

Seeking Similarity, Not Avoiding Difference: Reframing the Selective Exposure Debate

R. Kelly Garrett
University of California, Irvine
garrettk@uci.edu

Abstract: To what extent do individuals seek to craft an information environment that reflects their political predispositions? Unprecedented search and filtering capabilities facilitated by new information technologies mean that individuals' decisions regarding their information exposure are more important than ever. This paper presents data from two complementary projects to address the selective exposure question. The first project uses data collected in a national random-digit-dial telephone survey (n=1,510) to examine how Americans use the control afforded by the Internet to shape their overall exposure to political information. The second project uses data collected in a web-administered experiment conducted with a national sample of online news readers (n=727) to study subjects' use of individual news items. The results suggest that though people are drawn to opinion-supporting information, they do not systematically exclude contact with other opinions.

Acknowledgements: The author is grateful to Paul Resnick for his advice and encouragement throughout the project, and to Bruce Bimber, Paul Edwards, and Russ Neuman for their enormously helpful insights. Thanks also to the Pew Internet & American Life Project for sponsoring the survey research and to John Horrigan and Lee Rainie for their valuable contribution to its design and analysis.

Americans' preferences regarding which viewpoints they encounter fundamentally shape their exposure to political information. This exposure process has been the subject of inquiry and debate since the 1940s (Lazarsfeld, Berelson, and Gaudet 1944). While many findings point toward some form of selectivity, the process is not well understood and the literature remains plagued by discrepant claims. Decisions about what news sources to use and which articles to read are profoundly important to the future of deliberative democracy. If individuals seek to expand their familiarity with information that supports their beliefs while limiting their exposure to other perspectives, the prospects for deliberation are dire. Exposure to political difference is a defining element of effective deliberation and has important consequences for society at large. The presence of political viewpoints stimulates more thorough information searches and more careful scrutiny of alternatives (Mendelberg 2002; Nemeth 1986; Nemeth and Rogers 1996; Delli Carpini *et al.* 2004). Exposure to other perspectives also increases familiarity with the rationales that motivate opposing views, which can in turn foster political tolerance (Mutz 2002; Price *et al.* 2002). Conversely, if individuals effectively avoid viewpoint-challenging information, the society to which they belong is likely to become more politically fragmented (Sunstein 2002). Absent contact with other viewpoints, groups of citizens will become more polarized, and their ability to find common ground and to reach political agreement will dwindle. In light of the important stakes for political deliberation and democratic society, it is critical that we understand what choices people will make in the changing landscape of political news.

It is increasingly easy to realize an information environment that is consistent with one's preferences. Technologies such as the Internet are an important element of this landscape because they augment people's ability to selectively acquire political information, allowing them to more effectively find information on either side of a controversy (DiMaggio *et al.* 2001); (Bimber and Davis 2003: 152). Two characteristics of online news media are particularly important. First, the

range of viewpoints accessible online is wider than with traditional news media, such as television or newspapers. Politically extreme groups have a significant presence online (e.g., Zook 1996; Cleaver 1999). Second, the mechanisms for controlling which viewpoints one encounters are increasingly effective. Search engines, news aggregations services (such as Google News), and partisan news sites afford opportunities for searching and filtering information that are unparalleled in traditional news media. Such an environment provides an ideal opportunity to explore exposure preferences. Given the flexibility of the medium, the choices that individuals make should more closely reflect their underlying preferences.

Ideologically-motivated selective exposure, the tendency to craft an information environment that reflects one's political beliefs, has been a topic of debate for several decades (Sears and Freedman 1967; Frey 1986). According to selective exposure theory, individuals' prefer exposure to arguments supporting their position over those supporting other positions (e.g., Lazarsfeld, Berelson, and Gaudet 1944; Sweeney and Gruber 1984). Scholars argue that this preference also leads individuals to prefer information *sources* that are more supportive of their opinions over less supportive alternatives (Mutz and Martin 2001; Lowin 1967). For example, recent empirical investigations indicate that readers of conservative political books rarely read liberal books (Krebs 2004b; Krebs 2004a; Krebs 2003), and that popular political blogs tend to interlink with other blogs expressing similar viewpoints (Adamic and Glance 2005).

Critics of the theory of ideological selective exposure question the existence of an underlying psychological tendency to seek support and avoid challenge. According to these scholars, the data do not support the claim that citizens are disproportionately exposed to viewpoint-supporting information (Sears and Freedman 1967; Chaffee *et al.* 2001). Furthermore, they offer evidence that individual exposure choices are largely uninfluenced by ideology: when asked to choose among political information options, citizens do not systematically avoid challenge (DiMaggio and Sato

2003; Iyengar *et al.* 2003). The theory's detractors also argue that choices that do yield exposure to mostly viewpoint-reinforcing information are not necessarily motivated by viewpoint selectivity *per se*, but may instead be secondary consequences of decisions unrelated to ideology (Sears and Freedman 1967). For example, financial analysts may prefer to read the *Wall Street Journal* because of its coverage of financial news. Their tendency to agree with the paper's political views is not motivated by an effort to find support or avoid challenge; instead, it is a reflection of their political similarity with those who write about financial news.

Scholars on both sides of the debate have tended to treat preference for support and aversion to challenge as linked aspects of a single psychological preference. I argue that by conceiving of these preferences as *separate* phenomena we can reconcile seemingly contradictory evidence regarding citizens' political information acquisition practices. Most prior research results can be explained in terms of a systematic preference for viewpoint reinforcement paired with a weaker and less consistent attitude toward viewpoint challenge. I suggest that most individuals are drawn to viewpoint-reinforcing information, but they do not exhibit a systematic bias against viewpoint-challenging information. In a few circumstances, individuals may even seek out novel arguments with which they disagree. The ultimate objective of this study is to reconcile the contradictory evidence regarding the influence of individuals' preferences toward their exposure to political information.

I begin with a brief overview of recent research examining how individuals use the media to shape their information exposure. In the next section, I use data from a national telephone survey and a web-administered experiment with national subject recruitment to test the proposition that attitudes toward viewpoint-reinforcing information and viewpoint-challenging information are distinct. I examine data corresponding to individual and aggregate exposure decisions in order to test

claims regarding the influence of political viewpoint. The results suggest that reinforcement seeking is commonplace, but systematic avoidance of dissimilar political viewpoints is rare.

Media selectivity and selective exposure

Prior efforts to use media-afforded selectivity to assess individuals' propensity to engage in selective exposure have yielded inconsistent results. Some scholars suggest that increasing control is associated with a significant drop in exposure to political difference, while others disagree.

On one hand, Mutz and Martin (2001) argue that control and exposure to challenge are inversely correlated. They found that among traditional media sources, those offering the most partisan content are associated with reduced exposure to dissonant information. For example, people are less likely to encounter viewpoints that differ from their own when listening to talk radio than when reading a newspaper or watching television. Similarly, they found that individuals who can choose among competing local sources of partisan news tend to have less contact with dissonant information than those living in areas served by a single (less-partisan) local news source.

On the other hand, research examining people's use of an interactive CD-ROM containing campaign information about the two major candidates in the 2000 election found no evidence of one candidate's supporters avoiding information about the other (Iyengar *et al.* 2003). Similarly, analyses of 2000 and 2002 General Social Survey (GSS) data provide little evidence that people are using the Internet to avoid political difference. Strong partisanship is associated with the use of viewpoint-reinforcing sites, but not with a reduction in the use of viewpoint-contrary sites (Baruh 2004). Overall, 2000 GSS respondents reported using sites that are neutral or that challenge their viewpoint as often as they use those that reinforce it (DiMaggio and Sato 2003). Furthermore, they frequently report that their use of these sites led them to revise or refine their opinions. Another survey conducted in 2000 examining knowledge of the presidential campaign suggests that the Internet could reduce the effects of partisan selectivity. In her study of this data, Stroud (2004) found

that seeking political information online was associated with comparable increases in knowledge about *both* presidential candidates, especially among individuals with the lowest levels of political knowledge.

It is, however, possible to reconcile evidence that people engage in selective exposure with evidence that they do not avoid viewpoint-challenging information. Mutz and Martin take their findings as evidence that people prefer congruent partisan sources to those that include other viewpoints, but there is another interpretation. The difference may exist because the comparisons focus on individuals selecting among partisan sources, not between partisan sources and those that are less partisan. An individual who chooses a source in which he can find support for his own viewpoint over one in which his viewpoint is absent might most strongly prefer a source representing both perspectives. In other words, the data could reflect a form of *de facto* selective avoidance, motivated by an attraction to viewpoint-supporting information, not an aversion to viewpoint-challenging information. In this case, it is possible that an individual who chooses a viewpoint-consistent partisan publication would prefer a source representing multiple viewpoints if one were available. Most data are consistent with the hypothesis that citizens seek viewpoint reinforcement without avoiding challenge.

Research design

The diverse and increasingly pervasive online news environment provides two opportunities to examine the decisions people make about their exposure to political information. First, we can compare the range of views encountered by Americans who, by virtue of their use of online media, have extensive control over their information environment to those who do not. Second, we can use the politically diverse content available online to examine how Americans' use of individual news items is influenced by the presence of supportive and/or challenging information.

Survey

I collaborated with a team of researchers to design a survey to assess the relationship between control over the information environment and *overall* exposure to political information. The national telephone survey was sponsored by the Pew Internet and American Life Project and administered by Princeton Survey Research Associates (PSRA) between June 14 and July 3 2004, shortly before the Democratic and Republican party conventions. A pretest of the instrument was conducted a few weeks prior to full deployment to ensure that the questions and instructions were clear.

Respondents were contacted via a random digit sample of telephone numbers. Following standard PSRA protocol, interviewers asked to speak with the youngest adult male at home at the time of the call. If no males were present, the interview was conducted with the oldest adult female present. This randomization technique helps to offset known nonresponse biases (Keeter *et al.* 2000). The overall response rate was 31.2%¹, yielding a representative sample of 1,510 English-speaking non-incarcerated adult Americans. Analyses were conducted using population weights to correct for known sampling biases in random digit dial telephone surveys. The weighting parameters were computed with an iterative technique that compared demographics characteristic of the survey respondents to those of the Census Bureau's March 2003 Annual Social and Economic Supplement Survey.

The survey included several measures that were relevant to this research. In order to assess individuals' ability to shape their information environment, we included a battery of questions about respondents' Internet use, including their use of partisan web sites, online news sources, and their Internet experience in years. These measures were used to discriminate among respondents in terms of their ability and opportunity to utilize the selectivity-enhancing capabilities of the Internet. The

¹ Based on a 77% contact rate, 43% cooperation rate, and 94% completion rate.

survey included a variety of controls, including political interest, strength of candidate support, offline news use, and campaign news surveillance levels. There were five questions designed to assess respondents' open mindedness, based on selections from the 36-item California Psychological Inventory - Openness scale (CPI-Op) (Hakstian and Farrell 2001).² Finally, the survey included several demographic measures including age, gender, and race/ethnicity.

The assessment of political information exposure was based on data collected regarding the 2004 presidential election. Respondents were asked about their candidate preferences and about their familiarity with a series of statements about each candidate. The series included two arguments supporting and two challenging each candidate, for a total of eight arguments in all (see Appendix A). The viewpoint-reinforcement score is a summative measure based on individuals' familiarity with the statements favoring their preferred candidate or criticizing the opponent, with respondents receiving one point for each argument they heard at least once in a while. The viewpoint-challenge score is computed using the other four items. The resultant scores are summarized in Table 1.

² These items were selected to reflect the study's focus on politics, decision-making, and information exposure. Though the CPI-Op scale has been tested as a whole, the set of questions created for this study are new and their validity as a scale was untested. In the analysis stage it was determined that these items had very low scale reliability (Cronbach alpha = 0.28). For this reason, these items are treated separately in all analyses.

Table 1. Summary of exposure scores

Exposure scores	(n)	Min	Max	Mean	s.d.
Bush supporters					
Viewpoint-reinforcing	(694)	0	4	3.04	1.07
Viewpoint-challenging	(694)	0	4	2.41	1.19
Kerry supporters					
Viewpoint-reinforcing	(676)	0	4	2.83	1.06
Viewpoint-challenging	(676)	0	4	2.33	1.36
Overall (Bush and Kerry supporters)					
Favoring Bush	(1370)	0	4	2.69	1.27
Favoring Kerry	(1370)	0	4	2.62	1.15

The summary of exposure scores demonstrates that the distributions of exposure are different for Bush and Kerry supporters. This reflects the fact that the opinion statements were interpreted differently for the two types of voters—an argument that was treated as reinforcing for Bush supporters was said to be challenging for Kerry supporters and vice versa—and that Bush arguments were better known overall ($t=2.042$, $df=1369$, $p<.05$). Given the difference in the interpretation and distribution of the dependent variables for Bush and Kerry supporters, the two groups are treated separately in all analyses.

Experiment

I conducted an experiment to test whether making ideologically-motivated selectivity easier influences people's use of *individual* news items. I recruited readers of two partisan online news services to participate in the computer-administered experiment via the web. Subjects participated in the experiment over a six week period between February 9 and March 20, 2005. I conducted several preliminary tests, including a large-scale pilot test a few weeks prior to final data collection to evaluate question wording and estimate the effect in order to ensure adequate sample size.

I collaborated with two high-profile partisan news services to recruit subjects, one aligning itself with the political left (AlterNet—A Project of the Independent Media Institute) and the other

tending to the right (WorldNetDaily). A 75-word recruitment statement was included in the organizations' weekly email newsletter. WorldNetDaily also included the statement in the news headlines listed on its web site on February 15. Though I did not have direct access to the distribution lists, conversations with staff members suggest that as many 20,000 people may have seen the material sent by AlterNet, while the material posted to the WorldNetDaily site could have been seen by 100,000 people. Volunteers who responded to these recruitment materials received an email containing additional information about the study and instructions for accessing the study web site.³ As an incentive to participate, subjects could enter a \$100 gift certificate lottery. Volunteers who had not completed the study after two weeks were sent one follow-up email. About half those who volunteered to participate completed the study, for a total of 727 subjects (Table 2).

Table 2. Experiment response rates

Recruitment site	Volunteers	Completions	% Completions
AlterNet	700	358	51%
WorldNetDaily	762	369	48%
Total	1462	727	50%

In order to assess selectivity in the experiment, I compared subjects' perceptions about the political content of a series of news stories with their use of the stories. There were two stages to the experiment. First, I presented subjects with a heterogeneous set of news items representing a range of political viewpoints on an issue that they considered important.⁴ I provided a title, source, and brief excerpt for each item, and asked subjects to indicate which they were interested in reading.

³ Participants accessed the site through a user-specific URL provided in the email invitation. Once a subject completed the study, that URL was disabled.

⁴ Subjects were asked to choose among three issues: gay marriage, social security reform, and civil liberties.

Once this choice was made, I asked them to assess the extent to which they expected the content to be supportive of and/or challenging to their viewpoint (prospective perception). Second, I invited subjects' to read the selected items, recording which they chose to view, and how long they spent viewing them. Finally, I asked subjects to reassess the political content of any viewed items (retrospective perception). In the analysis, I assume that subjects based their decision to select a news item on the prospective information content, while both prospective *and* retrospective content influenced how long they spent looking at a news item.⁵

To assess the presence of viewpoint-reinforcing information, subjects were asked about the extent to which the news item (1) described arguments supporting their position, and (2) provided evidence that other people agree with them. Expectations regarding viewpoint-challenging information were measured in a similar fashion (see Appendix B for wording). Responses were summed to create reinforcement and challenge scores that fell between two and ten (Cronbach alpha of .88 and .87 respectively).

The instrument also measured several variables unrelated to ideology that were expected to influence people's news use. These included prior issue-related news exposure, changes in the subject's position on the issue, familiarity with the news events being reported, and personal salience of the news. Finally, the experiment included a collection of demographic items mirroring those used in the survey, including education, gender, age, sex, and race/ethnicity.

Results

The discussion of the results is divided into three sections. First, I review evidence regarding individual use of partisan web sites. Next, I turn to the influence of technology-enabled selectivity

⁵ I treat these factors separately because of their low inter-item reliability scores (Cronbach alpha of .52 for viewpoint-reinforcing information; .49 for viewpoint-challenging information.)

on global political exposure information. Finally, I examine how ideology influences individual news story exposure decisions.

Individuals' preference for supportive sources

The survey asked respondents about their use of partisan web sites. Table 3 compares use of political web sites by supporters of the two candidates, allowing us to examine the extent to which these individuals use sites that support and challenge their viewpoint. First, note that undecided voters' use of candidate web sites provides a useful baseline, showing relatively uniform usage levels across the different site types. In terms of support-seeking behavior, the data show that the stronger an individual's preference for a candidate, the more likely he is to have visited a site supporting this candidate. For example, strong Bush supporters were more likely to have visited a Republican site than weak supporters ($p < .05$).⁶ Similarly, strong Kerry supporters used sites of the Democratic Party more often than weaker supporters ($p < .05$). Surprisingly, the data suggest that strength of candidate support may also be positively related to use of *viewpoint-challenging* sites. The percent of strong Bush supporters who reported using a democratic site was larger than the percent of weak Bush supporters, though the difference was not significant. Strong Kerry supporters were even more likely to have used viewpoint-challenging sites. They reported using a conservative site more often than weak supporters (though again the difference was not significant after adjusting for the multiple comparisons), and were about as likely as *strong Bush supporters* to use these conservative sites. In terms of their source selectivity, online news users are not employing the control afforded by the medium to exclude sources representing other viewpoints.

⁶ Significance level of proportion difference after employing Bonferroni adjustment for multiple comparisons.

Table 3. Candidate preferences and political site use among Internet users

	(n)	Use Liberal site	Use Democratic site	Use Conservative site	Use Republican site
Strong Bush	304	4.9%	4.3%	14.7%	15.1%
Weak Bush	142	6.4	2.1	9.9	4.9
Other	96	10.5	6.3	7.4	3.2
Weak Kerry	263	12.9	10.2	7.6	6.1
Strong Kerry	138	20.9	20.9	13.0	5.8
Undecideds	59	5.2	4.6	5.2	2.9

Selectivity opportunity influences argument exposure

The survey asked respondents to indicate their familiarity with eight opinion statements about the leading candidates in the 2004 presidential election. Examining Table 1 again, notice that supporters of both candidates knew more on average about their preferred candidate than about the challenger ($t=14.171$, $df=693$, $p<.001$ for Bush supporters, and $t=10.537$, $df=675$, $p<.001$ for Kerry supporter). This suggests a relationship between individuals' political beliefs and their exposure to campaign information.

This does not, however, tell us anything about the respective contributions of viewpoint-support seeking and viewpoint-challenge avoidance. I have suggested that although individuals do seek support, they do not actively screen out all viewpoint-contrary information. On this view, I predict that individuals who have more control over their information diet will be familiar with more of the arguments supporting their position, but the influence on exposure to viewpoint-challenging information will be slight. There are numerous other factors that are expected to influence familiarity with political arguments, which must be controlled when testing these predictions.

To look at what accounts for differences in voters' exposure to political arguments, I constructed a series of regression models of argument familiarity. As previously reported, the distribution of argument familiarity varied depending on which candidate a voter supported, so Bush

and Kerry supporters were treated separately. For each group of supporters, there were two types of models, one predicting familiarity with viewpoint-supporting arguments, and the other predicting familiarity with viewpoint-challenging arguments.⁷ Each of these four models (two supporter groups by two types of exposure) was constructed in two stages. First, I regressed exposure on several potentially influential variables that were unrelated to respondents' control over their information environment. Second, I added the Internet factors, which represent a greater opportunity for information exposure control. The results of these models are summarized in Tables 4 and 5.

The models without the Internet factors explained between 20% and 25% of the variation in respondents' argument familiarity. Consistent with prior research, I found that several factors are associated with increased exposure to both types of arguments. For Bush and Kerry supporters, education, age, political enjoyment (one of the measures of open-mindedness), and following the campaign closely all have significant positive coefficients in the models of the two kinds of exposure. There were a few instances where factors influenced viewpoint-reinforcing and viewpoint-challenging information exposure differently. For example, men were more likely than women to be familiar with the arguments supporting their preferred candidate, but there was no gender effect on exposure to challenging arguments. None of the factors, however, were associated with a simultaneous increase in viewpoint-reinforcement and decrease in viewpoint-challenge exposure.

⁷ Although OLS regression assumes that the dependent variable is continuous and unbounded, the exposure scores used here range from one to four. There are several reasons that linear regression is employed despite this. First, the residual diagnostics suggest that the relevant regression assumptions have been met. Second, though there is a cut off on the dependent variable, it is not right-censored data in the traditional sense. Had the scale been based on more items, individuals who did not receive the maximum score might also have scored higher. Finally, tobit analyses, which would be appropriate if the data were right-censored, yield comparable results; most importantly, the overall effect of Internet use was the same in the OLS and tobit models.

Table 4. The effect of Internet use on exposure to viewpoint-reinforcing information

	Bush supporters				Kerry supporters			
	Model 1		Model 2		Model 1		Model 2	
	Coefficient (s.e.)		Coefficient (s.e.)		Coefficient (s.e.)		Coefficient (s.e.)	
Decides quickly	-.037	(.047)	-.037	(.046)	.028	(.046)	.042	(.046)
Reads a lot	.104*	(.046)	.087	(.046)	.123*	(.050)	.118*	(.050)
Information causes indecision	-.029	(.035)	-.005	(.035)	.018	(.035)	.020	(.035)
Seldom changes mind	.076	(.041)	.075	(.041)	-.017	(.037)	-.013	(.037)
Enjoys politics	.183***	(.043)	.192***	(.043)	.061	(.042)	.051	(.042)
Education	.123**	(.047)	.056	(.050)	.173***	(.049)	.149**	(.053)
Age	.011***	(.002)	.014***	(.002)	.009***	(.002)	.010***	(.002)
Sex	.163*	(.075)	.135	(.075)	.219**	(.080)	.202*	(.079)
Hispanic	-.106	(.149)	-.086	(.148)	.307**	(.117)	.320**	(.117)
Black, not Hispanic	-.834***	(.237)	-.788**	(.235)	-.329**	(.104)	-.341**	(.104)
Number of offline news sources used	.071*	(.031)	.057	(.031)	.053	(.030)	.046	(.030)
Following campaign closely	.342***	(.088)	.311***	(.087)	.346***	(.097)	.311**	(.097)
Strong candidate support	.202*	(.080)	.178*	(.079)	.087	(.087)	.098	(.087)
Internet experience			.032**	(.010)			-.006	(.011)
Frequency of online news use			.036	(.029)			.094**	(.032)
Constant	2.460***	(.243)	2.349***	(.242)	2.355***	(.241)	2.343***	(.247)
R ²	.253		.271		.201		.213	
ΔR ² after adding Internet factors			.017**				.011*	
(n)	(648)		(648)		(632)		(632)	

* p<.05 ** p<.01 *** p<.001

Table 5. The effect of Internet use on exposure to viewpoint-challenging information

	Bush supporters				Kerry supporters			
	Model 1		Model 2		Model 1		Model 2	
	Coefficient (s.e.)		Coefficient (s.e.)		Coefficient (s.e.)		Coefficient (s.e.)	
Decides quickly	.025	(.054)	.027	(.054)	.098	(.058)	.115*	(.058)
Reads a lot	-.008	(.053)	-.015	(.054)	.089	(.063)	.085	(.063)
Information causes indecision	.030	(.041)	.039	(.042)	.057	(.045)	.058	(.045)
Seldom changes mind	-.047	(.048)	-.046	(.048)	-.073	(.047)	-.070	(.047)
Enjoys politics	.149**	(.050)	.146**	(.051)	.225***	(.053)	.215***	(.053)
Education	.231***	(.055)	.208***	(.059)	.162*	(.062)	.141*	(.067)
Age	.010***	(.003)	.011***	(.003)	.019***	(.003)	.020***	(.003)
Sex	.162	(.087)	.149	(.088)	.100	(.101)	.080	(.101)
Hispanic	-.110	(.173)	-.110	(.173)	.131	(.148)	.140	(.149)
Black, not Hispanic	-.251	(.276)	-.234	(.276)	-.455**	(.133)	-.474***	(.132)
Number of offline news sources used	.086*	(.036)	.081*	(.037)	.052	(.038)	.043	(.038)
Following campaign closely	.554***	(.102)	.536***	(.103)	.376**	(.123)	.335**	(.123)
Strong candidate support	.077	(.093)	.067	(.093)	-.089	(.110)	-.078	(.110)
Internet experience			.007	(.012)			-.013	(.013)
Frequency of online news use			.038	(.034)			.117**	(.040)
Constant	1.519***	(.283)	1.477***	(.285)	1.958***	(.306)	1.973	(.314)
R ²	.200		.202		.236		.246	
ΔR^2 after adding Internet factors			.003				.010*	
(n)	(648)		(632)		(632)		(632)	

* p<.05 ** p<.01 *** p<.001

Next, I added two measures of Internet use to the models described above: online news use and experience using the Internet.⁸ All variables from the first model were retained, including education, news surveillance levels, and the five indicators of open mindedness. Adding the Internet factors produced a small but statistically significant improvement in three of the four models, with the expanded models explaining up to 27% of the variation. Only Bush supporters' exposure to dissonant information was unaffected. As the positive significant coefficients indicate, going online is broadly associated with increasing exposure to both types of information. Among Bush supporters, the number of years a user has been online is positively correlated with familiarity with viewpoint-reinforcing arguments. For Kerry supporters, the frequency of online news use is the significant predictor, and it is associated with increasing familiarity with both viewpoint-reinforcing and viewpoint-challenging arguments.

In sum, these results support hypotheses that individuals are using technology-afforded control to increase their exposure to viewpoint-reinforcing information, but that they do not systematically screen out other viewpoints.

Political content influences story use

The survey data show that Americans who use the Internet to get their news are not experiencing reduced exposure to political ideas that differ from their own, and that for some use of the technology is associated with increased familiarity with other viewpoints. These findings are consistent with the hypotheses regarding individual information exposure preferences; however, there is another possible explanation. It may be that the Internet, while useful for seeking out reinforcement, is not an effective mechanism for filtering out challenge. In order to rule out this

⁸ I excluded four respondents from the analysis who reported using the Internet for 30 years or more. Construction of the Internet infrastructure did not begin until 1969 (Abbate 1999: 64), and the network did not achieve widespread use until much later.

possibility, we must look at individuals' exposure decisions on a story-by-story basis. This is the purpose of the experiment.

The findings presented here are based on the behavior of individuals who use ideologically-biased news sites. These newsreaders are engaged in a form of selective exposure, as they have chosen to get news from a source that explicitly gives priority to one ideology over another. It is reasonable to assume that these individuals are more likely than most to take their political viewpoint into consideration when choosing which news items to view.

Experiment subjects, whether recruited through liberal or conservative sites, were similar in terms of a few key demographics. Both groups ranged in age from 18 to about 80, with average age of just under 50 years. More than 85% were white, and less than 5% identified as Black or Hispanic. Participants in this study were highly educated, with more than half having completed a college degree. There were, however, several demographic differences as well. Those recruited via the conservative site were disproportionately male, and those recruited via the liberal site disproportionately female, compared to the national average. Conservative-site recruits tended to be less educated: slightly more than half had completed a college degree compared to about 7 in 10 of those recruited from the liberal site. Conservative-site users also tended to be slightly wealthier, with about one in six reporting an income under \$30,000 while more than one-quarter of the liberal site recruits reported an income in this range.

As expected, these groups also differed significantly in terms of their political affiliation and ideology. More than half of those recruited from the liberal site identified themselves as Democrats, with very few Republicans. This pattern was reversed among conservative site recruits. A more pronounced pattern is evident when looking at political ideologies: about 9 in 10 identified with the ideology corresponding to that of the recruiting news site. It is also noteworthy that participants were more strongly committed to their particular political ideologies than most Americans. Three-fifths

described themselves as strong partisans, about three times the proportion that identified as such in the telephone survey described above.

I use regression analysis to examine how subjects take their viewpoint into account when deciding whether to read specific news items. Two measures of news use function as the dependent variables in these analyses. First, the data collection tool tracked whether or not each subject expressed interest in reading each of the five news items. This dichotomous variable reflects the item's appeal. Subjects selected about half (52%) of the 3635 news items presented (727 subjects each selecting up to five news items). A regression on this variable is the basis for evaluating the hypotheses that item selection is more likely when more reinforcing information is expected to be present, and unaffected by the expected presence of viewpoint-challenging information.

Second, the log of time spent reading each item (in seconds) provides a measure of subjects' willingness to invest effort in reviewing an item. I transformed read time using a log function in order to render the data more compatible with the linear regression assumption that the error term is normally distributed. Subjects read 1442 news items, about three-quarters (76%) of those they expressed interest in reading, and spent between 1 second and 76 minutes (4,554 seconds) reading individual news items. Items with read times greater than 15 minutes were excluded from this analysis, however, as such read times are more likely the result of an external factor such as an interruption. The mean time reading each story was a little over two minutes (134 seconds), and the median was about a minute and a half (100 seconds).

To assess which factors influence *item selection* I constructed a logistic regression model, clustering the data by subject ID to account for the fact that there were repeated non-independent observations (each subject could select up to five news items). Several types of predictors were represented in the model. In addition to measures of subjects' perceptions of the political content, the model also included controls for subjects' political affiliation, their familiarity with the events

reported in each news item and the personal relevance or salience of the events, as well as the issue selected, the stability of subjects' position on the issue, and subjects' prior exposure to the issue. Finally, there were demographic controls for age, education, and gender. I had complete data for 2,833 news items for this analysis. Table 6 presents the model coefficients, which correspond to the effect of each independent variable on the probability that a subject will select a news item for later viewing.

Table 6. Factors influencing probability of selection (logistic regression with clustering)

	Coefficient	(s.e.)
Prospective viewpoint-reinforcement	0.142 ***	(0.026)
Prospective viewpoint-challenge	-0.083 **	(0.030)
Conservative? (dummy) ^a	-0.410 **	(0.135)
Issue-related political activity	0.033	(0.038)
Religious activity	0.057	(0.060)
Issue = civil liberties? (dummy) ^b	0.124	(0.124)
Issue = gay marriage? (dummy) ^b	0.286 †	(0.149)
News item salience	0.147 **	(0.049)
Familiarity with events reported	0.065	(0.038)
Prior exposure to news about this issue	0.255 *	(0.110)
Stable issue position	-0.148	(0.108)
Male (dummy)	0.032	(0.109)
Age	-0.007	(0.004)
Education	-0.014	(0.046)
Constant	-1.098	(0.591)
Observations	2833	
Wald Chi-square	97.96 (p<0.001)	
Pseudo R-square	.0407	

† p<.1 * p<.05 ** p<.01 *** p<.001

a. Includes weak and strong conservatives

b. Reference category is social security reform

Several factors unrelated to the views expressed in an item exert a significant influence on item selection. Conservative subjects were less likely to select any individual news item, while those who had been following the issue most closely were more likely to select it. It is also worth noting that individuals interested in the gay marriage issue were marginally more likely to read a relevant

story than those interested in other topics ($p=0.05$). This may reflect the high media profile of this topic. Gay marriage made the headlines more often than the other topics during the time that the research was conducted, potentially elevating its perceived importance.

Controlling for these factors, the perception that a news item will provide either type of political information significantly influences the likelihood that it will be selected. First, the analysis reveals that subjects were more likely to select items with higher reinforcement scores. For example, the probability that a typical non-conservative subject will select a news item with neutral support and challenge scores was 67%. If the item provided strong viewpoint reinforcement the probability increased to 78%. Second, the model shows that challenge scores were *negatively* correlated to selection probability. The more challenging information a subject detected in a news story, the less likely he was to express interest in reading it, but the effect was smaller than that for viewpoint reinforcement.

These results support the hypothesis that the prospect of encountering viewpoint-reinforcing information would be positively correlated with article selection. The prediction that viewpoint-challenging information would have no influence on selection, however, was not supported. Subjects were less likely to view items the more viewpoint-challenging information they contained, though this effect was much smaller than the effect of viewpoint-support.

Next we turn our attention to subjects' use of the selected news items. To assess which factors influence news item *read time* I utilized linear regression, again employing clustering to account for the repeated measures contained within the dataset. A total of 1,064 read times were included in the analysis, representing the behavior of 486 subjects who assessed all the news items presented. The coefficients shown in Table 7 correspond to the magnitude of the change in the dependent variable, the natural log of item read time.

As before, I included subjects' perceptions of views expressed in the news item along with a variety of controls. One key difference is that in this model, there were separate measures for prospective perceptions of political content, based on the item synopses, and retrospective perceptions, which subjects provided after viewing the news items. As noted above, these items could not be reliably combined.

Table 7. Factors influencing natural log of read time (linear regression with clustering)

	Coefficient	(s.e.)
Prospective viewpoint-reinforcement	-0.010	(0.013)
Prospective viewpoint-challenge	-0.015	(0.013)
Retrospective viewpoint-reinforcement	0.032 **	(0.010)
Retrospective viewpoint-challenge	0.087 ***	(0.012)
Conservative? (dummy) ^a	-0.116 *	(0.055)
Issue = Civil liberties? ^b	-0.074	(0.058)
Issue = Gay marriage? ^b	-0.190 **	(0.072)
How much learned from news item?	0.038	(0.022)
Number of news items read prior	0.045 *	(0.021)
Total number of news items read	-0.081 ***	(0.022)
News item salience	0.016	(0.020)
Familiarity with events reported	-0.023	(0.018)
Prior exposure to issue news	-0.081	(0.072)
Stable issue position (dummy)	-0.112 *	(0.050)
Male (dummy)	-0.079	(0.049)
Age	0.005 **	(0.002)
Education	-0.060 **	(0.022)
Constant	4.623 ***	(0.357)
Observations (subjects)	1,064 (486)	
F-statistic	F(17, 485) = 7.73 (p<0.001)	
R-square	.1152	

* p<.05 ** p<.01 *** p<.001
a. Includes weak and strong conservatives
b. Reference category is social security reform

Some of the control factors were found to have a significant influence on read time. Age was positively correlated, while educational attainment was inversely correlated. The number of stories read prior to the current item was also associated with increased read time, though the overall number

of stories read in the session had a negative influence. Individuals whose attitudes regarding the issue had changed during the past year tended to spend more time reading. Finally, those interested in gay marriage tended to spend less time on each article they chose to read.

The viewpoints that subjects encountered in a news item they read significantly influenced read time even after controlling for the factors described above. While the results regarding item selection indicate that prospective assessments are an important predictor, these results show that retrospective perceptions about the information encountered in the article were the dominant factor shaping the time spent examining each item.

For the subjects in this experiment, the presence of political information was an unqualified incentive to read. The more viewpoint-reinforcing *or* viewpoint-challenging information they encountered, the more time they spent reading on average. It is also interesting to note that among these individuals, the presence of challenging information had a larger influence than supporting information on read times. For a typical reader, an increase in support from medium (six) to high (ten) was associated with a 14% increase in read time (from 94 seconds to 107 seconds); a similar increase in the amount of challenging information produced a 42% boost (to 133 seconds).

These results support the hypothesis that the more viewpoint-supportive information an individual encountered, the longer he would spend reading it. The prediction that viewpoint-challenging information would have no influence was again unsupported. Unlike the findings regarding item selection, which suggested that individuals exhibit an aversion to challenge, the read time analysis suggests that individuals are willing to engage with challenging information even if it requires additional time and attention.

Looking at selection and read time as a whole, the data show that when selecting among a variety of news items representing a range of political viewpoints, individuals consistently seek support for their own positions. They are more likely to look at information that reinforces their

opinion, and they spend more time reading it. Individuals also exhibit an aversion to viewpoint-challenging information, though the effect is substantially smaller. This is offset, however, by their tendency to spend more time looking at the viewpoint-challenging news items they do choose to read, reflecting a willingness to engage with other perspectives. Overall, these results provide further evidence that individuals desire viewpoint-reinforcement, but they do not have a propensity to screen out all viewpoint-contrary information. I conclude with a discussion of the implications of these findings.

Discussion

Ideologically-motivated selective exposure has been a topic of debate for more than half a century, and the explosive growth of specialized news media and high-control news environments, such as those available online, have brought renewed interest in this question. Americans' preferences regarding exposure to political information will profoundly shape the political environment in the years to come.

Understanding whether people have a preference for viewpoint reinforcement and/or an aversion to viewpoint challenges is important because the implications of these preferences are strikingly different. One form of selective exposure poses a greater threat to democratic deliberation than the other. Though seeking out reinforcement may produce deeper convictions and more passionate beliefs, such behavior does not necessarily reduce exposure to other perspectives. Avoiding other perspectives, on the other hand, presents a number of threats. Exposure to other viewpoints is important because it fosters political tolerance and can improve group deliberation processes. As this exposure drops, the evidence suggests that our society will become more polarized and politically fragmented.

The research described here suggests that individuals' political attitudes do influence their attention to relevant news and information. The data are also consistent with the claim that citizens

respond to viewpoint-reinforcing and viewpoint-challenging information differently, though my hypotheses regarding challenge avoidance were insufficiently nuanced. I did not anticipate that opinion-contrary information would have different effects on the decision to examine a news item and the time spent reading.

The results regarding individuals' preference to examine viewpoint-reinforcing information appear unambiguous. Individuals seeking political information in an online environment that facilitates ideological selectivity (1) seek out sources that support their political viewpoints; (2) are more likely to attend to and spend more time considering news items with which they agree; and (3) have a larger repertoire of arguments with which to justify their opinions.

The results regarding viewpoint-challenging information are not as straightforward. Speaking broadly, the results suggest that citizens do not seek to entirely exclude contact with challenging information. Evidence for this claim takes several forms. In terms of their overall information exposure, Internet users are no less familiar than non-Internet users with arguments justifying other perspectives. To the contrary, Kerry-supporting Internet users were more aware of the rationales for supporting Bush than Kerry supporters who had less experience with the technology. In terms of their news-item exposure decisions, newsreaders are slightly less inclined to read items containing viewpoint-challenging information, but this does not necessarily mean that they seek to exclude other perspectives. The bias against challenging information was slight: large increases in the degree of opinion-contrary information present had only a small effect on the likelihood that a reader would examine an item. Furthermore, readers spent extra time on the challenging items they did consider, suggesting that the exposure was valuable enough to merit expending additional time and energy.

Nevertheless, it is worth examining possible explanations for the differences between the survey and experimental results. Why did respondents in the first use additional control over their

information environment to maintain or increase their familiarity with other viewpoints, while subjects in the second chose to filter out other perspectives? I consider two types of explanations; the first is based on a revised theoretical model of individual preferences, while the second is methodological in nature.

The first possibility is that the additional attention that newsreaders give to challenging news items counteracts their bias against selecting them. Despite their aversion to viewpoint-challenging information, individuals may consider it important to be familiar with other perspectives. On this view, I would argue that citizens want to be aware of the arguments favoring other viewpoints, but they are selective about how they encounter them. Thus, individuals have a higher quality threshold when choosing among viewpoint-challenging stories and they want to avoid repeated exposure to arguments with which they disagree. Having identified a novel argument, however, they make an effort to understand and/or critique it. This takes more time than reading viewpoint-supporting information because the perspective and claims are less familiar and because the reader may be motivated to identify flaws in the arguments.

The alternative explanations are grounded in methodological issues. First, the differences might be related to differences in the sample. Perhaps the selectivity observed here is unique to the subject population. As previously observed, experimental subjects were more ideologically extreme than most Americans, and the topic was one that they indicated was of interest to them. Both of these factors are associated with a greater tendency to be selective (Frey 1986; Chaiken and Stangor 1987: 580). Second, the different results could reflect the different information environments in which the studies took place. Though the experiment relied on existing online tools to retrieve politically diverse news items, few Americans regularly use these capacities (Fallows 2005; Hargittai 2004). Thus, it could be that online news users responding to the survey are not filtering out other viewpoints because they have not yet developed the habits or skills in using the technologies that

would let them do so easily and efficiently. Third, the experimental results may have been the product of a Hawthorne effect (Roethlisberger and Dickson 1939): the study could have created an artificial incentive to attend to selected news items. If it were not for the read-incentive created by the experimental setting, people might have abandoned reading items that required more cognitive processing, rather than spending extra time on them. This seems unlikely, however, as (1) subjects were specifically informed that they could stop reading at any time, and (2) the questions that subjects answered after reading each news item did not ask detailed questions about the item.

None of the alternative explanations require that individuals engage in selective avoidance. Although these methodological issues are a legitimate source of concern, the evidence for a Hawthorne effect is weak, and neither the uniquely partisan subject pool nor the enhanced control provided explain why subjects spent extra time viewing information with which they disagreed. Thus, I conclude that a revised theoretical model, which accounts for the simultaneous aversion to and interest in viewpoint-challenging information, merits future research.

These results paint a moderately encouraging portrait of individual preferences, but there are many unanswered questions. The most important of these pertain to the ways in which people use the information they encounter. The data used here say nothing about individuals' comprehension or evaluation of political information. Recalling exposure to the arguments does not mean that the individual has critically engaged the content. Exposure is necessary but not sufficient to ensure that an individual integrates the arguments into his/her broader political understanding. Furthermore, these data do not allow an assessment of the effects of exposure on political opinion. Specifically, I am unable to determine whether the purposeful exposure to viewpoint-challenging information changes the strength or direction of individuals' attitudes toward the candidates. To understand the influence of selective exposure on the political landscape, these questions must be addressed.

The lessons learned here are important despite the questions that remain. A desire for exposure to viewpoint-supporting information is not synonymous with an aversion to other viewpoints. Though individuals are likely to use the information resources available to them to expand their familiarity with the arguments that support their position, there is no reason to expect that they will systematically screen out exposure to other viewpoints. Though individuals are selective about their contact with other viewpoints, they are willing to expend additional effort to understand them.

Appendix A. Opinion statement familiarity

I'm going to read different arguments people make about the Presidential candidates and their policies. Please tell me how often you have heard or read each argument – frequently, just once in a while, or never. Here's the (first/next) one...

Bush favorable [ask this block first for Bush supporters; rotate within block]

- a. The Bush administration's policies have helped the country's economy begin to recover
- b. George Bush is a stronger leader than John Kerry in the war against terrorism
- c. John Kerry changes his positions on the issues when he thinks it will help him win an election
- d. John Kerry has a history of accepting money from special interest groups

Kerry favorable [ask this block first for Kerry supporters; rotate within block]

- e. John Kerry will end special treatment for corporations and wealthy Americans
- f. John Kerry has a better strategy than George Bush for creating peace in Iraq
- g. The Bush administration misled the American public about the reasons for going to war with Iraq
- h. Some Bush administration policies are a threat to basic civil rights and civil liberties

Appendix B. Viewpoint assessment questions

Prospective

- a. I expect the news report to describe arguments supporting my political viewpoint.
- b. I expect it to demonstrate that others support my political viewpoint.

- c. I expect it to describe arguments opposing my political viewpoint.
- d. I expect it to demonstrate that others oppose my political viewpoint.

Retrospective

- e. The news report described arguments supporting my political viewpoint.
- f. It demonstrated that others support my political viewpoint.
- g. It described arguments opposing my political viewpoint.
- h. It demonstrated that others oppose my political viewpoint.

Responses on a five-point Likert scale anchored by strongly agree and strongly disagree.

REFERENCES

- Abbate, J. (1999) Inventing the Internet, Cambridge: MIT Press.
- Adamic, L. and Glance, N. (2005) 'The Political Blogosphere and the 2004 U.S. Election: Divided They Blog', Presented at the 2nd Annual Workshop on the Weblogging Ecosystem: Aggregation, Analysis and Dynamics, Chiba, Japan.
- Baruh, L. (2004) 'Selective exposure in cyberspace and the influence of political conviction on seeking information about politics', Presented at the annual meeting of the National Communication Association, Chicago, IL.
- Bimber, B. and Davis, R. (2003) Campaigning online: the Internet in U.S. elections, New York: Oxford University Press.
- Chaffee, S.H., Saphir, M.N., Graf, J., Sandvig, C. and Hahn, K.S. (2001) 'Attention to Counter-Attitudinal Messages in a State Election Campaign', Political Communication 18 (247-272).
- Chaiken, S. and Stangor, C. (1987) 'Attitudes and Attitude Change', Annual Review of Psychology 38: 575-630.
- Cleaver, H. (1999) 'Computer-linked social movements and the global threat to capitalism'. On-line. Available HTTP: <http://www.eco.utexas.edu/Homepages/faculty/Cleaver/polnet.html> (8 April 2005).
- Delli Carpini, M.X., Cook, F.L. and Jacobs, L.R. (2004) 'Public deliberation, discursive participation, and citizen engagement: a review of the empirical literature', Annual Review of Political Science 7: 315-44.
- DiMaggio, P., Hargittai, E., Neuman, W.R. and Robinson, J.P. (2001) 'Social implications of the Internet', Annual Review of Sociology 27: 307-36.
- DiMaggio, P. and Sato, K. (2003) 'Does the Internet balkanize political attention?: A test of the Sunstein theory', Presented at the annual meeting of the American Sociological Association, Atlanta.
- Eagly, A.H., Chen, S., Chaiken, S. and Shaw-Barnes, K. (1999) 'The impact of attitudes on memory: an affair to remember', Psychological Bulletin 125 (1): 64-89.
- Fallows, D. (2005) 'Search engine users: Internet searchers are confident, satisfied and trusting but

- they are also unaware and naïve.', Pew Internet and American Life Project. On-line. Available HTTP: http://www.pewinternet.org/pdfs/PIP_Searchengine_users.pdf.
- Fiske, S.T. and Kinder, D.R. (1981) 'Involvement, expertise, and schema use: evidence from political cognition'. in N. Cantor and J. Kihlstrom (eds) Personality, cognition, and social interaction, Hillsdale, NJ: Erlbaum Associates, p. 171–90.
- Frey, D. (1986) 'Recent research on selective exposure to information', Advances in experimental social psychology 19: 41-80.
- Hakstian, A.R. and Farrell, S. (2001) 'An openness scale for the California Psychological Inventory', Journal of personality assessment 76 (1): 107-34.
- Hargittai, E. (2004) 'Informed web surfing: the social context of user sophistication'. in P.N. Howard and S. Jones (eds) Society online: the Internet in context, Thousand Oaks: Sage Publications, Inc., pp. 257-74.
- Holbrook, A.L., Berent, M.K., Krosnick, J.A., Visser, P.S. and Boninger, D.S. (2005) 'Attitude importance and the accumulation of attitude-relevant knowledge in memory', Journal of Personality and Social Psychology 88 (5): 749-69.
- Iyengar, S., Hahn, K.S., and Walker, J. (2003) 'Does information technology encourage selective exposure to politics? Evidence from the 2000 presidential campaign', unpublished manuscript.
- Keeter, S., Miller, C., Kohut, A., Groves, R.M. and Presser, S. (2000) 'Consequences of reducing nonresponse in a national telephone survey', Public Opinion Quarterly 64 (2): 125-48.
- Koriat, A., Goldsmith, M. and Pansky, A. (2000) 'Toward a psychology of memory accuracy', Annual Review of Psychology 51: 481-537.
- Lazarsfeld, P.F., Berelson, B. and Gaudet, H. (1944) The people's choice, New York: Columbia University Press.
- Lowin, A. (1967) 'Approach and avoidance: alternative modes of selective exposure to information', Journal of Personality and Social Psychology 6 (1): 1-9.
- McGraw, K.M., Lodge, M. and Stroh, P. (1990) 'On-line processing in candidate evaluation: the effects of issue order, issue importance, and sophistication', Political Behavior 12 (1): 41-58.
- Mendelberg, T. (2002) 'The deliberative citizen: theory and evidence', Political Decision Making, Deliberation and Participation 6: 151-93.
- Mutz, D.C. (2002) 'The consequences of cross-cutting networks for political participation', American Journal of Political Science 46 (4): 838-55.
- Mutz, D.C. and Martin, P.S. (2001) 'Facilitating communication across lines of political difference: the role of mass media', American Political Science Review 95 (1): 97-114.
- Nemeth, C. and Rogers, J. (1996) 'Dissent and the search for information', British Journal of Social Psychology 35: 67-76.
- Nemeth, C.J. (1986) 'Differential contributions of majority and minority influence', Psychological Review 93 (1): 23-32.
- Nisbett, R.E. and Wilson, T.D. (1977) 'Telling more than we can know: verbal reports on mental

- process', Psychological Review 84 (3): 231-59.
- Price, V., Cappella, J.N. and Nir, L. (2002) 'Does disagreement contribute to more deliberative opinion?', Political Communication 19: 95-112.
- Roethlisberger, F.J. and Dickson, W.J. (1939) Management and the Worker, Cambridge, Mass: Harvard University Press.
- Sears, D.O. and Freedman, J.L. (1967) 'Selective exposure to information: a critical review', Public Opinion Quarterly 31 (2): 194-213.
- Stangor, C. and McMillan, D. (1992) 'Memory for expectancy-congruent and expectancy-incongruent information: a review of the social and social developmental literatures', Psychological Bulletin 111 (1): 42-61.
- Stroud, N. J. (2004) 'Where's the party? An investigation of the Internet and partisan selectivity', Presented at the annual meeting of the National Communication Association, Chicago, IL.
- Sunstein, C.R. (2002) 'The law of group polarization', The Journal of Political Philosophy 10 (2): 175-95.
- Sweeney, P.D. and Gruber, K.L. (1984) 'Selective exposure: voter information preferences and the Watergate affair', Journal of Personality and Social Psychology 46 (6): 1208-21.
- Zook, M. (1996) 'The unorganized militia networks: conspiracies, computers, and community', Berkeley Planning Journal 11