Anxiety, Immigration, and the Search for Information

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In this article, we use the issue of immigration to explore the role of anxiety in responses to political appeals. According to previous literature, anxiety motivates citizens to learn and pay more attention to news coverage. Literature in psychology demonstrates that anxiety is associated with a tendency to pay closer attention to threatening information. We predict that anxious citizens will seek more information but that they will seek out and be attracted to threatening information. In an experiment, we induce anxiety about immigration and then subjects have the opportunity to search for additional information in a website designed to mimic online news sources. The website has both immigration and nonimmigration stories, and the immigration stories are split between threatening coverage and nonthreatening coverage. We find that anxious subjects exhibit biased information processing; they read, remember, and agree with threatening information.

KEY WORDS: emotion, immigration, experiment

> *The ability of the press to present us with bad news, with news meant to disquiet us, though unpleasant . . . serves us well.*—George Marcus (*The Sentimental Citizen*, 2002)

> *Fear is the most powerful enemy of reason*—Al Gore (*The Assault on Reason*, 2007)

Anxiety is neither an enemy of learning and reason nor is it the panacea to cure the ills of democracy. Anxiety serves to motivate learning by increasing interest, the desire for information, and information gathering itself (Brader, 2005, 2006; Gross, 2009; Marcus & MacKuen, 1993; Marcus, Neuman, & MacKuen, 2000).[1] In a public where the average person has little factual knowledge about politics (Delli Carpini & Keeter, 1996), political appeals that increase individuals' anxiety can increase political knowledge and help people come closer to the democratic ideal of engaged citizens. Previous research finds that anxiety motivates citizens to learn about politics, but the act of simply gathering more information may not necessarily create better democratic citizens. We know very little about the kind of information that anxious citizens pay attention to or how they engage with political information. If anxious citizens seek more information but demonstrate biases in information processing, then the consequences of anxiety for citizen learning are more complex than

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[1] We rely on Eysenck's (1992) definition of anxiety as an "unpleasant and aversive state" with the purpose of detecting threat and danger in the environment.

suggested by political commentators and previous work on emotion and politics. In this article, we examine the consequences of anxiety for information processing. We argue that anxious citizens are motivated to seek political information but are attracted to threatening news.

In the realm of politics, some issues may be inherently threatening while others may be made threatening by strategic campaigns. Politicians, political pundits, and some political thinkers regularly sound alarm bells about the dire effects of immigration on the economic health and cultural fabric of the United States (Borjas, 1999; Huntington, 2004). To test the consequences of anxiety on political learning, we use the issue of immigration. The American public is torn on immigration policy, but a significant portion of the public believes that immigrants, particularly undocumented immigrants, burden the country's economy and social system (Pew Research Center for the People and the Press, 2006) and worry about the consequences of immigration.

Anxiety and Information Processing

Emotions are "multifaceted, whole-body phenomena" that occur when individuals evaluate a situation as relevant to their goals and involve changes in perceptions, behavior, and physiology (Gross & Thompson, 2009, p. 5). Drawing on functionalist approaches to emotion (Frijda, 1988), we use the idea that emotions serve to coordinate responses to circumstances that individuals confront and that their effects often persist past the original emotion-evoking event. Here, we are primarily concerned with how anxiety influences a particular political behavior—information processing. Anxiety occurs when individuals appraise a situation as being unpleasant, highly threatening, and uncertain (Lerner & Keltner, 2000, 2001; Roseman & Evdokas, 2004). Anxiety motivates individuals to avoid danger and create a safer environment in order to seek protection from threatening events and groups (Jarymowicz & Bar-Tal, 2006; Nabi, 1999; Roseman & Evdokas, 2004).

The contemporary political debate over undocumented immigration in the United States is infused with threats—the threat that "illegals" pose to Americans' economic well-being, their security, and their way of life are all evident in campaign advertisements and candidate speeches. According to intergroup emotions research, people react to groups with discrete emotions, such as anxiety and anger (Mackie, Devos, & Smith, 2000). Cottrell and Neuberg (2005) find that anxiety is a likely emotional response to groups that threaten physical safety and, to a lesser extent, economic resources, suggesting that anxiety is a likely an emotional response to immigrants in the United States, given the political climate.[2]

Individuals do not merely passively experience emotions, though; they also try to regulate those emotions, by increasing pleasant emotions and decreasing unpleasant ones like anxiety (Gross, 2009; Gross & Thompson, 2009). As a way of regulating emotion, individuals may seek information that they expect will help resolve the uncertainty underlying anxiety and thus dissipate the unpleasant emotion. One technique for regulating emotions is through attentional deployment, a regulatory process learned early in life that includes distraction as well as concentration (Gross & Thompson, 2009).

Previous scholarship on anxiety and politics demonstrates that political threats encourage citizens to utilize just this kind of attention deployment. Anxious citizens are more likely to engage with and learn more about politics by seeking information (Brader, Valentino, & Suhay, 2008; Kubey & Peluso, 1990; Valentino, Hutchings, Banks, & Davis, 2008). Crises like terrorist attacks and pandemics send people toward their television and computer screens to find information (Althaus, 2002; Bar-Ilan & Echerman, 2005; Boyle et al., 2004; Ginsberg et al., 2008) as do potentially significant policy changes (Pantoja & Segura, 2003). Marcus, Neuman, and MacKuen's (2000)

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[2] Though their study does not include "immigrants" as a target group, they find high levels of anxiety towards Mexican Americans.

theory of Affective Intelligence (AI) offers an explanation for this increased engagement. AI theory posits that two emotional systems, the dispositional and the surveillance systems, help citizens to navigate the political environment (Marcus et al., 2000; Marcus & MacKuen, 1993). When the disposition system senses a threat in the environment, it signals that the citizens should pay closer attention and gather more information in order to counter the threat. A major implication of the AI theory is that citizens mainly rely on their political habits to guide new decisions unless they are made anxious about candidates or issues. Once anxious, citizens will be more motivated to learn, pay attention to news coverage, and will base political decisions more heavily on contemporary information rather than partisanship.

Experimental work demonstrates that anxiety does stimulate citizens to search for information relevant to the threat, and this information seeking is not simply opinion confirming. Brader's study of campaign advertising (2005, 2006) shows that fear appeals steer citizens' attention toward information relevant to the threat. Exposure to campaign-fear appeals increased respondents' desire for information relevant to the issues covered in the ad. Redlawsk, Civinetti, and Lau (2007) find that voters search for additional information about candidates who make them anxious, even if they are otherwise positively evaluated. MacKuen, Wolak, Keele, and Marcus (2010) examined how varying news presentations affected emotional reactions and learning. Anxious experimental subjects were more willing than subjects in the control condition to learn about the policy changes and were more willing to learn from opponents of their policy preferences. Valentino, Banks, Hutchings, and Davis (2009) demonstrates that citizens made worried about the 2004 presidential campaign sought out useful information on the Internet. When anxious respondents knew they needed to defend their candidate choice, they sought balanced political information but absent that motivation, their information search was one-sided. We expect that under conditions of anxiety, attention deployment may lead to a concentration on threatening information, since this information may prove more useful in avoiding future harm (and thus reducing anxiety) than positive information (Lau, 1982).

We argue that even in a world with a poorly informed citizenry, more political information may not always lead to better democratic outcomes. A large body of literature on public opinion demonstrates that levels of political knowledge are quite low and that motivation and interest are key factors in explaining political knowledge (Delli Carpini & Keeter, 1996). Marcus et al. (2000) and Marcus (2002) argue that anxious citizens are closer to the democratic ideal of motivated and interested citizens who gather new information in order to make political decisions. While anxiety increases the desire to learn more, its effect on actual learning and information processing might not be necessarily positive. There are three circumstances under which information seeking may not be a normatively good end in and of itself. First, citizens may seek out information but not retain it or not be open to it. Feldman and Huddy (2005) found that after 9/11, individuals most anxious about terrorism claimed to be most attentive to politics but actually retained less factual information than nonanxious individuals. Civettini and Redlawsk (2009) found that anxiety also increases voters' recall of campaign information, although it does not enhance correct recall, suggesting that information seeking does not necessarily lead to learning when anxiety is high. Anxiety may also reduce openness to new ideas through cognitive freezing and a resistance to change (Jost, Glaser, Kruglanski, & Sulloway, 2003). Alternatively, if anxious people only expose themselves to views that conform to their previously held attitudes *or* if citizens pay the closest attention to threatening, anxiety-enforcing information, then anxiety-driven learning might not create better citizens. People do not have the luxury of infinite attention—we might direct our limited attention towards one area of a policy debate and that focus is politically consequential (Jones, 1994). As Jones writes, "in mass politics, preferences change glacially but focus changes rapidly" (p. 29). We argue that anxiety shifts focus toward threatening information, and whether or not this information will lead to good decision making is an open question.

Our research takes up the third possibility—that anxiety may lead citizens toward threatening news. We argue that the desire to regulate the unpleasant emotion of anxiety, coupled with the

vigilance toward threat that accompanies anxiety, will increase citizens' motivation to seek information but will lead them toward news that is threatening. Anxiety increases individuals' sensitivity to risk (Fischhoff, Gonzalez, Small, & Lerner, 2003; Huddy, Feldman, & Cassese, 2007; Lerner & Keltner, 2000, 2001; Renshon & Lerner, 2010; Skitka, Bauman, & Mullen, 2004), and we suggest that this results in increased attention to threatening information. In societies with high threat, individuals may become oversensitive to danger signals and exist in a readiness state to defend themselves (Bar-Tal, Halperin, & De Rivera, 2007; Halperin, Canetti-Nisim, & Hirsch-Hoefler, 2009). We argue that this hypervigilance to risk may occur even when threats are less existential than in high-threat societies and when anxiety is induced situationally.

Literature in cognitive psychology demonstrates that high stress and anxiety are associated with biased information processing—a tendency to pay closer attention to threatening information (Eysenck, 1992; Mathews, 1990; Mogg, Mathews, Bird, & Macgregor-Morris, 1990; Pratto & John, 1991; Yiend & Mathews, 2001). Cognitive theories of anxiety emphasize the role of anxiety in the selective processing of information. Anxiety heightens attention to threat and prioritizes the processing of threat cues (Mathews, 1990).

The same vigilance to threatening information is found among individuals who are naturally prone to anxiety (i.e., high in trait anxiety) as well as individuals made anxious by extant circumstances (i.e., high-state anxiety) (Spielberger, Gorsuch, & Lushene, 1984). Clinically anxious individuals are slower than nonanxious individuals in performing a task when simultaneously listening to threatening words (Mathews & MacLeod, 1986), even though none of the participants could identify the threatening words. Individuals high in trait anxiety are also more likely to perceive a threatening meaning in ambiguous stimuli (Wood, Mathews, & Dalgleish, 2001). Using a nonclinical sample, Mogg et al. (1990) found that high stress was associated with the bias toward threat, regardless of whether subjects were prone to anxiety. In subsequent work, Mogg and Bradley (2002) showed that as the threatening value of stimuli increases, all individuals tend to pay closer attention to it, regardless of trait anxiety.

We expect that citizens not only seek and remember information but that they also engage with the news that they gather. Little previous literature considers what happens after anxious individuals find information: are they likely to agree with the information they find, or do they poke holes in it? Indirect evidence from the literature on threat and tolerance suggests that citizens made anxious about immigration will be more likely to agree with information that portrays immigration as a threat. Jost et al. (2003) argue that a motivation to manage uncertainty and anxiety underlies citizens' endorsement of conservative ideologies. They point out immigration as a policy area that is often portrayed as "frightening, confusing, and potentially threatening to the status quo" (Jost et al., 2003, p. 351). Kuklinski, Riggle, Ottati, Schwarz, and Wyer (1991) found that when asked to focus on their feelings about a variety of social groups, individuals focused on the potential negative consequences of granting civil liberties and subsequently decreased their support for civil liberties like freedom of speech, particularly when the group they considered was disliked. While these studies do not directly address the link between anxiety and engagement, we propose that agreement with threatening information is a plausible link between anxiety and anti-immigration attitudes. More directly related to our study, Brader et al. (2008) find that subjects made anxious about the costs of immigration are likely to request immigration information from anti-immigration groups. While this research is highly suggestive, it's unclear if subjects would actually read the information they requested, and if they did, what they would think about it. Our study allows us to trace each step in information processing.

Hypotheses

Based on the literature on emotions and information processing, we derive three hypotheses about the effect of anxiety on information processing that we test using an experiment. We predict

that *manipulating anxiety about immigration will lead citizens to seek out information* and that anxious individuals will seek more information than individuals in the control condition. We predict that *manipulating anxiety about immigration will lead to biased information processing*, where anxious individuals may seek threatening information or pay the closest attention to threatening information. Additionally, we predict that *anxious individuals will be likely to evaluate threatening immigration stories more positively than nonthreatening immigration stories.*

Biased information processing may occur either because anxious citizens selectively expose themselves to more threatening information than those with less anxiety or through a process of selective attention whereby anxious people pay closest attention to and recall a higher proportion of threatening information (Vallone, Ross, & Lepper, 1985). In order to test the hypotheses above, our experiment measures both information exposure and recall, which allows us to empirically demonstrate whether anxious citizens read more threatening news about immigration than less anxious citizens and whether anxious citizens are more likely to remember threatening information. To test our last hypothesis, we examine the consequences of anxiety on how individuals evaluate information by asking if people agree or disagree with the stories they read.

Methodology: How to Measure Information Seeking

One of the innovations of our study is to track not only if anxious individuals seek information but what they seek and read. With the exception of Valentino et al. (2009, 2008), MacKuen et al. (2010), and Redlawsk et al. (2007), most previous studies of anxiety's effect on information seeking rely on self-reports of how interested respondents are in learning more about the issues presented in an experiment. Self-reports are not always reliable reflections of behavior and tend to overestimate media exposure by large magnitudes (Prior, 2009; Zaller, 2002). Even if subjects reported an interest in learning in an experimental environment, it is unclear whether they would actually research these issues on their own. Marcus et al. (2000) utilize a clear measure of behavior—the number of days a week respondents read a newspaper and magazine about the campaign and demonstrate that anxiety is associated with an increase in newspaper and magazine reading. However, this measure does not reveal *what* citizens were reading.

Rather than relying on self-reported intentions to gather information, our experiment simulates an information environment in order to monitor actual information consumption (Lau & Redlawsk, 2001; Mintz, 2004; Mintz, Geva, Redd, & Carnes, 1997). In the controlled political "world," subjects can choose what type of information they are interested in and spend as much or as little time with each piece of information as they choose, and behavioral measures can be collected unobtrusively. The main advantage of this design is that the researcher does not need to make assumptions about the type or content of information that subjects read. Mintz and colleagues (1997) utilized a similar dynamic information environment to explore how military leaders acquire information and make foreign policy decisions. Valentino and colleagues (2009, 2008) utilized this type of design to test the effects of anxiety, anger, and enthusiasm on information-seeking behavior in a campaign. Subjects were given an opportunity to visit a closed web domain modeled after the presidential candidates' websites.[3] Yet even with this design, the question still remains what citizens are most attracted to when their choice includes more explicitly emotive information. Subjects in these studies could learn about the biographies and issue positions of the presidential candidates, but one could imagine in the political world that anxiety might push citizens to seek solace from more affectively charged sources such as interest group websites or sensationalistic news coverage, thus reinforcing anxiety. These dynamic environments

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[3] Our information search design is also similar to MacKuen et al.'s (2010) set-up although our emotional induction task is more targeted than the newspaper story that they employ.

are a significant methodological advance over self-reports, and our design pushes further by providing a more affective information environment that has both policy relevant and less relevant stories. In the experiment described in more detail below, subjects had unlimited time to search a website of newspaper stories that were either obviously nonthreatening about immigration, obviously threatening, or unrelated to immigration policy.

Research Design

Respondents were randomly assigned to either a treatment condition that induced anxiety over immigration or a control condition. Respondents came from Knowledge Networks' (KN) panel of respondents with web access. The 384 subjects in our sample are a sample drawn from KN's panel members who access the Internet through a computer. Because of the large amount of text used within the study and the limitations of screen size and legibility of text on WebTV, those KN participants whose only access to the Internet is through WebTV were excluded from the sample frame for this study.[4] For the study, 624 panel respondents were contacted via email, and 384 completed the study over two weeks in April 2008, for a completion rate of 61.5%. Forty-one percent of respondents held a college degree or higher, 53% were female, and the average age was 46 years old. Forty-four percent of respondents identified as Republicans, 48% as Democrats, and 7% as Independents. In addition, 82% of the sample identified as white, 5% as African American, 7% as Latino, and 6% as "other" or multiracial. A randomization check showed that the conditions were balanced on age, race, gender, region, education, partisanship, and ideology.[5] Using a logit model to predict whether a respondent was assigned the treatment condition, we found no significant effects for partisanship ($p < .99$), ideology ($p < .32$), age ($p < .64$), whether a respondent was white ($p < .87$), female ($p < .88$), whether the respondent was the head of household ($p < .38$), region of residence ($p < .60$), or level of education ($p < .13$).

We utilize a bottom-up anxiety induction to stimulate anxiety in respondents in the treatment condition. Generally, in this type of manipulation, respondents in the treatment condition are asked to focus on an object, person, or policy area that causes them to feel a distinct emotion, in this case, anxiety. In our study, we asked respondents to focus on what made them worried about immigration. We modeled this manipulation on those used by social psychologists (Fischhoff et al., 2003; Isbell & Ottati, 2002; Lerner & Keltner, 2001; Ottati, 1997; Roseman, Spindel, & Jose, 1990; Smith & Ellsworth, 1985) as well as political scientists (Valentino et al., 2009; Valentino et al., 2008) who found that by asking respondents to go through an exercise of listing their worries that individuals experienced and reported increased anxiety. One advantage of this method is that emotion generation using language increases self-reported negative affect as well as amygdala activation more consistently than do methods that include visual stimulation (McRae, Misra, Prassad, Pereira, & Gross, 2011). An additional advantage of this manipulation is that we do not need to assume what dimension of the policy issue makes people anxious, which is particularly important with multidimensional issues such as immigration because there are individual differences in what evokes emotion (Kahan, Braman, Cohen, Gastil, & Slovic, 2010). Because respondents focus on whatever aspects of the policy worry them, in the case of immigration, we do not need to assume that economic issues or language issues will make all respondents anxious about immigration, rather, we allow each respondent to generate their own anxieties.

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[4] We excluded WebTV respondents from the sample frame because we believed that the experience of selecting and reading newspaper articles on a television screen was sufficiently different from reading newspaper articles on a computer screen, and we did not want the mode differences to affect the results. One of the advantages of an internet-based platform for our study is that this is the way many people gather their news—the computer screen offered a realistic test of information seeking.

[5] Please see Table A1 in the appendix for the demographic break-down of each condition.

In order to evoke anxiety about immigration, respondents in the treatment condition read the prompt, "Now, we'd like you to take a moment to think about the debate over immigration in the United States. When you think about immigration what makes you worried? Please list everything that comes to mind." In the control condition, respondents were asked to simply list everything that came to mind when they thought about immigration with the prompt "First, we'd like you to take a moment to think about the debate over immigration in the United States. When you think about immigration, what do you think of?"

Respondents had unlimited time to complete the thought listing and were provided a text box to type as much as they wished. Responses in the control condition ranged from simple phrases such as "illegal" and "social security" to paragraph long explanations of the differences between illegal and legal immigration. Several respondents told their own immigration stories or those of family members. Although the control prompt did not mention worry, some respondents mentioned why they thought that immigration was problematic or spontaneously mentioned their concerns, such as illegal immigrants driving down wages or taking jobs from Americans. The amount of worry about immigration that occurred in the control group without prompting suggests that the baseline level of anxiety about immigration is relatively high in the American public. This makes our experimental design a hard test of the hypotheses and should make showing the expected effects in the treatment condition more difficult.

Within the treatment condition, worries about immigration focused almost exclusively on illegal immigration, although our prompt did not separate legal and illegal immigration. Worries fell into four major categories: (1) economic concerns, (2) concerns about exploitation of the social welfare system, (3) culture worries such as the loss of English as a dominant language, and (4) security concerns that included both crime and terrorism. Respondents were also likely to mention particular immigrant groups such as Mexican immigrants in elaborating their worries. Several respondents also mentioned worries about immigrants themselves—worries about immigrant families or discrimination against immigrants. Worries over the costs of immigration, though, far outweighed worries over the treatment of immigrants.

Manipulation Checks

One concern about an emotion manipulation that asks people to focus on a particular object or policy is that the act of generating worries only affects respondents by priming considerations rather than through increasing emotions. To establish that this bottom-up manipulation did effectively increase anxiety without simply changing beliefs, we use several different manipulation checks— both within the main study itself and with separate convenience samples.

First, we had three research assistants unaware of our hypotheses code how many unique worries about immigration each respondent listed in the open-ended prompt in the Knowledge Networks sample.[6] We expect that the act of listing worries will make respondents feel more anxious about immigration and list more immigration worries than respondents in the control condition. The number of worries listed ranged from 0 to 8, with an average of 1.56 worries and a standard deviation of 1.49 worries. On average, respondents in the control condition mentioned 1.18 worries with a standard deviation of 1.36 compared to 1.95 worries in the treatment condition with a standard deviation of 1.52 ($t = 5.24$, $p < .01$). It is important to note that these worries do not simply reflect respondents' predispositions toward immigration policy. The only significant predictor of the

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[6] Two research assistants coded all respondents and the third coded a subset of respondents. Coders were in agreement 63% of the time on the number of worries in the treatment condition, compared to 17% expected by chance [Cohen's kappa for all respondents = .48(se = .03)].

number of worries mentioned is whether a respondent was assigned to the treatment condition. The demographic and political characteristics correlated with immigration attitudes (race, gender, education, region of the country, partisanship, and ideology) do not predict the number of worries subjects mention.[7]

We also had two separate research assistants unaware of our hypotheses code the degree of anxiety, anger, and excitement in the responses elicited in the Knowledge Networks sample. Answers were coded as 0 (none), 1 (some), or 2 (extreme).[8] Coders showed a great deal of agreement for both anxiety (70% agreement, Cohen's kappa = .53, z = 15.01, $p < .01$) and anger (78% agreement, kappa = .52, z = 13.05, $p < .01$), so we averaged across the codes to create one anger score and one anxiety score for each respondent. On average, respondents in the control condition had an anger score of .29 (standard deviation = .49) and an anxiety score of .48 (standard deviation = .58). Consistent with other work on immigration (Groenendyk, Brader, & Valentino, 2011), the treatment condition increased both anxiety and anger. The average level of anger in the treatment condition was .42 (t = 2.42, $p < .02$), while the average level of anxiety in the treatment condition increased by more than twofold to 1.02 (t = 8.57, $p < .01$). While the treatment condition did raise some anger in addition to targeted emotion of anxiety, average levels of anxiety are more than twice those of anger and the treatment condition increased anxiety significantly more than it did anger ($X^2 = 21.24$, $p < .01$).

We also ran manipulation checks with two separate convenience samples. In the first, we followed the manipulation with a battery of emotion questions. We found that subjects in the treatment condition self-reported higher levels of anxiety than subjects in the control condition but showed no differences in terms of anger or enthusiasm. With the second convenience sample, we followed the manipulation with six questions that tapped beliefs about undocumented immigrants. Our concern was that the manipulation might prime anti-immigrant beliefs in addition to inducing anxiety. The treatment condition did not significantly alter beliefs about immigrant on any of the six measures, which lends to our interpretation that the manipulation triggered anxiety without changing beliefs. (Please see the appendix for full study details.) Taken together, these manipulation checks provide evidence that the bottom-up manipulation fulfills the requirements for internally valid anxiety manipulation. The bottom-up manipulation increases respondents' anxiety, measured by self-reports, through a count of the number of worries listed, and through coders' evaluations of emotion, without changing beliefs.

Information Processing

After the manipulation, the Knowledge Networks respondents were invited to read news stories and informed that they would answer questions about the stories later in the survey. Each respondent was presented with a story set consisting of six randomly ordered headlines linked to full articles—four of which were about immigration and two of which were on unrelated topics (Table 1). Of the immigration stories, two stories focused on the benefits of immigration and how immigrants enrich the United States. The other two immigration stories reflected the more typical threatening and negative framing of immigration that dominates news coverage (Simon & Alexander, 1993)—

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[7] We modeled the number of worries mentioned by respondents as a function of gender ($p < .45$), the highest level of schooling completed ($p < .15$), region of the country ($p < .19$), partisanship ($p < .25$), ideology ($p < .26$), and treatment condition using OLS. The only significant predictor of worries was whether a respondent was in the treatment condition ($b_{treatment} = .75$, $se_{treatment} = .15$, $p < .01$).

[8] To differentiate between anxiety and anger, the coders were told to code responses in which the respondent appears to directly blame immigrants for negative consequences for America as anger. Responses that showed concern about negative consequences without blame attribution were coded as anxiety.

Table 1. Information Search Stories

Immigration Stories: Threatening	Gangs in the United States: How Illegal Immigrants Complicate Law Enforcement
	Why Unskilled Immigrants Hurt America
Immigration Stories: Nonthreatening	Immigrants to Be Proud of
	A Story of Two Immigrants
Non-Immigration Stories	One in Five Children Will Become Obese
	Mysterious Stone Slab Bears Ancient Writing

immigrants take resources and jobs from Americans and contribute to crime in large cities.[9] The headlines make clear both the subject and the tone of the stories. Subjects also had the ability to opt out of reading anything about immigration—respondents could choose to ignore all of the stories and proceed to the second part of the survey or read one of the two unrelated stories on childhood obesity or an ancient language.[10] All of the stories were uniform in length, and the story headlines appeared in random order on respondents' screens. This limited but competitive information environment allowed subjects to exercise a multitude of choices in seeking news. On average, respondents read 2.9 stories out of the six offered, and while 14% of respondents chose to read none of the stories, 23% read all six of the stories.

We examine biases in information processing in three ways. The first is information seeking: when subjects are made anxious about immigration, are they more likely to look at immigration stories that portray immigration as a threat? We test our information-seeking hypothesis through tracking information-seeking behavior—both by the number of stories read and the time spent on stories. The next opportunity for bias in information processing is attention. Perhaps threatened subjects are no more or less likely to look at threatening information, but when they do, they are prompted to pay closer attention. We measure attention through recall: what information do subjects say that they remember?

We also examine how subjects evaluate immigration news. Respondents were asked to evaluate the stories that they chose to read in an open-ended way, and their answers were coded for whether respondents agreed or disagreed with the content of the stories they read. The effect of anxiety on information seeking has been well documented, but we do not know what anxious people think about the new information they read. The engagement measures allow us examine differences in the way that subjects evaluated stories about immigration.

Information Seeking

Participants were given the opportunity to read any or all of the six stories. Subjects in the control condition read an average of 2.89 stories while subjects in the treatment condition read an average of 2.67 stories (n.s.). At first glance, it does not appear that anxiety triggered information seeking. However, the experiment specifically triggered anxiety related to immigration, and a more appropriate test is whether anxiety about immigration caused subjects to seek out more information about immigration. In order to test this idea, we compared the proportion of the stories each subject

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[9] One could imagine also including threatening stories that focused on threats to immigrants themselves (e.g., exploitation, the possibility of deportation) that would be more in line with less restrictive immigration policy. We chose to include these threatening stories that are more consistent with calls for more restrictive immigration policy because they are the most frequent types of frames utilized by political elites in the immigration debate and create an external validity to our information environment. Hayes (2011) finds that in the 2007 immigration reform debate, frames that focused on immigration in terms of law enforcement (crime), national security, and the burden on tax-payers make up 46% of all frames used on television news whereas frames focusing on humane treatment of workers and the disruption to families made up roughly 7% of frames and were more likely to be utilized by pro-immigrant interest groups rather than by political leaders.

[10] Before selecting the news stories, we had 21 outside raters rate a variety of story titles on how interesting and threatening they seemed. We chose these story titles because the raters rated them as equally interesting but with varying levels of threat.
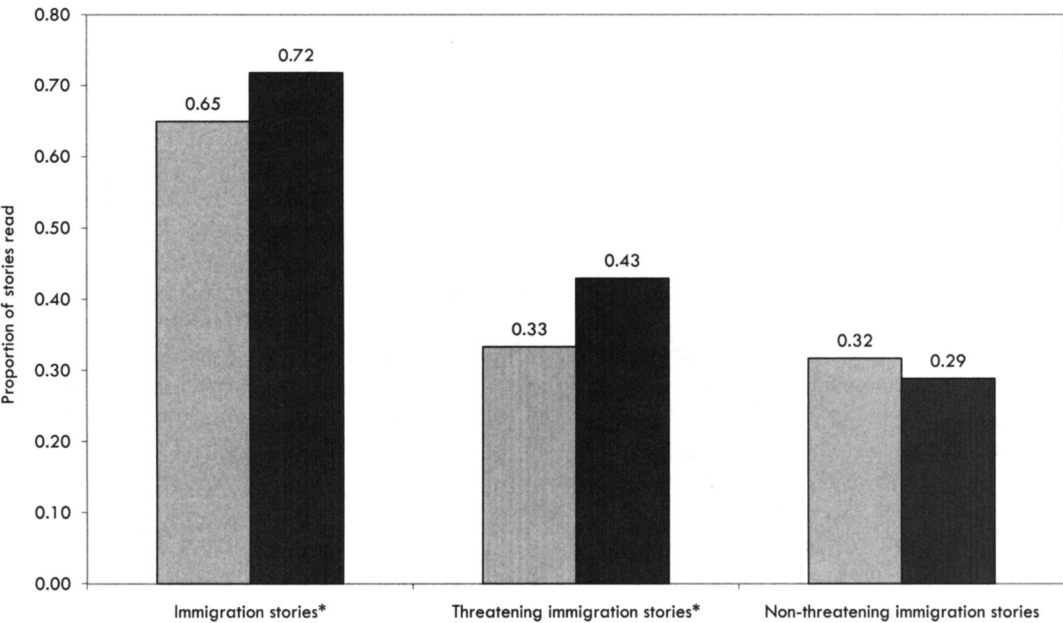
Figure 1. Effect of anxiety on types of stories read.

read that were about immigration out of all stories (Figure 1). On average, respondents in the treatment condition read a greater proportion of immigration stories than respondents in the control condition. Out of all stories read by control condition subjects, on average, 65% of those stories were about immigration, while treatment-condition respondents averaged 72% of their searching on immigration stories (F(1, 327) = 4.58, p = .033[11]).[12] This finding is consistent with previous literature that anxiety increased the seeking of relevant information. Anxiety triggered exposure to information about immigration, but our study allows us to break immigration stories by whether they were threatening or nonthreatening.

So far, our findings are in line with previous work: people who are anxious seek out more information about the source of their anxiety. However, these subjects were presented with an emotionally charged information environment that allows us to see if anxious subjects were driven to seek out a particular kind of information about immigration. We find that the increase in information consumption about immigration was entirely driven by exposure to threatening stories (Table II). For treatment condition subjects, threatening immigration stories represented 42% of all the stories they looked at, while threatening immigration stories represent just 33% of the stories that control condition subjects looked at (F(1, 327) = 7.77, p = .006). Treatment condition subjects are equally likely to look at nonthreatening stories about immigration as control condition subjects (29% vs. 32%, F(1, 327) = 0.79, p = .375). We replicated this analysis with the amount of time spent on immigration stories measured in seconds and get largely similar results. Treatment condition respondents spend 28% of their total time on threatening immigration stories compared with control condition respondents who spent 23% of their time on threatening immigration stories (based on between subjects analysis of variance (F(1, 279) = 4.02, p = .046). The differences in time spent on nonthreatening information is again statistically insignificant (18% for the treatment condition vs.

[11] Subjects choosing stories randomly would have chosen 67% immigration stories, so it appears that thinking about immigration did not, by itself, increase the probability of choosing an immigration story to read.
[12] Significance testing is based on ANOVAs, and full results are presented in the appendix.

Table 2. Interaction of Nonthreatening and Threatening Stories

	Nonthreatening Proportion Mean (se)	Threatening Proportion Mean (se)	Difference (Threatening-Nonthreatening)	Difference in Difference (Threat–Control)	t-value p-value
Control (n = 170)	.32	.33	.01		1.13
	(.02)	(.02)	(.04)		(0.13)
Treatment (n = 157)	.29	.43	.13		3.20
	(.02)	(.02)	(.04)		(0.01)
Difference in Bias				.09	1.58
				(.06)	(.06)

Source: Knowledge Networks Immigration Study, 2008.
Note. Means comparisons are based on two tailed t-tests. The dependent variables are the proportion of all stories read that were nonthreatening about immigration and the proportion of all stories read that were threatening about immigration.

21% for the condition, $F(1, 279) = 1.32, p = .252$). Subjects in the treatment condition spent more of their time reading threatening stories about immigration, in addition to simply clicking on a greater proportion of negative stories.

Anxiety about immigration led people to read more about immigration, but we find that they focused on threatening stories.[13] Table 2 demonstrates that the bias toward threatening news in the treatment condition was significantly larger than the bias in the control condition. Respondents in the treatment condition spent a significantly higher proportion of their total reading on threatening stories compared to nonthreatening stories, and this difference in the bias toward threatening news is significantly larger than the bias in the control condition ($t = 1.58, p < .06$). We also looked at the bias toward threatening information compared to irrelevant stories (not shown here) and found that the bias toward threatening information (compared to irrelevant) was significantly larger in the treatment condition than the control condition ($t = 2.17, p < .02$). This further suggests that the effect of immigration anxiety was to focus information seeking on threatening news rather than increase information searching more broadly.

We attribute the difference in exposure to threatening information between the treatment and control conditions to different levels of anxiety generated by the worries-listing exercise. In order to test this causal mechanism directly, we use a mediation model that accounts for the level of anxiety each respondent expressed. As a robustness check, we use two different measures of immigration anxiety in these models—the number of worries listed by respondents and their level of anxiety. As a reminder, the number of worries range from 0 to 8 while the level of anxiety is coded from 0 (none) to 2 (extreme). We also include respondents' level of anger in the mediation models and check that the treatment condition influences information seeking through anxiety rather than through anger. By using these measures, we can test whether anxiety is mediating the relationship between the experimental manipulation and the bias towards threatening information.

Table 3 demonstrates that the treatment condition led respondents to threatening stories by increasing immigration anxiety. Using the causal mediation approach advocated by Imai, Keele, and Tingley (2010) and Imai, Keele, Tingley, and Yamamoto (2011), Table 3 shows the effect of being in the treatment condition and immigration worries on three measures of information seeking: (1) the

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[13] We also conducted a 2x2 repeated measures ANOVA to test the proposition that respondents spent a larger proportion of their total reading on threatening immigration stories relative to the other stories (nonthreatening immigration stories and irrelevant stories) when anxiety was elicited but not in the control condition. The factors were condition (control, treatment) by valence (threatening stories, nonnegative stories (positive and irrelevant stories)) and the analysis revealed a significant interaction for condition x valence, $F(1, 382) = 4.04, p = .045$). The main effect for valence ($F(1, 382) = 157.72, p < .001$) was significant and the main effect for condition was not ($F(1, 382) = .38, p = .537$).

Table 3. Immigration Anxiety Increases Exposure to Threatening Immigration News

Proportion of Stories Read

	All Immigration Stories	Threatening Immigration Stories	Nonthreatening Immigration Stories	All Immigration Stories	Threatening Immigration Stories	Nonthreatening Immigration Stories
Treatment Condition	−0.01	0.03	−0.04	−0.04	0.01	−0.04
	(0.04)	(0.04)	(0.04)	(0.05)	(0.03)	(0.04)
Number of Worries	**0.06**	**0.04**	0.01			
	(0.01)	(0.01)	(0.06)			
Anxiety				**0.11**	**0.09**	0.02
				(0.03)	(0.03)	(0.02)
Anger				**0.10**	**0.10**	0.00
				(0.03)	(0.04)	(0.03)
PID	−0.12	−0.11	−0.01	−0.11	−0.10	−0.01
	(0.08)	(0.07)	(0.06)	(0.08)	(0.07)	(0.06)
Ideology	0.06	0.08	−0.02	0.02	0.04	−0.02
	(0.12)	(0.10)	(0.10)	(0.13)	(0.11)	(0.10)
White	0.01	0.03	−0.02	0.02	0.04	−0.02
	(0.06)	(0.05)	(0.05)	(0.06)	(0.05)	(0.05)
Female	−0.05	−0.02	−0.03	−0.04	−0.02	−0.03
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
High School Degree	−0.17	−0.11	−0.06	−0.15	−0.10	−0.06
	(0.09)	(0.08)	(0.09)	(0.09)	(0.09)	(0.09)
Some College	−0.04	0.00	−0.039	−0.03	0.01	−0.04
	(0.09)	(0.09)	(0.10)	(0.09)	(0.09)	(0.10)
College Graduate	−0.10	−0.12	0.02	−0.08	−0.1	0.02
	(0.09)	(0.08)	(0.09)	(0.09)	(0.08)	(0.09)
Constant	**0.63**	**0.31**	**0.32**	**0.61**	**0.28**	**0.32**
	(0.10)	(0.09)	(0.10)	(0.10)	(0.09)	(0.10)
N	384	384	384	384	384	384
R^2	0.08	0.09	0.02	0.07	0.08	0.01

Mediation by Anxiety | | | | **Mediation by Anxiety** | | |

	All Immigration Stories	Threatening Immigration Stories	Nonthreatening Immigration Stories	All Immigration Stories	Threatening Immigration Stories	Nonthreatening Immigration Stories
Mediation Effect	**0.04**	**0.03**	0.01	**0.06**	**0.05**	0.01
95% CI	[0.02, 0.08]	[0.01, 0.07]	[−0.01, 0.03]	[0.02, 0.10]	[0.02, 0.09]	[−0.02, 0.04]
Direct Effect	−0.01	0.04	−0.04	−0.03	0.01	−0.04
	[−0.10, 0.08]	[−0.05, 0.12]	[−0.12, 0.04]	[−0.13, 0.06]	[−0.08, 0.09]	[−0.12, 0.05]
Total Effect	0.04	0.07	−0.03	0.03	0.06	−0.03
	[−0.08, 0.15]	[−0.03, 0.17]	[−0.11, 0.05]	[−0.10, 0.14]	[−0.04, 0.16]	[−0.12, 0.05]

Mediation by Anger

		All Immigration Stories	Threatening Immigration Stories	Nonthreatening Immigration Stories
	Mediation Effect	0.01	0.01	0.00
	95% CI	[−0.00, 0.03]	[−0.01, 0.03]	[−0.01, 0.01]
	Direct Effect	−0.03	0.01	−0.04
		[−0.14, 0.07]	[−0.08, 0.09]	[−0.12, 0.04]
	Total Effect	−0.03	0.02	−0.04
		[−0.15, 0.09]	[−0.09, 0.11]	[−0.12, 0.03]

Source: Knowledge Networks Immigration Study 2008.
Note. Model specification: OLS with mediation effect calculated using algorithm in Imai, Keele, and Tingley (2010). Coefficients in bold indicate $p < .05$, based on a two-tailed test. The dependent variables are the proportion of all stories read that were about immigration, the proportion of all stories read that were threatening about immigration, and the proportion of all stories read that were nonthreatening about immigration. If a respondent did not read any stories, they are set to 0. The mediating coefficients for anger and anxiety come from separate models.

proportion of all stories read that focused on immigration, (2) the proportion of all stories that were threatening, and (3) the proportion of all stories that were nonthreatening.[14] To satisfy the sequential ignorability assumption, we also include pretreatment variables (gender, education, ideology, and partisanship) that may be related to immigration information seeking as well as anxiety in both the models predicting the mediator and the models predicting the outcomes of interest.[15] Using this causal mediation framework, we calculate three quantities of interest: (1) the direct effect of being in the treatment condition on information seeking, (2) the mediating (indirect) effect of anxiety on information seeking, and (3) the total mediation effect, which is the sum of the direct and indirect effects.[16] The direct effect can be interpreted as the causal effect of the treatment (being asked to worry about immigration) on the proportion of stories read that is *not* due to anxiety. The mediating effect can be interpreted as the effect of the treatment on the proportion of stories read due to a change in the level of anxiety.

The models in Table 3 show that immigration anxiety mediates the effect of the treatment condition for the proportion of threatening stories and immigration stories generally read by respondents but not for nonthreatening immigration stories. In other words, the treatment condition increases attention to news stories about the negative consequences of immigration through increasing their level of anxiety about immigration, using both measures of anxiety.[17] These models also show that anger over immigration does increase the proportion of threatening immigration stories that subjects read, but its effect is not due to the experimental treatment. Anger, in contrast to anxiety, is an emotion associated with certainty (Lerner & Keltner, 2001), so the fact that our experimental treatment influenced information seeking through anxiety rather than anger gives credence to our claims that one of the motivations of information seeking is to resolve uncertainty.

We find no evidence for mediation for nonthreatening stories, confirming our claim that immigration anxiety increase biased attention, not just overall attention. When we include a measure of thinking about immigration (word counts) as a mediator, we find no mediation effect, suggesting that simply thinking more about immigration does not influence the proportion of threatening or nonthreatening stories read by respondents. As predicted, anxiety, rather than thoughts about immigration, carries the causal impact of the treatment condition on exposure to threatening information.

Attention

We found that subjects in the treatment condition were more likely to look at threatening information about immigration than subjects in the control condition, but did they pay attention to this information? Information seeking and attention are two ways in which bias may creep in to anxiety-driven learning, and they do not necessarily go together. People might read plenty of

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[14] Since we established in the manipulation check section that the treatment condition significantly increased both the number of worries listed the respondents as well as the level of worry, we do not show the first-stage models here. Please see appendix for these models. If respondents did not read any stories, they are set to 0.

[15] We include anger only in the second-stage model that predicts information seeking as a function of emotions and the treatment. Including anger as a predictor of anxiety would imply that anger was a cause of anxiety and would thus be a posttreatment confounder, which would violate the sequential ignorability assumption that underlies these mediation models.

[16] We calculate these effects using the "mediate" command in Stata (Hicks & Tingley, 2011).

[17] The magnitude of the causal mediation effect of anxiety on our outcomes is similar in size to those of Brader et al. (2008) as calculated in Imai et al. (2011) and anxiety's effect on trust in Myers and Tingley (2011). The sensitivity analysis also reveals that the alternative anxiety measures have sensitivity parameters of equal size. To conclude that the true causal mediation effect is not significantly different from zero, we must assume that an unobserved confounder that affects both anxiety and information seeking in the same direction makes the correlation between the two error terms greater than .19 for the number of worries and .18 for the level of anxiety. These results are more sensitive to potential confounders than those of Brader et al. (2008); however, using the product of coefficients method of mediation proposed by Baron and Kenny (1986), we find that both measures of anxiety mediate the effect of the treatment on the outcome, giving us more confidence that these results hold. Please see the appendix for those results.

information and remember little (Feldman & Huddy, 2005), or they may read very little and remember all of it (Valentino et al., 2008). There are multiple ways that previous research has conceptualized attention, such as tracking subjects' eye movements toward or away from an anxiety-producing stimulus (Yiend and Mathews 2001) or measuring how anxiety interferes with processing (Pratto & John, 1991). We rely on an open-ended question that asked subjects which stories they remembered best. We asked, "Of the stories you read, what stories do you remember best? (If you don't remember the names, just describe the stories)." The simple self-report is an appropriate measure for our purposes, because we are interested in what subjects took away from their reading.[18]

We compared the recall of immigration stories between the treatment and control conditions in multiple ways, first focusing on whether subjects recalled immigration stories and then whether they recalled threatening or nonthreatening stories about immigration. The dependent variables are the proportion of all stories recalled that are about immigration, the proportion of all stories that are threatening, and the proportion of all stories that are nonthreatening. We use proportions for hypothesis testing because we expect that anxiety shifts attention. Subjects in the treatment condition remembered a larger proportion of immigration stories (.51 v. 60, $F(1,384) = 5.38$, $p = .021$). When we break apart the immigration stories by tone, we find that subjects in the treatment group remembered a higher proportion of threatening stories (.29 vs. .39, $F(1, 382) = 6.36$, $p = .012$), but that the groups did not differ in their tendency to recall nonthreatening immigration stories (.23 vs. .21, $F(1, 382) = .13$, $p = .714$).[19]

Next, we examine the effect of the treatment condition on recall, using a mediation model with OLS that controls for the number of immigration stories read in order to further disentangle attention from exposure (Table 4). As in the previous mediation models, we use two alternate measures of anxiety (the number of worries and level of anxiety) and also test anger as an alternative mediator in a separate model. The mediation results in Table 4 demonstrate that participants in the treatment condition remembered a greater proportion of immigration stories out of all stories when controlling for the number of immigration stories read and that the treatment biased attention through increasing respondents' level of anxiety. Again, we find no evidence that the treatment condition affected attention through anger.[20] Further, as in the case of information seeking, this heightened attention to immigration stories was driven by threatening immigration stories. Inducing anxiety about immigration not only caused respondents to seek out more threatening information, but anxiety also increased the salience of threatening information over nonthreatening information. Anxiety may increase the desire for information, but these findings demonstrate that anxious citizens seek and remember news that highlights threatening information about immigration, suggesting that anti-immigration activists are well-served by tapping into and increasing anxiety over immigration.

Engagement with Information

Respondents in the treatment condition spent a larger proportion of their time on threatening immigration stories than nonthreatening immigration stories and were more likely to pay attention to

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[18] Additionally, because the measure followed closely after subjects selected and read the experimental stories and because we can verify which stories respondents chose, we are less concerned about projection or subjects forgetting what they read.
[19] If you restrict the analysis to those 266 respondents who read an immigration story, the findings are substantively identical. In the threatening-bias analysis, we include only those subjects who read a threatening story (N = 232), and our nonthreatening bias analysis includes only those subjects who read a nonthreatening story (N = 200). We first compare the treatment and control groups using ANOVAs, and we find that subjects in the treatment condition remembered a larger proportion of immigration stories (.74 vs. .85, $F(1, 266) = 5.90$, $p = .016$). When we break apart the immigration stories by tone, we find that subjects in the treatment group remembered a higher proportion of threatening stories (.60 vs. .47, $F(1, 232) = 5.78$, $p = .017$) but that the groups did not differ in their tendency to recall nonthreatening immigration stories (.44 vs. .40, $F(1, 200) = .43$, $p = .511$).
[20] We replicate these mediation models using the Baron and Kenney product of coefficient method in the appendix and find that with this alternative method, the treatment condition is mediated through both our measures of anxiety.

Table 4. Immigration Anxiety Increases Recall of Threatening Immigration News

Proportion of Stories Remembered

	All immigration stories	Threatening immigration stories	Nonthreatening immigration stories	All immigration stories	Threatening immigration stories	Nonthreatening immigration stories
Treatment Condition	0.07	0.08	0.00	0.07	0.05	0.01
	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)	(0.04)
Number of Worries	**0.04**	**0.04**	0.00			
	(0.02)	(0.02)	(0.01)			
Anxiety				0.04	**0.08**	−0.03
				(0.04)	(0.04)	(0.03)
Anger				0.09	0.08	0.00
				(0.05)	(0.05)	(0.04)
PID	**−0.19**	−0.11	−0.08	−0.19	−0.11	−0.08
	(0.08)	(0.08)	(0.07)	(0.08)	(0.08)	(0.08)
Ideology	0.22	0.11	0.11	0.2	0.08	0.13
	(0.13)	(0.12)	(0.11)	(0.13)	(0.12)	(0.11)
White	−0.03	0.06	−0.09	−0.03	0.06	−0.09
	(0.07)	(0.06)	(0.06)	(0.07)	(0.07)	(0.06)
Female	−0.01	−0.02	0.01	−0.01	−0.01	0.00
	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)	(0.04)
High school Degree	0.10	0.12	−0.03	0.12	0.14	−0.02
	(0.09)	(0.09)	(0.06)	(0.10)	(0.09)	(0.07)
Some College	**0.21**	0.14	0.06	**0.23**	0.16	0.07
	(0.09)	(0.08)	(0.07)	(0.10)	(0.09)	(0.07)
College Graduate	0.13	−0.02	0.14	0.15	0.00	**0.15**
	(0.09)	(0.07)	(0.07)	(0.09)	(0.08)	(0.08)
Number of Immigration Stories Read	**0.13**	**0.05**	**0.07**	**0.13**	**0.05**	**0.07**
	(0.01)	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)
Constant	0.90	0.03	0.06	**0.08**	**0.14**	0.06
	(0.10)	(0.09)	(0.09)	(0.11)	(0.05)	(0.08)
N	384	384	384	384	384	384
R^2	0.26	0.12	0.15	0.26	0.13	0.15

Mediation by Anxiety				**Mediation by Anxiety**		
Mediation Effect	**0.03**	**0.03**	0.00	0.03	**0.04**	−0.02
95% CI	[0.00, 0.07]	[0.00, 0.07]	[−0.03, 0.02]	[−0.01, 0.07]	[0.00, 0.09]	[−0.06, 0.02]
Direct Effect	0.08	0.08	−0.01	0.06	0.06	0.02
	[−0.03, 0.18]	[−0.03, 0.18]	[−0.09, 0.08]	[−0.06, 0.16]	[−0.06, 0.16]	[−0.09, 0.09]
Total Effect	0.11	0.11	0.00	0.09	0.10	0.00
	[−0.01, 0.23]	[−0.01, 0.24]	[−0.09, 0.09]	[−0.04, 0.21]	[−0.03, 0.23]	[−0.10, 0.09]

	Mediation by Anger		
Mediation Effect	0.01	0.01	0.00
95% CI	[−0.01, 0.04]	[−0.01, 0.04]	[−0.01, 0.01]
Direct Effect	0.08	0.06	0.02
	[−0.03, 0.18]	[−0.05, 0.17]	[−0.07, 0.10]
Total Effect	0.09	0.08	0.02
	[−0.03, 0.20]	[−0.05, 0.19]	[−0.07, 0.10]

Source: Knowledge Networks Immigration Study 2008.

Note. Model specification: OLS with mediation effect calculated using algorithm in Imai, Keele, and Tingley (2010). Coefficients in bold indicate $p < .05$, based on a two-tailed test. The dependent variables are the proportion of all stories recalled that are about immigration, the proportion of all stories that are threatening, and the proportion of all stories that are nonthreatening. If a respondent did not read any stories or did not remember any stories, they are set to 0. The mediating coefficients for anger and anxiety come from separate models.

those stories, but what these respondents thought about the information they read is an open question. While anxiety may increase the potential for persuasion, we do not expect that citizens simply receive political information without evaluating it, regardless of whether their information seeking is prompted by anxiety. Yet particularly if anxiety prompts information seeking, then as part of this process, we expect that anxiety should also affect evaluations of the information gathered. We hypothesize that anxiety biases the way subjects evaluate information, either by promoting agreement with threatening information or by promoting disagreement with nonthreatening information.

As a way of measuring evaluation, subjects were asked what they thought about the stories in an open-ended question. We asked, "What did you think about the stories you read?" Three research assistant unaware of our hypotheses coded the responses first by whether they engaged with a nonthreatening or a threatening immigration story and then by whether their comment expressed agreement, disagreement, or was neutral (a comment could fall into more than one category). This measure is novel in the emotion and politics literature and will help establish whether anxiety leads individuals to evaluate information differently than subjects who are not anxious. The dependent variable is the percentage of respondents who made a statement agreeing/disagreeing with a threatening/nonthreatening story out of the number of respondents who read a threatening/nonthreatening story.[21] That is, comments were only counted for respondents who read a story and then mentioned that story when prompted by the open-ended question. Neutral comments, where respondents simply restated the premise of the news story or made unrelated comments, are excluded from our analyses. In addition, some respondents express both agreement and disagreement with the same story or evaluated the nonimmigration stories. Among the 232 respondents who read threatening stories, 9% took the opportunity to disagree with a threatening story, and 45% expressed agreement. Among the 200 respondents who read nonthreatening stories, 15% argued with them in some way, and 27% expressed agreement.

Many respondents took the opportunity to agree with threatening information. For example, one respondent agreed with the crime story: ". . . all our city streets and businesses are threatened by this overflow of illegals from around the world being a menace to our peace and tranquility, I support mass deportation tomorrow." Another respondent wrote, "Shocking report on the 18th Street Gang and the Mexican Mafia. Two thirds of all fugitive felon warrants are for illegal aliens. No wonder the streets are not safe in Tucson, AZ. Our political leaders are sleeping while America burns." Respondents in the treatment condition were more likely to agree with threatening stories than respondents in the control condition. Among respondents who read a threatening story, 47% of respondents in the treatment condition expressed agreement compared to 33% of those in the control condition ($X^2 = 5.50$, $p < .02$). Few subjects in either condition argued with threatening stories about immigration: of those respondents who read a threatening story, only 10% of respondents in the treatment condition and 8% of subjects in the control condition expressed disagreement (n.s.).

In contrast to their engagement with threatening stories, fewer respondents expressed agreement with nonthreatening stories, implying that these subjects found the threatening stories more memorable and convincing. There are no significant differences between the conditions in the percentage that either agree with or argue with the nonthreatening stories. Sixteen percent of respondents in the control condition who remembered a nonthreatening story argued with the content of it while 15% of treatment subjects argued with the nonthreatening stories. While 28% of respondents in the control condition agreed with a nonthreatening story, this did not differ significantly from the 24% of respondents in the treatment condition. Overall, respondents in the treatment condition evaluated information differently than respondents in the control condition. Anxious respondents were more

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[21] Our research assistants found that it was often difficult to discern which of the negative and positive stories were referenced when participants were asked to share their thoughts on the stories. For example, an answer such as "I agree, immigration is a huge problem. It's harming our economy" could be referencing just one or both of the negative immigration stories. We rely on a simple dichotomous measure because of this ambiguity.

Table 5. Anxiety Increases Agreement with Threatening Immigration News

	Agree with Threatening Stories vs. No Engagement		Argue with Threatening Stories vs. No Engagement		Agree with Nonthreatening Stories vs. No Engagement		Argue with Nonthreatening Stories vs. No Engagement	
	Model 1				Model 2			
	Coef. (s.e)		Coef. (s.e)		Coef. (s.e)		Coef. (s.e)	
Anxiety Treatment	**0.57**	**0.60**	0.31	0.35	−0.43	−0.49	−0.26	−0.34
	(0.24)	(0.25)	(0.44)	(0.45)	(0.31)	(0.33)	(0.40)	(0.43)
Number of Threatening (Nonthreatening) Stories Read		**1.05**		**1.32**		**1.47**		**1.77**
		(0.16)		(0.33)		(0.23)		(0.36)
Constant	**−1.19**	**−2.42**	**−2.56**	**−4.21**	**−1.56**	**−3.30**	**−2.28**	**−4.51**
	(0.17)	(0.29)	(0.31)	(0.62)	(0.20)	(0.41)	(0.27)	(0.67)
N	383	383	383	383	378	378	378	378
Psuedo R^2	.01	.11	.01	.11	.01	.18	.01	.18

Source: Knowledge Networks Immigration Study 2008.
Note. Model specification: Multinomial logit. Coefficients in bold indicate $p < .05$, based on a two-tailed test. Dependent variables indicate respondents' engagement with the stories: 0 (did not mention, neither agree nor disagree), 1 (agree with threatening [nonthreatening] story, no disagreement), 2 (argue with threatening [nonthreatening] story, no agreement). Respondents who both agreed and disagreed with stories were excluded ($n = 7$). The treatment variable is 0 for respondents in the control condition and 1 for respondents in the treatment condition. Number of relevant stories read is a count of how many threatening or nonthreatening stories respondent read during the information search.

likely to embrace the threatening messages about immigration than those in the control condition, yet they were no more likely to argue with nonthreatening information.

Respondents in the treatment condition were more likely to agree with threatening information, but this might be driven by their higher propensity to read threatening stories. We address this possible confound with multinomial logistic regressions, where we include the number of threatening (nonthreatening) stories read as a covariate in Table 5. We use multinomial logit models because the analysis includes a nominal dependent variable with more than two categories.[22] We use a slightly different engagement measure in these models that captures whether a respondent engaged with immigration stories at all, and if so, in what direction. Subjects were categorized for threatening and nonthreatening stories separately as: (1) not evaluating the story [either because they did not read immigration stories or because they did not mention these stories], (2) agreeing with the story, or (3) arguing with the story. Each respondent received a score for engagement with threatening stories and a score for engagement with nonthreatening stories. If a respondent expressed both agreement and disagreement with the same story, they were dropped from the analysis.[23] We use "not evaluating" as the baseline category. The models demonstrate that the treatment condition had a significant effect on agreement with threatening information, even controlling for the number of threatening stories read. As in the bivariate analysis, anxiety did not affect engagement with nonthreatening stories or disagreement with threatening stories.

These findings suggests that citizens made anxious about the detrimental effects of immigration not only pay closer attention the plethora of threatening information about immigrants and immi-

[22] We have also modeled these effects using four separate logit models where the dependent variable was whether a respondent agreed (disagreed) with a threatening (nonthreatening) story and find identical results. In these logit models, we exclude all respondents who did not read a threatening (nonthreatening) story. We include these models as a table in the appendix.

[23] One respondent both agreed and disagreed with the same threatening story, and six respondents both agreed and disagreed with the nonthreatening stories; these respondents were excluded from this analysis.

gration in the news (Hayes, 2011; Knoll, Redlawsk, & Sanborn, 2011; Simon & Alexander, 1993), but that they are likely to be convinced by that information. Politicians or interests groups that raise alarm bells about immigration are likely to find a receptive audience in the American public. In an attempt to regulate their anxiety, anxious citizens may encounter information that ends up reinforcing views of immigrants and immigration as threats.

Conclusion

To trace the causal impact of anxiety on information processing, we used an experiment in which we manipulated anxiety about immigration and provided subjects with a mock news website. We measured information processing at three stages: We first track subjects' information seeking by monitoring which stories they read. Then, we measured attention by asking subjects what they remember, and finally we measured engagement by asking what they thought about the stories. Two major findings arise from this study that hold implications for the use of anxiety in politics. First, anxiety triggered biased learning about immigration. We find that anxiety triggers learning about immigration as suggested by previous scholars, but anxiety also biases the type of information that people prefer. Individuals made anxious about immigration are attracted to threatening information, and this bias is apparent in information seeking, attention, and engagement. Secondly, attention to threatening information was not costless; when citizens turn their attention toward the object of their anxiety, they are less able to devote time to other issues.

We contribute to the literature on emotion and politics by focusing on the valence of anxiety-driven learning. Our study design is the first to incorporate the emotionally charged nature of the contemporary news environment—where immigration coverage includes positive, neutral, and, most often, threatening stories (Simon & Alexander, 1993). In a mock news environment, we track the information that anxious citizens gravitate towards, rather than relying on self-reports. Given the opportunity to choose among nonimmigration stories, nonthreatening immigration stories, and threatening immigration stories, anxious people systematically favor threat. Another contribution of this work is that we examine learning as a three-step process: information seeking, attention, and engagement. Knowing what anxious people read is just one step in understanding how anxiety affects politics. We also measure what they remember and what they think about the information, finding that they favor threatening information at each stage. Finally, this work adds to the literature on immigration attitudes by showing one mechanism by which citizens may form and reinforce anti-immigration attitudes—through a focus on threatening news.

Many studies show that anxiety leads people to seek out information (Brader, 2006; MacKuen et al., 2010; Marcus & MacKuen, 1993; Marcus et al., 2000; Redlawsk et al., 2007). Our goal was to take a closer look at the valence of that anxiety-driven learning when people are given the choice between threatening, nonthreatening, and irrelevant news. We found that anxious people were more likely to read and remember threatening information, and they were more likely to agree with threatening information. We find that anxiety affects how individuals evaluate the news that they consume; that is, people do not automatically accept information that they encounter. While anxious people were no more likely to argue with nonthreatening information in this study, they were more likely to agree with threatening information.

Though an experimental design has obvious costs in terms of external validity, we took steps to create a realistic news environment. Subjects participated in the experiment in their own homes, and the articles they were presented with were all drawn from newspapers. We also made it clear that subjects could read as many or as few stories as they would like and included nonimmigration stories so that subjects could opt out of the immigration debate all together. Additionally, some respondents in the control condition also expressed concern about immigration, providing a hard test of the hypothesis that immigration anxiety prompts biased information processing. Unobtrusive measures

of information seeking, attention, and engagement allowed us to measure bias at different stages of information processing and revealed that anxiety influenced learning at every stage.

One limitation with this study is the difficulty in teasing apart effects triggered by emotional reactions from those caused by cognition. The manipulation triggered anxiety by asking the treatment group to worry, but of course their anxiety was accompanied by thoughts, and some participants in the control group likely experienced anxiety even though they were not asked to worry. The treatment group worried more than the control group, and these worries mediate the relationship between the treatment and biased learning. This difference, coupled with the direct effect of the treatment condition on anxiety in the pretests, lends support to our interpretation, but it remains possible that these results are, in part, due to cognition. Another limitation of the study is that the immigration stories are divided between threatening and nonthreatening, and the threatening stories are both anti-immigration. An expanded study design would also include threatening stories that are more pro-immigrant, such as alarming reports of immigrant abuse and detention. This design would allow us to test whether anxious citizens are attracted to any relevant threatening information, or if their attention is confined to certain types. We chose a simplified design because the vast majority of threatening news coverage of the immigration debate in the United States is anti-immigrant, but the more elaborate design is worth pursuing.

Implications

Political scientists assume that more information is better, which seems reasonable in light of low levels of political information in the mass public. Our study points to the necessity to pay attention not simply to the quantity of information citizens know but also the valence of that information. If anxious citizens are biased towards threatening information in terms of what they look at, what they remember, and what they agree with, then the normative implications of anxiety need to be revisited. The benefits of learning rest on the assumption that the information gathered is somehow accurate and useful. A bias towards threatening information challenges this assumption. We do not rule out the potential benefits of biased information processing. People who are anxious about an imminent physical threat, such as a flood or charging bear, might be better off if their learning process was biased toward threatening information. Under these conditions, attention to threat might improve their chances of physical safety. However, in the political world, the benefits of biased learning are less clear. If there are two or more sides to a contentious issue, such as immigration, anxiety will bias information processing towards the more threatening viewpoints. This bias toward threat may be particularly troubling where one side of a policy debate has more resources, more compelling threatening imagery, or more access to disseminate threatening information, as is the case in the immigration debate (Hayes, 2011; Simon & Alexander, 1993). Anxiety-driven learning might politically benefit those in favor of restrictive immigration policies but might not make for better democratic citizens.

These findings hold implications for how political scientists should think about how citizens engage in politics under threatening conditions. This study focuses on how immigration anxiety biases information gathering, yet these findings are not limited only to immigration anxieties. Political debates surrounding immigration often focus on the costs and threats of immigration, yet numerous other political issues such as terrorism, crime, public health, and the economy may evoke anxiety. While the origins of anxiety about immigration, terrorism, and public health threats may differ, our findings imply that once individuals become anxious about these issues, these anxious citizens will pay close attention to threatening information about those policies, potentially at the expense of more reassuring information or other policy issues, particularly when these debates involve an out-group.

Another implication of this work is that information seeking is not costless. Anxiety may pique our interest, but it does not add time to our lives. If we direct our attention towards the subject of our

anxiety, we are necessarily directing our attention away from other, potentially important political issues. We argue that these trade-offs play out in terms of substance and tone. Anxious people direct their attention toward the topic of their anxiety, and further, toward threatening information about that topic. Relevant nonthreatening stories and irrelevant news are given less attention.

Previous research has focused on the potential of anxiety to increase the amount of information citizens seek. Consequently, anxiety has increasingly been viewed as normatively positive. Our research points to a second political implication, that anxiety biases information processing. We find that anxiety does not encourage well-rounded information seeking but leads citizens to embrace information that portrays immigration and immigrants in a threatening light. What is striking about anxiety driven learning in this study is that the bias emerges in all stages of information processing and systematically favors threatening information. Anxious information seekers come away with an unbalanced set of considerations which they then may bring to bear on their political attitudes and behaviors.

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Appendix

Table A1. Demographics Balance in Treatment Conditions

Percent	Control	Treatment	X^2
Female	53	52	0.03
White	82	82	0.00
Northeast	19	20	0.24
Midwest	21	19	0.24
South	36	37	0.24
West	24	24	0.24
Less than high school	7	10	1.76
High school degree	25	20	1.76
Some college	28	29	1.76
College degree	40	40	1.76
Head of household	82	86	1.45
Mean			**t**
Size of household	2.89	2.60	1.91
Partisanship (6 = Strong Dem, 0 = Strong Rep)	3.09	2.93	0.75
Ideology (0 = Very liberal, 1 = Very conservative)	0.53	0.55	−1.02

Convenience Sample Manipulation Checks

In the first manipulation check, we ran a pretest with 60 undergraduates at a large state university in a lab on campus. The student sample was 47% female, 53% white and 21% African American. Forty-seven percent of respondents identified as Democrats and 40% identified as Republicans. Subjects were recruited from political science courses to participate for extra credit. Subjects were randomly assigned to the bottom-up anxiety treatment or a control condition with the same wording we used in the Knowledge Networks sample. After completing the control condition or the worries listing, respondents reported how hopeful, upset, eager, anxious, reassured, irritated, excited, afraid, confident, angry, enthusiastic, and worried they felt on a scale from 1 (not at all) to 5 (felt very strongly). Based on a factor analysis, we combined those specific emotions into three scales: Anxious (afraid, anxious, irritated, Cronbach's alpha = .76), Angry (angry, upset, Cronbach's alpha = .84), and Enthusiastic (hopeful, excited, confident, enthusiastic, Cronbach's alpha = .86). Table A2 shows three OLS models that show the effect of being in the anxiety treatment condition on these emotion scales with no controls. Being in the treatment condition is indicated with a dummy variable in the models. The bottom up manipulation increased the Anxious scale by 27% over the control condition, significant at the $p < .10$ level. In contrast, the treatment did not significantly affect self-reported anger or enthusiasm. The worries listing manipulation increase self-reported anxiety in our subjects.

A second potential area of concern with respect to our experimental manipulations is that our manipulation changed respondents' beliefs about immigration instead of their emotions. Several additional manipulation checks demonstrate that this is not the case. We find no evidence that the experimental manipulation affected cognition by changing beliefs about immigration or by increasing the number of considerations that respondents had. In the Knowledge Networks sample, we do not find evidence that respondents in the worried condition thought about immigration more than those in the control condition. We use the number of words that respondents used as a measure of thinking. The average word count in the control condition was 17.2 words while the average word count in the treatment condition was 18.8 words ($F(1,382)$, $p < .58$).

To further test for a cognitive effect, we utilize a pretest to test whether the bottom-up manipulation simply changed respondents' beliefs about immigration. We ran a pretest in March

2007 with 33 undergraduates at a private university in the Northeast who participated for the chance of a small cash prize. We randomly assigned respondents to either think about immigration or worry using the same manipulation wording. The convenience sample was 53% female, all under the age of 21, 51% identified as Democrats, 27% as Independents, and 21% as Republicans.

After the manipulations, we asked questions that tapped beliefs about undocumented immigrants and immigration. We asked respondents to indicate their agreement with a series of statements on a scale from 1 (strongly disagree) to 5 (strongly agree). The statements are: (1) Illegal immigrants are a burden to the United States because they take jobs, housing, and healthcare; (2) Illegal immigrants do not pay their fair share of taxes; (3) Illegal immigrants threaten traditional American values and customs; (4) Illegal immigrants mostly take jobs that Americans don't want; (5) Illegal immigrants try to learn English; and (6) Illegal immigrants strengthen the country because of their hard work and talents. Table A3 models the effect of being in the treatment condition on those six belief statements using OLS. The treatment condition is a dummy variable indicating that the respondent was asked to worry about immigration. Table A2 shows that being in the treatment condition did not significantly alter beliefs about immigration on any of the six measures, which does not support the alternative that the treatment condition primed different types of beliefs.

Table A2. Bottom-up Immigration Manipulation: Student Pretest

	Anxiety	Anger	Enthusiasm
Treatment	**0.39**	0.30	−0.33
	(0.23)	(0.28)	(0.25)
Constant	1.42	1.55	2.73
	(0.37)	(0.44)	(0.39)
Observations	60	60	60
R-squared	0.045	0.019	0.029

Source: 2008 Immigration undergraduate pretest.
Model specification: OLS, coefficients in bold are significant at $p < .10$. Treatment condition is an indicator that respondents were asked to list their worries about immigration (0 = control condition, 1 = worried condition).

Table A3. Beliefs about Immigrants

	Burden the US economy Coef. (se)	Do not pay fair share of taxes Coef. (se)	Threaten traditional values and customs Coef. (se)	Take jobs Americans don't want Coef. (se).	Try to learn English Coef. (se)	Strengthen the US because of talents Coef. (se).
Treatment	.05	.22	.24	−.63	.39	−.10
	(.43)	(.35)	(.45)	(.39)	(.37)	(.30)
Constant	3.00	3.57	2.28	4.00	3.32	3.78
	(.33)	(.27)	(.34)	(.30)	(.28)	(.23)
N	33	33	33	33	33	33

Source: 2007 undergraduate pretest.
Model specification: OLS. Treatment condition is an indicator that respondents were asked to list their worries about immigration (0 = control condition, 1 = worried condition).

Table A4. Treatment Condition Increases Number of Worries and Anger

	Number of worries	Anxiety	Anger
Treatment condition	**0.80**	**0.54**	*0.11*
	(0.16)	(0.07)	(0.06)
PID	0.35	−0.01	0.14
	(0.28)	(0.13)	(0.11)
Ideology	0.19	**0.40**	0.12
	(0.43)	(0.18)	(0.16)
Female	−0.12	−0.17	**0.02**
	(0.16)	(0.07)	(0.07)
High school degree	−0.06	0.11	**0.12**
	(0.28)	(0.13)	(0.16)
Some College	0.31	**0.25**	−0.25
	(0.29)	(0.12)	(0.16)
College Graduate	0.2	**0.26**	**−0.34**
	(0.26)	(0.12)	(0.16)
White	0.18	−0.02	0.05
	(0.43)	(0.09)	(0.08)
Constant	0.63	0.16	0.38
	(0.32)	(0.15)	(0.15)
N	384	384	384
R2	0.11	0.22	0.09

Model specification: OLS. Coefficients in bold indicate $p < .05$, Italicized coefficients indicate $p < .10$, based on a two-tailed test. The treatment variable is 0 for respondents in the control condition and 1 for respondents in the treatment condition. Number of worries is a count of the number of unique worries mentioned by respondent in the open-ended manipulation (range 0–8). Anxiety and anger are the levels of emotion coded from open-ended responses (0 = none, 1 = some, 2 = extreme).

Table A5. Summary of ANOVA Results

	n	F	p-value
Selective exposure			
Immigration Stories Proportion:	327	4.58	0.033
Threatening Immigration Stories Proportion:	327	7.77	0.006
Nonthreatening Immigration Stories Proportion:	327	0.79	0.375
Selective attention			
Proportion recalling an immigration story (among those who read an immigration story)	266	5.90	0.016
Proportion recalling a threatening story, (among those who read a threatening story)	232	5.78	0.017
Proportion recalling a nonthreatening story, (among those who read a nonthreatening story)	200	0.43	0.511

Table A6. Proportion of Stories Read: Mediation Models (Baron and Kenney method)

	All Immigration Stories		Threatening Immigration Stories		Nonthreatening Immigration Stories	
Treatment	−0.02	−0.04	0.02	−0.01	−0.03	−0.03
	(0.04)	(0.04)	(0.03)	(0.03)	(0.03)	(0.03)
Number of worries	**0.05**		**0.04**		0.01	
	(0.01)		(0.01)		(0.01)	
Anxiety		**0.10**		**0.10**		0.01
		(0.03)		(0.03)		(0.02)
Constant	**0.50**	**0.52**	**0.26**	**0.25**	**0.25**	**0.26**
	(0.03)	(0.03)	(0.03)	(0.02)	(.02)	(0.02)
N	384	384	384	384	384	384
R^2	0.04	0.04	0.04	0.05	0.01	0.01
Sobel test—Z-value	3.25	3.45	3.14	3.64	0.93	0.37
p-value	0.01	0.01	0.01	0.01	0.35	.71

Model specification: OLS. Coefficients in bold indicate $p < .05$, based on a two-tailed test. The dependent variables are proportions and vary from 0 to 1. The treatment variable is 0 for respondents in the control condition and 1 for respondents in the treatment condition. Number of worries is a count of the number of unique worries mentioned by respondent in the open-ended manipulation (range 0–8). Anxiety is the level of anxiety coded from open-ended responses (0 = none, 1 = some, 2 = extreme). Sobel tests calculated with sgmediation command in Stata.

Table A7. Proportion of Stories Remembered: Mediation Models (Baron and Kenney method)

	All Immigration Stories		Threatening Immigration Stories		Non-Threatening Immigration Stories	
Treatment	0.04	0.04	**0.08**	0.06	−0.03	−0.03
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Number of immigration stories read	**0.13**	**0.13**	**0.06**	**0.06**	**0.07**	**0.07**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Number of worries	**0.05**		**0.03**		0.01	
	(0.01)		(0.01)		(0.01)	
Fear		**0.08**		**0.07**		0.01
		(0.03)		(0.03)		(0.03)
Constant	**0.22**	**0.23**	**0.14**	**0.14**	**0.08**	**0.09**
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)
N	384	384	384	384	384	384
R^2	0.25	0.23	0.09	0.08	0.11	0.10
Sobel test—Z-value	2.73	2.23	2.15	2.01	0.92	0.26
p-value	0.01	0.03	0.03	0.04	0.36	0.79

Model specification: OLS. Coefficients in bold indicate $p < .05$, based on a two-tailed test. The dependent variables are proportions and vary from 0 to 1. The treatment variable is 0 for respondents in the control condition and 1 for respondents in the treatment condition. Number of worries is a count of the number of unique worries mentioned by respondent in the open-ended manipulation (range 0–8). Fear is the level of fear coded from open-ended responses (0 = none, 1 = some, 2 = extreme). Sobel tests calculated with sgmediation command in Stata.

Table A8. Engagement

	Argue threatening v No engagement	Agree threatening v. No engagement	Argue non-threat v. No Engagement	Agree non-threat v. No Engagement
Treatment condition	0.43	**0.56**	−0.42	−0.53
	(0.47)	(0.26)	(0.46)	(0.35)
Number of (non)threatening	**1.51**	**1.09**	**1.95**	**1.66**
stories read	(0.45)	(0.17)	(0.40)	(0.26)
PID	0.79	0.93	**2.83**	0.87
	(0.92)	(0.49)	(1.01)	(0.72)
Ideology	−0.84	0.95	−1.49	−1.81
	(1.23)	(0.72)	(1.34)	(0.98)
White	−0.65	0.03	−0.57	−0.73
	(0.57)	(0.03)	(0.60)	(0.43)
Female	−0.67	0.09	0.03	0.84
	(0.50)	(0.26)	(0.47)	(0.36)
High school	**18.35**	0.02	0.12	1.04
	(1.09)	(0.51)	(1.34)	(0.91)
Some college	**18.51**	−0.02	1.56	1.01
	(0.99)	(0.49)	(1.19)	(0.89)
College graduate	**18.97**	−0.61	1.31	0.56
	(0.92)	(0.48)	(1.16)	(0.87)
Constant	−21.55	−2.98	−5.95	−3.26
		(.67)	(1.55)	(1.03)
N	383	383	378	378
R-squared	0.16	0.16	0.26	0.26

Model specification: Multinomial logit. Coefficients in bold indicate $p < .05$, based on a two-tailed test. Dependent variables indicate respondents' engagement with the stories: 0 (did not mention, neither agree nor disagree), 1 (agree with threatening [nonthreatening] story, no disagreement), 2 (argue with threatening [nonthreatening] story, no agreement). Respondents who both agreed and disagreed with stories were excluded (n = 7). The treatment variable is 0 for respondents in the control condition and 1 for respondents in the treatment condition. Number of relevant stories read is a count of how many threatening or nonthreatening stories respondent read during the information search.

Table A9. Logistic Regression of Engagement with Stories—Alternative Model

	Argue Threatening Coef. (s.e)	Agree Threatening Coef. (s.e)	Argue Nonthreatening Coef. (s.e)	Agree Nonthreatening Coef. (s.e)
Treatment	.22	**.75**	−.46	.14
	(.52)	(.31)	(.43)	(.36)
Number of relevant stories read	1.00	**−.63**	.84	.57
	(.57)	(.31)	(.48)	(.38)
Constant	−4.09	.41	−2.94	−2.06
	(1.03)	(.55)	(.80)	(.69)
N	232	232	200	200
PseudoR^2	.03	.04	.03	.01

Model specification: Logit. Coefficients in bold indicate $p < .05$, based on a two-tailed test. Dependent variables indicate respondents' engagement with the stories: 0 (did not agree/disagree), 1 (agree with (non)threatening story). The treatment variable is 0 for respondents in the control condition and 1 for respondents in the treatment condition. Number of relevant stories read is a count of how many threatening or nonthreatening stories respondent read during the information search. Only respondents who read at least one threatening story are included in the threatening model (N = 232) and only respondents who read at least one nonthreatening story are included in the nonthreatening model (N = 200).

Appendix: Information Search Stories

Respondents only viewed the headlines of each story. They were then able to click on the headlines to see the full text of the stories. Each story is approximately 400 words.

Story 1:
Gangs in the US: How Illegal Immigrants Complicate Law Enforcement
Police commanders may not want to discuss, much less respond to, the illegal alien crisis, but its magnitude for law enforcement is startling. Some examples:

- In Los Angeles, 95 percent of all outstanding warrants for homicide (which total 1,200 to 1,500) target illegal aliens. Up to two-thirds of all fugitive felony warrants (17,000) are for illegal aliens.
- A confidential California Department of Justice study reported in 1995 that 60 percent of the bloody 18th Street Gang in California is illegal (estimated membership: 20,000); police officers say the proportion is undoubtedly much greater. The gang collaborates with the Mexican Mafia, the dominant force in California prisons, on complicated drug distribution schemes, extortion, and drive-by assassinations, and is responsible for an assault or robbery every day in Los Angeles County. The gang has dramatically expanded its numbers over the last two decades by recruiting recently arrived youngsters, a vast proportion illegal, from Central America and Mexico.
- The leadership of the Columbia Li'l Cycos gang, which uses murder and racketeering to control the drug market around L.A.'s MacArthur Park, was about 60 percent illegal in 2002, says former Assistant U.S. Attorney Luis Li. Frank "Pancho Villa" Martinez, a Mexican Mafia member and illegal alien, controlled the gang from prison, while serving time for felonious reentry following deportation.

Good luck finding any reference to such facts in official crime analysis. The LAPD and the Los Angeles City Attorney recently requested a judicial injunction against drug trafficking in Hollywood. The injunction targets the 18th Street Gang and, as the press release puts it, the "non-gang members" who sell drugs in Hollywood on behalf of the gang. Those "non-gang members" are virtually all illegal Mexicans, smuggled into the country by a trafficking ring organized by 18th Street bigs. The illegal Mexicans pay off their transportation debt to the gang by selling drugs; many soon realize how lucrative that line of work is and stay in the business.

The immigration status of these non-gang "Hollywood dealers," as the City Attorney calls them, is universally known among officers and gang prosecutors. But the gang injunction is silent on the matter. And if a Hollywood officer were to arrest an illegal dealer (known on the street as a "border brother") for his immigration status, or even notify Immigration and Customs Enforcement (ICE), he would be severely disciplined for violation of Special Order 40, the city's sanctuary policy.

Story 2:
Why unskilled immigrants hurt America
The day after Librado Velasquez arrived on Staten Island after a long journey from his home in Mexico, he waited on a street corner with other illegal immigrants looking for work. Velasquez, had been a farmer until he heard about work in the US from his cousin, who is also here illegally. He eventually got work loading trucks at a small New Jersey factory, which hired illegals for jobs that required few special skills. The arrangement suited both, until a work injury sent Velasquez to the local emergency room. After five operations, he is now permanently disabled and has remained in the United States to pursue compensation claims.

Velasquez's story illustrates some of the fault lines in the nation's highly charged debate on immigration. Since the mid-1960s, America has welcomed nearly 30 million legal immigrants and

received perhaps another 15 million illegal immigrants. These immigrants have picked our fruit, cleaned our homes, cut our grass, worked in our factories and washed our cars. But they have also crowded into our hospital emergency rooms, schools and government-subsidized aid programs, sparking a fierce debate about their contributions and costs.

Advocates of open immigration argue that welcoming the Velasquezes of the world is essential for our American economy: our businesses need workers like him. Like tax cuts, supporters argue, immigration pays for itself.

But the tale of Velasquez helps show why supporters are wrong about today's immigration. America does not have a vast labor shortage that requires waves of low-wage immigrants; in fact, unemployment among unskilled workers is high—about 30 percent. Like Velasquez, many of the unskilled, uneducated workers now journeying here labor in shrinking industries, where they force out native workers.

These workers come at great cost. Increasing numbers of them arrive with little education and few skills necessary to succeed in a modern economy. Many may wind up stuck on our lowest economic rungs, where they will rely on a vast U.S. welfare and social-services apparatus. Even as welfare reform and other policies are helping to shrink America's underclass by weaning people off such social programs, we are importing a new, foreign-born underclass.

Immigration can only pay off again for America if we reshape our policy, organizing it around what's good for the economy by welcoming workers we truly need and excluding those who, because they have so little to offer, are likely to cost us more than they contribute, and who will struggle for years to find their place here.

Story 3:
A Story of Two Immigrants

Amid the din over illegal immigration, I have been thinking about two immigrants I happen to know rather well.

One is a 3-year-old boy from southern Guatemala. He was brought to the United States in March 2004, one of 11,170 adopted orphans to immigrate that year. The other, who will turn 81 in August, comes from a small village in what is now Slovakia. He entered the United States in the spring of 1948, a few months before his 23d birthday.

Born an ocean and 78 years apart, these two immigrants might seem on the surface to have little in common. But as naturalized US citizens, they in fact have a great deal in common. English, to mention the most obvious example, is the primary language for both. Neither retains the customs of his native land.

The little boy from Guatemala is my younger son. The older man from Slovakia is my father.

America is a richer place because my father and son are here, and no doubt most Americans even those now clamoring for a crackdown on illegal immigration would agree. To countless Americans, the difference between legal and illegal immigration is self-evident and meaningful. But is that really what distinguishes the immigrants we want from those we don't that the former enter the country lawfully, while the latter break the rules to get here? Are immigrants like my father and son inherently desirable merely because a lot of exasperating bureaucratic requirements were met before they came? Are the 11 million illegal immigrants living within our borders unwelcome and problematic only because they got in the wrong way?

A foreigner who enters the United States without first running the immigration-law gantlet is not congenitally unfit to be a good American any more than someone who operates an automobile without a license is congenitally unfit to drive. Our immigration laws are maddening and Byzantine. They are heavily skewed in favor of people related to US citizens nearly two-thirds of all legal immigrants qualify to enter the United States because they are the relatives of someone already here.

In so many other contexts, Americans admire self-starters and risk-takers who find ways to get around roadblocks that would defeat less inventive, determined, or gutsy individuals. Of course it is vital, especially after 9/11, to properly control the nation's borders. But there is still something to be said for the self-starters and risk-takers who look at the formidable roadblocks we place in the path of most would-be immigrants, especially those not related to a US citizen and make up their minds to find a way around them.

Story 4:
Immigrants to Be Proud Of

The exclusionists are wrong when they say the current wave of immigration is tearing our social fabric. The facts show that the recent rise in immigration hasn't been accompanied by social breakdown, but by social repair. As immigration has surged, violent crime has fallen by 57 percent. Teen pregnancies and abortion rates have declined by a third. Teenagers are having fewer sexual partners and losing their virginity later. Teen suicide rates have dropped. The divorce rate for young people is on the way down.

Over the past decade we've seen the beginnings of a moral revival, and some of the most important work has been done by Catholic and evangelical immigrant churches, by faith-based organizations like the Rev. Luis Cortés's Nueva Esperanza, by Hispanic mothers and fathers monitoring their kids. The anti-immigration crowd says this country is under assault. But if that's so, we're under assault by people who love their children.

Immigrants themselves are like a booster shot of traditional morality injected into the body politic. Immigrants work hard. They build community groups. They have traditional ideas about family structure, and they work heroically to make them a reality. This is evident in everything from divorce rates (which are low, given immigrants' socioeconomic status) to their fertility rates (which are high) and even the way they shop.

Hispanics and Hispanic immigrants have less money than average Americans, but they spend what they have on their families, usually in wholesome ways. According to Simmons Research, Hispanics are 57 percent more likely than average Americans to have purchased children's furniture in the past year. Mexican-Americans spend 93 percent more on children's music.

According to the government's Consumer Expenditure Survey, Hispanics spend more on gifts, on average, than other Americans. They're more likely to support their parents financially. They're more likely to have big family dinners at home.

This isn't alien behavior. It's admirable behavior, the antidote to the excessive individualism that social conservatives decry.

Good values lead to success, and that immigrants' long-term contributions more than compensate for the short-term strains they cause. There's no use denying the strains immigration imposes on schools, hospitals and wage levels in some markets (but economists are sharply divided on this). So over the long haul, today's immigrants succeed. By the second generation, most immigrant families are middle class and paying taxes that more than make up for the costs of the first generation.

Story 5:
Report: One in Five Children Will become Obese

One in five children is predicted to be obese by the end of the decade.

But efforts to turn that tide are scattershot and underfunded, and the government killed one of the few programs proven to work, say specialists at the Institute for Medicine.

No one knows which programs really help kids slim down, said the institute said in calling for research to identify best methods.

More troubling, the country lacks the national leadership needed to speed change, lamented an expert panel convened by the scientific group.

Dr. Jeffrey Koplan of Emory University, who led the IOM's panel, said, "This is a major health problem. It's of a different nature than acute infectious threats, but it needs to be taken just as seriously."

To reinforce that point, Wednesday's report spotlighted the government's VERB campaign, a program once touted as spurring a 30 percent increase in exercise among the preteens it reached. It ended this year with Bush administration budget cuts.

Koplan was blunt, calling it a waste of taxpayer money to develop a program that works and then dismantle it.

The report cites other examples of promising federal programs that have yet to reach their potential. Kids gobbled fruits and vegetables in an Agriculture Department school snack program, but it only reaches 14 states. And CDC's main anti-obesity initiative had enough money this year to fund just 28 states starting childhood nutrition and exercise programs.

The report also lauded some creative state and local efforts, including:

- A California program, started in Marin County, to build new sidewalks and bike paths to get children to walk or bike to school.
- An effort by Arkansas schools notify parents when students are overweight. The initiative recently reported a leveling off of the state's child obesity rate.

In 2004 the IOM called for a joint attack on childhood obesity by parents, schools, communities, the food industry and government. Wednesday's report was the first checkup.

"We still are not doing enough to prevent childhood obesity, and the problem is getting worse," concluded Koplan, a former CDC director. "The current level of public and private sector investments does not match the extent of the problem."

Some 17 percent of U.S. youngsters already are obese, and millions more are overweight. Obesity can lead to diabetes, high blood pressure and cholesterol, sleep problems and other disorders.

Story 6:
Mysterious Stone Slab Bears Ancient Writing

An ancient slab of green stone inscribed with insects, ears of corn, fish and other symbols is indecipherable so far, but one message is clear: It is the earliest known writing in the Western Hemisphere.

The ancient Olmec civilization probably produced the faintly etched symbols around 900 B.C., or roughly three centuries before what previously had been proposed as the earliest examples of writing in the Americas.

"We are dealing with the first, clear evidence of writing in the New World," said Stephen Houston, a Brown University anthropologist. Houston and his U.S. and Mexican colleagues detail the tablet's discovery and analysis in a study appearing this week in the journal Science.

The text contains 28 distinct glyphs or symbols, some of which are repeated three and four times. The writing system does not appear to be linked to any known later scripts and may represent a dead end, according to the study.

Other experts not involved in the study agreed with Houston and his colleagues that the horizontally arranged inscription shows patterns that are the hallmarks of true writing, including syntax and language-specific word order.

"That's full-blown, legitimate text—written symbols taking the place of spoken words," said William Saturno, a University of New Hampshire anthropologist and expert in Mesoamerican writing.

Villagers in the Mexican state of Veracruz discovered the tablet sometime before 1999, while quarrying an ancient Olmec mound for road-building material. News of the discovery slowly trickled out, and the study's authors traveled to the site this year to examine and photograph the block.

"This is centuries before anything we've had. People have debated whether the Olmecs had any writing. This clears it up. This nails it for me," David Stuart, a University of Texas at Austin expert in Mesoamerican writing, said of the new find.

The find bolsters the early importance of the Olmecs, who flourished between about 1200 B.C. and 400 B.C., before other great Central American civilizations such as the Maya and Aztec. They are best known for the massive heads they carved from stone. The village where the block was found is close to a site called San Lorenzo, believed to be the center of the Olmec world.

"To me, this find really does bring us back to this idea that at least writing and a lot of the things we associate with Mesoamerican culture really did have their origin in this region," Stuart said.