

# News Media Diet and Climate Change Attitudes: A Reexamination

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## Introduction

Fox News has been under the microscope of scholars, researchers, and commentators since its arrival in the late 1990s for the impact that it has made on American politics. That scrutiny has been focused on one major issue: climate change. The conventional wisdom suggests that it is Fox News, as a prominent news source for many conservatives, that bears the brunt of responsibility for polarizing the public opinion on climate change and turning conservatives into climate skeptics.

Popular accounts of this dynamic highlight two facts: the prominence of Fox News as a source of information for conservatives, and the misleading nature of its coverage of climate change. A recent study by the Pew Research Center (2014) found that while liberals tend to consume a variety of mainstream sources, conservatives tend to be clustered around Fox News.<sup>1</sup> And, their coverage of climate change apparently leaves a lot to be desired. According to one analysis by the Union of Concerned Scientists, 72 percent of Fox News's 2013 climate related segments were misleading, compared to 30 percent on CNN and 8 percent on MSNBC.<sup>2</sup> If that figure is at all representative of Fox's coverage of this topic, it is not surprising that consumers of Fox News content would turn against the findings of climate science. There are, however, problems with this narrative.

First, the focus on Fox News as a primary news source for Republicans neglects the fact that most people rely on mainstream media sources for their information, not cable news. Although Fox News is, in fact, the most successful cable news channel, not that many people frequently watch cable news. The small exception to this rule are the most politically involved partisans. Furthermore, for Fox to have such an immense effect on public opinion formation among its viewers, it would have to be one of the only, if not THE only news source that they consume, or all of the news sources that they do consume would have to feature similar types of coverage of climate change. Otherwise, Fox's misleading climate change coverage would be counterbalanced by more sensible coverage from other news sources that people consume.

Secondly, it would have to be empirically documented that climate coverage on Fox News is consistently as one sided and misleading as some of the sparse evidence suggests. Despite frequent news media accounts of that being the case, there have not been many systematic, over time analyses of

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<sup>1</sup><http://www.journalism.org/2014/10/21/political-polarization-media-habits/>

<sup>2</sup><https://www.theguardian.com/environment/climate-consensus-97-percent/2014/apr/08/fox-news-28-percent-accurate-climate-change>

the nature of climate change news coverage on Fox News or other prominent news sources. Some preliminary work suggests that that account is oversimplified (Merkley & Stecula, 2016).

The focus of this paper is to examine the first objection above. Utilizing a large national survey, I examine the nature of Fox News viewership and its relationship to attitudes on climate change mitigation. In the process, I generate several different profiles of media diets and examine the relationship between those diets and climate change attitudes.

I find that Fox News does seem to increase resistance to climate change mitigation policy, though that effect is limited to a small group of Republicans who limit their cable news sources to Fox News alone. Furthermore, including other cable news sources in one's media diet while still watching Fox seems to have an equally strong, positive effect. This has important implications for how we should think about the role of cable news in climate change opinion formation and the importance of thinking of a broad media diet versus focusing on individual sources.

## Cable News and Climate Change Attitudes

Despite the broad appeal of examining the link between cable news on climate change attitudes, the amount and quality of scholarly work does not match the certainty with which we understand the relationship between the media coverage of climate change and relevant attitudes among the American public.

It is understandable why scholars would seek the role of the media on climate change attitudes in light of the findings of the political communication literature that the media do help shape public opinion, especially on complex issues. Climate change certainly fits that characterization, especially since the public may be lacking in-depth scientific knowledge necessary to make sense of the problem (M. C. Nisbet & Myers, 2007).

So far, researchers have found that the media play a large role in educating the public about climate change (Kahlor & Rosenthal, 2009; O'Neill & Nicholson-Cole, 2009) and that paying attention to the news improves the public's knowledge about climate change (Jang, 2014; Ho, Brossard, & Scheufele, 2008; Lee & Scheufele, 2006; Zhao, Leiserowitz, Maibach, & Roser-Renouf, 2011). Unsurprisingly, the content of the news reporting matters as well. For example, news coverage of climate change that was dismissive in nature had negative effects on the acceptance of the issue (Feldman, Maibach, Roser-Renouf, & Leiserowitz, 2012).

Focusing specifically on cable news and Fox News has been the subject of a growing amount of work (Feldman et al., 2012; Mayer, 2012; Carmichael, Brulle, & Huxster, 2017). In a meta-analysis of the existing body of research, Feldman (2016) notes that,

“[...] the three leading cable news outlets CNN, Fox News, and MSNBC do indeed cover climate change in distinctive ways, and these differences are reflected in their audience’s beliefs about climate change. Through a reinforcing dynamic of selective exposure and partisan media effects, cable news shapes and polarizes public opinion about climate change.[...] Overall, Fox News paints a very different picture of climate change than CNN and MSNBC. This creates the opportunity for exposure to distinctive messages that are a prerequisite for observing persuasive media effects.”

There are issues, however, with some of the work that produced these findings. Hmielowski et al (2013), for example, find a mediating effect of trust in scientists in the relationship between news media use and perceptions of climate change. Their findings suggest that “conservative media use decreases trust in scientists which, in turn, decreases certainty that global warming is happening. By contrast, use of non-conservative media increases trust in scientists, which, in turn, increases certainty that global warming is happening.” The problem, however, is that their models do not control for partisanship, and it is not difficult to imagine why trust in scientists might be in some way a function of one’s party loyalties, especially in the context of climate change attitudes. It is entirely possible that the trust in science question in their survey was affected if climate change attitudes were primed before that (E. C. Nisbet & Garrett, n.d.). Partisanship, therefore, needs to be a crucial element in any analyses of any potential media effects.

Another issue with this body of work is the focus on selective exposure and the supposed echo chambers that news consumers create to protect themselves from ideologically cross-cutting information. Feldman et al. (2014) discuss a cyclical process that sustains like-minded media usage and thus polarizes attitudes. Feldman (2016) envisions the process in which “Fox News audiences see messages that challenge the reality of global warming and warn that any contrary information from scientists or the mainstream media should be questioned or dismissed, this reinforces their current beliefs about global warming and encourages them to ignore disconfirming evidence from the scientific community, while driving them back to Fox News for more of the same.”

The weight of the evidence in political communication research so far, however, does not support the claim of the existence of a sizable echo chamber, which tends to be limited to only the most politically engaged and partisan members of the public. Interesting new work that tracked people's online news consumption, rather than relying on traditional self-reported survey measures, found that most people across the political spectrum have centrist media diets which are mostly composed of mainstream news portals like MSN News and Yahoo News (Guess, n.d.). There is also evidence that most people tend to avoid partisan media like cable news (Prior, 2013; Arceneaux & Johnson, 2013).

Furthermore, the sheer size of the cable news audience, and Fox's audience in particular, has been overestimated. Fox News, as the cable news leader, attracts nearly 2 million viewers a night in prime time, according to the Pew Research Center.<sup>3</sup> But cable news in general has been in decline for several years now (though that dynamic has been potentially reversed during the last presidential election), and the viewership of Fox News, MSNBC and CNN combined has dropped to around 3 million viewers in prime time and around 2 million viewers in the daytime, according to data from 2013.<sup>4</sup> In a country of over 243 million adults, that is a very small audience, regardless of how potentially influential that group of people might be. As a point of comparison, it is worth highlighting that combined average nightly audience for ABC, CBS and NBC evening news is about 24 million Americans.<sup>5</sup>

As a result, existing work is not entirely convincing in demonstrating that it has been cable news, and Fox News in particular, that has had such a devastating effect on climate change attitude polarization in the U.S. public. In light of this research, I formulate two simple research questions:

*RQ1:* Are Fox News viewers committed to their ideological echo chamber?

*RQ2:* What effect do different Fox News viewing patterns have on climate change attitudes?

I expect to find that most Fox News viewers will not cocoon themselves in conservative media coverage and will actually use other mainstream media sources as well. That expectation is based on several studies tracking Americans' media habits as well as viewership numbers of cable news versus

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<sup>3</sup><http://www.pewresearch.org/fact-tank/2014/01/14/five-facts-about-fox-news/>

<sup>4</sup><http://www.journalism.org/2016/06/15/cable-news-fact-sheet/>

<sup>5</sup><http://www.journalism.org/2016/06/15/network-news-fact-sheet/>

traditional network news broadcasts tracked by the Pew Research Center. I also expect that the effect of the Fox News viewing on climate change attitudes will not be uniform for all news media diets, but will only matter to people who primarily consume Fox News content. I also expect that the effects will vary by partisanship, making a larger impact on Republicans than Democrats. That expectation is based on the importance of partisan motivated reasoning in processing politically salient information as well as the balance of pro- and anti-climate cues in a person's information environment.

## Data and Methods

### Sample and its characteristics

The data analyzed in this paper comes from an online survey conducted in October 2014 for another project (Owen, Quirk, Harrison, & Olewiler, n.d.). Respondents were drawn from an internet panel conducted by SSI and are broadly representative of the U.S. population on major demographic categories, such as gender, age and education. 3,092 respondents completed the survey, although the question about global warming, pertaining to most of the analyses below, were only presented to the random half of the respondents. As Table 1 below demonstrates, the sample skews white, female, older, and educated. There is also a clear skew towards the ideological left in the sample, with a large plurality of respondents identifying as Democrats. Leaners here were classified as partisans, however. If we classify leaners as Independents, then the results are consistent with polling data from Gallup from October of 2014. <sup>6</sup>

### Variables

The dependent variable is based on two questions that were asked about climate change attitudes. The first dealt with support or opposition to government action on climate change. The exact wording was:

*Some people believe the government should take actions that will lower emissions of the gases that cause global warming. Other people believe the government should not take these actions. Which is closer to your view?*

The follow up question asked about the strength of the respondent's attitude, ranging from very strongly, through somewhat strongly, to not very

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<sup>6</sup><http://www.gallup.com/poll/15370/party-affiliation.aspx>

Table 1: Characteristics of the sample

<i>%</i>	<b>Sample</b>	<b>2014 ACS</b>
<i>White</i>	87	73
<i>Black</i>	8	13
<i>Asian</i>	4	5
<i>Female</i>	57	51
<i>Median age*</i>	50	37
<i>Higher education</i>	35	30
<i>Democrat</i>	47	-
<i>Republican</i>	36	-
<i>Independent</i>	17	-

Note: ACS is the U.S. Census Bureau’s American Community Survey, \* Age expressed in years

strongly. The people who selected don’t know on the original question were asked a follow up and their attitudes were deemed “not very strong” on the final variable, which ranges from strong opposition to government action on climate change to strong favoring of such action. Majority of the sample favors governmental action on reducing greenhouse gas emission to tackle climate change.

As Figure 1 below demonstrates, the majority of respondents support governmental action on climate change in the form of lowering greenhouse gas emissions.

The primary independent variables that had to do with news media consumption were self-reported measures of likelihood of tuning in to watch a given news outlet. Only questions about television news sources were asked on the survey, respondents were not asked similar questions about newspaper sources, for example. The exact wording of the question was:

*When you want to watch the news on TV, how likely are you to watch the following programs and channels?*

Respondents were asked about network news (like *CBS Evening News*), local news, Fox News, MSNBC and CNN. The allowed responses ranged from never, not very likely, somewhat likely to very likely. The viewership breakdown for the sample is presented in Table 2.

As Table 2 reveals, network news and local news are much more popular than cable news options. In fact, plurality of respondents never tune in to

Figure 1: Climate change mitigation attitudes

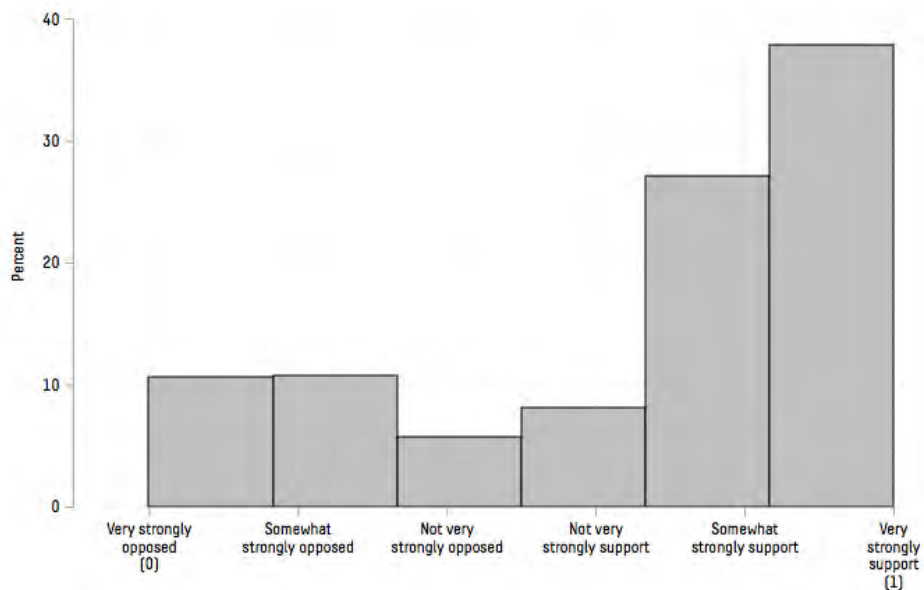


Table 2: Television news viewership

%	Network news	Local news	MSNBC	Fox News	CNN
<i>Never</i>	14	8	39	34	31
<i>Not very likely</i>	23	12	33	28	28
<i>Somewhat likely</i>	30	30	20	22	25
<i>Very likely</i>	33	50	8	17	16

MSNBC, Fox or CNN. 5% of the total sample declares not watching any television news at all.

To examine to what degree people avoid news from across the ideological isle, I construct a measure of three specific audiences: Fox diverse, Fox purists, and Fox avoid. Fox diverse audience are people who are likely (somewhat likely or very likely) to watch Fox News and MSNBC or CNN, regardless if they watch local or network news. Fox purists are people who declare never watching CNN or MSNBC but are likely to watch Fox News (either somewhat likely or very likely), regardless of whether or not they watch network news or local news. Fox avoid is made up of people who are likely to watch CNN or MSNBC but not Fox.



In the analyses that follow, I control for a set of variables that might also contribute to climate change attitudes and TV news viewing patterns. These include socio-demographic variables, news consumption and political knowledge measures, as well as measures of political ideology, partisanship, and partisan strength expressed with a measure of partisan motivated reasoning. Specifically, these variables are: a seven-point ideology scale, dichotomous variables indicating female respondents, black respondents, and people who have completed at least a four year postsecondary degree. Political knowledge is based on answers to a battery of four factual political questions. Self-declared news consumption is a binary variable with those declaring spending at least an hour a day consuming the news are coded as one. Partisan motivated reasoning index is included here to measure the strength of the partisanship. It is based on two questions about which political party has been more responsible for corruption scandals and long term budget deficit. The variable has a scale ranging from -100 to 100, with negative numbers indicating partisan bias against Democrats and positive numbers indicating bias against Republicans.

To answer the research questions outlined in the section above, I will begin by analyzing the effect of the likelihood of watching a certain news source on climate change attitudes. I will then re-focus the analysis on the several key audience groups outlined above. I will first describe each group in detail, and then use basic regression analysis to examine the effect of being in each audience group on climate change attitudes. Lastly, I will analyze the same relationship using an alternative method of propensity score matching in an effort to circumvent the issues of working with cross sectional survey data and selection effects. The propensity score is defined as the conditional probability of receiving treatment given a set of observed covariates (Zanutto, 2006). More specifically, this method uses a logit model to determine the probability of receiving "treatment" given the pre-treatment characteristics. The predictions from that model are then used as propensity scores to match the respondents based on predetermined variables and the values of the dependent variables are compared to determine the effects of the treatment (for an example, see Barabas (2004)).

## Findings

I begin the analysis by examining a simple relationship between climate change attitudes and media source preferences without any controls. Figure 2 plots predictions from a simple OLS model regressing climate change atti-

tudes on each news media source viewership. There is a correlation between the reported likelihood of watching Fox and prioritizing climate change mitigation. The pattern in the figure below could not be clearer: the more likely one is to watch Fox, the more likely they are to oppose government action on climate change mitigation and the less likely they are in prioritizing the issue of climate change politically. This is not the case with other sources like CNN, MSNBC, network news, and local news. That is in fact consistent with the previous findings highlighted in the section above. It is also worth noting that despite those patterns, the respondents very likely to be Fox viewers have a mean of 0.51 on the climate change mitigation scale (0-1).

Figure 2: TV news and climate change attitudes

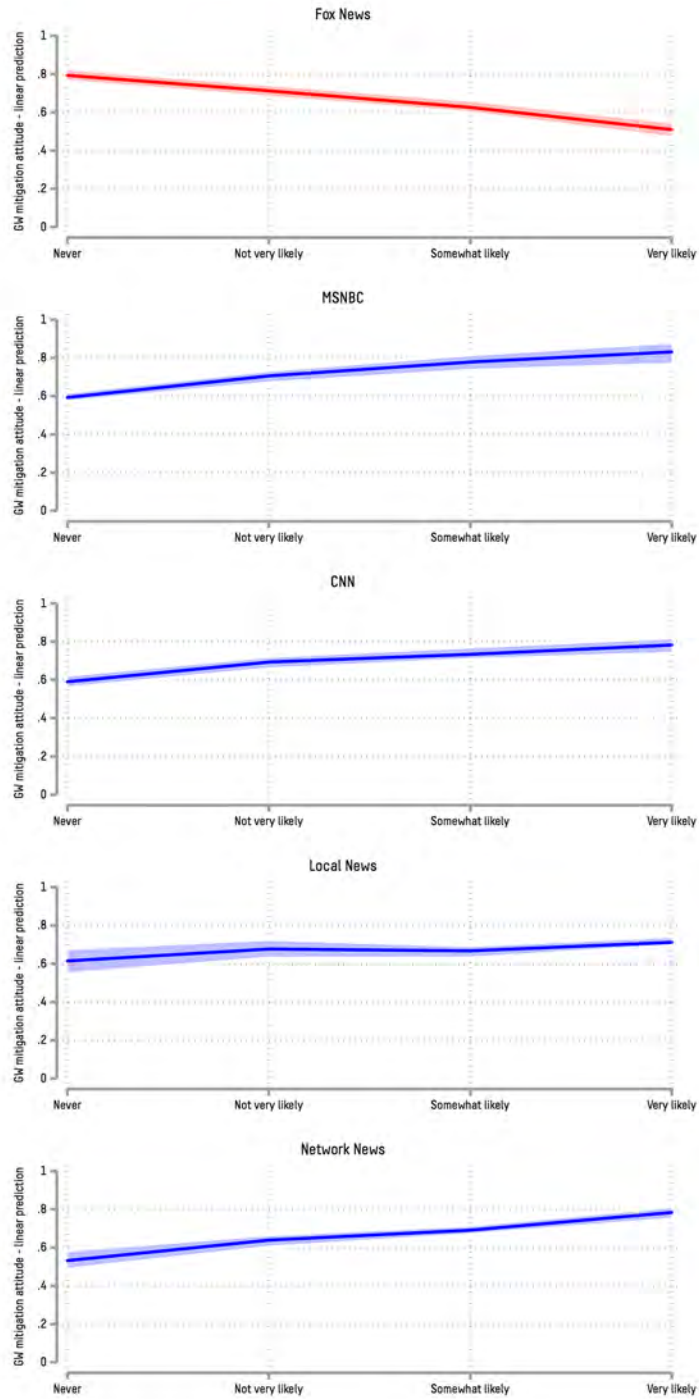
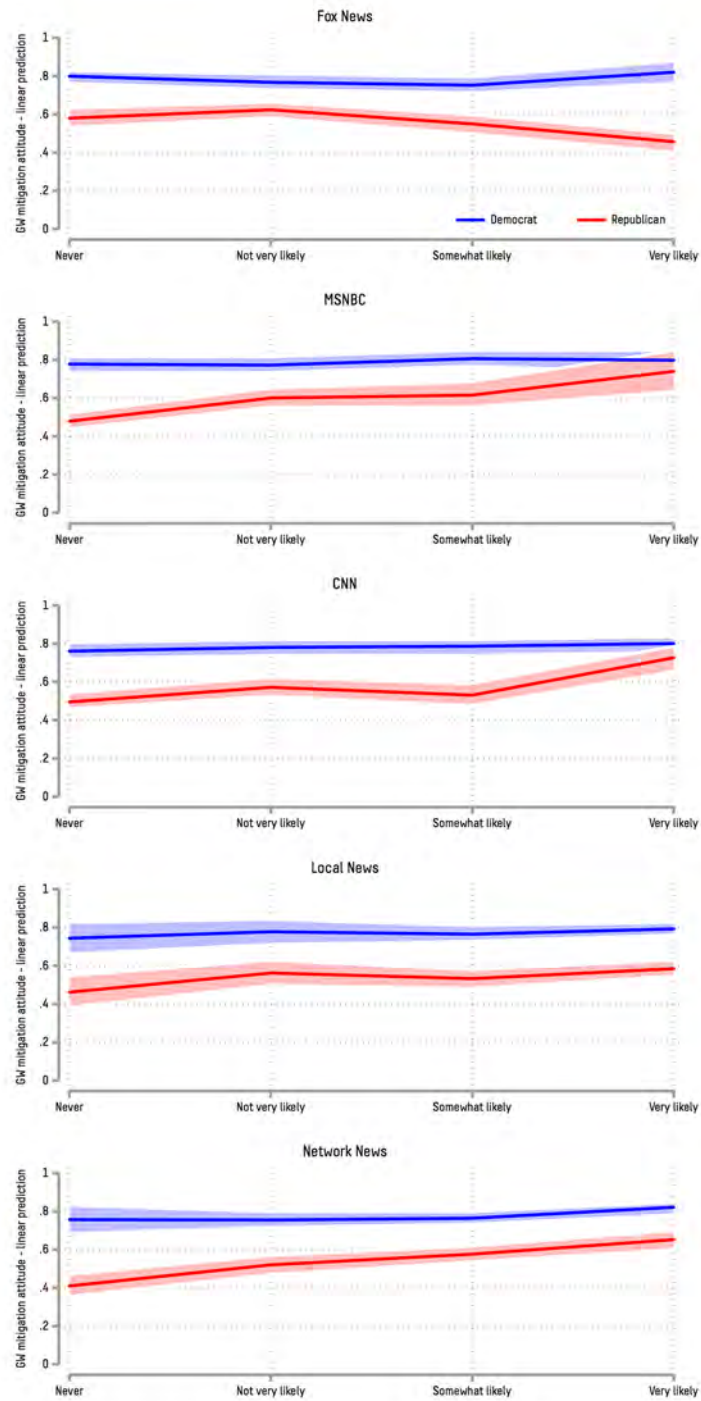
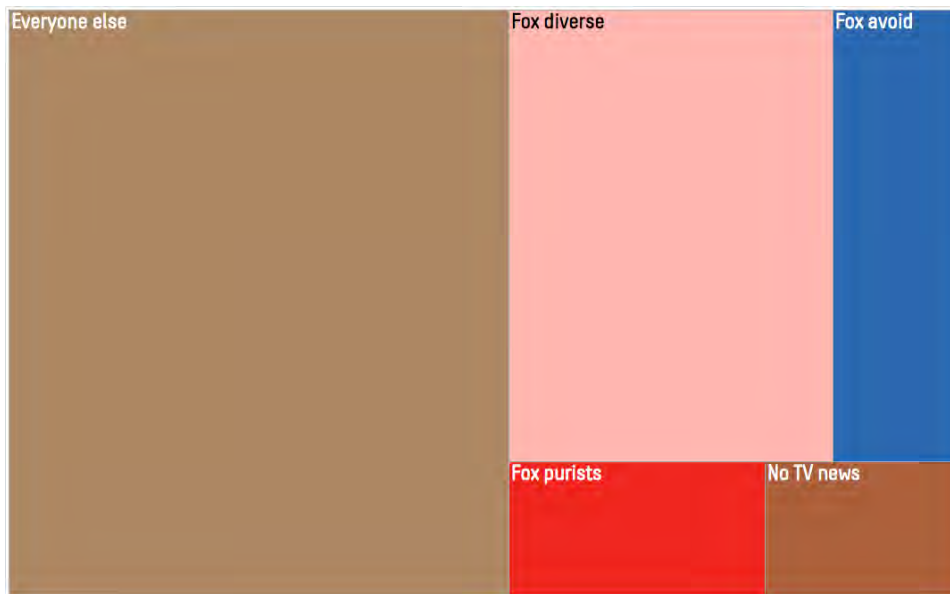


Figure 3: TV news, partisanship, and climate change attitudes



When I control for ideology, gender, race, education, political knowledge, self-declared news consumption, partisan motivated reasoning, and partisanship, the picture looks quite different. Figure 3 depicts linear predictions obtained from basic linear regression models using the controls stated above. The negative correlation between climate change attitudes and the likelihood of watching Fox is only a factor for Republicans. Democrats appear unaffected by Fox News. Even Democrats who are very likely to watch Fox News do not hold different climate change attitudes than Democrats who never watch Fox. Republicans who are frequent consumers of other cable news seem more likely to support governmental role in climate change mitigation, though the number of Republicans who actually watch these sources regularly is likely very small. Exactly how many Republicans actually watch these sources? I explore this question by carefully examining different types of TV news audiences below.

Figure 4: Breakdown of the television news audience



I begin by describing the characteristics of each group of interest: Fox purists, Fox diverse and Fox avoid. As the Figure 4 demonstrates, Fox purists, or people committed to avoiding other cable news options, are a small proportion of the total sample size (6%), only slightly larger than the group of people who declare never watching any television news (5%). People who incorporate other cable news along with Fox News are a much larger

slice of the total television news audience, representing 26% of the sample. People who regularly watch other cable news but ignore Fox specifically make up 10% of the sample. People with all kinds of combinations of other viewing patterns make up the majority of the sample (53%).

Table 3: Profiles of relevant news audiences

	Fox purists	Fox diverse	Fox avoid	Everyone else
<i>Very likely to watch Fox News</i>	65%	39%	-	6%
<i>Likely to watch network news</i>	25%	85%	71%	62%
<i>Likely to watch local news</i>	77%	88%	77%	83%
<i>1 hr or more of news consumption a day</i>	62%	42%	52%	37%
<i>Republican</i>	81%	36%	4%	36%
<i>Independent</i>	10%	15%	9%	19%
<i>Democrat</i>	9%	49%	87%	45%
<i>Extreme conservative</i>	24%	6%	0%	5%
<i>Moderate</i>	2%	18%	4%	8%
<i>Extreme liberal</i>	1%	5%	16%	4%
<i>Partisan motivated reasoning score</i>	-28.4	-3.4	23.6	1.5

As Table 3 demonstrates, the people who are committed to Fox News while explicitly ignoring other cable news sources like CNN and MSNBC make up a very small percentage of the total sample. Although the majority of them declare watching local news, only a quarter are likely to watch network news, which they presumably consider biased in the liberal direction. These people are also self-declared news junkies, with overwhelming majority declaring consuming news for at least one hour a day. Politically, that group is overwhelmingly Republican (81%) and quite conservative (a quarter label themselves as “extremely conservative”). Surprisingly, 9% of that group are Democrats. It is important to remember, however, that only 14% of Republicans, 4% of Independents and 1% of Democrats are Fox purists. These people are also highly partisan, as the partisan motivated reasoning scale indicates that they are quick to blame Democrats for all of the responsibility with political problems in the U.S.

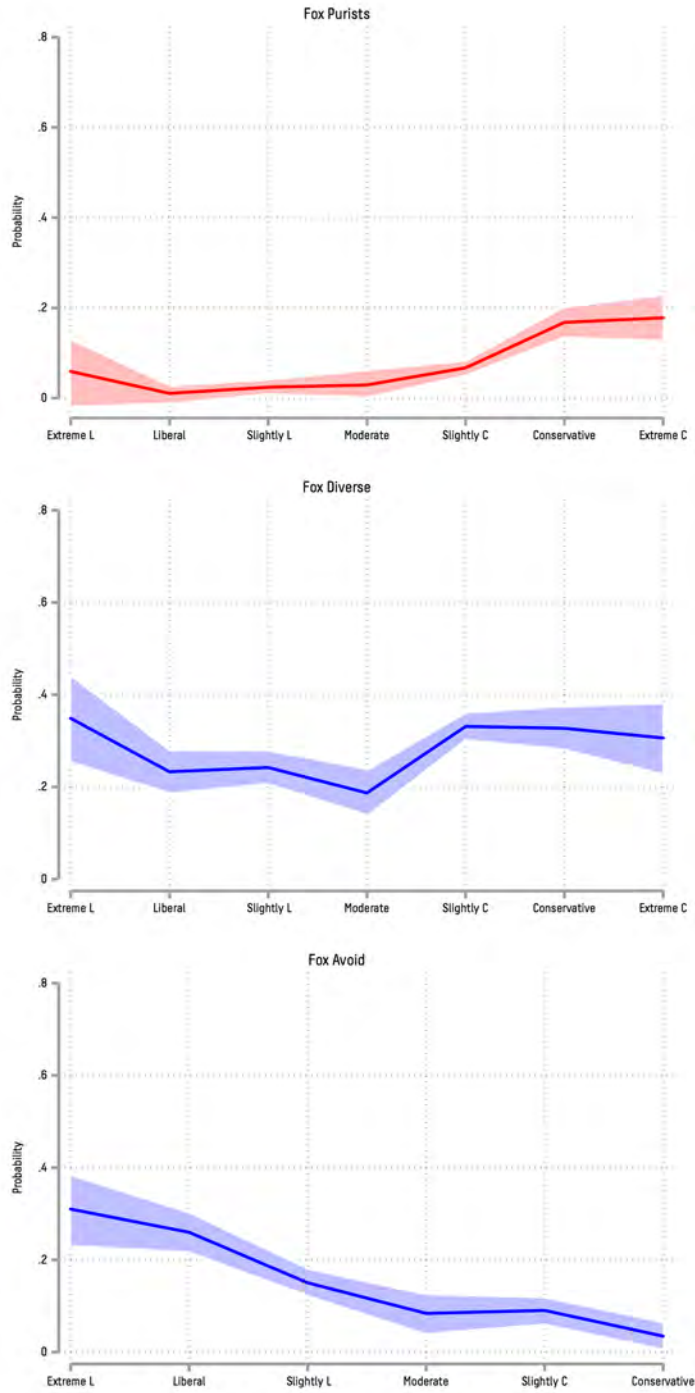
The people who specifically avoid Fox News and are likely to watch either MSNBC or CNN also make up a fairly small portion of the total television news audience, although it is still nearly twice the size of the Fox purist audience. In many respects, this group is a mirror opposite of Fox purists. These respondents are overwhelmingly Democrats, and 16% classify themselves as “extreme liberals.” A majority of them are news junkies who frequently consume local news, and they are much more likely to watch network news than Fox purists. They are strongly partisan, as they blame all political problems on the Republicans. 19% of Democrats fall into this

category, as do 6% of Independents and 1% of Republicans.

On the other hand, people who don't discriminate in their media diet and consume Fox, along with CNN or MSNBC, make up a much larger 26% of the total sample. In many ways, this group of people is very similar to everyone else who watches television news, which makes up majority of the sample. A quarter of Republicans are Fox diverse viewers, substantially more than Fox purists. 23% of Independents and 26% of Democrats are also likely to include Fox News in their media diets. The partisan makeup of this groups is balanced among Democrats, Republicans and Independents, with a substantial plurality of Democrats. These news consumers are much more likely than Fox purists to watch network news, and slightly more likely to watch local news. They are also much more likely to watch Fox News than everyone else in the sample. What separates this group from Fox purists and Fox avoid is that these people are significantly less partisan. Nearly a fifth of this group call itself ideologically moderate and the members of this audience do not seem to very motivated by partisanship.

With the description of each audience group out of the way, I examine the degree to which ideology helps explain which news audience does the respondent fit into. The figure below plots the predictive margins from a logistic regression models where each audience was regressed on partisanship, ideology, gender, race, education, political knowledge, the political motivated reasoning index, and self-declared news consumption. The baseline for each group is everyone else that does not fall into one of the three categories: Fox purists, Fox avoid and Fox diverse.

Figure 5: Ideology and television news media diet





As Figure 5 demonstrates, whether one is a Fox Purist or a Fox Avoider is strongly conditioned by ideology, even after controlling for other important factors outlined above. According to these logistic regression models, people who identify as conservative or extremely conservative are substantially more likely to opt in for a Fox News echo chamber experience than more moderate conservatives. Similarly, liberals are significantly more likely to cocoon themselves in CNN and MSNBC than more moderate respondents. Meanwhile, ideology is not as strong of a predictor of whether one is a Fox Diverse viewer. Extreme liberals have a similar probability of being a Fox Diverse viewer as extreme conservatives. Taken together, although some audience groups appear to be composed of ideological extremists, these are the groups that represent only a small fraction of the total television news audience.

Moving on to the analysis of the potential relationship between one’s media diet and attitudes about climate change mitigation, I present average marginal effects of being in each audience group for both Democrats and Republicans in Table 4. The predictions are obtained from OLS models regressing the primary dependent variable on ideology, gender, age, education, political knowledge, partisan motivated reasoning index, self-declared news consumption, partisanship, audience group and the interaction term between audience group and partisanship. The results show very limited potential effects of media diet on climate change mitigation attitudes.

Table 4: Average marginal effects of relevant news audiences

	<b>Fox purists</b>	<b>Fox diverse</b>	<b>Fox avoid</b>
<i>Democrats</i>	-0.04 (0.13)	-0.01 (0.03)	0.06** (0.02)
<i>Republicans</i>	-0.19*** (0.04)	0.04 (0.03)	-0.12 (0.1)

Note: Based on OLS models with all the controls. Standard errors in parentheses. \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Republican Fox Purists are significantly less likely to favor governmental action on climate change than Republicans who do not belong to any of these three audience groups. There is no statistically significant effect for Democrats. Fox Purists are on average 0.19 lower on the 0-1 climate change mitigation scale than Republicans in the baseline category, a substantial, negative effect. No effect is discernible for Democrats.

Being ecumenical in your media choices and including Fox along CNN or MSNBC in your media diet seems unrelated to climate change attitudes. Including CNN or MSNBC in Republican media diet does not increase the support for mitigation policy among Republicans and it does not reduce it for Democrats. There is no evidence of any potential media effects.

Avoiding Fox News does not matter for Republicans. There is no statistically significant average marginal effect for that group. For Democrats, however, people who are Fox avoiders but who might occasionally watch another cable channel are more likely to support governmental action on climate change mitigation than Democrats in the baseline category, with an average mean higher by a magnitude of 0.06.

The findings so far suggest that cable news media's role in shaping public attitudes on climate change is pretty limited. Watching Fox News is no guarantee of opposition to climate change mitigation, while turning on more liberal sources is not associated with more supportive views on the issue. Furthermore, regression analysis on its own does not address the issue of whether being a member of a particular audience group affects climate change attitudes or whether people with certain beliefs flock to specific media outlets. In an attempt to alleviate this problem, I use another method to test for media effects: propensity score matching. I ran logistic regression models for each of the four audience groups as "treatments" while matching them on gender, race, age, education, ideology, partisanship, partisan motivated reasoning index, news consumption and political knowledge.

Propensity score matching results in Table 5, although limited, confirm the previous results. There is a strong negative effect of opting in to Fox News as your only cable news source. There is also a small positive effect of avoiding Fox News altogether. Furthermore, leaving the echo chamber of Fox News and including other sources in your news diet seems to be associated with more acceptance of governmental action on climate change. An increase of 0.19 would effectively mean reducing the gap between Fox purists and Democrats on this issue by 32 percent. But it would still mean that Republicans would be substantially more likely than Democrats to reject governmental action on climate change mitigation. That is largely because Fox purists are such a small part of the television news audience.

It is important to take in these results with a grain of salt. First, there are potential issues with the dependent variable. One problem is certainly the fact that there are no questions on this survey asking about whether the respondents believe in climate change or to what extent is it caused by humans.

A more pressing problem has to do with issues related to self-reported

Table 5: Propensity score matching

<b>Treatment</b>	<b>ATET</b>	<b>N</b>
<i>Fox purists</i>	-0.14*** (0.05)	1002
<i>Fox diverse</i>	0.04 (0.03)	1265
<i>Fox avoid</i>	0.07*** (0.02)	1064
<i>Fox purist -&gt;Fox diverse</i>	0.19*** (0.05)	461
<i>Fox diverse -&gt;Fox avoid</i>	0.13*** (0.04)	523

Note: Based on a logit model, nearest neighbor (2). Average Treatment Effect on the Treated presented. Standard errors in parentheses. \*\*\* $p < 0.01$

media data. As Prior (2009) points out, people tend to greatly overestimate their media exposure in surveys, sometimes even by a factor of three. The hope here is that the questions asked on this survey do not ask the respondent to estimate a specific amount of time that they have devoted to consuming news from a specific television source, but rather the likelihood of them watching that channel. As such, it is more of a measure of news source preference than a measure of the amount of exposure to a particular source. Furthermore, there are clear substantive differences between different audience groups. Differences that make sense in light of previous research and ones that produce fairly robust results.

## Conclusion

The results presented above shed more light on the relationship between media diet and global warming attitudes. Fox News does seem to have a negative effect on supporting governmental action in reducing greenhouse gas emissions, though that effect is limited to a very small group of purists stuck in the conservative echo chamber. Most people, and importantly *most Republicans*, are not very likely to be members of that group.

A larger portion of Republicans is likely to consume Fox News along with other partisan media outlets like CNN or MSNBC. There is some evidence

above that including these other sources in one's media diet is associated with slightly more supportive views on climate change mitigation among Republicans.

Taken together, these results suggest that the role of Fox News in turning Republicans into climate change skeptics has potentially been overstated. The assumption that most Republicans get their news inside of a conservative echo chamber does not seem to be supported by evidence. Consistently with previous findings, the group of Republicans that is ideologically motivated in their news selection is quite small in size. Most Republicans tune in to a broad mixture of TV news, which tends to include local news, some network news, and sometimes even CNN or MSNBC. And these other sources presumably contain climate change reporting that is not skeptical and denialist.

This does not mean that Fox News did not contribute to polarization of the public or that somehow the stories that actively promoted a false sense of scientific debate, doubt, or flat out climate denial should not be condemned. But a narrow focus on Fox News as the vehicle of opposition to climate change mitigation policies among Republicans limits our understanding of the issue and fails to explain how less politically interested Republicans, people who are not committed to Fox News as their primary news source, also polarized on the issue of climate change.

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## Appendix

Table 6: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>Global warming attitudes (0-1)</i>	1579	.6873971	.348325	0	1
<i>Female</i>	3093	.5699968	.4951563	0	1
<i>Ideology (7 pt, L to C)</i>	3033	4.176063	1.649936	1	7
<i>Partisanship (0=Democrat, 1=Republican)</i>	2532	.4312796	.4953528	0	1
<i>Age (years)</i>	2945	48.6438	16.52599	18	88
<i>Higher education</i>	3093	.3524087	.4777977	0	1
<i>Black</i>	3093	.0733915	.2608203	0	1
<i>Political knowledge (low, medium, high)</i>	3003	.6440226	.6464324	0	2
<i>News junkie (1=at least 1 hour of news/day)</i>	3093	.4238603	.4942487	0	1
<i>Political motivated reasoning scale (-100 to 100)</i>	3014	.6178327	31.55616	-100.0109	99.9891