

# Civic Engagements: Resolute Partisanship or Reflective Deliberation

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*Why do people practice citizenship in a partisan rather than in a deliberative fashion? We argue that they are not intractably disposed to one type of citizenship, but instead adopt one of two different modes depending on the strategic character of current circumstances. While some situations prompt partisan solidarity, other situations encourage people to engage in open-minded deliberation. We argue that the type of citizenship practiced depends on the engagement of the emotions of anxiety and aversion. Recurring conflict with familiar foes over familiar issues evokes aversion. These angry reactions prepare people for the defense of convictions, solidarity with allies, and opposition to accommodation. Unfamiliar circumstances generate anxiety. Rather than defend priors, this anxiety promotes the consideration of opposing viewpoints and a willingness to compromise. In this way, emotions help people negotiate politics and regulate the kinds of citizenship they practice.*

Consider two idealized citizens. The first, the attentive, thoughtful, and deliberative citizen, critically examines not only familiar and favored but also unfamiliar and opposing perspectives. These citizens set aside prior commitments and consider novel points of view. Rather than giving in to the natural inclination to rely on like-minded allies, they engage with others in a wider discussion. The norms for this deliberative citizen include consideration, balance, open-mindedness, and a willingness to collaborate and accommodate.<sup>1</sup>

For the second type of citizen, politics is the passionate pursuit of established goals, and in such circumstances successful citizen engagement demands loyalty and commitment to the cause. As Schattschneider put it, “To un-

derstand any conflict it is necessary . . . to keep constantly in mind the relations between the combatants and the audience because the audience is likely to do the kinds of things that determine the outcome of the fight . . . the outcome of every conflict is determined by the extent to which the audience becomes involved in it” (1960, 2). In other words, outcomes depend on the vigor of the proponents and their ability to recruit and sustain the participation of others. Here, calls for debate and open-mindedness are seen as efforts to delay and derail. Instead, the pursuit of victory impels citizens to stand fast and reject middle-ground compromises. While this form of citizenship—as partisan combatant—is less intellectual in its core, it often reflects the way in which politics actually unfolds.<sup>2</sup>

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<sup>1</sup>Deliberation has a public as well as a private meaning. As Mutz (2006) notes, the inclination to have an interior conversation is a precursor to public deliberation, a vital topic in its own right.

<sup>2</sup>These idealized types echo a debate in contemporary normative political theory with arguments for a deliberative citizen (Benhabib 1996; Fishkin 1991; Gutmann and Thompson 1996; Habermas 1979; Warren 1996) or a more partisan citizen (Sanders 1997; Young 1990, 2000).

Rather than assuming that citizens conform only to a single type, we argue that people can and do practice both types of citizenship, where the appropriate type depends on the circumstances. The question we seek to answer is: when, why, and how do people move from one mode to the other?

We look to emotion for an answer. While not a complete explanation, the emotions people experience shape the way that they approach politics. Research in psychology demonstrates that people's emotional states affect how they deal with the world. Emotions manifest situational appraisals (e.g., Roseman, Wiest, and Swartz 1994; Smith et al. 1993) and structure the sorts of actions that people undertake (Frijda, Kuipers, and ter Schure 1989; Phelps 2006). In politics, emotions help regulate people's attentiveness and engagement (Brader 2006; Dumont et al. 2003; Marcus, Neuman, and MacKuen 2000; Rudolph, Gangl, and Stevens 2000). In particular, the distinction between anxiety and anger is related to people's willingness to act aggressively or to seek further information (Huddy et al. 2005; Mackie, Devos, and Smith 2000) as well as their appraisals of candidates (Capelos 2006) and issues (Huddy, Feldman, and Cassese 2007). Emotions convey information about the environment and guide subsequent searches for further information. Here, we investigate how emotion animates the types of citizenship that people practice.

According to the theory of affective intelligence (Marcus, Neuman, and MacKuen 2000), preconscious affective appraisals identify the strategic character of environments by swiftly mapping their features and matching them against stored memories. In familiar terrain, people automatically rely on routines and habits both to act as well as to make decisions (Bargh and Chartrand 1999). Feelings of enthusiasm tell us we are in the realm of the safe and rewarding, able to engross ourselves in the familiar actions that manage our lives. In novel situations, previously learned routines may prove unreliable. When confronted with conditions of uncertainty and risk, feelings of anxiety arrest reliance on heuristics and initiate a strategy of explicit consideration.<sup>3</sup> Thus, rather than being restricted to one strategy applied in all situations, people can use explicit consideration in some situations or rely on heuristics appropriate in other circumstances.

<sup>3</sup>The theory of affective intelligence indicates that anxiety leads to an active consideration of the information environment. This expectation holds for the low levels of uneasiness associated with typical public policy debates. That being said, it is certainly worthwhile to explore how the neural mechanisms function under more extreme conditions, such as being subject to a terrorist attack (see Huddy, Feldman, and Cassese 2007).

Different environments recommend different strategies. Here, we explore a new emotional strategy: aversion.

People usually navigate familiar environments by relying on habits to manage the mundane tasks of daily life. But sometimes in that environment they confront familiar foes—individuals, groups, causes, slogans, and symbols—that cause discomfort and even pain. Aversion, including feelings of anger, disgust, contempt, and hatred, signals the need to confront an adversary. When familiar aversive stimuli are encountered, people rely on previously learned routines to manage these situations, just as they do for familiar rewarding circumstances. They often simply ignore uncomfortable information or, alternatively, bolster their own views by seeking conforming information.

The effects of aversion have not been integrated into the empirical literature on affective intelligence, and doing so is important because it challenges a widely shared presumption that all “negative” situations produce essentially similar emotional responses.<sup>4</sup> This presumption is common in other theories of emotion. Valence theories distinguish positive emotions from negative (Barrett and Russell 1998; Russell and Carroll 1999). Decision-making theories such as prospect theory (Levy 1992; Quattrone and Tversky 1988) posit that people make different decisions in rewarding circumstances than when anticipating loss. We argue that rather than a homogenous negativity, people encounter two very different kinds of “negative” situations—conditions of uncertain risk and conditions of known threat. Consequently, people will use different strategies to deal with each situation.<sup>5</sup> When people feel threatened, finding themselves in recurring disagreeable situations, they rely on previously learned and previously successful solutions. When people are in risky and novel circumstances, they are likely to be better off engaging deliberative mechanisms, thoughtful consideration, in order to handle the uncertainty. Thus, the kind of citizenship people practice will depend on the kind of negative emotion politics evokes.<sup>6</sup>

<sup>4</sup>The distinction between anxiety and anger is an old one in the psychology literature (Ax 1953). More recently, psychologist Jennifer Lerner has investigated the information-seeking impact of anger as contrasted with anxiety (Lerner and Keltner 2001), though this work in psychology and our work developed independently (Marcus 2002).

<sup>5</sup>There is also evidence that the brain has different structures that mediate anxiety, the amygdala, and aversion, the insula (Phan et al. 2002; Phillips et al. 1997; Phillips et al. 2004).

<sup>6</sup>We do not mean to suggest that anxiety and aversion will be mutually exclusive. Indeed some, perhaps many, familiar threats may stimulate anxiety when the outcome of such situations is uncertain. In this study, we are interested in disentangling their distinct effects.

Our approach describes citizen strategies as a product of situations, not simply dispositions. We know that people often prefer homogenous environments, avoiding information that challenges what they believe and interpreting new information through a partisan lens (Berelson, Lazarsfeld, and McPhee 1954; Festinger 1957; Stroud 2008). These tendencies are strengthened for those who hold strong convictions (Brannon, Tagler, and Eagley 2007; Taber and Lodge 2006). We argue that such patterns of selective exposure and selective interpretation are context specific, activated in conditions that give rise to feelings of aversion and abandoned in conditions that give rise to anxiety.

## **Emotional Triggers for Partisan and Deliberative Citizenship**

### **Desire to Learn More**

The reason why anxiety promotes learning follows from the theory of affective intelligence. When cues from the environment generate an anxious response, the resulting increase in anxiety signals that extant habits are no longer adequate for dealing with the day-to-day environment. An effective way to address novel circumstances is to seek out information about what has changed in the environment and then to explicitly consider how to proceed. When people are faced with familiar rewarding situations, such as the anticipated victory of one's partisan candidate, reactions are governed by enthusiasm and translated into positive action. On the other hand, when people encounter familiar disliked political groups, issues, and leaders, they experience aversion. With aversion, one habituated practice is avoidance—rejecting distasteful news much in the way that one spits out a bite of a rotten apple. With both enthusiasm and aversion, people's responses are governed by already learned and mastered habits.

### **Balance in Information Search**

Once people devote attention to an issue, they can engage in either a defensive search focused on the information that supports prior beliefs, practicing selective exposure, or they can engage in an exploratory search that gives consideration to the claims of opponents. When anxiety signals a problem with prior attitudes, selective exposure will be set aside as people search for useful information, some of which will be found in new arguments from new sources. Thus, people made anxious will pursue more opposing information, and on the whole conduct an information search that is more balanced than those who

are not made anxious.<sup>7</sup> In the case of aversion, we expect a different pattern. When confronted by a familiar threat, people do not need a novel perspective. Instead, they seek information that reinforces rather than challenges—so that the normal defenses will stand strong. Accordingly, we expect that those who feel aversion will limit their search for information and any search for information will be biased.

### **Willingness to Compromise**

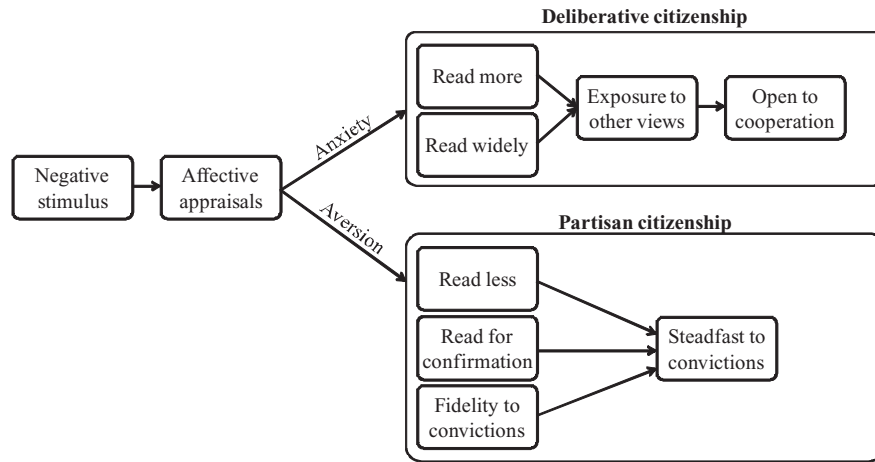
How do emotions and information balance set the stage for the decisions people make about policy? Much of the previous research on how people react to political messages examines persuasion and the conditions under which people reject or accept opposing views. In regard to citizenship, however, the more important concern is not persuasion but consideration—where people who disagree about political goals are willing to listen to alternative viewpoints and seek common ground. In this sense, compromise represents something greater for citizenship than persuasion, not an accession to others' preferences but a willingness to consider the claims of the other side in the service of defining the public interest together. A standard expectation is that when people get emotional about politics, their positions become entrenched, resolute, and steadfast. Our theory predicts that this will be true—for aversion but not for anxiety. Those who are angered by a policy change will protect their prior views by limiting exposure or seeking confirmation and thereby reduce their willingness to endorse compromise. In contrast, we argue that anxiety will have the opposite effect. As anxiety inhibits reliance on habitual routines, it encourages people to seek out more information and to discover alternatives besides their own view. This exposure sets the stage for compromise and cooperation.

Thus, people can engage either as deliberative or partisan citizens, where the kind of citizenship practiced will depend on whether people react with anxiety or with anger.<sup>8</sup> Figure 1 summarizes our expectations. Those who experience anxiety should search for more information on a policy change and explore oppositional as well as supportive information. Those who react with anger should search for less information and that information search

<sup>7</sup>Under conditions of risk, where fundamental strategies are not understood and a change in behavior may be indicated, people need not only confirming information but also potentially challenging information. In the formal literature, optimal information searches under conditions of uncertainty can be a subtle matter (e.g., Calvert 1985; Lupia and McCubbins 1998).

<sup>8</sup>We set aside enthusiasm in these hypotheses as we focus on the circumstances of uncertainty and confrontation to better understand the role of the negative emotions of anxiety and aversion.

**FIGURE 1** Theory of Affective Intelligence, Citizenship, and the Effects of Different Types of Negativity



should be biased toward prior attitudes. Finally, for those who experience an anxious response, the ensuing behavior should show them as more likely to compromise on the policy issue, while the behavior after an aversive response should show people as less likely to compromise. In short, if heightened anxiety is the predominant emotional state, then citizens will be drawn to a more balanced and cooperative state than if the predominant response is aversion.

### Alternative Explanations

Despite our emphasis on emotion, we understand that other mechanisms are important as well. We want to be especially careful to consider explicitly those psychological mechanisms that might generate a spurious emotion-attention link and thus lead to false inferences. In particular, we consider the roles of prior commitments and chronic attentiveness.

First, a long research tradition has established that an individual's commitment to prior beliefs shapes attention and information processing. The idea has deep roots in psychology under the rubrics of selective attention and selective perception (see a summary of early work in Frey 1986). Further, it continues to be explored fruitfully in contemporary political science (Gaines et al. 2007; Redlawsk 2002; Taber and Lodge 2006; Taber, Lodge, and Glathar 2001). While it is clear that prior commitments matter, our theoretical perspective suggests that selective information processing is context specific: it operates more forcefully in conditions that give rise to feelings of aversion and less forcefully in conditions that give rise to

anxiety. Second, we now know that chronic attentiveness affects attention (Delli Carpini and Keeter 1996; Zaller 1992)—some people simply pay more attention to public affairs because they have chosen the field as an area of personal interest. The chronically attentive, as compared with the politically uninterested, routinely seek more information and develop stronger psychological commitments to their policy preferences. Again, our expectation is that emotion will affect attention for both the habitually attentive and habitually inattentive. In our research design, we are careful to account for these additional explanations. We want to isolate emotion's power to shape political attention.

### Research Design

To test our claims that emotional appraisals condition how people handle information, we created a web-based environment where participants have full freedom to wander as they wish, selecting from hostile, harmonious, neutral, and unrelated information. By tracking how people use these web sites, we examine how emotional reactions motivate the pursuit of information. This design improves on prior studies on affective intelligence by shifting from survey data to a laboratory setting, allowing us to better explore the mechanisms of affective response and trace the consequences for citizenship.

Our interest lies in exploring the distinctive effects of aversion connected to threat and anxiety connected to risk. To evoke emotion, we manipulated the content of the initial story web page the participants observed.

Participants were presented with an online newspaper article containing policy information that was (by random assignment) either reassuring or challenging in nature. The article outlined a fictional change in affirmative action admission policies at Oregon's state universities, a location distant from the locale of the study. The content of the story varied such that the university system was portrayed as either extending affirmative action (to a minority-oriented open admissions policy) or eliminating affirmative action admissions. Using preferences reported in the pretest, the news story was identified as either conforming to the individual's policy preference or instead challenging the views of the participant. We expect that those who encounter opposition to their views will have more aversive reactions than those viewing policies in line with their preferences. Aversive reactions are uncommon, emerging in response to specific threats or challenges to one's beliefs (Steenbergen and Ellis 2006). Anxious reactions, however, are more common and hold more general roots. Anxiety can arise whenever people are faced with unfamiliar or uncertain circumstances, even if a policy change is in line with one's preferences.

The study began when participants filled out a background questionnaire online a few days before the web session. On the assigned day, the participant came to a computer laboratory. Participants were instructed to explore the web site as much or as little as they wished. After receiving these instructions, participants began the session by looking at a computer screen opened up to one of the two simulated newspaper web pages, randomly assigned. Figure 2 shows a screenshot in black and white of one of the opening pages.<sup>9</sup>

Each story offered participants a number of links to pursue for additional reading. Three links under the photo on each page allowed participants to read more about the affirmative action policy. Each link was clearly labeled in a way that revealed the content of the page (e.g., "Why affirmative action programs must be preserved") so that subjects could choose different types of information search. One link would take them to a page where their views would be reinforced, the second link would take them to a page where their views would be challenged, and a third link would take the subject to neutral pages

which gave background information. The order of the links was randomized. Following these links led to other newspaper stories, which contained additional links to external sites, such as home pages for affiliated proaffirmative action and antiaffirmative action groups. In all, participants could select up to nine different pages related to the news story: three proaffirmative action, three opposed to affirmative action, and three pages of neutral content related to affirmative action. If participants were not interested in the affirmative action stories on the web site, they could select from a number of "distraction" pages, including a crossword puzzle, a solitaire game, movie reviews, comics, a sports page, and an advice column, or they could choose to stop exploring the web environment and go on to complete the posttest questionnaire. When they ended their session, participants completed a questionnaire eliciting their reactions to the policy they read.

The benefits of such a design are several. Participants can select the kinds of news that interest them and view as much or as little information as they like. In a practical sense, the web-based design improves on text-based designs like information boards in that the web pages closely resemble actual news sources, with full story text and imagery. The drawback to this research design is that it limits our ability to construe the associations we observe as causal, since the research design can best be understood as a carefully controlled observational study rather than a true experiment. We did follow the logic of experimental research in that we created two groups of subjects that were randomly selected to be identical except for the treatment of an invoked emotional response. While challenging policies increase levels of negative emotions, we cannot neatly isolate the aversion versus anxiety distinction critical to our theory.<sup>10</sup> Nonetheless, we gain a direct test of the hypothesis that the "negative" domain is not homogenous. Importantly, the nondirective character of the design enables us to see if people's own emotional reactions spur them to pursue the behaviors associated with each variant of citizenship (partisan and deliberative).

We implemented this design in studies conducted in the spring of 2001 and the spring of 2002. Subjects were recruited from a participant pool of students in introductory American government classes at a public university in the South who received course credit for their

<sup>9</sup>The two versions of the stimuli are nearly identical in length and boast similar readability scores. Each article has a title, photo, and content in line with the specific policy change in question, to roll back or reinforce affirmative action programs. Both articles describe the policy, providing a reason for the change as well as a description of the expected consequences. In addition, both articles include a quote from an advocate of the policy and a quote from an opponent.

<sup>10</sup>See Brader (2006) for an excellent example of such a direct manipulation in the context of political campaign advertisements. However, things may not always turn out so clearly. Our further experimentation, conducted over several years, indicates that such a manipulation is a much more difficult and uncertain enterprise than one might suppose.

FIGURE 2 First Web Page: Supporting Affirmative Action at Oregon Universities

**herald sun.com**

**CLICK HERE**  
to view our website

hill country woodworks  
Chapel Hill

home : nation : AP news

**contact us**

**DURHAM**  
ORANGE  
GRANVILLE  
PERSON  
CHATHAM  
NATION/WORLD  
STATE  
SPORTS  
BUSINESS  
OPINION  
TECHNOLOGY  
ANN LANDERS  
ARTS/FEATURES  
MOVIES  
COMICS  
CROSSWORD  
GAMES  
MILESTONES  
SUBSCRIBE

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CLASSIFIEDS  
YELLOW PAGES  
ADVERTISING INFO

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now available!  
ORDER ONLINE!

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## Oregon universities announce new effort to increase minority enrollment

Previous efforts deemed insufficient in meeting diversity goals

By JACOB SULLIVAN : AP news writer

Eugene, OR (AP) -- Officials from Oregon's state universities announced a new race-based admissions system that will strive for greater diversity by more aggressively trying to match incoming classes to the percentages of racial groups in the state.

"For some time now, we have strived for a diverse campus. Looking back at our success to date, we feel that must be more aggressive in our diversity goals to achieve what we have been unable to reach through conventional admissions policies. While we have made strides, we must be proactive to truly achieve the diversity that creates a quality education," announced Ellen Hardin, chair of the Board of Trustees for the Oregon University System.

The new admissions policy will attempt to match the racial diversity of each admissions class to the racial diversity of the state. Currently, each incoming freshman class is 93% white, compared to the state's population which is 81% white.

The new affirmative action policy will require a radically new set of admissions criteria. Since in past years state universities have not received enough applications to meet minority admission goals, minority students who have taken at least a college prep curriculum will be essentially guaranteed admission.

Under the new policy, the number of white students accepted into Oregon state universities is projected to drop next year. The total number of admitted students will be similar to previous years, with the newly opened slots aimed to be filled by minority students. By university projections, the number of black students will increase by 48%, Hispanic students by 38%, Asian students by 15%, and American Indian students by 20%.

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**EXTERNAL SITES**

participation.<sup>11,12</sup> In all, 215 individuals participated, 122 in the first session and 93 in the second. We found no

significant differences in the results when we compared the two administrations.

### Emotional Responses

Next, we measure participants' emotional responses to the policies using a question wording similar to the traditional American National Election Study questions about

<sup>11</sup>The use of a student sample raises concerns about external validity (Sears 1986). Our sample is generally representative of the population of college students, as the class from which the participant pool is comprised is taken by a wide range of majors, not just political science majors. Probably more important is the match between our participants and the character of the political issue with which we stimulate their feelings: affirmative action is both interesting and familiar to many of our student population. Having said that, we do not yet understand fully the relationship between type of stimulus and the potential response, despite having exerted some efforts in this regard. While several experimental studies that used both college students and adult subjects report no fundamental differences (Druckman 2004; Kühberger 1998; Marcus et al. 1995),

in the end, our subjects are students and the normal cautions are in order.

<sup>12</sup>Within the sample, 29% were 18 years old, 45% were 19 years old, and 26% were 20 years old or older; 58% were female; and 81% were white.

levels of emotional response.<sup>13</sup> The emotional prompts we asked about were “proud,” “hopeful,” “enthusiastic,” “anxious,” “afraid,” “uneasy,” “angry,” “contempt,” “bitter,” and “disgust.” Because previous research suggests that aversion arises only in certain circumstances (Marcus, Neuman, and MacKuen 2000), we use factor analysis to confirm the presence of three distinct emotional responses—*anxiety*, *enthusiasm*, and *aversion*. We find that a three-factor model has a superior fit over two-factor models of negative and positive emotions and disposition/surveillance systems, as described in Appendix C. We used these items to make three separate scales of emotional response—one of *anxiety*, one of *enthusiasm*, and one of *aversion*—employing an additive scale with equal weighting.<sup>14</sup> All of the scales were reliable, with Cronbach’s alpha values ranging between .74 and .93. Our focus is on disentangling the effects of negativity. As such, *enthusiasm*, the other emotion of the disposition system, serves as a control in the substantive models.<sup>15</sup>

### The Effects of Emotion on Information Search and Willingness to Compromise

We first see if people react emotionally to policy positions in our web environment by comparing reactions of those who saw disturbing versus reassuring policy change. We include three control measures to account for alternative explanations. Attitude strength is measured as a 4-point scale of intensity of preferences about affirmative action in college admissions. News consumption reflects the number of days in a week that a person seeks news about politics and public affairs. Interest is measured with a 4-point scale about interest in following governmental affairs. Each of these measures explores whether

<sup>13</sup>The design of the study requires that we measure emotional reactions after study participants engage in any search for additional information in the experimental web site, raising the possibility that the ensuing search elevates levels of emotion. However, as Appendix A shows, mean levels of emotion are comparable whether people had an opportunity to engage in information search or not. (The specific question wording is listed in Appendix B.)

<sup>14</sup>For each scale, we simply take the average of the items (rescaled to the 0–1 interval, with 0 being unemotional and 1 being very emotional). We lose some precision in equal weighting, but thereby avoid over-fitting to the smallish samples in the study.

<sup>15</sup>Our expectation is that *enthusiasm* will operate similarly to *aversion*, the other emotion of the disposition system—encouraging learning only about favorable arguments and discouraging compromise. We include *enthusiasm* to serve as an “instrumentation” control—to ensure that our results are emotion-driven and not merely evidence of a willingness to engage in the experiment.

preexisting dispositions account for some, or all, of the observed variation in citizenship behaviors we examine. These measures are all rescaled 0–1.

As Figure 3 illustrates, the experimental manipulation has a significant effect on the level of emotional response reported. Those who see that Oregon is adopting a policy in line with their preferences are much more enthusiastic, while those who see the universities’ pursuing an affirmative policy inimical to their own preferences react with both heightened aversion and anxiety. Given an expectation that most people have little interest in the details of public policy, the fact that even a distant policy debate engages people emotionally is significant.

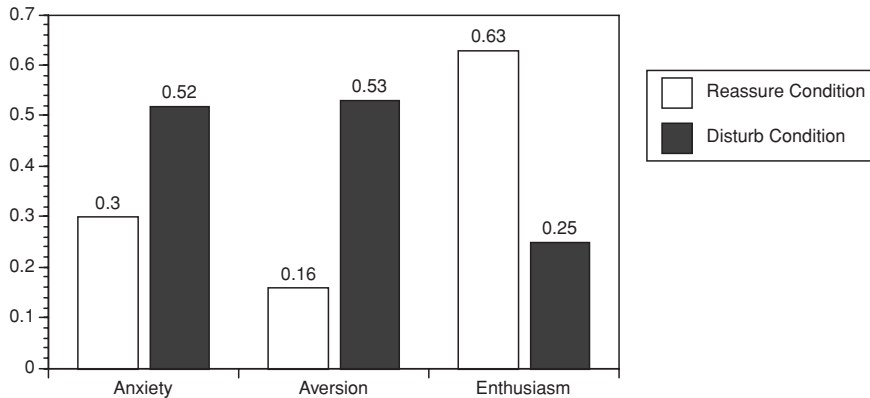
The ability of the challenging stimulus to evoke emotions remains robust even controlling for other individual-level differences. In Table 1, we find that the strength of one’s priors on affirmative action policy contributes to feelings of aversion, but given that these variables are each scaled from 0 to 1, the effect is less than half the effect size produced by the challenging stimulus (compare 0.16 to 0.37). While the intensity of prior preferences fuels anger, it does not contribute to anxiety. We control for attitude strength in later models to ensure that any results we see are not simply due to existing dispositions in preference intensity, news consumption habits, or interest.<sup>16</sup>

### Information Search

Next, we consider whether threatening stimuli motivate people to seek out more information. We devised two measures of information search—one a behavioral response and one a subjective report. The first is a count of the affirmative-action pages visited. We recorded the browsing patterns of each participant during the web session and summed the number of pages visited, excluding the initial page and any visited pages unrelated to affirmative action. The second measure is the subject’s desire to learn more about the policy area. In the posttest questionnaire, we asked participants three items about whether they would like to learn more about

<sup>16</sup>Given the modest numbers of subjects, despite our randomization, it is possible that our treatment and control groups might differ with respect to some confounding third variable that might affect the emotional response variable. To check this, we used one-to-one genetic matching (Sekhon and Diamond 2007) to match subjects from the treatment group with similar subjects from the control group based on party identification, ideology, gender, age, religious affiliation, and grade point average. For all three outcomes in Table 1, our estimates done with matching were very similar to those done with the unmatched data, confirming that our research design produced a treatment and control group that appear to be well balanced.

**FIGURE 3** Effects of Issue Challenge and Reassurance on Anxiety, Aversion, and Enthusiasm



Notes: Emotional response scales are each normalized to 0–1. Differences are all significant,  $p < .05$ ; one-tailed test.  $N = 198$ .

**TABLE 1** Effects of Issue Challenge on Anxiety and Aversion

	Anxiety	Aversion	Enthusiasm
Issue challenge	0.22* (0.03)	0.37* (0.03)	-0.38* (0.03)
<i>Alternative explanations</i>			
Attitude strength	-0.02 (0.07)	0.16* (0.07)	0.01 (0.07)
Political interest	0.08 (0.07)	-0.01 (0.08)	-0.04 (0.07)
News consumption habits	0.04 (0.06)	0.08 (0.07)	0.03 (0.06)
Constant	0.25* (0.07)	0.00 (0.07)	0.63* (0.07)
N	197	197	197
Adjusted R <sup>2</sup>	0.18	0.37	0.41

Notes: Standard errors are in parentheses. OLS regression estimates. \* $p < .05$  on a one-tailed t-test.

proaffirmative action groups, antiaffirmative action groups, and affirmative action policies generally. We combined responses to these three questions into a 7-point scale to capture whether study participants were intrigued by what they had read (Cronbach’s alpha of .84). The observed behavior, the number of pages visited, provides direct evidence of search, but is limited by the character of the design and the tendency for participants to comply with an experimenter’s demands (although subjects were instructed to view as much or as little of the web pages as they wanted). The second measure better captures moti-

vation but cannot show whether those motivations will be pursued.

Our theory suggests that anxiety generated by challenging policy stories will spur the search for more information, while aversion should inhibit information search. Table 2 presents the results. In column 1, we see that the anxiety produced by the disturbing news story generates increased searching, while aversion limits search. Those made anxious by the stimulus on average visited two more stories (2.04) on the web site than those who were not anxious. In terms of magnitudes, the difference between those made anxious and those who remained calm accounts for about half the range of search behavior. In addition, we see that aversion has a substantial and distinct effect on search behavior in the opposite direction, limiting the pursuit of additional information. In column 1, we see that aversion considerably dampens the subjects’ inclination to read pages (coefficient of -1.63). When participants are faced with a policy that makes them angry, they avoid further reading. The effect of anxiety is such that those most anxious browse through more than four web pages beyond the initial stimulus page. Those who had a highly aversive response visited half as many pages. In column 3, we see the effect of anxiety on the desire to learn more about the policy, which is positive and significant. Those with the highest issue anxiety express a desire to learn more about the issue that is three times as great as those who experience minimal anxiety. This pattern confirms the affective intelligence hypothesis—by showing that the emotions of the surveillance system are central in governing political attention even after controlling for other emotional responses and individual differences in political interest.



**TABLE 2** The Effects of Emotions on Information Search

	Search Behavior (Pages Read)		Search Motivation (Future Intent)	
	Challenging	Reassuring	Challenging	Reassuring
<i>Emotion</i>				
Anxiety	2.04* (0.77)	-0.10 (1.48)	0.58* (0.13)	0.18 (0.19)
Aversion	-1.63* (0.75)	-2.47 (1.60)	-0.20 (0.13)	0.06 (0.20)
Enthusiasm	-0.61 (0.86)	-2.04* (1.03)	0.38* (0.15)	0.17 (0.13)
<i>Alternative explanations</i>				
Attitude strength	-0.48 (0.66)	-1.10 (1.08)	0.20* (0.11)	0.02 (0.15)
Political interest	0.68 (0.64)	1.26 (1.11)	-0.06 (0.11)	0.06 (0.14)
News consumption	0.41 (0.60)	0.51 (0.88)	0.18* (0.10)	0.14 (0.11)
Constant	2.76* (0.76)	4.56* (1.21)	0.13 (0.13)	0.31* (0.15)
Adj. R <sup>2</sup>	.08	.03	.17	.03
RMSE	1.53	2.01	.27	.26
N	113	84	113	84

Notes: Standard errors are in parentheses, OLS regression estimates. \*p < .05 on a one-tailed t-test.

To confirm that these emotional reactions are the consequence of situational appraisals and not simply individual differences in emotionality, we consider the effects of emotion when people are confronted with favored outcomes. In our earlier analysis, we saw that the negative emotions of anxiety and aversion were infrequently elicited in the face of friendly policy change, and we see in column 2 that it is the positive emotion of enthusiasm that best explains information search when confronted with reassuring policy change. Those pleased with this policy change are less inclined to seek additional information. In terms of information search, the evidence is clear. The emotions of the surveillance system spur attention to novel information, while aversion suppresses the inclination to seek out new information. Moreover, these findings are not undermined by the three alternative dispositional factors. We next consider whether anxiety leads to a more balanced search for information, encouraging a reconsideration of the evidence, and whether aversion promotes a biased information search, connected to a renewed commitment to one's original position.

### Bias in Search Patterns

To test bias in information search, we rely on three measures, two related to the content of the actual search patterns, and one related to the stated desire to learn more about opposing views. The first measure is a count of the number of web pages selected that conflicted with the subject's prior preferences on the issue—for instance, the number of proaffirmative action pages viewed by a person opposed to the policy. The second measure reflects the ratio of opposing pages to the total number of affirmative action pages considered, among those who engaged in any information search. The third measure reflects the motivation to learn about opponents, drawn from posttest questions about interest in learning more about the sides of the issue.

We present the results of each measure as a separate column in Table 3. The first model of the number of opposing pages visited is estimated with Poisson regression, the second model reports the ratio measure regressed on the three measures of emotion, and the third model is an ordered probit model of the desire to learn more

**TABLE 3** Willingness to Learn Opposing Viewpoints (Due to Challenging Stimulus)

	Number of Opposition Pages Viewed		Ratio of Opposition Pages to Total Pages Viewed		Desire to Learn More about Opponents	
	Challenging	Reassuring	Challenging	Reassuring	Challenging	Reassuring
<i>Emotion</i>						
Anxiety	0.92*	0.15	0.06	0.06	2.84*	1.61*
	(0.55)	(0.69)	(0.10)	(0.19)	(0.64)	(0.85)
Aversion	-1.26*	-0.86	-0.21*	0.00	-1.74*	-0.16
	(0.53)	(0.74)	(0.10)	(0.21)	(0.60)	(0.91)
Enthusiasm	-0.12	-0.65	-0.05	0.01	1.83*	-0.26
	(0.61)	(0.48)	(0.11)	(0.14)	(0.67)	(0.59)
<i>Alternative explanations</i>						
Attitude strength	-0.44	0.18	-0.09	0.19	-0.08	0.04
	(0.45)	(0.52)	(0.08)	(0.15)	(0.51)	(0.60)
Political interest	0.05	0.10	-0.03	-0.16	-0.15	0.59
	(0.48)	(0.54)	(0.08)	(0.14)	(0.49)	(0.64)
News consumption	0.06	0.49	-0.09	0.27*	0.53	0.59
	(0.43)	(0.41)	(0.08)	(0.12)	(0.46)	(0.50)
Constant	0.27	0.15	0.48*	0.15	—	—
	(0.53)	(0.57)	(0.10)	(0.16)		
N	113	84	99	69	113	84
Adjusted R <sup>2</sup>	—	—	0.07	0.01	—	—
Pseudo R <sup>2</sup>	0.04	0.02	—	—	0.12	0.07
RMSE	—	—	0.18	0.24	—	—

Notes: Standard errors are in parentheses. The models in columns 1 and 2 represent a Poisson regression, the models in columns 3 and 4 represent an OLS regression, and columns 5 and 6 are ordered probit models.

\*p < .05 on a one-tailed t-test.

about the views of opponents.<sup>17</sup> The overall pattern is clear: anxiety and aversion influence the amount of opposing information explored. Those made anxious by the challenging stimulus had a higher probability of visiting pages that conflicted with their prior views and expressed greater willingness to learn more about the views of opponents. Only in the case of the ratio measure of bias does anxiety fail to have a statistically discernible effect. Aversion has the opposite impact, inhibiting the search for opposition information across all three measures. When the policy change induces anger, participants are more likely to retreat to their prior attitudes and look for information that reinforces those priors. We also unexpectedly find that those who respond to challenging policies with enthusiasm are also more likely to express interest in learning more about opponents. Figure 4 graphically

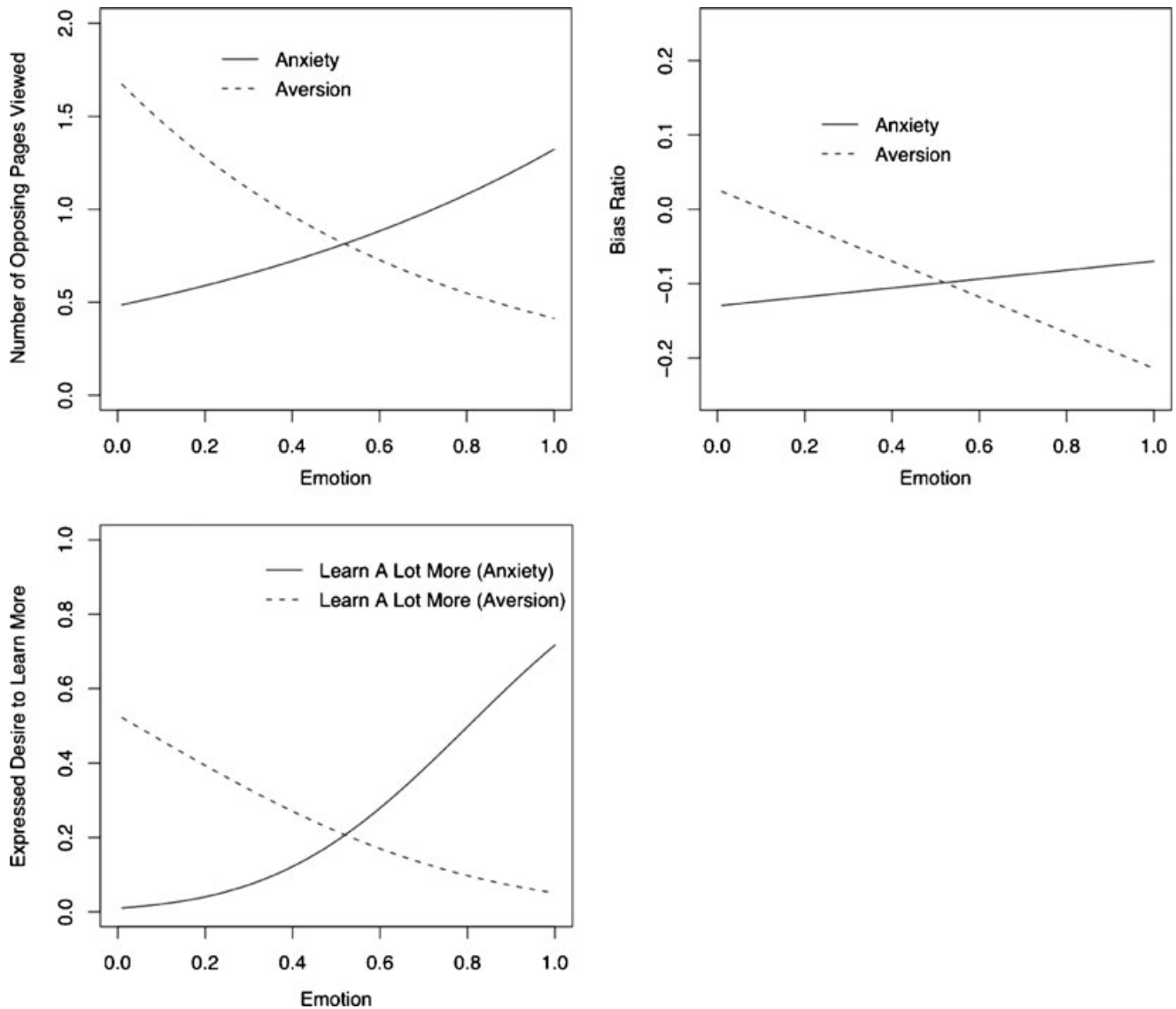
<sup>17</sup>We use OLS regression models in explaining the total number of pages visited and Poisson models relating to the number of opposing pages. In the former case the range is 0–8 and the distribution is fairly close to normal, while in the latter, the variable ranges from 0 to 3 and is not close to being normally distributed.

illustrates the difference between effects of anxiety and aversion. In the three panels, we see that those made anxious (the solid line) are more likely to seek information that might challenge their priors, while those made angry (the dashed line) turn to arguments that are familiar and agreeable. The aversion generated by a challenging policy issue provokes a resistance to outside information, while anxiety leads to a desire to learn about alternative views.

## Compromise

Emotions, we now see, play an important role in the amount and type of information people gather. But policy debate is about choosing a particular outcome, so we are also interested in what emotional responses imply for policy outcomes. Can emotions influence individuals' willingness to consider competing claims in a choice situation? Given our results thus far, it appears promising that the engagement of the surveillance system may open, rather than shut, the doors for political compromise.

**FIGURE 4 Bias in Information Search in Challenging Condition**



*Notes: Number of Opposition Pages Viewed.* Estimated (Poisson regression) as a function of anxiety, aversion, and enthusiasm. Anxiety ( $p < .05$ ) and aversion ( $p < .01$ ), one-tailed test.  $N = 114$ .

*Ratio (of Opposition Pages)* is defined as the ratio of opposing and neutral pages viewed to the total pages viewed. Estimated (OLS) as a function of anxiety, aversion, and enthusiasm. Aversion ( $p < .01$ ), one-tailed test. Anxiety is not statistically distinct from the null.  $N = 114$ .

*Expressed Desire to Learn More* is the probability of wanting to learn more about the opposition viewpoint. Estimated (ordered probit) as a function of anxiety, aversion, and enthusiasm. Probabilities for wanting to know less, not shown, slope downward for anxiety and upward for aversion. All measures are significant ( $p < .05$ ), one-tailed test.  $N = 114$ .

We employ a measure of compromise that sums responses to three items. First, we consider two measures of participants' explicit inclination to compromise. Once participants completed reading the materials, we asked them to indicate what the Oregon university system should do about the policy, first from their own point of view and second, taking into account everyone's views. They could choose to expand affirmative action, eliminate

it, or produce some compromise solution.<sup>18</sup> As a third component, we consider whether participants on their

<sup>18</sup>Thirty-seven percent of those viewing challenging stimuli voiced personal support for compromise, compared to 30% of those in the reassurance condition. Regarding the decision to compromise considering all points of view, 72% of participants presented with challenging stimuli chose to compromise, as did 63% of those viewing reassuring stimuli.

**TABLE 4 Willingness to Compromise as a Function of Emotions and Nature of Information Search**

	Challenging		Reassuring		Challenging		Reassuring	
<i>Emotion</i>								
Anxiety	1.64*	2.18*	1.39*	2.07*	1.49*	2.02*	(0.63)	(0.87)
Aversion	-1.48*	-1.18	-0.94	-0.95	-1.08*	-1.20	(0.58)	(0.91)
Enthusiasm	1.24*	-1.19*	1.50*	-1.01	1.44*	1.55*	(0.65)	(0.63)
Number of opposing pages	—	—	0.53*	0.18	—	—		
Ratio of opposition pages	—	—	(0.18)	(0.14)	1.26*	0.35	(0.70)	(0.60)
<i>Alternative explanations</i>								
Attitude strength	-1.39*	-1.28*	-1.23*	-1.35*	-1.30*	-0.67	(0.50)	(0.62)
Political interest	-0.94*	1.00	-1.01*	1.02	-0.75	1.48*	(0.76)	(0.65)
News consumption	0.76	-0.48	0.75	-0.58	0.75	-0.23	(0.47)	(0.50)
Pseudo R <sup>2</sup>	0.12	0.11	0.15	0.12	0.13	0.11		
N	103	79	103	79	92	65		

Notes: Standard errors are in parentheses. Each column represents a separate ordered probit regression. \*p < .05 on a one-tailed t-test.

own initiative voiced support for compromise. We asked study participants to write open-ended responses to the materials they viewed, to explain their choices about what should happen in Oregon, and to comment on the principles that underlie affirmative action. We coded these essays with respect to the subjects’ willingness to seek alternative solutions—rather than merely arguing for or against the Oregon affirmative action policy. When an individual offered (or expressed an explicit interest in finding) an alternative remedy other than strengthening or weakening affirmative action, we so coded their response.<sup>19</sup> Here, less than half chose to compromise. These three nominal measures of support for compromise were summed to form a scale (Cronbach’s alpha of 0.65), then modeled using ordered probit.

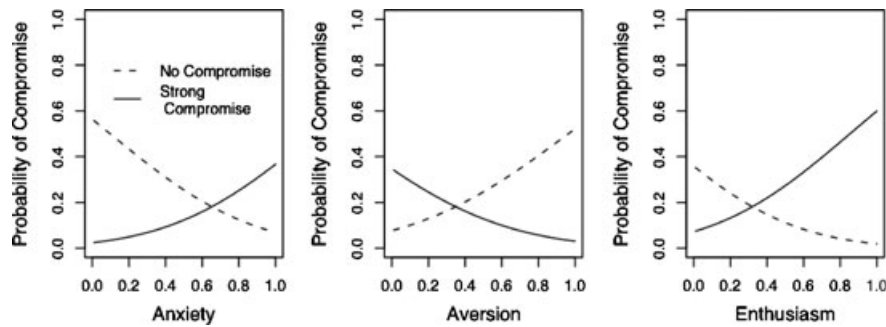
In the first column of Table 4, we show compromise as a function of the three emotions: anxiety, enthusiasm, and aversion. Then, to illuminate the mechanisms

by which anxiety encourages compromise, we consider whether cooperation is solely a product of the emotions raised, or a reflection of kinds of information pursued within the web environment. We use both the count measure of the number of opposition pages viewed and the ratio measure of open-minded search in separate models. We find that emotional reactions significantly influence the desire for compromise. Those who were made anxious by the challenging stimulus were more likely to endorse compromise, while those made angry were significantly less likely to accept a middle-ground remedy. In the unlikely case that people were enthusiastic about a challenging policy story, compromise was also welcomed. When the policy conforms to one’s priors, enthusiasm limits one’s willingness to compromise, but if one feels any anxiety, compromise receives greater consideration. Whether the policy is reassuring or challenging, holding strong priors about the policy issue also inhibits the consideration of compromise. However, the effects of these emotions persist even when controlling for individual differences such as attitude strength and political interest.

To what degree is the willingness to compromise a product of the kind of information search engaged? We find that visiting opposing pages opens the door to

<sup>19</sup>Three coders read the open-ended comments to assess the substantive nature of the response, the expressed desire for alternative or compromise solutions, and other things. To assess reliability, responses from a sample of 30% of participants were simultaneously coded by two different coders. The level of coder agreement was quite high (94%), with a significant Cohen’s kappa of 0.87.

**FIGURE 5** Willingness to Compromise as a Function of Emotion



Notes: Plots derived from ordered probit estimates for subjects in the challenging condition. All measures significant,  $p < .05$ , one-tailed test.  $N = 104$ .

compromise. Controlling for the kind of information search, anxiety remains a predictor of openness and the effects of aversion are moderated. In the fifth column, we find the ratio of opposing pages viewed is a significant influence on one's willingness to compromise—the more people direct their information search toward the viewpoints of the other side, the more likely they are to move from their priors to consider other options. Thus, the effects of emotion on compromise are mediated by the kinds of information search those emotions provoke. However, even controlling for the kinds of information sought, anxiety still has a significant effect on willingness to compromise. Figure 5 illustrates the dramatic effects of emotions on support for compromise. We see that rising anxiety is positively associated with a desire for compromise. And, equally, an aversive reaction leads to a rejection of compromise. Activating the surveillance system inspires not only attention to policy issues, but does so in a way that encourages consideration of alternatives and compromise.<sup>20</sup>

<sup>20</sup>We tested for nonlinear specifications and for interactions among the covariates in our model specification. First, the control variables are all discrete with a small number of categories, so we estimated alternative models with dummy variables for each category in each control variable to account for possible nonlinearity. We also include quadratic terms for the emotion measures, which do have a number of categories. Under these statistical manipulations, the estimates for the measures of emotion were not altered in any material fashion. In general, we found little evidence that the emotional measures have nonlinear effects on the various outcomes. We also tested for interactions, to see whether any of the alternate controls modulated the effects of the emotion measures. Again, we found little consistent evidence of such effects. Across all the outcomes, we found only two statistically significant interactions. We found that political interest modulates the effect of enthusiasm in the model for the total number of pages read and that attitude strength moderated the effect of aversion in the model for the desire to learn more about opponents. In the first case, the enthusiasm effect strengthened as interest increased. In the second case, the effect decreases

## Discussion

Our empirical tests confirm that emotions shape the ways that people acquire political information, where two different types of negative emotions—aversion and anxiety—produce distinctive response patterns. When familiar threats spur aversion, people shut down their information search, practice selective attention, and become close-minded about alternatives. In contrast, when novel circumstances produce anxiety, people are more willing to seek new perspectives and become open to compromise.

We recognize more work needs to be done. A fuller array of issues and a more heterogeneous array of subjects would help, of course. The design of the study, however, improves on extant survey-based evidence in that we can now more closely connect people's emotional reactions with their behavior in a controlled environment. Yet important questions—beyond the scope of this study—remain about just how public policy issues generate anxiety and aversion. It is clear that our issue manipulation generates a distinct pattern of emotional response: emotional reactions are not mere reflections of people's dispositions; they also respond actively to the immediate policy environment. These emotions have consequences for the practice of citizenship—beyond that explained by prior predispositions like attitude strength and attention to politics. Having assessed the consequences, we now know that further work is needed to identify the causes—we want to better understand why people identify political situations as risky versus threatening.<sup>21</sup>

for higher levels of attitude strength. The interactions appear to be isolated cases that do not alter our general conclusions about the role of emotions in politics.

<sup>21</sup>People deal with their emotions in quite different ways, and that will undoubtedly impact the ways in which politics engages them

We must of course acknowledge that a variety of other factors shape the different modes of citizenship. Framing influences how people appraise issues (Nelson, Clawson, and Oxley 1997), and how the media chooses to cover an issue can shape the voters' stances (Gilens 1999). Campaign ads, by their content and style of presentation, shape the responses of those who observe them (Brader 2006; Valentino, Hutchings, and White 2002). How citizens practice politics is also influenced by their social context (Huckfeldt, Johnson, and Sprague 2004; Mutz 2006). Institutional settings clearly encourage, depress, and shape the form of citizenship practiced in a society. Yet as these factors function, they touch the emotions of the citizens. To understand the political meaning of framing, campaign ads, or social context, we want to know whether the mechanisms evoke anxiety or aversion, since each will have distinct consequences for the manner and quality of practiced citizenship.

### Some Implications

In thinking about how citizens engage in politics, it is common to distinguish different types of citizens—the politically sophisticated versus the less knowledgeable, the strong partisans versus the weakly affiliated, those who vote versus those who engage in more demanding acts like volunteering for a candidate. But rather than focus on fixed typologies, we argue that different modes of citizenship are suited to different circumstances and goals—some situations demand the commitment of partisan citizenship while other instances recommend a more deliberative engagement. The results of this study support the view that two modes of citizenship are available to citizens—deliberative (reflective consideration of available choices) and partisan (steadfast adherence to established convictions).

The way that citizens approach politics depends in part on affective appraisals that identify the political geography of the moment as either aversive or anxious. Research on motivated reasoning shows the power of prior attitudes in directing how new information is evaluated (Kunda 1990; Taber and Lodge 2006). It is clear that an inclination toward partisan citizenship reflects individual differences in sophistication and the intensity of prior preferences. Consistent with that account, we find here that those holding strong views will more likely engage anger and partisan processing. But motivated reasoning

(Gross and John 2003). In other experimental work (Wolak et al. 2003), we find it difficult to isolate anxious responses, as assessments of risk appear to hinge on both individual factors and the issue in question.

is only one strategy people can employ in the face of new policy information. In unfamiliar or uncertain terrains, the partisan biases that guide motivated reasoning can be set aside and attention turned to an open consideration of what is new. Our theory and evidence indicate that the political environment, and the emotions that it stimulates, also directs the kind of citizen behavior pursued. Both predispositions and contemporary context matter.

That people react differently to risk and threat, via anxiety and aversion, may help illuminate some puzzles in political communication. This emotional duality could explain some of the inconsistent evidence of selective exposure (Chaffee et al. 2001; Iyengar et al. 2008; Sears and Freedman 1967), as people's desire to seek reassuring information and avoid challenges may be driven by multidimensional and contradictory emotional cues. Further, the question of negative campaigning's unpredictable impact (Lau et al. 1999; Lau, Sigelman, and Rovner 2007) might be informed by the distinction. The lack of clarity may be due to the operation of two distinct forms of negativity, one associated with conditions of risk and one associated with conditions of threat. As this study has shown, each has unique cognitive and political consequences. Ads that signal risk will produce consequences that are the opposite of those ads that signal threat.

Finally, emotions motivate strategic action for both citizens and political elites. When in familiar circumstances, people value information primarily for its capacity to bolster their familiar habits of action, confirm their partisan orientation, and sustain partisan solidarity with like-minded others. But when the past seems an inapt guide to current circumstances, people explore alternatives from sources foreign as well as familiar. Thus, at emotions' distinctive signal, people's information processing comports with the norms of either a partisan or a deliberative citizenship. The important implication is that contemporary information does not have universal value to citizens—its value depends on strategic requirements.

It seems likely that the distinction between anxiety and aversion affects not only citizen information processing but also citizen behavior as well. Commonly, enraged partisans want to go to the streets, send in their financial support, and march to the polls. Those same activated citizens resist a social deliberation that calls for honoring others' perspectives and a cooperative search for solutions. Angry participants notoriously produce poor deliberation; worried participants might do better.

Equally, elite political strategies incorporate the complexity of negative emotions. Any campaign, whether to

**TABLE A1 Measuring Emotional Response by Experimental Condition**

Level of Emotion, Disturb Condition	Information Search Available (Spring 2001, 2002)	No Search Available, Identical or Similar Stimulus (Fall 2002, Spring 2003)
	Mean anxiety	0.52
Mean aversion	0.52	0.48
Mean enthusiasm	0.24	0.28
N	114	83

gain victory in an election context, pursue policy change, or mobilize support to begin or end a war, confronts three distinct populations: supporters, opponents, and disinterested spectators. On the one hand, campaigns must activate their supporters and guard against the attempts of opponents to undermine loyalty: they often turn to anger and disgust as the currency of political discourse. On the other hand, campaigns often require new supporters to succeed. The spectators are an obvious target—the challenge lies in breaking their habits of inattention. Further, the large pool of opponents may be appealing if targeted communications can motivate them to abandon their stands and to consider alternative resolutions. In both cases, the anxiety of unknown risk lies at the core.<sup>22</sup> Thus politics, even combative politics, may incorporate

<sup>22</sup>In American politics, the part played by the abandonment of partisan commitment and a reconsideration of alternatives is sometimes underappreciated (MacKuen et al. 2007).

strategies that promote not only partisan conflict, but also the precursors of civic deliberation.

## Appendix A: Emotional Responses after First Exposure and When Leaving Web Environment

One concern with this design is that emotional responses are assessed after participants engage in information search, rather than immediately after reading the initial stimulus story. (We avoided contaminating the emotion-produced behavioral response with an intervening measurement battery.) As such, measures of emotional response may be altered by the intervening search. To assess the degree to which the information search modified the initial emotional response, we conducted separate studies in Fall 2002 and Spring 2003 where participants read only the initial stimulus and then proceeded to the questionnaire with no opportunities for additional information search. One subset of participants read a news story identical to that in the first study. A second set of participants saw a very similar version of the initial stimulus, identical in content but slightly longer with the addition of several neutrally worded sentences that discussed the history of affirmative action policy in the states (Wolak et al. 2003).

In Table A1, we compare mean levels of emotional response for this study with two replication subsets combined. The mean levels of anxiety, aversion, and enthusiasm are quite similar regardless of whether emotional response was measured immediately after participants read the first web page or after they had the opportunity to

**REPLICATION OF TABLE 1 The Effects of Issue Challenge on Anxiety and Aversion**

	<i>Anxiety</i>		<i>Aversion</i>		<i>Enthusiasm</i>	
	Main Study	Replication	Main Study	Replication	Main Study	Replication
Issue challenge	0.225* (0.033)	0.273* (0.067)	0.375* (0.035)	0.333* (0.074)	-0.384* (0.033)	-0.349* (0.064)
<i>Alternative explanations</i>						
Attitude strength	-0.020 (0.066)	-0.080 (0.144)	0.136* (0.070)	-0.084 (0.159)	0.002 (0.066)	0.152 (0.138)
News consumption habits	0.077 (0.053)	-0.043 (0.113)	0.067 (0.056)	0.027 (0.125)	0.006 (0.053)	0.021 (0.109)
Constant	0.285* (0.062)	0.327* (0.105)	0.018 (0.066)	0.191 (0.116)	0.624* (0.062)	0.519* (0.101)
R <sup>2</sup>	0.20	0.33	0.38	0.36	0.42	0.46
N	198	41	198	41	198	41

Notes: OLS regression estimates, standard errors in parentheses. \*p < .05 on a one-tailed test.

search for additional information. Levels of aversion are slightly lower for participants who read only the initial stimulus, while levels of enthusiasm are slightly higher. None of these differences are significant (paired t-tests). In short, we find similar levels of emotional response in both the original study and the replication.

As additional evidence of the ability of the stimulus to generate emotional response, we also have replicated Table 1. We find that issue challenges generate similar levels of emotional reactions, controlling for attitude strength and news consumption, regardless of whether one had the opportunity to seek additional information or not.

We also confirm that the emotional reactions generated by the stimuli affect people's desire to learn about the issue even when not given the opportunity to pursue information in the web environment. Here, we use replication data from the Fall 2002 study as well as responses from two studies in 2003 that used nearly identical stimuli that included an additional paragraph of neutral text. (In these two studies, all participants were confronted with issue challenges.) In the replication studies, we find that anxiety related to seeing policy challenges is positively associated with desire to learn more about the issue and desire to learn more about opponents while aversion is negatively associated with interest in learning about opponents. These smaller studies, designed for other purposes, do not provide multiple measures nor do they examine the willingness to compromise. They do, however, confirm that emotions have a direct influence over both attention and open-mindedness.

## Appendix B: Measures

*Emotional Response:* "Now we would like to understand how you feel about the Oregon University System's affirmative action policy. People have various feelings about these matters, and we'd like to get your own personal reactions. Please concentrate on your feelings rather than your thoughts. Would you say the Oregon University System's affirmative action policy makes you feel: VERY angry; SOMEWHAT angry; NOT VERY angry; NOT AT ALL angry?"

*Information Search—Subjective Measures:* "Thinking about what you have read, would you like to learn more about the ideas of anti-affirmative action groups (such as Americans Against Discrimination and Preferences)? Would you like to learn more about the ideas of pro-affirmative action groups (such as Americans United for Affirmative Action)? And more generally, would you like

to learn more about the affirmative action controversy and ways to handle it?"

*Willingness to Compromise:*

- (A) "From your own personal point of view, as well as the general principles involved, which of these options would you prefer?"
- (B) "Now taking into account everyone's views, as well as the general principles involved, what should happen?"

Response options for both measures: "1. The university system should eliminate affirmative action policies on admissions. 2. The university system should enhance affirmative action policies to insure full representation in the student body. 3. The university system should try to work out a compromise."

*Alternative Explanations:*

- Attitude strength: "How strongly do you feel about [affirmative action in college admissions]?" (Very strongly, Somewhat strongly, Not very strongly, No feelings one way or the other)
- Political interest: "Generally speaking, how interested in politics would you say that you are?" (Very interested, Somewhat interested, Not very interested, Not at all interested)
- News consumption: "How many days in the past week did you read about politics and public affairs in a daily newspaper?" (Number of days)

## Appendix C: Measurement of Emotions

We verify that our stimuli generate distinctive feelings of aversion by using confirmatory factor analysis. We consider three factors: enthusiasm (proud, hopeful, enthusiastic), aversion (contemptuous, bitter, angry, disgusted), and anxiety (anxious, uneasy, afraid). We find that the relevant emotion items load highly on both aversion and enthusiasm, with factor loadings between 0.80 and 0.92. While the factor loadings of the anxiety items tend to be lower, from 0.56 to 0.95, in all, the fit of the model is good with a goodness of fit index of 0.92. More critically, the model fit of the three-factor model of emotional response is found to be superior to alternate two-factor conceptions of emotional response that exclude aversion as a unique dimension. As indicated by the table below, the three-factor model has a significantly lower chi-square than both a two-factor positive/negative model and a two-factor disposition/surveillance model.



	Chi-square	Degrees of Freedom	Goodness of Fit Index	Standardized Root Mean Squared Residual
Three-factor model: Anxiety, Aversion, Enthusiasm	98.00	32	0.92	0.059
Two-factor model: Surveillance (anxiety), Disposition (enthusiasm, aversion)	365.23	34	0.69	0.095
Two-factor model: Positive (enthusiasm), Negative (aversion, anxiety)	146.64	34	0.89	0.063

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