This partisan gap in viewership has continued to expand as the Fox brand has strengthened over time. Figure 2 indicates that 39% of regular Fox viewers self-identified as Republican as compared to 22% of network news

viewers and 18% of MSNBC viewers. Interestingly, self-selection toward exposure to MSNBC was not as strong as for Fox News. This pattern could be due to the relatively recent shift in tone on MSNBC. Partisan self-selection of news exposure was generally strongest for the growing number of hosted news oriented shows such as the O'Reilly Factor, Countdown with Keith Olbermann, Comedy Central's the Colbert Report, and so on. Nearly two thirds of O'Reilly Factor viewers, for example, identified themselves as politically conservative, while only 14% of Colbert Report viewers did so (Pew, 2009b).

Not surprisingly, the partisan self-selection of viewership has led to a strong partisan divide on the favorability with which the public views the Fox News and MSNBC broadcasts. In 2008 more than 70% of Republicans stated that they had a favorable impression of Fox News, while just over 40% of Democrats viewed Fox favorably (Pew, 2009b). Democratic favorability toward MSNBC was somewhat lower than Republican favorability toward Fox because a larger number of respondents in this study were not familiar with MSNBC. Nonetheless, a wide partisan gap in favorability remained, with 60% of Democrats viewing MSNBC favorably as compared to just over 30% of Republicans (Pew 2009b).

Revisiting the Causal Impact of the News

Few would dispute that the news environment has changed in tone and content over the past two decades. What remains less clear, however, is the extent to which any of these changes in the delivery of news may alter the impact of news on public opinion or challenge the "agenda setting hypothesis." In particular, do we

need to revise the conventional view that news coverage has “minimal effects” on the substance of public opinion? Additionally, have the differing news agendas across the cable environment created different agendas among the public? That is, if the media are effective in telling citizens what to think about, has the new partisan media environment caused Fox viewers to think about different issues than MSNBC viewers?

There are a number of reasons to expect that the changes in tone and delivery of news may have led media exposure to have a stronger substantive impact on public opinion and may have led to differing public agendas. First, Page, Shapiro and Dempsey (1987), and Entman (1989), find that the editorial content of news coverage has a significant impact on attitudes, opinions of candidates, and even vote choice. As both Fox and MSNBC have become more explicitly editorial and have more thoroughly blended editorial comment with the delivery of news events, one might expect these news broadcasts to have a more substantial impact on viewers’ attitudes. Second, Forgette and Morris (2006) find that combative news coverage leads viewers to have more negative views of political leaders and institutions, while Ansolabehere et. al. (1999) find that negative political ads reduce feelings of efficacy and reduce voter turnout among viewers. These studies suggest that the combative and negative tone of Fox News and MSNBC might lead viewers to have more negative and skeptical views about highly contested policies such as the wars in Iraq and Afghanistan. Third, the tendency of viewers to expose themselves to news coverage that is compatible with their existing beliefs might also prevent viewers from being exposed to surprising information that could alter their views.

Gelpi (2010) finds that individuals respond to news stories about the Iraq War that clash with their partisan expectations by updating and moderating their attitudes. And while exposure to such surprising news on partisan news outlets like Fox and MSNBC may be effective in altering viewers' attitudes (Baum and Groeling, 2009), it is likely to be increasingly rare. Finally, as noted above, the partisan tone and story selection on cable news and other "new media" (Baum and Groeling, 2008, Pew 2009a) creates the possibility of widely differing public agendas depending on their selection of media exposure.

At least a few studies have suggested that exposure to Fox News in particular has had a substantial impact on public opinion. Kull et. al. (2004), for example, find that exposure to Fox News significantly increased the likelihood that respondents would hold any of three misperceptions about the Iraq War: 1) that the US had found evidence of Iraqi weapons of mass destruction (WMD) following the 2003 attack, 2) that the US had found clear evidence of a link between Iraq and al-Qaeda, and 3) that World public opinion was supportive of the US invasion.¹ Specifically, Kull et. al. found that Fox News viewers were twice as likely as non-Fox viewers to hold at least one of these misperceptions. Moreover, they found that each one of

¹ While Kull et. al. (2004) find substantial differences of opinion on these issues, it is not entirely clear that all of the differences should be characterized as "misperceptions" of an objective reality. Regarding links between Iraq and al-Qaeda, for example, Kull et. al. code those who perceived that Iraq provided "substantial" support to al-Qaeda as having misperceived the relationship. The meaning of "substantial" support, however, seems somewhat subjective, as does the kind of evidence that would demonstrate such a link. Nonetheless, Kull et. al. (2004) clearly demonstrate wide opinion gaps on the Iraq War depending on news exposure.

these misperceptions led respondents to be two to three times as likely to support the Iraq War.

DellaVigna and Kaplan (2007) rely on aggregate voting returns and an interesting natural experiment created by the geographic expansion of access to Fox News between 1996 and 2000 to argue that exposure to Fox News persuaded a substantial number of viewers to vote for the Republican candidate, George Bush. Specifically, they claim that Fox persuaded between 3% and 8% of its viewers who were not already planning to vote Republican to do so. If accurate, this would be a very substantial effect that could have been pivotal in bringing George Bush to the White House.

While no one doubts the fact that Fox News viewers differ substantially from non-Fox Viewers in their partisanship, political attitudes and vote choice, important questions remain about the extent to which this gap is caused by exposure to news coverage. Kull et. al. (2004), for example, control for party identification, attention to news, and intention to vote for President Bush in 2004. But their selection of control variables is fairly limited and their model assumes that the variables have independent and linear effects. It seems likely that Fox News viewership will be the function of an interaction of a fairly wide range of demographic factors, and recent studies indicate that the failure to account for such complex interactions can create biased estimates of the causal variables of interest (Ho et. al., 2007; King and Zeng, 2007). Moreover, given the fact that Fox News viewers differ substantially and simultaneously from non-Fox Viewers on a wide range of attributes, the use of simple linear models will often lead to inferences based on counterfactual

comparisons that extrapolate well beyond the observed data (King and Zeng, 2006, 2007). Drawing inferences from such extreme counterfactuals that reach outside the observed data can lead to strongly biased estimates of causal effects.

DellaVigna and Kaplan (2007) go to much greater lengths than Kull. et. al. (2004) to estimate the likely causal effects of the expansion of Fox News, but even their results remain fairly contingent on a variety of aspects of the statistical models they choose. Relatively atheoretical choices such as the weighting of counties based on population, the inclusion of differing kinds of fixed effects, and the inclusion or exclusion of certain data points from the analysis has a substantial influence on DellaVigna and Kaplan's estimate of Fox's causal impact (2007:1232). Once again, such model dependence can be a result of making causal inferences based on extrapolation from thinly populated areas of the data matrix (deMarchi, 2005; King and Zeng, 2007).

Data and Methods

In this paper, I examine the causal impact of exposure to Fox News, MSNBC and Comedy Central on viewers' attitudes toward two critical foreign policy issues - the wars in Iraq and Afghanistan - as well as the impact of exposure to those news outlets on the salience of international security issues and terrorism in viewers' minds. I examine attitudes toward these four issues because they allow me to examine the impact of cable news on the substantive of attitudes as well as the salience of issues. Specifically, attitudes toward the wars in Iraq and Afghanistan constitute substantive attitudes on issues and allow me to revisit the question of the

“minimal” effects of news media on such attitudes. Conversely, the salience of security issues and the salience of terrorism are both agenda-related attitudes that will allow me to look for the presence of differing public agendas.

Finally, I will investigate whether cable news amplifies the views of those who are already predisposed to listen to the polarized messages on cable news or changes the views of those who were not predisposed to hear the message but did so anyway. To the extent that the cable news media are creating an “echo chamber” of polarization, we should expect the former process to predominate. On the other hand, to the extent that cable news broadcasts persuade viewers to change their views, we should see evidence for the latter process.

Data on public attitudes toward foreign policy were gathered by Polimetrix/YouGov in a survey of 4,000 respondents fielded from September 27 through October 11, 2008. Polimetrix gathers data from a volunteer opt-in panel of respondents via the internet and produces samples that are representative of the national public through a statistical procedure that selects opt-in respondents that are most similar to a random draw from the 2004 American Communities Study (ACS) conducted by the Census Bureau (Rivers 2007). As a relatively new method of selecting respondents, Polimetrix’s matched opt-in panel methodology has attracted attention. Malhotra and Krosnick (2007) argue that levels of partisanship, political interest, and even the structure of relationships within the data differ between a matched opt-in panel and the random sample generated for the American National Election Study (ANES). Hill et. al. (2007), on the other hand, conclude that the

sample matching techniques produces modest biases which are analogous to the kinds of biases involved in random digit dialing (RDD) telephone surveys.

In order to evaluate the comparability of the Polimetrix data to probability samples, I compare these data to two different probability samples from prominent scientific studies: the American National Election Study (ANES) and the General Social Survey (GSS). Since the most critical issues of sample bias focused on levels of political interest and activity, I begin by comparing voter registration rates between the Polimetrix and ANES samples in 2008. These two samples appear to be very similar in terms taking action to become involved in politics. Approximately 89% of the matched opt-in sample stated that they were registered to vote in October of 2008, while in the fall of 2008 92% of ANES respondents stated that they were registered to vote.² Next, since this study focuses on attitudes toward foreign policy, I compared the level of interest in foreign affairs across the Polimetrix and GSS samples in 2008. This comparison is somewhat less exact, since the two surveys ask this question in somewhat different ways. Nonetheless, 25% of GSS respondents stated that they were “very interested” in international issues, while 22% of the Polimetrix sample stated that they follow foreign affairs “all the time.” Thus the matched opt-in sample appears to align very closely with traditional probability-based sampling methods in terms of its level of political activity and interest in foreign affairs.

² It is possible, of course, that differences in survey mode are also affecting these results. For example, ANES respondents might have been more likely to state that they were registered to vote because they were embarrassed to admit otherwise in a face-to-face survey. Nonetheless, these results suggest that the net impact of the differences in sample selection and survey mode between the matched opt-in sample and ANES on levels of political interest are quite modest in this case.

Turning next to the measurement of variables, I calculate support for the Iraq War through respondents' answers to a battery of 5 questions. Specifically, respondents were asked: 1) whether they approved of President Bush's initial decision to attack Iraq, 2) whether they believed that the so-called "surge" of US troops into Iraq in 2007 had made things better in Iraq, 3) whether they believed the US war effort in Iraq was likely to succeed, 4) whether they approved of a timetable for withdrawing US troops, and 5) whether they approved of allowing the withdrawal of US forces to be determined by conditions in Iraq. Responses to these questions scaled together quite strongly, yielding a Cronbach's alpha score of 0.81.

Support for the war in Afghanistan was measured with a similar battery of 5 questions. As with Iraq, respondents were asked about their approval for the decision to attack Afghanistan and whether they expect that the war will succeed. In addition, respondents were asked whether they believe that the situation in Afghanistan is improving or getting worse, whether they would approve of sending additional troops to Afghanistan, and whether they approve of keeping US forces in Afghanistan until the situation is stabilized. Respondent's attitudes toward Afghanistan were not quite as well structured as those toward Iraq. Nonetheless, responses to these questions scaled adequately well, yielding an alpha score of 0.69.

Turning to the agenda-setting variables, respondents were asked to rank the importance of seven issues "in the order of priority you think they should be for the federal government." The issues were: 1) the Iraq War, 2) the war in Afghanistan, 3) terrorism, 4) job creation and economic growth, 5) health care, 6) illegal immigration, and 7) the environment and global warming. All seven issues were

displayed in random order on the computer screen and respondents were asked to click and drag the issues across the screen into their preferred rank order. The salience of terrorism is measured in inverse proportion to the rank respondents chose. That is, respondents who ranked terrorism as the most important issue received a salience score of seven. Respondents who ranked terrorism second received a salience score of six, and so on. The salience of security issues is measured as the average salience of terrorism, the Iraq War and the war in Afghanistan.

The three key independent variables are exposure to Fox News, MSNBC, and Comedy Central. Respondents were asked to rank “broadcast networks in the order of how frequently you use them to get your news about national and international issues.” Specifically, respondents were asked to rank NBC, ABC, CBS, CNN, Fox News, MSNBC, Comedy Central news shows (The Daily Show and the Colbert Report), and local news programming. As with ranking issues, respondents were presented with these networks in random order and asked to click and drag them across the screen into their preferred order. The 26% (N=1,050) of respondents who ranked Fox News as their most frequent news sources were identified as “Fox News viewers.” The 8% (N=342) of respondents who ranked MSNBC as their most frequent news source were identified as “MSNBC viewers.” Finally, the 4.5% (N=182) of respondents who ranked Comedy Central as their most frequent news source were coded as Comedy Central viewers.

Finally, in order to account for self-selection of news content, I included a number of demographic variables as controls in the analysis. These controls

included variables that capture party identification, ideology, gender, age, race, religious beliefs, regularity of church attendance, and interest in politics and foreign affairs.

In order to place the substantive meaning of the statistical results in context, it is useful to begin by describing the variation of the four dependent variables. Figure 3 depicts the variation in support for the wars in Iraq and Afghanistan. These variables are standardized scales normalized to a mean of zero. Thus one cannot make comparisons in the absolute level of support across these variables. Support for the Afghan War has a single peaked distribution with a standard deviation of 0.69. Not surprisingly, support for the Iraq War is more polarized – reflected in its bimodal distribution. Variance of opinion toward Iraq is thus somewhat higher with a standard deviation of 0.77. Figure 4 depicts the observed variation in the salience of terrorism and of international security issues more broadly. These measures are not standardized and can thus be compared to one another. The mean salience of terrorism is 4.05 (i.e. about the third most important issue), and the average salience of security issues is just slightly lower at 3.92. Not surprisingly the variance in the salience of terrorism is higher (with a standard deviation of 1.88) since it is a response to a single item, as compared to the salience of security issues (standard deviation of 1.07), which is an average across three response items.

Next we examine the extent to which the control variables included in the analysis can provide a persuasive model of media self-selection. Figure 5 depicts the success that these variables have in predicting Fox News viewership, MSNBC viewership and Comedy Central viewership using a logit model. The graphs in

Figure 5 are Receiver Operating Characteristic (ROC) curves that depict the ability of statistical models to discriminate between dichotomous outcomes across all possible thresholds for prediction (Swets, 1988). The more the curves bend away from the 45-degree line toward the upper left corner of the graph, the better the discrimination of the model between dichotomous outcomes (e.g. Fox News viewership). Additionally, the area under the ROC curve (which varies from 0 to 1) can be used as a summary statistic for a model's discriminatory capability.

The control variables clearly provide a reasonably good model of self-selection for Fox News with an area under the ROC curve of 0.88. The controls are somewhat less effective in predicting self-selection to MSNBC with an area under the ROC curve of 0.77. As noted above, MSNBC viewership does not yet seem to be quite as strongly ideologically self-selected as Fox, perhaps because of their relatively recent tilt to the left. Comedy Central viewership, on the other hand, is well explained by the demographic controls with an area under the ROC curve of 0.85.

It is important to note that the predictions in Figure 5 are a result of logit models that are strictly linear in their coefficients. That is, these models do not allow for any interaction effects among the factors that cause self-selection. The genetic matching models that are utilized in this analysis allow for interactions among and across all of the variables in modeling the propensity to receive the treatment variable (i.e. news viewership). Thus the discriminatory capabilities of the matching models described below are significantly higher than the ROC curves in Figure 5. Nonetheless, the results in Figure 5 do suggest that these variables

provide a reasonably sound foundation for modeling the self-selection of news media.

Based on this set of control variables, our next task is to construct statistical matching models that will account for the self-selection of cable news content and allow us to separate the causal impact of cable news from the effects of self-selection. Matching analysis is a technique designed to help provide robust causal inferences based on observational data. Experimental analysis is, of course, the most reliable method for estimating the causal impact of a treatment. By randomizing the application of a treatment, the researcher can ensure that exposure to the treatment is not spuriously related to any other potential cause of the dependent variable.

However, while experiments are very reliable in documenting causal effects in a laboratory setting, these studies often struggle to demonstrate their applicability in the real world. The generalizability of experimental studies often stumble over two principal hurdles. First, experimental subjects often differ significantly from the real population of interest. Many experimental studies, for example, are conducted on university students participating in experimental subject pools. These students may not be representative of many segments of the public at large. This mismatch between sample and population creates the possibility that some groups of individuals may respond differently to the treatment than the subjects in the study. Second, individuals in the real world frequently will not experience the treatment in the same way that they do in the lab. In an experimental study of news media effects, for example, subjects might be seated

quietly in a room for 20 minutes while they watch the news. At home, however, these same subjects might be more likely to be exposed to the news while simultaneously making dinner and talking with their family. Perhaps most importantly, while experimental studies may accurately gauge the short-term impact of exposure to a news stimulus, they frequently cannot measure the long-term impact of repeated exposure that individuals experience in the real world.

Matching analysis seeks to approximate the randomized application of treatments that is so critical to experimental causal inference with the ability of observational data to capture treatments and responses as they occur in the real world. Matching analysis is in no way a substitute for experimental research, but it can provide a robust foundation for causal inference – especially when researchers must rely on observational data because of an inability to manipulate the treatment or problems with the fidelity of the treatment as it is applied in the real world (Hox et al., 2007; King and Zeng 2007).

The intuition behind matching analysis is fairly straightforward. Since researchers cannot randomize the application of the treatment, they begin by collecting data on all observations that received the treatment of interest. Then the researcher matches each of these treated observations with an untreated observation that is similar to the treated one on all of the dimensions that the researcher believes may be related to the application of the treatment. Thus the researcher creates a “control” group that is as similar as possible to the treatment group on all of the dimensions related to the application of the treatment and then

observes the difference in outcomes between the treatment and control groups. This difference is the average treatment effect (ATE).

The inferential logic of matching is very much analogous to the logic of using statistical control variables in a linear regression model. One significant difference, however, is that in regression models such control variables are generally assumed to have independent linear effects. The researcher can specify particular interactions among certain control variables or between control variables and treatment variables of interest. But statistical problems of multicollinearity and the limitations of degrees of freedom generally only allow researchers to specify a few such interactions at a time. Moreover, researchers must specify which interactions they wish to include, and thus may not be aware of important interactions that should be included in a model. Matching analysis incorporates non-linear interactive effects while avoiding problems with colinearity and the theoretical specification of interaction effects by simply matching treated cases to controls in order to create treatment and control groups that are statistically balanced on all of the relevant control variables.

There are a wide variety of algorithms that one can use to match treatment and control observations. In this analysis, I rely on an algorithm known as genetic matching (Diamond and Sehn, 2005). This method begins by developing a statistical model of the propensity to receive treatment and then matches observations simultaneously based both on the propensity to be treated and the control variables used to estimate that propensity. By focusing both on propensity scores and on the values of the independent variables, genetic matching can often

yield very robust balance between treatment and control groups (Diamond and Sekhon, 2005).

The first half of Table 1 contains a description of the distributions of the control variables for Fox viewers and non-Fox viewers. As expected, these groups of news viewers appear to differ on a variety of dimensions. The average difference in party identification scores, for example, is about three points on a six-point scale, and the average difference in self-reported ideology is more than one point on a five-point scale. Neither of these gaps is surprising, but both seem substantively large. Non-Fox viewers are also about 10% more likely (or about six times as likely) to be African American than their Fox viewing counterparts. Fox viewers are also substantially more likely to be male, to attend church regularly, to identify as Protestant, and to express a strong interest in politics and foreign affairs. On the other hand, non-Fox viewers are much more likely to state that they have no religious beliefs.

The second half of Table 1 compares the treatment group of Fox viewers to the “control” group of non-Fox viewers created by the genetic matching algorithm. Once the algorithm estimated propensities to watch Fox, I eliminated observations outside the bounds of what is known as “common support.” That is, I prevented the algorithm from matching treatment cases with propensity scores higher than the highest propensity score of any non-Fox viewer; and I prevented the algorithm from matching control cases with propensity scores lower than the score of any Fox viewer. Restricting the analysis to the area of common support ensures that the estimated treatment effects are not a result of counterfactual extrapolation outside

our observed data. Specifically, by focusing on the area of common support we are estimating the impact of watching Fox by comparing Fox viewers only to non-Fox viewers who are within the observed propensity of Fox viewers to watch Fox. This procedure is generally regarded as providing more robust and unbiased estimates of treatment effects when the treatment and control groups differ substantially in their propensity to receive the treatment (Ho et. al. 2007). Dropping these cases, however, does alter the quantity that we can estimate. Rather than estimating the average treatment effect – which is a comparison of Fox and all non-Fox viewers, we must now restrict our attention to the average treatment effect on the treated. That is, we are estimating the impact of Fox news on those who selected Fox news by comparing Fox viewers to similar individuals who did not select Fox.

Restricting the analysis to the area of common support in terms of propensity to watch Fox retained a set of 994 treatment cases and 451 controls. Each Fox viewer was then matched to a non-Fox viewer based on their propensity score and the observed values on all of the control variables. Given the larger number of treatment cases relative to controls, matching was done with replacement. The second half of Table 1 describes the balance between the treatment and control groups across the propensity score and all control variables. The table demonstrates that the treatment and control groups are extremely well balanced in terms of party identification, ideology, race, religiosity, and so on. None of the control variables differ substantially between treatment and control groups and the propensity to watch Fox is nearly identical across the two groups.

Tables 2 and 3 summarize the same information regarding the matching procedures for MSNBC and Comedy Central watchers. Not surprisingly, the differences between treatment and control groups are not as large for MSNBC – although they remain substantial in several instances. Once again, I excluded observations outside the area of common support for the propensity to watch MSNBC and Comedy Central from these analyses. This procedure yielded a set of 317 treatment cases and 272 controls for the analysis of MSNBC and a set of 161 treatment cases and 143 controls for the analysis of Comedy Central. In each instance, the samples appear extremely well balanced after the genetic matching procedure. Thus each of these matched datasets appear to provide a sound basis for estimating the causal impact of each of these cable news outlets on those who choose to view them.

After identifying the overall causal impact of cable news exposure, I will investigate the extent to which any effects are due to the amplification of existing beliefs as opposed to the persuasion of those less inclined to agree with the network’s editorial tone. I perform this analysis through subclass matching. This procedure takes the propensity scores described above and divides cable news viewers into three groups, low, medium and high propensity viewers. For example, I create a treatment group of “unlikely” Fox News viewers who have a low estimated propensity to watch Fox but nonetheless state that Fox is their primary news source. I perform the same procedure with regard to MSNBC and Comedy Central to create treatment groups of “likely and “unlikely” viewers. If cable news exposure has the effect of amplifying attitudes of those strongly predisposed to self-select

exposure to the message, we should see its effects most strongly among “likely” viewers. If, on the other hand, cable news exposure has the effect of altering opinions among those not strongly predisposed to select the message, we should see its effects most strongly among “unlikely” viewers.

Data Analysis

I estimate the impact of each cable news outlet on each foreign policy attitude in a series of steps. I begin by presenting the difference of means for each attitude between viewers and non-viewers of each network. A simple comparison of the difference of means illustrates the apparent impact of cable news viewership when one pools together the causal impact of the news with the effects of self-selection. Second, I estimate the average treatment effect on the treated (ATT) for each of the three news outlets. This analysis estimates the overall causal impact of cable news viewership after controlling for self-selection through genetic matching. Third, I investigate whether cable news outlets are having their strongest effect on likely or unlikely viewers through subclass matching.

I begin by analyzing respondents’ substantive support for the Wars in Iraq and Afghanistan. Figure 6 presents the impact of Fox News, MSNBC and Comedy Central on attitudes toward the war in Afghanistan. The circles represent estimated effects of each cable news outlet for each of the estimation methods described above. The black vertical lines represent the 95% confidence intervals around those estimated effects. Beginning with the bivariate analysis on the left-hand side of Figure 6, we can see that Fox News viewers differ substantially from non-Fox

viewers in their support for the Afghan War. The bivariate difference of means between Fox and non-Fox viewers is 0.69, which is equal to a full standard deviation difference across the distribution of support for Afghanistan. For example, the bivariate analysis suggests that selecting Fox News as one's primary news source would increase an individual's support for the Afghan War from the median level to approximately the 90th percentile.

Not surprisingly, however, the genetic matching analysis demonstrates that the overwhelming majority of this effect is due to self-selection of news outlets. The average treatment effect on the treated (ATT) for Fox News viewers is 0.15 regarding support for Afghanistan – nearly an 80% reduction from the bivariate difference. This effect is statistically significant even after matching, but its substantive size is relatively modest. The ATT in this instance suggests that Fox viewership increased support for Afghanistan from the median level to approximately the 60th percentile.

Next, the subclass matching analysis investigates whether the impact of Fox News varies across likely and unlikely viewers. Here we can see that the impact of Fox is substantially larger among “unlikely” viewers. Specifically, the average treatment effect on “unlikely” Fox viewers is nearly three times as large (0.32) as the ATT for “likely” Fox viewers. Both of these treatment effects are statistically significant, but the substantive impact on “likely” viewers is even more muted than the overall ATT, moving viewers from the median to the 55th percentile in support. The ATT for “unlikely” Fox viewers, on the other hand, is large enough to move those viewers from the median to the 75th percentile of support.

At first glance, MSNBC also appears to be having a significant impact on attitudes toward Afghanistan. The bivariate difference between MSNBC and non-MSNBC viewers is -0.18 – approximately equal to the overall ATT for Fox News, but in the opposite direction. Once we apply matching techniques, however, we can see that this apparent difference in views between MSNBC and non-MSNBC watchers is entirely due to self-selection. The overall ATT for MSNBC is substantively almost zero (-0.03) and does not approach statistical significance. The same result holds true for both likely and unlikely MSNBC viewers. Interestingly, the impact of Comedy Central viewing on support for Afghanistan appears to be stronger and more robust than the impact of MSNBC. The bivariate difference between Comedy Central and non-Comedy Central watchers is -0.39. Not surprisingly, much of this apparent effect disappears once we account for self-selection through matching. Nonetheless, the ATT for Comedy Central viewership remains statistically significant. Its overall substantive impact (-0.11) is fairly modest, moving viewers from the median to the 45th percentile of support, but the subclass matching analysis reveals that its impact is stronger among “unlikely” Comedy Central viewers. In this case, the ATT is -0.27, which is large enough to move a viewer from the median to about the 38th percentile of support. The impact of Comedy Central on likely viewers on the other hand, is not statistically significant.

Turning our attention to Iraq, Figure 7 displays the bivariate differences of means and estimated treatment effects for each of the cable news outlets on support for the war in Iraq. The association between news exposure and opinion appear to be somewhat larger with Iraq than was the case with Afghanistan. The bivariate

difference in opinion between Fox and non-Fox viewers is 1.02. This represents a difference of about one and one-third standard deviations in support for the war. Not surprisingly, the causal impact of Fox on support for Iraq is much smaller once we account for self-selection through matching, and in this case the overall ATT is about one quarter the size of the bivariate gap (0.27). This effect is remains statistically significant, however, and is roughly equivalent to shifting a viewer's support for Iraq from the median to the 60th percentile. The treatment effect of Fox News on "unlikely," viewers is more than twice as large as the overall ATT (0.58), while the Fox effect among likely viewers is similar to the overall ATT (0.25).

As was the case with Afghanistan, MSNBC appears to reduce support for Iraq substantially among its viewers. The bivariate difference of means is -0.65. This gap is equivalent to reducing a viewer's support for the war from the median to the 20th percentile. In this instance, however, MSNBC continues to have a causal impact even after we account for self-selection. The overall ATT for MSNBC viewers is much reduced from the bivariate gap (-0.18), but it remains statistically significant. This effect is roughly equivalent to reducing a viewer's support from the median to the 45th percentile, which is modest in comparison to the Fox effect, but larger than MSNBC's impact on attitudes toward Afghanistan. The treatment effect of cable news continues to be larger for unlikely viewers than likely ones. The treatment effect for "unlikely" MSNBC viewers is -0.26 – roughly similar to the overall ATT for Fox News.

The effects of Comedy Central on support for the Iraq War seem to be roughly similar to those of MSNBC with the exception that the impact of Comedy

Central is slightly more differentiated between likely and unlikely viewers. The bivariate difference between Comedy Central and non-Comedy Central viewers is -0.55. The overall ATT for Comedy Central, however, is more attenuated at -0.08. This effect is just barely statistically significant and is substantively quite negligible. The reason for this modest overall effect, however, is due to a sharper difference between likely and unlikely viewers. The ATT for unlikely Comedy Central viewers is -0.32 – larger than the impact of MSNBC for unlikely viewers and larger than the overall ATT for Fox. The impact of Comedy Central on likely viewers, however, does not approach statistical significance.

Thus in contrast to the “minimal effects” hypothesis, I do find that exposure to more partisan and polarized news coverage on cable networks such as Fox and MSNBC does have an impact on substantive attitudes toward foreign policy, and these effects cannot be attributed to self-selection in the new and more diverse media environment. Next we turn our attention to the “agenda setting” hypothesis to examine whether exposure to these more polarized media creates a partisan divide over the salience of key issues facing the country. We begin with the overall salience of international security issues to the American public. At the time of this survey, the two most highly ranked issues in the public mind were the economy and health care reform. All networks paid a good deal of attention to these issues during 2008, but the cable news networks appeared to vary somewhat in their willingness to move away from these topics toward international issues such as the wars in Iraq and Afghanistan and terrorism – which had dominated the airwaves in 2007. Fox News, in particular, is noted for its attention to the success of the “surge” of US

forces in Iraq during 2008 and most especially for its extensive attention to terrorism since 2001. Indeed, Fox's framing of news coverage in the wake of 9/11 and its focus on the Global War on Terror (in which they included Iraq and Afghanistan) became central to the Fox brand.

I begin by examining the average priority that viewers place on the three central international issues of 2008: Iraq, Afghanistan, and terrorism. As expected, Figure 8 shows that Fox News viewers are much more likely to find these three issues salient than are non-Fox viewers. The bivariate difference between Fox and non-Fox viewers is 0.94, indicating that Fox viewers rank Afghanistan, Iraq and Terrorism an average of 1 slot higher of the seven issues they were asked to rank. As expected, the matching analysis indicates that a substantial portion of this effect is due to self-selection, but the relative size of the causal impact appears to be larger with regard to agenda setting than we observed with substantive attitudes. Specifically, the ATT of Fox for the salience of security issues is 0.58. Thus while self-selection appeared to account for 75-80% of the opinion gap with regard to substantive attitudes, it only accounts for about half of the opinion gap regarding agenda setting. These results suggest that Fox News caused viewers to place Iraq, Afghanistan and terrorism and average of about half a rank higher than non-Fox viewers. The same pattern regarding likely and unlikely viewers continues for the salience of security issues, but the gap is somewhat more muted in this case. The ATT for unlikely Fox viewers is virtually identical to the overall ATT, while the effect for likely Fox viewers is slightly smaller at 0.42.

Once again, MSNBC appears to have a strong impact on setting the agenda regarding security issues, but this effect evaporates when we account for self-selection. The bivariate difference of means between MSNBC and non-MSNBC viewers is -0.24, indicating that MSNBC viewers rank these three security issues a quarter of a point lower in priority than non-MSNBC viewers (most likely due to a higher priority for health care). Once we account for self-selection through matching, however, the causal impact of MSNBC is virtually zero. The overall ATT, and the estimated treatment effects for likely and unlikely viewers are all substantively negligible and do not approach statistical significance. In this case the impact of Comedy Central is just as ephemeral as MSNBC. The bivariate difference of means in this case is somewhat larger at -0.38, but this effect evaporates in all of the matching models.

Thus with regard to the salience of security issues, it appears that Fox News may be setting an agenda that differs significantly from the mainstream media, but MSNBC and Comedy Central are not. How much of this result is due to Fox's renowned emphasis on terrorism as a lens for its coverage of international issues? Figure 9 summarizes the impact of cable news on the salience of terrorism as a national issue. As expected, the bivariate gap between Fox and non-Fox viewers is very large. Fox viewers rank terrorism an average of two spots higher than non-Fox viewers out of the seven possible issues they were asked to rank. A little over half of this gap disappears when we use matching to account for self-selection, but the overall ATT for Fox regarding terrorism is 0.83. Thus exposure to Fox causes viewers to rank terrorism an average of nearly one slot higher on the national

agenda. Fox's agenda setting regarding terrorism has an even stronger impact on "unlikely" Fox viewers with a treatment effect of 1.27 – nearly 50% larger than the overall effect. The agenda setting impact of Fox is reduced for likely viewers who are strongly predisposed to seek out such messages. In that case the estimated treatment effect is 0.48.

As was the case for security issues more generally, much of the agenda setting effect of MSNBC seems to disappear with the application of matching techniques. MSNBC viewers do rank terrorism an average of 1.3 spots lower on the agenda than non-MSNBC viewers, but about 80% of that difference evaporates with matching. Thus MSNBC causes viewers to rank terrorism an average of about one-quarter of a slot lower than non-viewers. Interestingly, while MSNBC's overall agenda setting impact is modest, its effects are much stronger among unlikely viewers. The estimated ATT for unlikely MSNBC viewers is -.49 – double the overall ATT. Moreover, this means that about half of "unlikely" MSNBC watchers place terrorism one rank lower on the national agenda because of their exposure to MSNBC. MSNBC has no impact on the salience of terrorism for likely viewers.

The effects of Comedy Central are very similar to those of MSNBC, but Comedy Central has a somewhat stronger impact on unlikely viewers. The bivariate gap between Comedy Central and non-Comedy Central viewers regarding the salience of terrorism is -1.32, but this difference drops to 0.16 and becomes statistically insignificant in the genetically matched sample. The subclass matching, however, indicates that "unlikely" Comedy Central watchers reduced their perception of the salience of terrorism by 0.65 ranks (or two-thirds of viewers

reduce the salience by one rank) due to their exposure to Comedy Central. Finally, Comedy Central actually raises the salience of terrorism modestly among likely viewers, although this result is just on the threshold of statistical significance.

Discussion

Several robust patterns emerge from these analyses regarding public opinion in the new media environment. First, the analyses clearly show that the new and more fractured media environment do allow individuals to select out the media messages that they feel predisposed to receive. In every case the use of statistical matching to account for self-selection substantially reduced the gap between treatment and control groups. In fact, the evidence here suggests that the majority of the difference in opinion that we observe across Fox, MSNBC and Comedy Central viewers can be accounted for by self-selection.

But at the same time, the evidence here indicates that while self-selection may explain the majority of the polarization that we see across cable news audiences, it cannot explain all of these differences. In many instances, it appears that the consumption of cable news has a substantial causal impact on individual's attitudes and priorities regarding foreign policy. Fox News stands out in particular as having a robust and often substantial impact on the foreign policy attitudes of its viewers. The data suggest that Fox News viewers are – on average – significantly more supportive of the wars in Iraq and Afghanistan and significantly more concerned about security issues and terrorism than they would have been had they not relied on Fox News as their primary source of information. The Fox effect is

especially significant in terms of its impact of the salience of terrorism in the minds of its viewers. Fox viewers appeared to place terrorism an average of nearly a full rank higher on the national agenda because of their exposure to Fox.

Third, it appears that MSNBC and Comedy Central did not have the same kind of sustained or substantial impact on public opinion that we observed from Fox. Perhaps it is not surprising that the effects of these networks are more muted since they only recently began to deliver more explicitly editorial coverage. Nonetheless, I do find that exposure to MSNBC did significantly reduce support for the Iraq War and reduce the salience of terrorism. Similarly, Comedy Central caused viewers to be slightly less supportive of both Iraq and Afghanistan and slightly less concerned about terrorism. Interestingly, exposure to the news shows on Comedy Central often seemed to have a stronger causal impact of public opinion than exposure to MSNBC, despite the fact that the genetic matching model identified Comedy Central viewers with greater discrimination than MSNBC watchers. The audiences at comedy central may be smaller, but their hosts appear to pack a greater editorial punch.

A fourth pattern that emerges robustly from these analyses is that news exposure has its greatest impact on “unlikely” viewers. One model of the polarizing effect of cable news programming is that it becomes an echo chamber in which individuals amplify the attitudes that they already hold. Since the matching algorithms are able to identify individuals with many factors predicting their propensity to seek out particular media messages, this echo chamber argument would suggest that the causal impact of cable news would be through the further

polarization of those who are already strongly motivated to watch. An alternative model, however, would suggest that editorial and polarized newscasts actually alter the opinions of those who are exposed to the broadcast but did not select it because of their predispositions. This argument suggests that editorial broadcasts persuade rather than amplify.

There can be no question that the new media environment is – at least in part – an echo chamber. The strength of self-selection in explaining observed opinion gaps is powerful evidence that such an echo chamber exists. But that process of amplification may not be the primary mechanism by which cable news media alter opinions. In particular, the results indicate that individuals who watch a particular network despite the fact that they had a low propensity to seek out that message are more strongly influenced by their exposure. This result seems consistent with evidence from DellaVigna and Kaplan (2007) that cable news media may actually be persuading some viewers who did not initially share the editorial predispositions of the network.

This set of results calls into question the applicability of the “minimal effects” hypothesis to an environment in which news media feel freer to editorialize more explicitly in their reporting of the news. The data here seem to indicate that cable news networks have at least some success in telling people what to think as well as telling them what to think about. While these results are in no way inconsistent with the “agenda setting” model of media effects, they do update and extend the evidence of agenda setting to a new news environment. Moreover, these results suggest that instead of thinking about the news media setting an agenda for the

public, we should paying increasing attention to the various agendas that differing media outlets may set for their viewers, readers and listeners.

Conclusion

For the past several decades, the conventional wisdom on the impact of news media on public opinion has been succinctly summarized by a widely cited remark from Benjamin Cohen. “The mass media may not be successful much of the time in telling people what to think,” Cohen writes, “but the media are stunningly successful in telling their audience what to think about.” (Cohen, 1962) Much of our knowledge supporting this view, however, comes from an era dominated by the “traditional media” of newspaper reporting and network television news. Forty years ago, TV networks controlled about 90% of the television audience at a time when the overwhelming majority of the public had begun to obtain their news primarily through television (Lowry, 1997).

Today most of the public still gets its news from television, but with the launching of the Fox News Network in 1996, TV news began a profound transformation in both substance and style. Emulating Fox’s commercial success with its difference in editorial tone and its combative angle on news, MSNBC set out in 2007 to become the liberal counter-weight to the perceived conservatism of Fox. At the same time, news shows on the Comedy Central Network – such as the Daily Show with Jon Stewart and the Colbert Report – gained popularity with younger viewers with an irreverent and biting critical comedic perspective on the news.

This paper has examined the impact of Fox News, MSNBC, and Comedy Central news shows on public attitudes toward the wars in Iraq and Afghanistan as well as the salience of international security issues and terrorism in the public mind. Using genetic and subclass matching techniques to analyze a survey of 4,000 respondents, I find that strong evidence that media self-selection explains the majority of the differences in foreign policy opinions across network audiences. At the same time, however, I find that cable news organizations do appear to have a residual causal impact on public attitudes toward foreign policy and the popular salience of international issues even after accounting for self-selection. The causal impact of Fox News, in particular, stands out as relatively robust and substantial. The impact of MSNBC and Comedy Central is more ephemeral. Finally, I discovered evidence that cable news networks influence opinion not primarily by amplifying existing attitudes among a like-minded audience, but by influencing the attitudes of those who are exposed to the media messages despite their low propensity to seek those messages out.

Figure 1: Negative News Coverage of McCain and Obama On Cable and Broadcast Networks

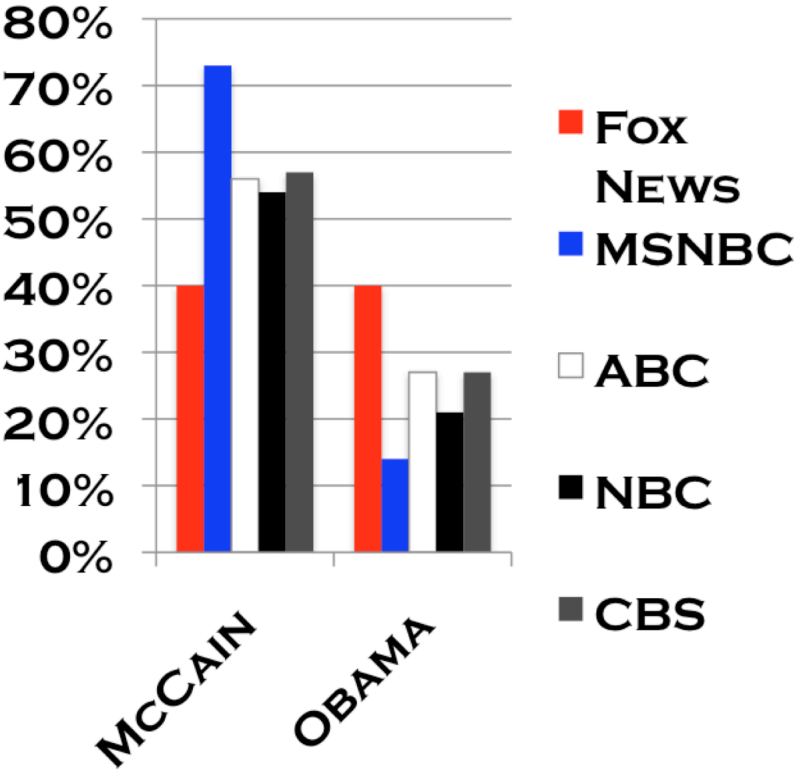


Figure 2: Party Identification of Cable and Network News Viewers

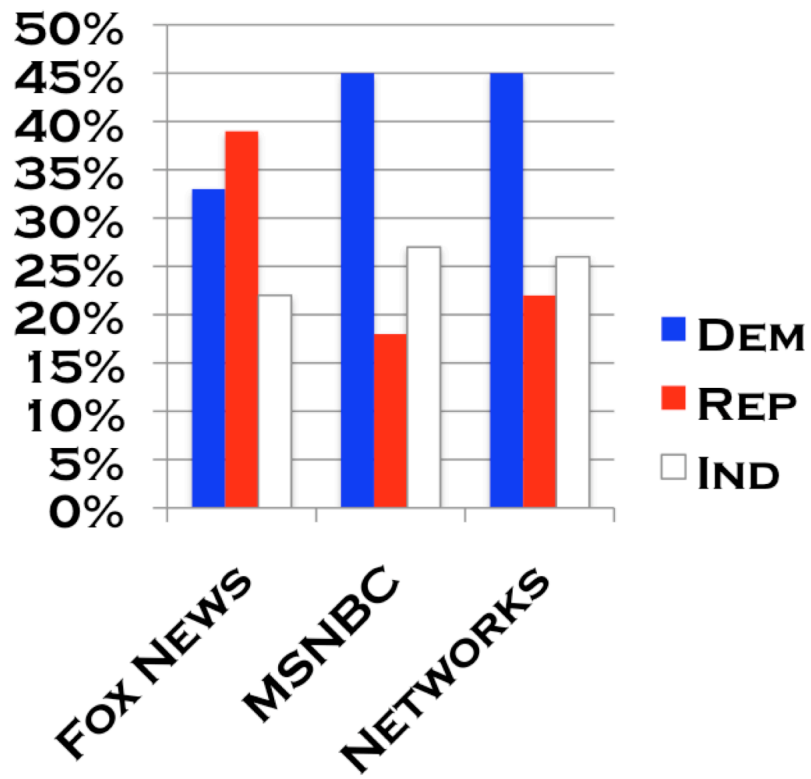
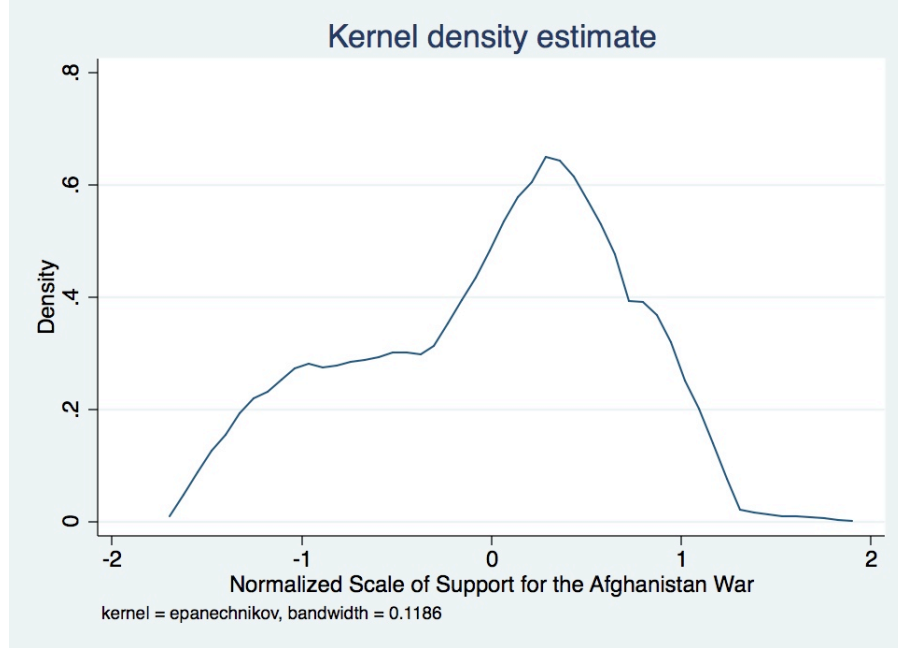
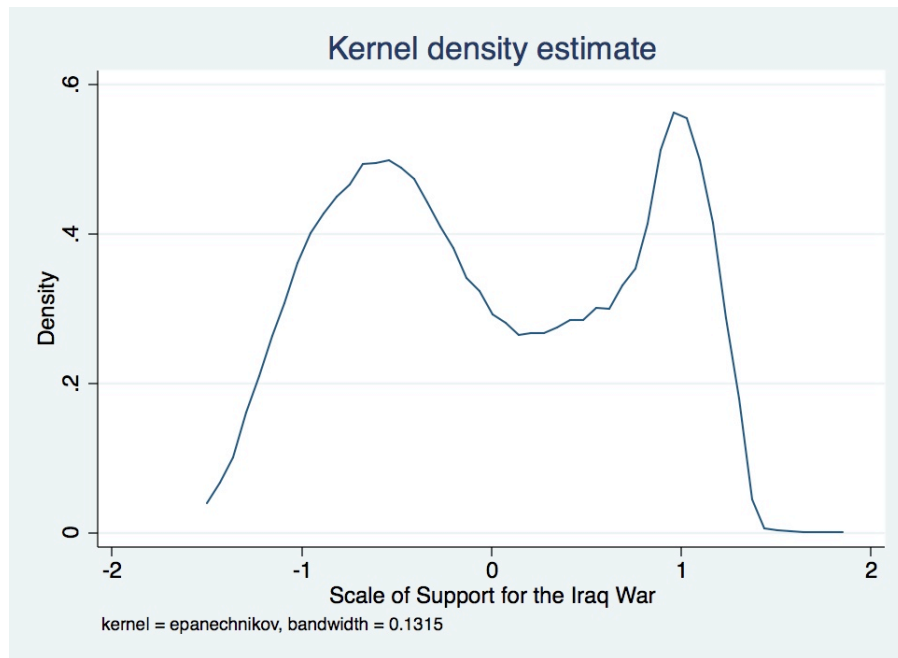


Figure 3: Public Support for the Wars in Iraq and Afghanistan

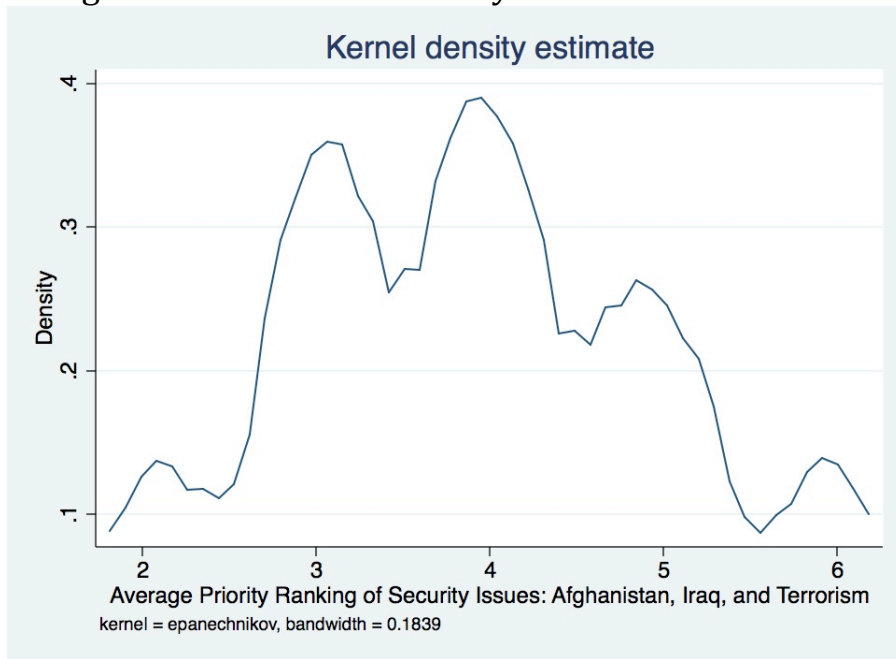


Mean= -0.01; Standard Deviation=0.69

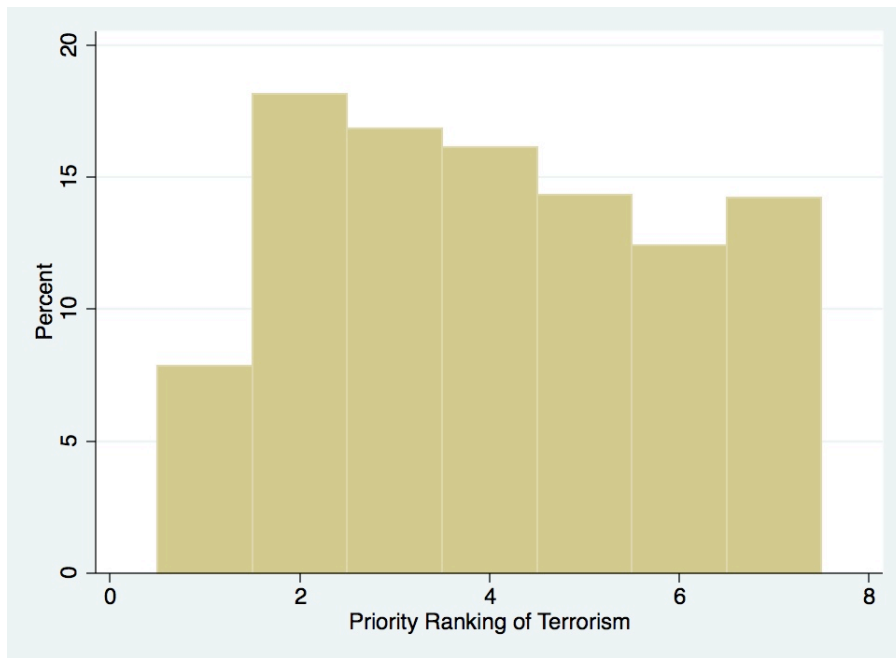


Mean=0.00; Standard Deviation=0.77

Figure 4: Salience of Security Issues and Terrorism



Mean=3.92; Standard Deviaion=1.07



Mean=4.05, Standard Deviation=1.88

Figure 5: ROC Curves Predicting News Viewership

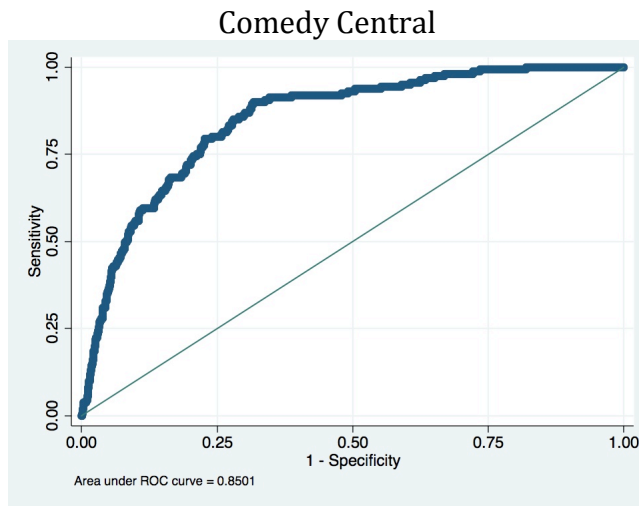
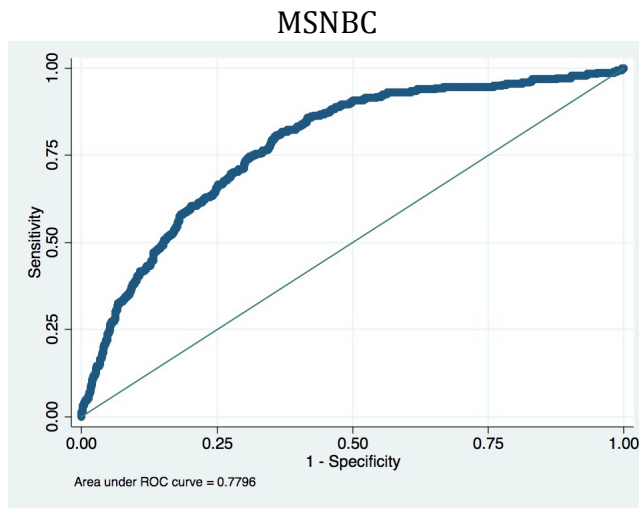
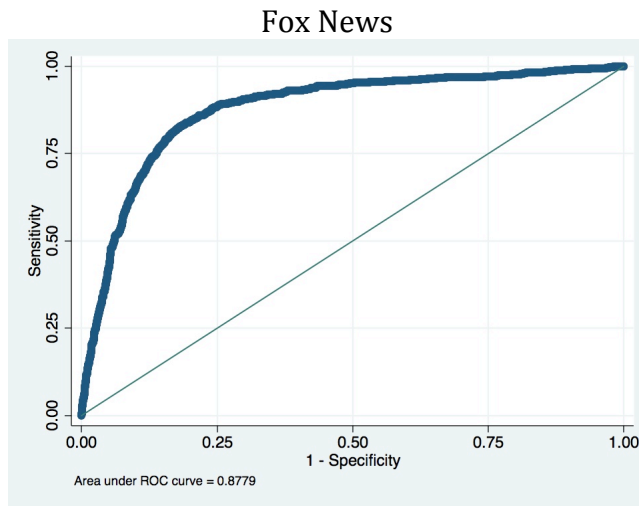


Table 1: Summary of Balance for Matched and Unmatched Data on Fox News Viewers

| Summary of balance for all Data with Fox News as Treatment | | | | | | | |
|--|---------------|---------------|------------|-----------|---------|----------|---------|
| | Means Treated | Means Control | SD Control | Mean Diff | eQQ Med | eQQ Mean | eQQ Max |
| Distance | 0.576 | 0.171 | 0.209 | 0.404 | 0.469 | 0.404 | 0.585 |
| Party ID | 5.788 | 3.048 | 2.107 | 2.739 | 3 | 2.74 | 5 |
| Ideology | 4.057 | 2.805 | 1.065 | 1.252 | 1 | 1.254 | 2 |
| Age | 49.854 | 44.256 | 15.202 | 5.598 | 6 | 5.608 | 22 |
| African American | 0.027 | 0.129 | 0.335 | -0.102 | 0 | 0.102 | 1 |
| Hispanic | 0.104 | 0.125 | 0.331 | -0.021 | 0 | 0.021 | 1 |
| Education | 3.313 | 3.269 | 1.464 | 0.044 | 0 | 0.045 | 1 |
| Gender | 1.378 | 1.532 | 0.499 | -0.154 | 0 | 0.153 | 1 |
| Go to Church | 1.513 | 1.083 | 1.24 | 0.43 | 0 | 0.431 | 2 |
| Protestant | 0.421 | 0.26 | 0.439 | 0.161 | 0 | 0.161 | 1 |
| No Religion | 0.093 | 0.218 | 0.413 | -0.125 | 0 | 0.126 | 1 |
| Follow Politics | 1.763 | 1.483 | 0.64 | 0.28 | 0 | 0.281 | 1 |
| Follow IR | 3.085 | 2.601 | 0.96 | 0.484 | 0 | 0.485 | 1 |

| Summary of Balance for Matched Data with Fox News as Treatment Using Genetic Matching | | | | | | | |
|---|---------------|---------------|------------|-----------|---------|----------|---------|
| | Means Treated | Means Control | SD Control | Mean Diff | eQQ Med | eQQ Mean | eQQ Max |
| Distance | 0.576 | 0.571 | 0.246 | 0.004 | 0.15 | 0.136 | 0.224 |
| Party ID | 5.788 | 5.782 | 1.62 | 0.006 | 1 | 0.707 | 3 |
| Ideology | 4.057 | 4.053 | 0.798 | 0.004 | 0 | 0.308 | 1 |
| Age | 49.854 | 49.287 | 14.386 | 0.567 | 4 | 3.67 | 24 |
| African American | 0.027 | 0.027 | 0.163 | 0 | 0 | 0.029 | 1 |
| Hispanic | 0.104 | 0.104 | 0.305 | 0 | 0 | 0.031 | 1 |
| Education | 3.313 | 3.176 | 1.349 | 0.137 | 0 | 0.098 | 1 |
| Gender | 1.378 | 1.358 | 0.48 | 0.02 | 0 | 0.031 | 1 |
| Go to Church | 1.513 | 1.51 | 1.318 | 0.003 | 0 | 0.102 | 1 |
| Protestant | 0.421 | 0.411 | 0.493 | 0.009 | 0 | 0.06 | 1 |
| No Religion | 0.093 | 0.091 | 0.287 | 0.002 | 0 | 0.013 | 1 |
| Follow Politics | 1.763 | 1.759 | 0.482 | 0.004 | 0 | 0.14 | 1 |
| Follow IR | 3.085 | 3.053 | 0.782 | 0.031 | 0 | 0.239 | 1 |

Table 2: Summary of Balance for Matched and Unmatched Data on MSNBC Viewers

| Summary of Balance for All Data for MSNBC Viewers | | | | | | | |
|---|---------------|---------------|------------|-----------|---------|----------|---------|
| | Means Treated | Means Control | SD Control | Mean Diff | eQQ Med | eQQ Mean | eQQ Max |
| Distance | 0.179 | 0.083 | 0.083 | 0.097 | 0.11 | 0.096 | 0.149 |
| Party ID | 2.189 | 4.002 | 2.323 | -1.813 | 2 | 1.808 | 4 |
| Ideology | 2.379 | 3.245 | 1.133 | -0.866 | 1 | 0.868 | 2 |
| Age | 46.637 | 45.788 | 15.439 | 0.849 | 1 | 1.035 | 22 |
| African American | 0.132 | 0.096 | 0.295 | 0.036 | 0 | 0.035 | 1 |
| Hispanic | 0.148 | 0.116 | 0.32 | 0.032 | 0 | 0.032 | 1 |
| Education | 3.524 | 3.257 | 1.462 | 0.266 | 0 | 0.268 | 1 |
| Gender | 1.483 | 1.488 | 0.5 | -0.006 | 0 | 0.006 | 1 |
| Go to Church | 0.953 | 1.232 | 1.277 | -0.279 | 0 | 0.281 | 1 |
| Protestant | 0.243 | 0.312 | 0.464 | -0.07 | 0 | 0.069 | 1 |
| No Religion | 0.281 | 0.172 | 0.377 | 0.109 | 0 | 0.107 | 1 |
| Follow Politics | 1.782 | 1.541 | 0.623 | 0.241 | 0 | 0.246 | 1 |
| Follow IR | 3.028 | 2.711 | 0.954 | 0.318 | 0 | 0.322 | 1 |

| Summary of Balance for MSNBC Viewers after Genetic Matching | | | | | | | |
|---|---------------|---------------|------------|-----------|---------|----------|---------|
| | Means Treated | Means Control | SD Control | Mean Diff | eQQ Med | eQQ Mean | eQQ Max |
| Distance | 0.179 | 0.178 | 0.104 | 0.001 | 0.011 | 0.011 | 0.064 |
| Party ID | 2.189 | 2.192 | 1.67 | -0.003 | 0 | 0.121 | 1 |
| Ideology | 2.379 | 2.394 | 0.951 | -0.016 | 0 | 0.092 | 1 |
| Age | 46.637 | 46.306 | 14.858 | 0.331 | 1 | 1.228 | 3 |
| African American | 0.132 | 0.132 | 0.34 | 0 | 0 | 0.007 | 1 |
| Hispanic | 0.148 | 0.148 | 0.356 | 0 | 0 | 0.018 | 1 |
| Education | 3.524 | 3.483 | 1.438 | 0.041 | 0 | 0.085 | 1 |
| Gender | 1.483 | 1.483 | 0.501 | 0 | 0 | 0.004 | 1 |
| Go to Church | 0.953 | 0.937 | 1.2 | 0.016 | 0 | 0.029 | 1 |
| Protestant | 0.243 | 0.243 | 0.43 | 0 | 0 | 0.007 | 1 |
| No Religion | 0.281 | 0.293 | 0.456 | -0.013 | 0 | 0.007 | 1 |
| Follow Politics | 1.782 | 1.785 | 0.455 | -0.003 | 0 | 0.011 | 1 |
| Follow IR | 3.028 | 3.025 | 0.868 | 0.003 | 0 | 0.048 | 1 |

Table 3: Summary of Balance for Matched and Unmatched Data on Comedy Central Viewers

| Summary of Balance for All Data for Comedy Central Viewers | | | | | | | |
|--|---------------|---------------|------------|-----------|---------|----------|---------|
| | Means Treated | Means Control | SD Control | Mean Diff | eQQ Med | eQQ Mean | eQQ Max |
| Distance | 0.147 | 0.042 | 0.064 | 0.106 | 0.111 | 0.105 | 0.197 |
| Party ID | 2.478 | 3.902 | 2.338 | -1.424 | 1 | 1.429 | 4 |
| Ideology | 2.205 | 3.212 | 1.131 | -1.007 | 1 | 1 | 2 |
| Age | 33.851 | 46.453 | 15.343 | -12.602 | 15 | 12.752 | 33 |
| African American | 0.075 | 0.101 | 0.301 | -0.026 | 0 | 0.031 | 1 |
| Hispanic | 0.093 | 0.12 | 0.325 | -0.027 | 0 | 0.031 | 1 |
| Education | 3.776 | 3.258 | 1.458 | 0.519 | 0 | 0.522 | 2 |
| Gender | 1.404 | 1.492 | 0.5 | -0.088 | 0 | 0.087 | 1 |
| Go to Church | 0.522 | 1.24 | 1.277 | -0.718 | 0 | 0.72 | 3 |
| Protestant | 0.149 | 0.314 | 0.464 | -0.165 | 0 | 0.168 | 1 |
| No Religion | 0.429 | 0.17 | 0.376 | 0.259 | 0 | 0.255 | 1 |
| Follow Politics | 1.615 | 1.561 | 0.614 | 0.054 | 0 | 0.056 | 1 |
| Follow IR | 2.764 | 2.739 | 0.95 | 0.025 | 0 | 0.05 | 1 |

| Summary of balance for Comedy Central Viewers using Genetic Matching | | | | | | | |
|--|---------------|---------------|------------|-----------|---------|----------|---------|
| | Means Treated | Means Control | SD Control | Mean Diff | eQQ Med | eQQ Mean | eQQ Max |
| Distance | 0.147 | 0.143 | 0.104 | 0.005 | 0.01 | 0.011 | 0.046 |
| Party ID | 2.478 | 2.478 | 1.659 | 0 | 0 | 0.098 | 1 |
| Ideology | 2.205 | 2.236 | 1.022 | -0.031 | 0 | 0.077 | 1 |
| Age | 33.851 | 34.41 | 12.302 | -0.559 | 1 | 1.238 | 4 |
| African American | 0.075 | 0.075 | 0.264 | 0 | 0 | 0 | 0 |
| Hispanic | 0.093 | 0.093 | 0.292 | 0 | 0 | 0.014 | 1 |
| Education | 3.776 | 3.733 | 1.453 | 0.043 | 0 | 0.084 | 1 |
| Gender | 1.404 | 1.404 | 0.492 | 0 | 0 | 0.021 | 1 |
| Go to Church | 0.522 | 0.503 | 0.982 | 0.019 | 0 | 0.07 | 1 |
| Protestant | 0.149 | 0.143 | 0.351 | 0.006 | 0 | 0.014 | 1 |
| No Religion | 0.429 | 0.429 | 0.497 | 0 | 0 | 0.035 | 1 |
| Follow Politics | 1.615 | 1.652 | 0.551 | -0.037 | 0 | 0.063 | 1 |
| Follow IR | 2.764 | 2.839 | 0.887 | -0.075 | 0 | 0.119 | 1 |

Figure 6: The Effects of News Viewership on Support for the War in Afghanistan

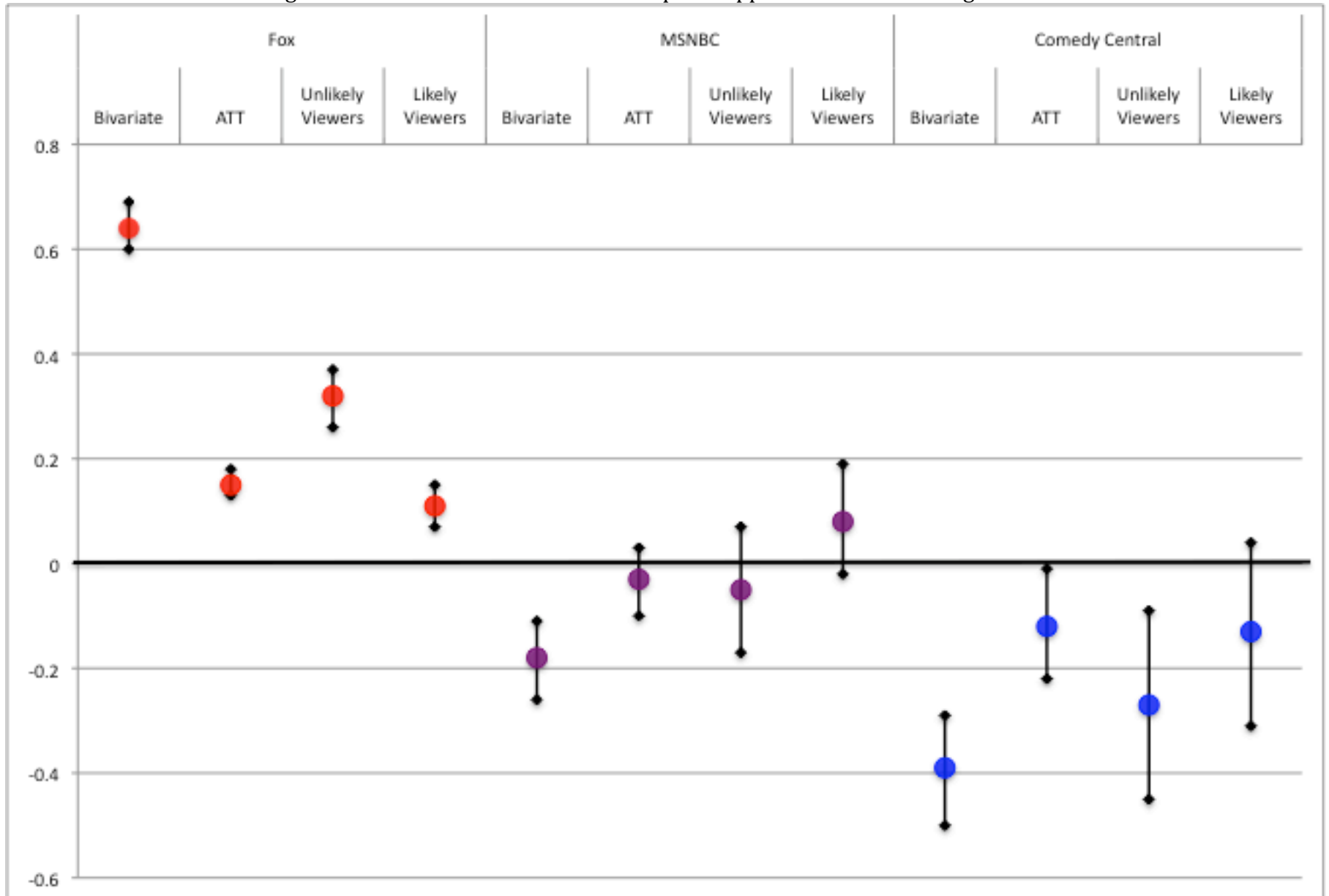


Figure 7: The Effects of News Viewership on Support for the War in Iraq

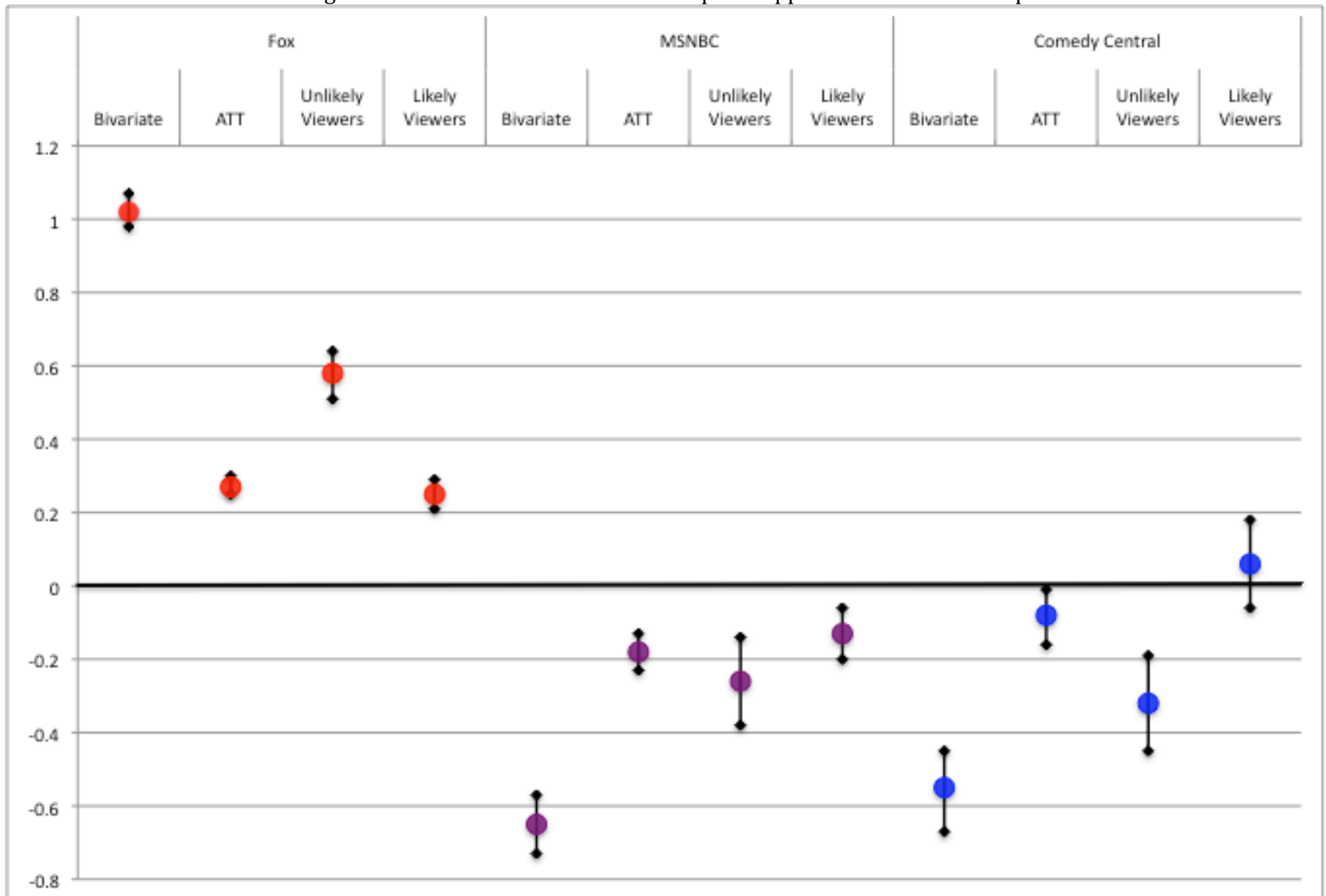


Figure 8: The Effects of News Viewership on the Salience of Security Issues

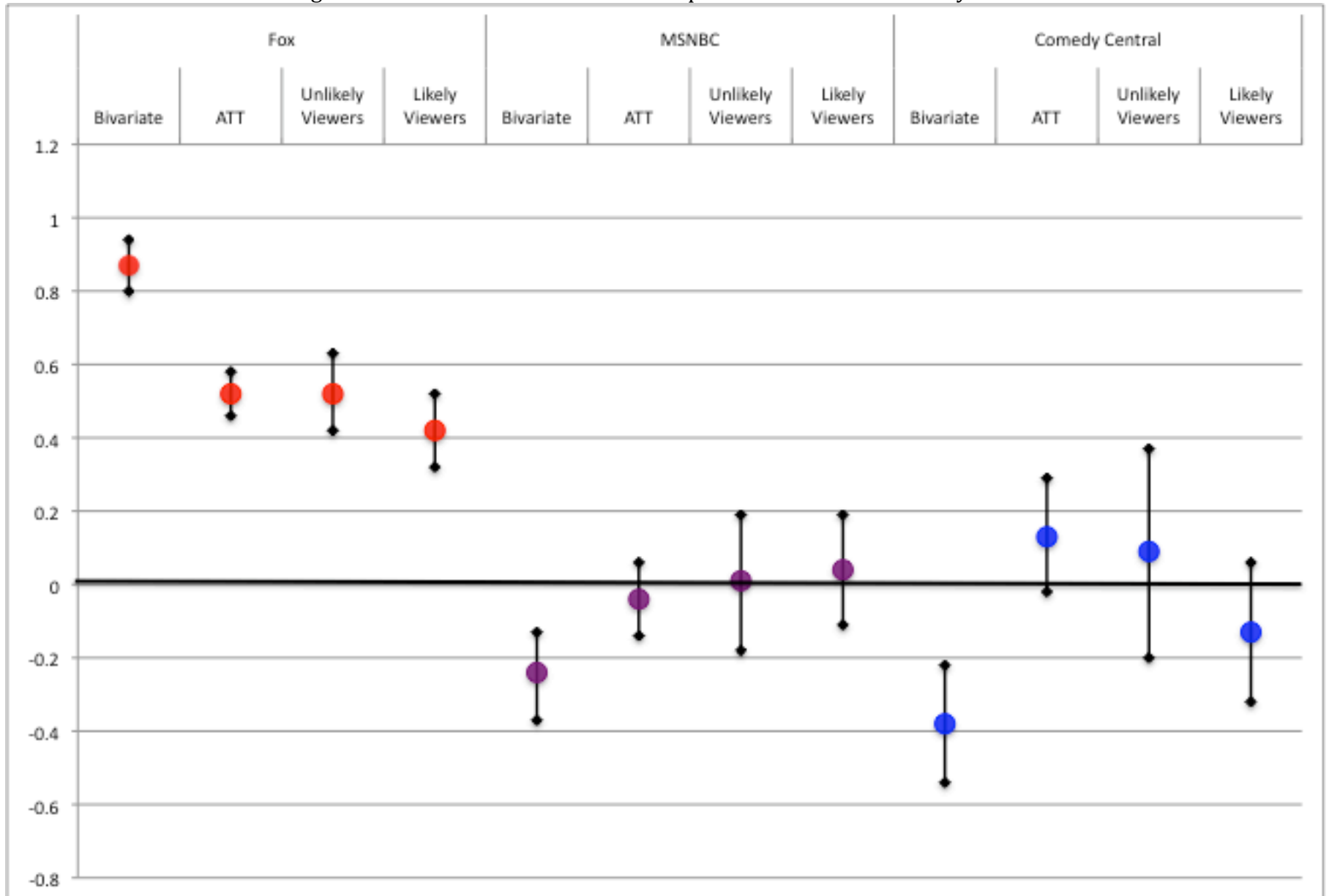


Figure 9: The Effects of News Viewership on the Saliency of Terrorism

