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Selective Exposure in the Internet Age: The Interaction between Anxiety and Information Utility

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The rise of the Internet forces scholars to reevaluate the frequency and nature of political information seeking in the contemporary period. The functionality of the Internet makes passive exposure more difficult, and selective information seeking easier, than in the past. However, people may also use the Internet in a new and directed way—to arm themselves with information to express and defend their views either online or in the real world. The central question we explore in this paper is what explains balanced versus biased information seeking in the era of the Internet? We combine insights from Sears and Freedman (1967) with newer work on emotion to predict motivated selectivity: focusing specifically on the interaction between anxiety and information utility. Our central theoretical claim is that anxiety does not simply boost any *information seeking; it triggers information seeking that is* useful for addressing the problem at hand. *Anxiety alone, therefore, does not guarantee a* balanced *information search. When counterattitudinal information is useful for some reason—for example, to defend their own opinions to others who may disagree—anxious citizens should seek it out. As a consequence, these subjects should learn more specific information about where each candidate stands on the issues. In an experiment we find support for these hypotheses. We conclude that while today's flexible Internet environment may permit selectivity, balanced seeking should still occur under a fairly common set of circumstances.*

KEY WORDS: Selective exposure, Threat, Anxiety, Political information seeking

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During the 1990s, the Internet grew exponentially in size and complexity as an alternative source of political information to broadcast and cable network news (Neuman, 2000). Candidate and interest group web pages, political blogs, specialized news services, electronic newspapers, Internet polls, public affairs information sites, and email campaigns have exploded in volume, offering new information resources and participatory outlets to the average citizen. These phenomena force students of political communication to revisit basic conclusions about media effects on mass information seeking, modes and rates of political participation, civic knowledge and engagement (Bimber, 1998, 2001; Bimber & Davis, 2003; Davis, 1999; DiMaggio, Hargittai, Neuman, & Robinson, 2001; Negroponte, 1995; Neuman, 2000; Sunstein, 2002).

Speculation about the impact of the Internet on politics has generally fallen into one of two camps. Some foresee a utopian future, where the Internet fulfills Barber's (1984) promise of strong democracy. In this conception, political engagement and knowledge are enhanced by the vast increase in accessible information and opportunities for political expression, debate, deliberation, organizing, and citizen contacting via the Internet (Browning, 1996; Hauben & Hauben, 1997; Hill & Hughes, 1998). Others are concerned about dystopian possibilities such as increased social fragmentation and ideological polarization stemming from selective exposure: the tendency for individuals to seek out only those political views that reinforce their current preferences and beliefs (Negroponte, 1995; Sunstein, 2002; see DiMaggio et al., 2001, for an insightful discussion of the general debate). In fact, increasing media choice may permit large segments of the audience to opt out of exposure to news and politics altogether (Prior, 2007). Such outcomes are made possible by the very factors—control, interactivity, and flexibility—that others consider to be the Internet's greatest assets.

While concern about the potentially fragmenting effects of the Internet is reasonable, we also must acknowledge that people are using this medium to express their political views and interact with others whom they previously would not have encountered. In particular, the Internet may foster political expression and debate between diverse groups. The explosion of citizen expression on political blogs, discussion groups, news websites, email lists, and candidate websites is obvious to even the most casual observer over the past two decades. In other words, the Internet allows people to gather information about politics, debate politics with others directly, and express their views to elites (Hill & Hughes, 1998; Shah, Cho, Eveland, & Kwak, 2005). When citizens use the Internet for information seeking, they often experience gains in social capital (Shah, Kwak, & Holbert, 2001). The Internet, then, is not simply a replacement for the surveillance needs once fulfilled by television, radio, and newspapers (Althaus & Tewksbury, 2000).

While it is not clear exactly how much political debate across lines of partisan or ideological difference actually occurs online, we know that the Internet dra-

matically reduces costs and increases the opportunities for such interaction (Lupia & Sin, 2003; Price & Cappella, 2002). Davis (1999) documented a virtual avalanche of interpersonal political discussion occurring on Usenet discussion groups in the 1990s. He estimated that by 1995 nearly one million messages were being posted daily to tens of thousands of newsgroups (p. 150). The Pew Internet and American Life Project reported that 46% of Americans "used the Internet to get news about the campaigns, share their views, and mobilize others" by the summer of the 2008 election cycle (Smith & Rainie, 2008). The study found over 10% of Americans were sharing political content with others, and 5% were posting their own commentary or writing to online newsgroups, websites, or blogs. Furthermore, these activities had roughly doubled in frequency since 2006. So while selectivity online is possible, there is also reason to believe that debate and information exchange, and the balanced information seeking possibly supporting it, may be occurring more regularly than in the past.

Our goals are two. First, we explore the conditions under which citizens may seek out balanced partisan information as opposed to exposing themselves selectively to viewpoints with which they already agree. We draw inspiration from a finding from Sears and Freedman (1967) regarding the role of information utility in driving the choice of attitudinally consonant or discrepant information. Second, we refine one of the insights from the growing literature regarding the link between a particular emotion—anxiety—and political attention, engagement, and information seeking (Brader, 2006; Marcus, Neuman, & MacKuen, 2000; Valentino, Hutchings, Banks, & Davis, 2008). We will review the details of our theory below, but our prediction is as follows: Anxiety is not likely to boost *all* political information seeking, but instead should focus attention on information immediately helpful for solving the problem at hand. If balanced information is useful, anxious citizens will seek it out. If not, anxiety is likely to lead people to avoid counterattitudinal views. Finally, we expect these patterns of consumption will be consequential for learning: When anxious citizens know they will need to defend their views, an activity perhaps common on the Internet, they may end up learning more than other citizens.

Selective Exposure in the Internet Age

The concept of selective exposure played an important role in the formulation of the "minimal effects" hypothesis (Klapper, 1960). Based in part on insights from Cognitive Dissonance theory (Festinger, 1957), Klapper presumed that citizens would, if they could, opt out of exposure to views that were unlike their own. Results from early election studies concluded that partisanship acted as a filter for contrarian viewpoints (Berelson, Lazarsfeld, & McPhee, 1954; Campbell, Converse, Miller, & Stokes, 1960; Katz & Lazarsfeld, 1955; Lazarsfeld, Berelson, & Gaudet, 1944). Since that time, scholars and lay citizens alike have assumed that

motivated selectivity to mass media messages is pervasive (DeFleur & Dennis, 1981; Merril & Lowenstein, 1971; Rivers, 1964).

However, causal evidence for motivated selective exposure to attitudinally consonant information has been elusive (Freedman, 1965; Freedman & Sears, 1965; Sears & Freedman, 1967; Frey, 1986). Instead, when selectivity occurred, it was "*de facto*" in nature: People found themselves in situations that reinforced their existing beliefs, but were not motivated to avoid attitudinally discrepant views. In other words, many studies mistook correlation for causation when they discovered a relationship between prior attitudes and current exposure to information. Sears and Freedman (1967) reviewed several studies suggesting people in fact seek out opposing arguments under a variety of circumstances. One finding appeared in repeated studies: People are less likely to select attitudinally consonant information when they know they will need dissonant information in order to defend their position or make future decisions (Canon, 1964; Freedman, 1965; Rosen, 1961). Information utility, therefore, influenced whether people would choose to avoid or seek out views they disagreed with.

In the middle of the twentieth century, selectively exposing oneself to just one side of every issue was difficult because the mainstream media attempted to provide balanced, contrapuntal news (Mutz & Martin, 2001; Neuman, 1991; West, 2001). The three-network news environment therefore placed significant constraints on information seeking, forcing those who consumed any news at all to be exposed to some balance (Prior, 2007). The values driving the production and presentation of news also produced an ideologically moderate and standardized information stream (Bennett, 2001; Schudson, 1978; West, 2001). Neuman (1991) describes the three-network era as a "cultural commons," in which a balance of partisan information was the norm.

Research on political and health communication campaigns during the television era found little evidence of partisan selectivity (Chaffee & Miyo, 1983; Milburn, 1979). Chaffee and Miyo (1983) found motivated selectivity only among the least partisan and least politically experienced subjects in their sample (adolescents, as opposed to their parents). They found very little evidence for intentional avoidance of counterattitudinal information, and only slight evidence for the motivation to seek consonant information. They concluded that reinforcement of preexisting preferences via media searching during campaigns "may have been well suited to an earlier political era of party predominance and biased media fare, (but) it neither fits the conditions of today nor the data of our study" (p. 34).

On the other hand, positive evidence for selective exposure has been turning up for some time. Barlett and his colleagues (1974) performed a field experiment that involved a simple decision by registered Democrats and Republicans to open mail sent by Republican versus Democratic campaign organizations. They found that partisans exhibited a great deal of selectivity. Stroud (2008) finds partisanship is correlated with media preferences in both cross-sectional and panel survey data. Garrett (forthcoming) argues that this pattern may be due more to reinforcement

seeking rather than motivated avoidance of counterattitudinal information. Fischer, Jonas, Frey, and Schulz-Hardt (2005) find that information scarcity also seems to promote selective exposure, but that feature seems less likely in the Internet age. Taber and Lodge's (2006) theory of motivated reasoning posits cognitive strategies that are consistently biased against information contradictory to a person's prior attitudes. They find laboratory evidence for both a disconfirmation bias—the tendency for people to counterargue opinions with which they disagree—as well as a confirmation bias—the tendency to seek out information congruent with existing opinions—in information seeking in an open information search. These findings indicate selective exposure occurs under a variety of circumstances and via a number of motivating forces.

Neuman (1991) as well as Bimber and Davis (2003) argue the key to understanding contemporary information seeking is to understand motivations. This important insight, that we must understand *why* people seek political information, is also the premise behind the "uses and gratifications" approach to media effects (Blumler & Katz, 1974; Rosengren, Wenner, & Palmgreen, 1985). Audience members as active and purposive in their approach to media information seeking seem even more applicable today than when Atkin (1973) was writing. So what might motivate citizens to seek information in the first place? Recent work on political threats, and the specific emotions they trigger, suggests one answer.

Anxiety, Information Seeking, and Selective Exposure

Political threats, and the anxiety they sometimes trigger, can motivate campaign interest, attention, and perhaps information seeking (Brader, Valentino, & Suhay, 2008; Kubey & Peluso, 1990; Sheatsley & Feldman, 1965). Information seeking can be motivated by a desire to reduce uncertainty during troubling times (Boyle et al., 2004) or to manage moods (Zillman & Bryant, 1985). Marcus, Neuman, and MacKuen (2000) propose a theory of Affective Intelligence, which explores the distinct influences of anxiety and enthusiasm on political attentiveness, engagement, and learning. Drawing on neuroscience theories of emotion, they discuss two separate systems that individuals use to monitor the environment for signals about their well being. The first, dubbed the "dispositional system," is active whenever individuals receive environmental feedback related to how well they are progressing toward their goals. When progress is adequate relative to their expectations, enthusiasm is experienced. Frustration or depression is experienced when progress falls short of expectations. The other system, dubbed the "surveillance system," monitors the environment for threats to well-being. When a threat is identified, anxiety is experienced, attention is heightened, and the individual becomes more engaged with contemporary information. Positive emotions such as enthusiasm, on the other hand, are triggered when the disposition system is active. In these states, habits and predispositions are applied to current circumstances and

the individual is more likely to be motivated to participate but not necessarily to seek out new information.

Based on this dual-systems approach, Marcus et al. (2000) predict different political consequences for enthusiasm versus anxiety. In an anxious state, individuals are vigilant, attentive, and perhaps willing to seek out new information. The question is, which kind of information are people going to pursue? Using American National Election Studies (ANES) survey data, Marcus and his colleagues find support for their basic distinction between the impact of enthusiasm and anxiety on general campaign attention. The impact of anxiety relative to enthusiasm on campaign attentiveness was also confirmed by Brader (2006) in a set of controlled experiments. Using a field experiment, Miller and Krosnick (2004) also found that threats can mobilize political action.

There is some evidence that the impact of anxiety on information seeking may be more conditional than previously supposed. Anxiety may boost learning most when individuals believe they have some hope of success in overcoming the threats they fact (Nadeau, Niemi, & Amato, 1995). In addition, Rudolph, Gangl, and Stevens (2000) find that anxiety only boosts attention among those high in political efficacy. Therefore, it is not obvious whether increased attention and vigilance with regard to one's environment should systematically increase *total* information search volume among all citizens. Valentino et al. (2008) find that anxiety does not increase total time spent seeking out information, but may enhance the *quality* of searches and therefore boost learning.

Evidence is also beginning to emerge suggesting the impact of anxiety is moderated by contextual and interpersonal factors. Feldman and Huddy (2005) find anxiety does not always boost learning. Anxious citizens after September 11, 2001, claimed to pay more attention to the news but also knew fewer objective facts about the attacks. The authors infer that anxiety might boost attention but also distract people, making them less able to encode and retain information. Lavine, Lodge, and Freitas (2005) find that some individuals—authoritarians—react to threats by increasing attention to confirmatory messages while those low on authoritarianism look for more balanced information when threatened. All these findings suggest that the relationship between anxiety and information seeking, especially the distinction between balanced seeking and selective exposure, may be conditional.

Instead of expecting anxiety to boost all information gathering across the board, we expect anxiety to make people pay more attention to the *goals and problems* they face at the time (Smith & Ellsworth, 1985). People should seek out information only if it is useful for achieving those goals or solving those problems. The utility of information available to people at the time when they feel anxious will help determine the nature and impact of the resulting search. If given a problem to solve, anxiety should channel information seeking in productive ways. In the Internet age citizens have myriad opportunities to engage others and defend their political views in diverse discussion networks, both online and off. Since

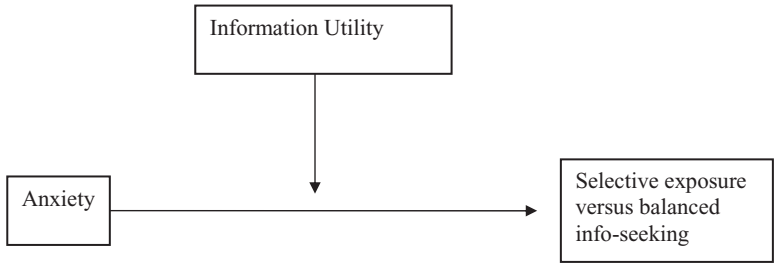

Figure 1. Causal model for the impact of anxiety on motivated selective exposure, moderated by information utility.

balanced information seeking would be helpful for attitude defense, we predict anxiety will cause citizens to seek counterattitudinal information. On the other hand, when there is no use for counterattitudinal information, the individual may react to anxiety by seeking out predominantly consonant viewpoints, perhaps as a way of coping with the negative emotion (Lazarus, 1991).

These relationships are captured in Figure 1. This simple model captures, in our opinion, a common phenomenon in contemporary politics. An individual perceives some threat in the political environment, which triggers anxiety, and this emotion triggers attention to the information environment compared to when he is angry or enthusiastic. Whether or not she decides to pursue balanced information in that state, however, is determined by the nature of the problem she faces. If balanced information seeking would be useful, she will seek it out. If such a goal is not present, anxiety might actually reduce balanced information seeking (though perhaps not suppress information seeking overall). Previous designs have coupled the threatening stimulus with the particular information domain (say, news about 9/11), so it is difficult to determine whether anxiety triggers an increase in attention to *all* information or focuses attention on information that is useful for solving the particular problem facing the individual at the time. Our study attempts to address this confound.

We predict information utility should not influence search behavior when an individual experiences anger or enthusiasm, because these emotional states trigger reliance on existing political predispositions and behavioral habits. This would make additional information seeking, regardless of the quality of the information, unnecessary. Our approach differs from previous work in its predictions about the distinct role of anger. Marcus et al. (2000) combine anger and anxiety in a single dimension. This measurement strategy is driven by the tight correlation between the two measures, not because the theory predicts the two emotions behave identically. There are, in fact, good theoretical reasons to separate anger and anxiety, as Marcus (2003) has begun to suggest. Huddy, Feldman, and Cassese (2007) discuss various theories of emotion, each of which suggests distinct causes and consequences for particular negative emotions. In particular, they find that

anger facilitates superficial decision making about the Iraq war, while anxiety prompts thoughtful processing. Anger and enthusiasm should act similarly, because in both these emotional states people will become more entrenched in their current opinions and less open to alternative views. Further information seeking is unnecessary in this scenario, because firm and confident conclusions have already been drawn.

Hypotheses

We predict the causal chain linking emotion and selective exposure should be moderated by the perceived utility of balanced information. When an anxious individual knows she is going to need to defend her own views against people who disagree, balanced information seeking should increase. When anxiety is not accompanied by a specific use for balanced information, balanced information seeking should decrease.

We also expect that balanced information seeking triggered by the interaction of anxiety and information utility will have beneficial consequences. Knowledge about the candidates should be significantly enhanced under these conditions. Evidence in line with this prediction would further suggest that, under a set of circumstances potentially common during campaigns, significant learning can take place via the Internet.

Design

We designed an experiment to test our hypotheses. The study was conducted in a computer lab from October 14 to November 1 of 2004. The original sample size was 305, consisting of local residents, mostly students, living on or near campus. The sample was 38% nonwhite and 62% female. Republicans are underrepresented, comprising only 22% of the final sample. There were no significant differences across cells of the design in the proportion of these sociodemographic and partisan variables. Subjects were recruited with flyers at local businesses and in university office buildings. Respondents were informed that they would receive $10 for answering questions about "media habits and current events." The data were collected using surveys on computers, so that interaction with lab staff was limited to the set-up period. Participants completed a pretest that included questions on media information, partisanship, and values. They were then randomly assigned to conditions intended to induce the emotions of anger, fear, and enthusiasm.[1]

[1] A fourth condition attempted to induce a "relaxed" state. Though our results are quite comparable when we use this condition as the baseline comparison, it is a more rigorous test of our hypotheses to compare the effects of anxiety and anger with that of enthusiasm as previous research has done.

To induce an emotional state, we used a technique quite common to social and cognitive psychological studies of emotion (Bower, 1981; Isbell & Ottati, 2002; Lerner & Keltner, 2001), where subjects are asked to recall and focus on events, people, or occurrences that caused them to experience a given emotion. We modified this task to ensure that people would focus on emotions caused by the current campaign. Subjects responded to the following query:

> "Now we would like you to describe something during the current campaign that made you feel (angry/afraid /enthusiastic). Please describe how you felt as vividly and in as much detail as possible. Think about the candidates running for office, the issues in this year's election, and real world events. Examples of things that have made some people feel (anger/afraid/enthusiastic) are statements made by candidates, speeches given during the party conventions, and things said during the debates. It is okay if you don't remember all the details, just be specific about what exactly it was that made you (angry/afraid/enthusiastic) and what it felt like to be (angry/afraid/enthusiastic)."

The length of responses was unrestricted, but in order to encourage participation subjects were instructed to "take a few minutes" to write down anything about politics that made them feel the emotion.

We performed extensive manipulation checks to determine if our emotion induction task worked as intended. We had a pair of graduate students unaware of our hypotheses and the conditions to which respondents were assigned analyze the content of responses to the induction task. The main goal of this check was to determine whether the emotional content of open-ended responses could be easily sorted. Results of this test are presented in the appendix. In Table A1, regression analyses of the intensity of each emotion expressed in the open-ended responses correspond powerfully with the condition to which subjects were assigned. Some anger, however, did appear among subjects in the anxiety and enthusiasm conditions. In addition, a small amount of anxiety appeared in the anger condition. These unanticipated effects were small, and make our tests of the impact of specific emotions more conservative.

After completing this task, participants were given the opportunity to visit the web sites of the presidential candidates in order to learn about the campaign. These web sites were designed to mimic those of the actual major party candidates, and the front pages of these two sites are presented in the appendix. Subjects were allowed to choose which web site they wanted to visit and were allowed to switch back and forth between the web sites to compare information if they so chose. The online environment was closed, so subjects could not navigate away from the candidate sites to visit other locations on the web. While subjects were forced to choose at least one web site to view (by clicking on one or the other campaign logos), they were allowed to end their information search

immediately after choosing a candidate's page. On average, subjects spent nearly 60 seconds searching for information online, and a significant proportion of the sample spent 5 minutes or more in their total information search. A substantial proportion of our sample, across conditions of the experiment, was willing to look at information from both candidates' web sites. Forty-nine percent of the sample viewed both pages, and 56% of partisans viewed the opposing candidate's information.

The web sites were standardized for both candidates: information was organized into issue based and biographical information of the candidates. Both contained similar, but not identical issue pages in order to maintain the realism of the sites. The Bush-Cheney site contained pages involving jobs and the economy, compassion and values, education, health care, safety and security, and the environment and energy. The Kerry-Edwards web site contained pages on national security, economy and jobs, health care, energy independence, homeland security, education and the environment. Software tracked which specific pages on these sites were being visited, in which order, and for how long. This technique allows us to directly observe the impact of the emotional manipulation on the nature and extent of information seeking.

Before the information-seeking task, we randomly assigned a "warning" to half the sample which indicated subjects would need to defend their candidate choice. The other half of the sample was not forewarned. This technique was intended to manipulate the degree to which subjects would find balanced information useful to them, because they could collect information about their own or the opposing candidate in order to better defend their choice. The notification read as follows:

> "After reading about the presidential candidates on the web, we will ask you to defend your choice in this year's presidential election. In other words, we will ask you why you think your candidate is a better choice than any other candidate running for president. If you don't think either of the two leading candidates is a better choice than the other, you will be asked to defend that opinion as well."

After the information-seeking task, subjects answered an extensive posttest questionnaire that included candidate evaluations, issue importance ratings, participation and political interest, and efficacy questions.

Of course, any single methodological approach has potential limitations. Our setting is a computer lab, where other subjects are present during the interview. We induce specific emotions instead of allowing them to occur naturally as a reaction to a political threat. These factors make generalizing to other settings difficult. However, our study overcomes some of the obstacles that other studies have faced. In particular, the entire questionnaire and Internet search were self-administered, reducing demand characteristics by different interviewers. In addition, survey-

based studies of Internet use have some weaknesses that undermine the strength of causal inferences, so our experiment improves upon existing work in this area. Representative survey samples can accurately estimate levels of Internet use in the population, but cannot observe which information people sought out, or how much time they spend online. Such designs can estimate who has access to the Internet, but cannot measure actual use. Our study enables us to observe actual information-seeking behavior, not simply intentions.

Measures

Anger and *anxiety* are dummy variables, with the enthusiasm condition as the excluded category. *Warning* is a dummy variable, with half of respondents told that they would need to defend their candidate choice. We included several variables in our analyses as standard controls. These were not technically necessary since each characteristic was balanced across the conditions by random assignment. We included them only as a precaution. The standard general political *knowledge* questions, including queries about who held a majority in Congress, which political office is held by William Rehnquist, which institution's job is it to decide if a law is constitutional, etc., were combined to form a scale with values ranging from 0 to 6 correct answers. *Internet experience* was measured by asking subjects "Other than for e-mail, how often do you use the Internet?" Responses ranged from 0 (Never) to 6 (More than Once a Day). *Age* ranged from 18 to over 30. With our sample consisting mostly of undergraduate students, we created 4 categories (0 = under 18, 1 = 18–19, 2 = 20–25, 3 = 26–30, 4 = 30+). *White* and *Home Ownership* are dummy variables.

There are two ways to measure selectivity. One simply determines whether respondents seek a balance of information. This measure consists of a dummy variable distinguishing between subjects who viewed both or only one of the websites. This measure has the benefit of retaining all subjects for analysis. A second measure determines whether subjects choose to look at information from the opposition candidate at all, regardless of whether they look at the candidate from their party. This second approach is also a dummy variable reflecting whether or not the subject visited the web site of the candidate from the party they do not identify with. In this case, respondents who did not identify any partisan leaning were excluded. Visiting the opposition party candidate is coded 1, while visiting the in-party candidate is scored 0.

Finally, we measure candidate issue knowledge via a 9-point scale of correct placements of Bush and Kerry on a variety of issues. Our definition of "correct" candidate knowledge was simply whether the respondent placed Bush to the right of Kerry. Respondents placed the candidates on spending for public schools, spending on welfare programs for the poor, provision of social services versus cutting taxes, punishing juvenile criminals as adults, abortion rights, guaranteed

health care, raising the minimum wage, support for the war in Iraq, and support for the death penalty.[2]

Results

Our central prediction was that anxiety will boost balanced information seeking when such information will help the individual in some way. Telling people they would have to explain and defend their candidate selection should have boosted the utility of balanced information seeking. The warning gave respondents a challenge, perhaps increasingly common in the Digital Age, that the information environment could help them address. Table 1 displays the results of

Table 1. The Impact of Emotions and Information Utility on Information Seeking

	Visited Both Sites β **(s.e.)**	Visited Opposing Candidate's Site β **(s.e.)**
Anxiety	−.84*	−.48
	(.42)	(.44)
Anger	−.27	−.11
	(.42)	(.42)
Information Utility	−.38	−.22
	(.41)	(.44)
Anxiety*Info Utility	1.58**	1.34*
	(.59)	(.63)
Anger*Info Utility	.19	.47
	(.59)	(.62)
Constant	−2.83^	−1.46
	(1.15)	(1.08)
Nagelkerke R^2	.10	.09
N	302	269

^p ≤ .1; *p ≤ .05; **p ≤ .01 (two-tailed test). Note: Entries are unstandardized logistic regression coefficients and the standard errors are in parentheses. The dependent variable in the first column is a dummy variable coded "0" if the subject visited only one website, or "1" if the respondent visited both candidates' websites. The dependent variable in the second column is a dummy variable coded "1" if the subject visited the opposition party candidate or "0" if the respondent visited his/her party's candidate. The baseline condition for both columns is enthusiasm. Thus the effect of the negative emotion is the difference between the enthusiasm condition and either the anxiety or anger condition. Controls in these models (not shown here) were age, Internet experience, knowledge, race, and home ownership.

[2] In reality, the candidates took similar positions on some of these issues, especially the death penalty. We still considered a "correct" answer to be placing Bush to the right of Kerry, mostly because this decision is most defensible across all issues. Changing the coding of correct answers based on a closer correspondence between responses and the precise positions offered by the candidates does not change the results presented here.

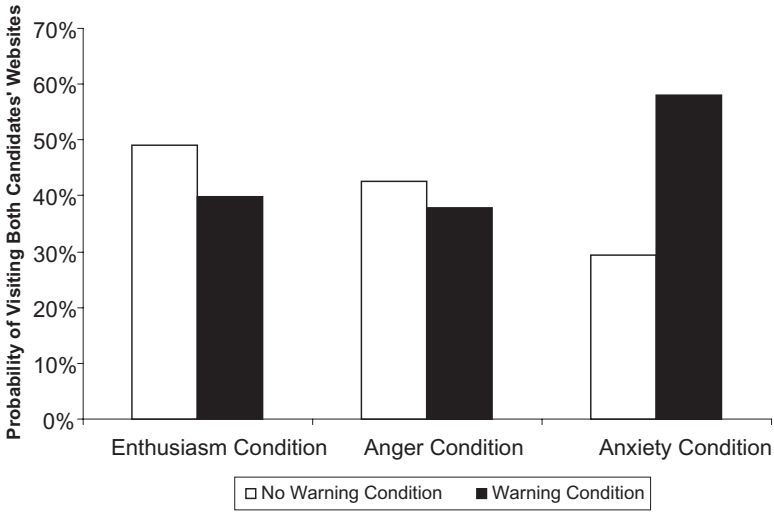

Figure 2. The Impact of Negative Emotions on Balanced Information Seeking.
Note: Entries are logistic probabilities of regressing a dummy for those who viewed both candidates' websites on the anxiety condition, the anger condition, the warning condition, and the interaction between each emotion and warning (anxiety × warning, anger × warning), controlling for age, race, Internet experience, knowledge, and home ownership (not shown here). The excluded category is the enthusiasm/no warning condition.

two logistic regression analyses.[3] In the first row of the first column, we see that anxiety significantly depresses the likelihood of visiting both web sites when the utility of balanced information is low.[4] The second row indicates there is no such effect for anger. The warning also does not affect information seeking among those in the baseline emotion condition: enthusiasm. Anxiety, however, positively and significantly interacts with information utility in the fourth row of the table. This interaction suggests that when feeling anxious and balanced information is deemed useful, people seek it out.

Figure 2 displays the probabilities based on the results from the first column of Table 1. The bars in this figure present the probability that a subject would visit both candidates' websites. To calculate probability shifts, control variables were set to their means. Here we see how anger and enthusiasm produce almost identical patterns of information seeking, regardless of information utility. While anger reduces the probability of information seeking relative to the enthusiasm condition

[3] For both models, we controlled for age, race, knowledge, home ownership, and experience with the Internet. Coefficients for these variables were suppressed in the table for ease of presentation. Results available from the first author upon request.

[4] As before, the constituent variables in these interactive models represent the effect of the dummy when the other variable in the interaction is zero. In this case, the coefficient "anxiety" is the impact of anxiety when information utility is zero.

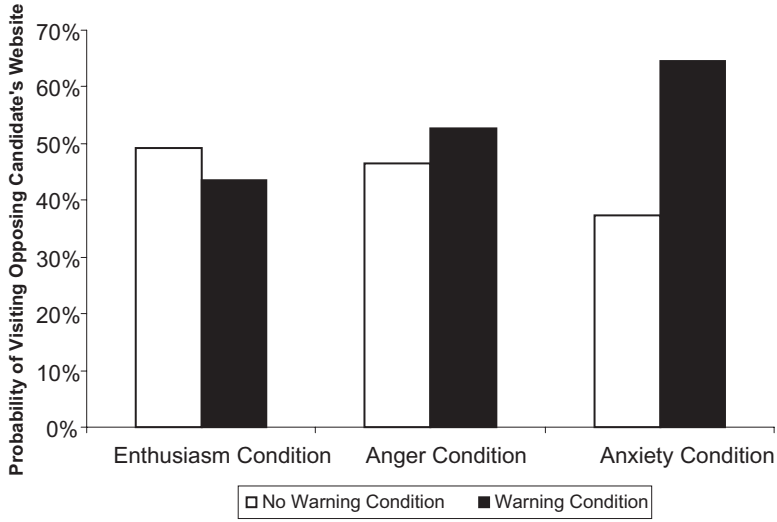

Figure 3. The Impact of Negative Emotions on Exposure to Opposing Views.
Note: Entries are logistic probabilities of regressing a dummy for exposure to the website of the respondent's opposition party candidate on the anxiety condition, anger condition, warning, and the interaction between each emotion and warning (anxiety × warning, anger × warning), controlling for age, race, Internet experience, knowledge, and home ownership (not shown here).

by about 5 points, this is not a significant effect. In the anxious condition, however, information utility drives up balanced seeking by 20 percentage points compared to the enthusiasm condition. Conversely, respondents in the low-information utility condition are nearly 20 percentage points less likely to view both candidates' web sites.

The same pattern emerges when we focus in on selective exposure more narrowly. When we look only at partisans who are willing to seek out information on the web site of the candidate from the opposition party, anxiety and information utility interact in the same way as before. In the second column of Table 1, we see that anxiety slightly depresses the likelihood of information seeking on the opposing candidate's site as long as the utility of balanced information is low. In the fourth row, as before, anxiety provides a significant boost to such seeking when the information at the respondent's fingertips is potentially useful for dealing with that emotion. Anger, once again, does not interact with information utility. Figure 3 shows the probability shifts corresponding to these results for selective exposure.

In Figure 3, the same effects as with balanced information seeking emerge. Anger and enthusiasm produce roughly the same pattern of information seeking regardless of the utility of balanced information. On the other hand, the impact of anxiety is contingent on information utility. Anxious individuals who are told they will need to defend their candidate choice are over 20 percentage points more

Table 2. The Impact of Emotions and Information Utility on Candidate Issue Knowledge

	Correct Candidate Placement β (s.e.)
Anxiety	.15
	(.44)
Anger	.66
	(.45)
Information Utility	−.41
	(.44)
Anxiety*Info Utility	1.03^
	(.62)
Anger*Info Utility	−.03
	(.63)
Constant	.22
	(1.07)
Adjusted R^2	.18
N	304

^ $p \leq .1$; * $p \leq .05$; ** $p \leq .01$ (two-tailed test). Note: Entries are unstandardized ordinary least squares regression coefficients and the standard errors are in parentheses. The dependent variable is the number of issues on which Bush is placed to the right of Kerry. The baseline condition is enthusiasm. Thus the effect of the negative emotion is the difference between the enthusiasm condition and either the anxiety or anger condition. Controls in these models (not shown here) were age, Internet experience, knowledge, race, and home ownership.

likely to seek out information about the candidate from the opposite party, compared to those in the enthusiasm condition. Those who are not told they will need to defend their preferences are over 10 points less likely to visit the opposing candidate's web site compared to the enthusiasm condition. These findings support our hypothesis about the unique impact of anxiety on selectivity in information seeking.

We also tested whether anxiety and the utility of balanced information would interact to boost substantive knowledge about where the candidates stand on issues. We predicted that when anxious people were told they would need to defend their candidate choices, they would be more likely to learn the issue positions of both candidates. Table 2 displays the results. Here the dependent variable is the number of times (out of nine issues) the respondent placed Bush to the right of Kerry. The first two rows indicate that there is no direct effect of anxiety or anger on candidate issue knowledge when information utility is low (subjects have no reason to learn additional information about the candidates). When balanced information may be useful, however, anxiety boosts issue knowledge by about one correct placement. The mean number of correct placements

in the sample was 5.4 out of nine issues. The interaction between anxiety and information utility is statistically significant. The effect of anger, regardless of the utility of balanced information, does not significantly enhance candidate issue knowledge. This pattern is consistent with our expectations.

Discussion

In this paper we revisited Sears and Freedman's (1967) discussion of the conditions under which motivated selective exposure to political communication might occur. Our efforts are spurred by the importance of the concept of selectivity in the media effects debate since Klapper's (1960) early summary of the field. Given how much has changed in media technology, revisiting the role of selectivity biases seems appropriate. We do not deny that motivated selectivity may be more common today, simply because selective filtering of information is more feasible on the Internet than with other media. Instead of suffering through the point-counterpoint format of the nightly news, citizens can click only on the content they most want to see. Nonetheless, people are not always motivated to ignore voices they disagree with.

We find that anxious citizens are more likely to seek balanced information when such information is useful for dealing with a threat or a problem. In particular, when anxious citizens know they will be engaged in a debate and have to defend their positions, they are much more likely to seek out a balance of viewpoints on both candidates' web pages. When they have no reason to believe such a balanced search is useful, anxiety pushes respondents to view only information from their favorite candidate. We conclude that for those who surf the web in order to develop and defend their views, potentially a significant and growing share of the population, balanced information seeking should be quite common. These individuals are much more likely to seek out opposing views than those who experience anger or enthusiasm.

So how common is it for citizens to experience anxiety as a result of exposure to a campaign? Brader (2006) performed an extensive content analysis of campaign advertising which suggests that threatening ads *attempting* to produce anxiety are quite common. If these are, in fact, successful, and citizens use the Internet to help inform and defend their views, then we might expect that searching for balance is more common than previously feared.

Though our ability to distinguish between the particular effects of anger and anxiety in the selective exposure process is preliminary, we believe these findings expand the scope of the debate about the impact of emotions in politics. The fact that anger, a negative emotion, seems to operate much more like enthusiasm than it does anxiety on the dimension of information selectivity is important. Particular negative emotions may have very distinct political consequences. Anger and moral indignation may arise from different events, or among different people, than do

anxiety or fear. Therefore, more work needs to be done on the unique causes and consequences of these specific emotional states.

How do our findings fit in with the more recent work on emotions and information seeking? Unlike Marcus and his colleagues, we do not find a clear and universally positive effect of anxiety. Anxiety suppresses the likelihood that individuals will expose themselves to counterattitudinal information *unless they believe the information at their disposal will be useful in some way*. This finding is not actually in contradiction to Affective Intelligence theory; it merely suggests that anxiety will only focus attention on counterattitudinal information if that information is relevant for coping with a threat.

On the surface, these results seem consistent with Feldman and Huddy's (2005) findings regarding attention and learning triggered by the 9/11 terrorist attacks. They found that these events boosted attention but reduced learning. This is consistent with the pattern we find here: Those who sought out counterattitudinal information in the immediate wake of the attacks may not have found much useful or accurate information in the environment. If the news coverage of the national identities of the 9/11 terrorists was inadequate or misleading, for example, increased attention to the news would not lead to accurate knowledge.

The Internet represents a radical change in the ways citizens can interact in and with the political world. Scholars have only just begun to explore the impact of these interactions, and as often is the case many of our greatest hopes and fears appear to be exaggerated. One great concern has been that the Internet will usher in an era of information isolation, of islands of opinion, permanently separated by the motivation to avoid other points of view. This world is a scary one indeed, especially to those who champion deliberation in the public sphere as the mainstay of a fully functioning democracy. Our results, however, should provide some optimism. There seem to be circumstances, perhaps quite common, under which citizens will seek out and confront voices opposed to their own.

Appendix

To check the validity of our manipulation we examined emotions expressed in the open-ended responses to each condition. The *intensity of emotion* expressed in open-ended responses was double coded by two graduate student assistants who were unaware of which condition each respondent was in. Coders read each response to the emotion induction and assessed the degree of enthusiasm, fear, or anger expressed. The values assigned were 0 (None), 1 (Some), and 2 (Extreme). The assigned values were then tested for intercoder reliability, and all met or exceeded standard levels of acceptability (>.75).

The results of our test are displayed in Table A1. Each column represents a separate regression equation where the degree of emotion expressed is regressed on dummy variables for each treatment condition. Each manipulation performed in the expected manner. Subjects expressed the intended emotion most strongly

Table A1. Emotional Intensity in Open Ended Responses to Manipulation

	Intensity of **Anger** Expressed β (s.e.)	Intensity of **Anxiety** Expressed β (s.e.)	Intensity of **Enthusiasm** Expressed β (s.e.)
Anger Condition	**1.69*** **	.13**	−.10
	(.09)	(.06)	(.09)
Anxiety Condition	.61***	**1.64*** **	.00
	(.08)	(.06)	(.09)
Enthusiasm Condition	.28***	.01	**1.29*** **
	(.09)	(.06)	(.09)
Constant	.02	.01	0.11
	(.06)	(.04)	(.07)
N	401	401	401

* $p \leq .1$ (two-tailed test) ** $p \leq .05$ (two-tailed test) *** $p \leq .001$ (two-tailed test).
Note: Entries are unstandardized OLS regression coefficients and the standard errors are in parentheses. The dependent variable, degree of emotion expressed in the open-ended responses, was coded as a scale that runs from 0 (No emotion) to 2 (Extreme emotion).

(Anger, 1.69, $p < .001$; Anxiety, 1.64, $p < .001$; Enthusiasm, 1.29, $p < .001$). The manipulation, however, was not perfect. The first column displays the degree of anger expressed in each condition. Regardless of condition, at least some anger was identified. Anxiety (second column) was also slightly elevated in the anger condition (.13, $p < .05$), but not in the enthusiasm condition. Enthusiasm was only expressed in the enthusiasm condition. Despite these minor deviations, the emotional content of responses corresponds very closely to that which was intended.

Why might anger have appeared in the anxiety and enthusiasm conditions? One might speculate that 2004 was a particularly "angry" election. Since we asked

respondents to focus on this election, they might simply have been expressing this election-specific sentiment. It is unclear, however, whether this effect would be limited to 2004. The emotional content of *all* thoughts about politics may typically contain at least a small degree of anger.

We examined word count to determine how much people said about events that made them angry, afraid, or enthusiastic. In Figure A2 respondents have more to say when asked what makes them angry or anxious about politics than about what makes them enthusiastic. Our manipulation produced the intended emotions, but each may not have been experienced with the same intensity. Enthusiasm may have been experienced less intensely than either anger or anxiety. It is possible that enthusiasm is less common in reaction to politics.

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