

On The Distinct Political Effects of Anxiety and Anger

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Abstract

We consider the structure of political emotions by differentiating between the distinct negative emotions of anger and anxiety. Past research has emphasized a two-dimensional valence model in which positive and negative affect are distinct. But recent research in psychology challenges that view, arguing instead for a distinction among different types of negative emotions. We explore the distinction between anger and anxiety on attention to, and support for, the Iraq war. Findings are drawn from a national panel of Americans (N=1549 in wave 1) interviewed by telephone at three time points between October 2001 and June 2003. Feelings of anger and anxiety were assessed toward diverse groups of political actors and events linked to the Iraq war: “President George Bush”, “Saddam Hussein”, “anti-American terrorists”, “the war with Iraq,” and “anti-war protesters.” Findings confirm expectations on the distinct effects of anger and anxiety. Both anxiety and anger increase attention to the war, although the effects of anxiety are slightly larger, which is in line with typical vigilance effects. More importantly, anger and anxiety have opposite effects on the perceived risks of the war and support for it. Anger decreased the perceived risks associated with the war and heightened war support whereas anxiety did the opposite; it heightened perceived risks and dampened war support. We consider the broader implications of this research for American support for the Iraq war, the political distinctiveness of anger and anxiety, and functional approaches to emotion more generally.

Research on emotions has had growing influence on the study of political behavior, producing valuable insights into the emotional underpinnings of political beliefs. George Marcus, Michael MacKuen and colleagues (1993; 2000) have argued for the centrality of emotion within political decision making. Their theory of affective intelligence focuses on two weakly related dimensions of affect, anxiety and enthusiasm, that have distinct effects on political judgments. In their research, anxiety enhances interest in political matters and inhibits citizen reliance on long-standing political beliefs in arriving at political decisions whereas enthusiasm influences candidate choice and encourages active interest and involvement in a political campaign. In addition to demonstrating the intricate interconnectedness of affect and cognition, these findings hold important implications for everyday politics. Marcus and colleagues conclude that candidates who engender anxiety cause voters to seek out more information about a campaign, whereas candidates who elicit enthusiasm are more likely to foster active campaign involvement. Their research on affective intelligence thus goes beyond a simple demonstration of the political relevance of emotion to underscore the differentiated political effects of specific emotions elicited by political events and candidates.

Evidence of two distinct dimensions of political affect has emerged in other studies of political reasoning (Abelson et al 1982; Marcus 1988; Brader, 2006) and is consistent with a large body of research in psychology on the structure of emotions more generally. Two distinct dimensions of self-reported positive and negative affect commonly emerge in social psychological research, and the dimensions are usually only weakly negatively related (Marcus 2003; Cacioppo et al 1999; Watson et al 1999; Tellegen et al. 1999; see Marcus 2003 for a summary). From a political vantage point, this means that someone can feel both positive and negative emotions toward a political candidate, producing a complex set of reactions to their candidacy. Emotion researchers in psychology use slightly different names for their models and underlying dimensions, but there is broad consensus that the two dimensions are tied to a basic approach-avoidance behavioral system. Negative emotions are linked to the avoidance of aversive stimuli, whereas positive emotions encourage approach towards rewarding stimuli.

This neat picture of distinct, weakly related negative and positive emotional reactions has met with a growing challenge, however, from a number of social science subfields including behavioral decision theory (Lowenstein 2001; Lerner and Keltner 2000, 2001), social psychology (Berkowitz 2003; Bodenhausen et al 1994; Mackie et al 2000; Skitka et al 2004) and political science (Conover and Feldman 1986; Marcus 2003). The major objection to the prevailing two dimensional valence model is its inability to explain consequential differences among specific types of positive and negative emotions. In particular, researchers question whether negative emotions such as sadness, anger, and anxiety produce the same cognitive consequences and behavioral outcomes. Anxiety, for example, is typically equated with risk avoidance whereas anger is tied to risky action (Lerner and Keltner 2000; 2001).

Recent research confirms that it is possible to distinguish among different negative political emotions. Marcus and colleagues (2000) observed three distinct emotional reactions to Bill Clinton : the two familiar dimensions of enthusiasm and anxiety and a third aversion factor conveyed by disgust and anger. Differing negative reactions also have divergent political consequences. Conover and Feldman (1986) found, for example, that anger but not anxiety about the national economy fueled disapproval of President Reagan. Experimentally manipulated anxiety but not anger heightened the perceived likelihood of future terrorism (Lerner, Gonzalez, Small, and Fischhoff 2003). And Skitka and colleagues (2004) observed higher levels of political tolerance among anxious individuals in the aftermath of 9/11, but lower levels of tolerance among those who were angry.

These findings lead to two important conclusions about the treatment of emotion within political research. . First, it is important to distinguish among different negative emotions in order to understand their distinct effects. Second, the effects of different negative emotions need to be contrasted simultaneously because responses such as anxiety and anger are related but distinct, making it difficult to isolate their specific political effects. In this study, we differentiate between anger and anxiety as distinct negative reactions to the Iraq war, and examine their unique political effects.

Two Dimensional Valence Models

Careful analysis of the structure of self-reported emotions confirms the existence of distinct positive and negative dimensions (Cacioppo et al 1999; Marcus 2003; Watson et al 1999; Watson and Tellegen 1985; Watson and Clark 1992). Watson and colleagues (Tellegen et al 1999; Watson et al 1999; Watson and Clark 1992) have the most sophisticated version of this model in which they posit and test the existence of three hierarchical levels of emotion: a single, higher level bipolar pleasant-unpleasant dimension, an intermediate level of dissociated positive and negative affect referred to as positive and negative activation, and a lower level of more discrete emotions such as anger and anxiety. The two dimensions of positive and negative affect or activation are central to Watson and colleague's model. In general, we refer to this as the two-dimension valence model.

The central focus on two valence dimensions fits with assorted evidence that they are basic to the way in which emotion is experienced. Both positive and negative affect are tied to core aspects of personality: positive affect is linked to extraversion and negative affect is tied to neuroticism (Watson et al 1999). The two valence dimensions (along with more specific emotions) are consistent across situations and type of measurement, suggesting a close match between affective experience and long-standing predispositions (Watson and Clark 1992). Moreover, the two-dimensional valence model has been neatly equated with two basic motivational systems that developed as part of human evolution: the approach and avoidance systems. The approach system is linked to motivated goal-seeking behavior that produces positive emotions by directing an individual toward experiences and situations that produce pleasure and reward. In contrast, negative affect is linked to avoidance designed to protect against harm and the occurrence of negative outcomes (Cacioppo et al 1999; Cacioppo, Gardner and Bernston 1997; Watson et al 1999). The existence of distinct behavioral approach and avoidance systems is further supported by the involvement in their activation of differing regions of the brain and neurochemical pathways (Davidson 1995).

This functional approach to emotions, based on the notion that emotions serve decidedly utilitarian and basic evolutionary functions linked to approach and avoidance motivations, helps to

explain the weak link between positive and negative affect. Negative emotions are likely to surge under conditions of threat but may be muted at other times. In contrast, positive emotions are more common and ongoing. It is thus possible to experience a range of positive emotions without any noticeable shift in negative feelings, although positive affect is likely to decline under conditions of extreme negativity. As a result, positive and negative dimensions of affect are modestly correlated (at around $-.45$; Watson et al 1999). This correlation increases significantly under various conditions: high levels of negative emotion, after having made a decision, and as one gets closer to action (Cacioppo et al 1999; Watson et al 1999).

Beyond Valence: The Distinct Effects of Anxiety and Anger

The two dimensional valence model of positive and negative emotion is thus conceptually clean, mapping onto approach and avoidance motives. But it does not account for the distinction raised earlier among different types of negative emotions, such as anger and anxiety. According to the valence model, all negative emotions should be associated with heightened vigilance, and the avoidance of danger consistent with their link to an avoidance motivation more generally. Anxiety conforms to this pattern, but anger does not. Indeed, anger has commonly been equated with behavioral approach not avoidance, raising further doubts about any simple correspondence between valence and functional approaches to affect (Carver 2004; Berkowitz and Harmon-Jones 2004; Harmon-Jones and Allen 1998; Harmon-Jones and Sigelman 2001; Lerner and Keltner 2000; Mackie et al 2000; Marcus 2003).

It is perhaps useful at this point to examine anger and anxiety in greater detail to better understand their distinctive political effects. Consider their origins first. Clinical and cognitive psychologists regard anxiety as a response to an external threat, especially a personal threat, over which the threatened person has little control (Bower 1988; Eysenck 1992). In contrast, anger arises in response to a negative event that frustrates a personally relevant or desired goal (Carver 2004; Lazarus, 1991; Stein, Trabasso, and Liwag 2000), and is intensified when the event is caused by a specific agent and

viewed as unjust or illegitimate (Clore and Centerbar 2004; Ortony et al 1988; Smith and Ellsworth 1985; Shaver, Schwartz, Kirson, and O'Connor 1987; Weiss, Suckow, and Cropanzano 1999).¹

Anxiety and anger also have different consequences. Anger is not only linked to action, but also to a series of cognitive outcomes that propel someone towards action such as less careful and systematic processing of events, the diminishment of perceived risks, and greater tolerance for risky action. In contrast, anxiety's link to avoidance produces a heightened sensitivity and attention to threat, an overestimation of risks, and more careful information processing. The distinct effects of anger and anxiety make clear the need to better understand their political consequences. We consider each of these distinct consequences of anxiety and anger in turn to explore their possible political implications.

Risk Assessment and Action

Anxiety commonly produces an overestimation of risk, leads to risk-averse behavior (Eysenck 1992; Lerner and Keltner 2000; 2001; Lerner et al 2003; Raghunathan and Pham 1999), and is especially likely to increase the perceived risks associated with personally relevant negative events (Butler and Mathews 1987). In contrast, anger tends to decrease perceived threat and leads to heightened risk-taking behavior. Supportive evidence comes from behavioral decision research. Lerner and Keltner (2000) found that anxiety increased the perceived risk of dying from various common causes whereas anger decreased risk estimates. This is consistent with evidence summarized by Lerner and Keltner (p.486) that angry people lead more risk-prone lives and tend towards greater optimism. They are, in fact, just as optimistic as happy people when contemplating the future (Lerner and Tiedens *in press*). In addition, striking differences in the behavioral consequences of anxiety and anger suggest that the widely reported link between general negative feelings and increased pessimism is caused by anxiety not anger (see Lerner and Keltner 2000 for a summary).

The differing behavioral effects of anxiety and anger lead to specific predictions about their impact on support for government policy. Consider support for overseas military action designed to

¹ See Berkowitz and Harmon-Jones 2004 for an exception. They believe that all of these factors intensify anger, but that it is precipitated very generally by any kind of negative event.

punish terrorists or curtail terrorism. Anxious individuals should oppose any military action that is seen as dangerous and risky, especially to oneself. In contrast, angry individuals, especially those angry at terrorists, should be less inclined to see military action as risky and more supportive of it as a consequence. These expectations concerning the political impact of anxiety are supported in our research on reactions to 9/11 in which anxious individuals were less supportive than non-anxious Americans of military intervention in Afghanistan (Huddy, Feldman, Taber and Lahav 2005). Anger should operate very differently, reducing perceived risks associated with action and leading to support for aggressive military intervention. We did not examine anger in our original research on 9/11, however, and were therefore unable to test this additional prediction. The current study is designed to extend research on the political effects of emotions by examining the simultaneous effect of anxiety and anger on support for the Iraq war.

Political Motivation

Ample research in cognitive psychology and neuroscience demonstrates that anxiety leads to heightened interest in, and focus on, threatening stimuli (Eysenck 1992; LeDoux 1996; MacLeod and Mathews 1988; Mathews and MacLeod 1986; Mogg et al. 1990; Öhman 2000; Yiend and Mathews 2001; Williams et al 1997). This effect occurs in experimental lab settings, but has also been demonstrated by Marcus and colleagues for political phenomena outside the lab. In their research, individuals who feel anxious about presidential candidates exhibit slightly greater campaign interest, care more who wins, and follow the campaign more closely in newspapers and magazines even after controlling for their level of general political interest (Marcus and MacKuen 1993; Marcus et al 2000).

Two-dimensional valence models predict that any form of negative affect, including anger, will heighten attention to negative stimuli because it produces a heightened sensitivity to threat. From that perspective, anger, anxiety, and a whole host of other negative emotions should elicit increased attention to threatening environmental stimuli (Gray 1987; Watson et al 1999). Pratto and John (1991) provide supportive evidence that negative emotions produce greater vigilance and attention to negative stimuli. This is also consistent with pervasive evidence that negative affect motivates more effortful and

systematic processing and directs attention to new, external information (Bless 2001; Bless et al 1992; Clore et al 2001; Schwarz 1990).

It is unclear, however, whether anger also heightens vigilance to threatening stimuli. Berenbaum and colleagues (1995) provide tentative evidence that anger does not, at least in terms of the amount of thought given to threatening events. They presented students with various negative scenarios, asked them to write down everything they would expect to think and feel, and then indicate how strongly they would experience each feeling. When these responses were analyzed, feelings of anxiety produced greater thought but not much action, as expected. In contrast, anger initiated action but little thought. This provides tentative evidence that anger does not increase attention to negative events as indicated by the amount of thought given to them. This is consistent with the notion that angry individuals are more inclined toward action than vigilance, a proposition that we test by examining the effects of anger and anxiety on news consumption and various other indicators of attention to the Iraq war.

Depth of Cognitive Processing

Negative moods tend to deepen levels of cognitive processing (Bless et al 1992). Marcus and colleagues confirm that anxiety has this effect on political information processing (Marcus and MacKuen 1993; Marcus et al 2000). In their research, Americans who feel anxious about one of the presidential candidates show greater interest and learn more than less anxious individuals about the candidate's issue positions (although the deeper level of thought given to political problems by anxious individuals does not always facilitate learning; Feldman and Huddy 2005). As noted earlier, Berenbaum and colleagues (1995) also find that anxiety is associated with increased thoughtfulness. The link between anxiety and deeper levels of cognitive processing is consistent with the notion that anxiety heightens vigilance and leads to a careful analysis of the threat inherent within a given situation in order to avoid harm.

The link between negative emotion and deeper levels of thought does not appear to extend to anger, however. In fact, anger is often associated with lower levels of cognitive effort and less thorough cognitive processing than is anxiety (Bodenhausen et al 1994; Lerner, Goldberg and Tetlock 1998; Lerner and Tiedens *in press*; Tiedens 2001; Tiedens and Linton 2001). Tiedens (2001) found, for example, that

people induced to feel angry made inferences about others based on chronically accessible scripts, indicative of superficial processing, whereas those who were sad considered a greater number of alternatives. In research by Bodehausen et al (1994), angry people engaged in more stereotyping than those who were sad and were more convinced by superficial aspects of a persuasive speech. Lerner and Tiedens (*in press*) conclude that “angry people engage in relatively automatic, superficial, and heuristic processes.” In general, the evidence suggests that angry people may be faster to arrive at a decision and take shortcuts to do so, consistent with their action orientation. We examine the link between political knowledge, anxiety, anger, and support for the Iraq war to further explore these relationships.

In summary, past research provides convincing evidence that anger and anxiety have distinct effects. Anxiety is best characterized by heightened vigilance, increased sensitivity to threat, and behavioral avoidance. In contrast, anger is associated with superficial and possibly rapid decision making, a lowered sensitivity to risk, and an action orientation. At odds with a simple two-dimensional valence model, these two negative emotions can generate diametrically oppose predictions about the implications of negative emotion for political beliefs and action.

Theoretical Approaches and Specific Negative Emotions

If the two dimensional valence model cannot account for the obvious distinction between anxiety and anger, what other approach can? We tentatively consider two main classes of explanations: appraisal theories and a broad class of approaches that we refer to collectively as a functional neuroscience perspective. Within appraisal theories, differing negative emotions are caused by the perceived features of a situation. From this perspective, anxiety, anger, shame, sadness, and a range of other negative emotions arise from factors such as one’s perceived control over a given situation or certainty about the course of events. In other words, the way someone perceives, understands, and analyzes the development of a specific situation determines their emotional reaction to it. In this approach, cognition typically precedes affect (although see Berkowitz and Harmon-Jones 2004 for an exception) and produces fine-grained negative and positive emotions in response to specific events. In contrast, the functional neuroscience

perspective blends evidence on the physical location of different emotions in the brain with a functional approach-avoidance framework in which emotions are tied to behavioral tendencies (Carver 2004; Davidson, Jackson, and Kalin 2000; Gray 1994). This approach is similar to the functional approach applied to standard two-dimensional valence models discussed earlier but, rather than simply equating all negative emotions with an avoidance motive, this perspective accounts for a more differentiated set of emotional and behavioral responses.

Appraisal Theory

According to appraisal theories, people assess a given situation along several distinct dimensions and the ensuing appraisal determines their emotional reactions to the event (Lazarus 2001; Smith and Ellsworth 1985). Four appraisal dimensions are most pertinent to the distinction between anger and anxiety: responsibility for the event, control of the event, whether the situation is pleasant, and certainty about what has and will happen next (Smith and Ellsworth 1985). Both anger and anxiety are characterized by an understanding that an event is unpleasant and typically caused by external factors. Anger and anxiety differ, however, in the degree of perceived certainty and control inherent in the precipitating event (Tiedens and Linton 2001). From an appraisal perspective, anger arises when negative events are clear and certain, and action against the responsible agent is seen as likely to succeed (Lazarus 1991; Weiss et al 1999). In contrast, anxiety is characterized by reduced feelings of certainty, and a lack of perceived control over events. This explains why anger produces action whereas anxiety leads to avoidance and heightened perceived risk (Lerner and Keltner 2001). Appraisal theory thus has the virtue of being able to clearly differentiate among numerous negative and positive emotions.

But appraisal theory also has a number of drawbacks. First, it does not address the effects of emotions on cognition. As noted above, anxiety is expected to enhance attention and thoughtful cognitive processing, whereas anger does not. This is difficult to reconcile with appraisal approaches in which cognition drives emotion, not vice versa (although see Roseman and Smith 2001 for a contrary view). Second, the notion of a cognitive appraisal is difficult to operationalize. Consider Lazarus' (1991) reference to "two kinds of appraisal processes – one that operates automatically without awareness or

volitional control, and another that is conscious, deliberate and volitional.” If appraisal occurs outside conscious awareness how can it be measured and differentiated from emotional reactions that also occur outside conscious awareness? And how can an unconscious appraisal be differentiated theoretically and empirically from an automatic affective response to a conditioned stimulus? This question regarding the level of consciousness at which cognitive appraisals has yet to be successfully resolved by appraisal theorists (see for example, Ellsworth and Scherer, 2003). Third, it is possible that cognitions and emotions operate in a recursive loop in which cognitions influence emotions which influence cognitions, in turn – making it difficult to know whether cognitive appraisals are a cause or consequence of differing emotional states. We should add that not all appraisal theorists view appraisals as the sole source of emotion (see Just, Crigler and Belt, this volume).

As a consequence, we leave open the possibility that cognitive appraisals drive emotional reactions but also turn to functional neuroscience approaches as a second possible basis for distinguishing among different positive and negative emotions, especially anger and anxiety.

Functional Neuroscience Approach.

The functional neuroscience approach differs from cognitive appraisal theories in several respects. First, functional neuroscience models allow emotions to influence cognitive activities outside of conscious awareness well before conscious appraisals have been formed about a given situation as a conditioned (CR), secondary conditioned (SCR) or unconditioned response (CR) to a specific stimulus. This clearly differs from cognitive appraisal theories in which appraisals about a situation (at either the conscious or unconscious level) drive emotional reactions. Spezio and Adolphs discuss this process in greater detail (this volume), in their description of Damasio’s (1994) somatic marker hypothesis. From this perspective, a specific stimuli elicits a particular emotional response through their pairing over time, not through the contemporary appraisal of a given situation. This link is essentially the arrow from affective response (part of the “body loop”) to conscious emotional processing (“as-if loop”) in Spezio and Adolphs’ depiction of the Recurrent Multilevel Appraisal Model. In that sense, emotions are seen as

formative not just derivative of cognitive activity within a functional neuroscience approach (Marcus 2003).

Second, the functional neuroscience approach is grounded in the neuroscience literature, which locates emotional reactions in parts of the brain that are differentially associated with approach or avoidance motives (Davidson et al 2000). This perspective accounts for differences between discrete emotions such as anxiety and anger by demonstrating their location in differing parts of the brain that are, in turn, associated to varying degrees with approach and avoidance behavior. Contemporary approaches to appraisal theory can also be considered functional in this sense, pairing emotions with broad action tendencies (for example, Lerner and Tiedens' appraisal-tendency framework 2004). The key difference is that functional neuroscience approaches focus on two broad behavioral systems – approach and avoidance – with obvious roots in evolutionary theory and specific locations in the brain. In contrast, appraisal theories account for a broader and more differentiated range of actions.

Carver (2004) provides one variant of a functional neuroscience model. Building on the work of Jeffrey Gray, he argues that anger is part of the approach system (the behavioral activation system in Gray's terminology), whereas anxiety is tied to avoidance (or the behavioral inhibition system) (see also Marcus 2003). There are slight differences between Gray and Carver's approach, but basically negative emotions arise in Carver's system when either approach or avoidance is blocked; positive emotions emerge when avoidance or approach is successful. Thus, according to Carver, anger is associated with moderate levels of frustration (when the goal is not yet lost) and is accompanied by increased effort, whereas anxiety more typically produces avoidance. Carver finds that a dispositional sensitivity to reward is tied to angry responses in an experimental situation, whereas a long-standing sensitivity to threat is linked to greater anxiety. This confirms the link between anger and approach, and avoidance and anxiety, although others note that this relationship is far from complete (Wacker et al 2003).

There is also neurological evidence linking anger and approach behavior (Davidson et al 2000). Gray's behavioral activation and inhibition systems (BAS and BIS) have been localized in different parts of the prefrontal cortex. Recent research confirms the link between anger and action by locating anger in

regions of the brain such as the action/positive region of the frontal cortex that are associated with the behavioral activation system (Harmon-Jones and Sigelman 2001; Harmon-Jones and Allen 1998).

The association between anxiety and risk-aversion and anger and risk-taking is consistent with Carver's functional approach to emotions. Greater sensitivity to threat helps to explain why anxiety leads to avoidant behavior: anxiety increases perceived risks and the need to avoid threat takes on greater urgency as a consequence. This process can be clearly adaptive in a threatening environment. Anger, on the other hand, deemphasizes any perceived risks and precipitates action. The link between anger and action, and anxiety and inaction is supported in findings reported by Berenbaum and colleagues (1995). Mackie and colleagues (2000) also find that anger at an outgroup strongly predicts a desire to argue with, oppose, and attack outgroup members.

Carver's model is thus plausible but by no means universally accepted. Cognitive appraisal models retain a loyal following (see Just et al, this volume, Ellsworth and Scherer, 2003). And evidence from neuroscience that anger, anxiety and other distinct emotional reactions originate in distinct functional regions of the brain remains tentative. At best, we can suggest that the functional neuroscience approach remains an intriguing alternative to cognitive appraisal theories as an explanation for the distinct effects of anger and anxiety. There have been several recent attempts to reconcile the differences between appraisal theories and functional neuroscience approaches, but these models while appealing in broad outline lack sufficient specificity. Consider Spezio and Adolphs' Recurrent Multilevel Appraisal Model, a blend of Damasio's somatic marker hypothesis, in which affect flavors cognition, and appraisal theory, in which cognition drives affect (see Figure X this volume). The devil lurks in the details of their model, raising a number of unanswered pivotal questions. What happens when a cognitive appraisal is at odds with an automatic affective response? Are there circumstances under which a conditioned affective response overwhelms a cognitive appraisal? Or when a cognitive appraisal trumps an automatic affective response? These questions are central to political decision making in which immediate emotional arousal (e.g., in response to the burning World Trade towers) may be at odds with considered intellectual

reasoning (e.g., the low odds of being victimized by a terrorist attack). A model that blends the two approaches is appealing, but more work is needed to do this successfully.

Data and Key Measures

Sample

The data for this paper are drawn from the Threat and National Security Survey (TNSS), a three-wave national panel study. The analyses are based largely on the second and third waves of the study that focus on political reactions to the Iraq war. The first wave of the survey was conducted via telephone with a national sample of 1,549 adults over age 18 between early October, 2001 and early March, 2002, focusing on psychological reactions to 9/11 and support for government anti-terrorism policy. The initial sample was drawn as a weekly rolling cross-section with roughly 100 individuals interviewed each week throughout this period. The first month of data was collected by Shulman, Ronca, and Bukuvalis; the remainder of the data (including waves 2 and 3) was collected by the Stony Brook University Center for Survey Research. The cooperation rate (AAPOR COOP3) for the survey was 52%.²

The second wave of data collection occurred in October of 2002 after Congressional debate on the war had ended. Of the original interviewees, 858 were re-interviewed between 7 and 12 months later for a re-interview rate of 55%. An additional 221 respondents were added to the panel from a fresh RDD sample drawn to the same specifications as the original. This new component was designed to serve as a check on panel effects, attrition, and composition. The cooperation rate for this new component was 56%. A more complex third wave of data collection occurred in 2003. Half the sample was re-contacted during the Iraq war starting on the day after the war's onset (3/20/03) and continuing until 4/10/03 roughly at the official end of the war as announced by George Bush. The other half was interviewed some time after the war had ended from 5/20/03 until 6/18/03. We were able to re-interview 612 individuals from the original panel and 117 of those introduced in wave 2 for a re-interview rate of 68% between waves 2 and 3. All three waves of the survey were roughly 20 minutes in length. The second and third waves focused on reactions to terrorism and support for the Iraq war.

² There was no difference in response rate between the two survey organizations and response rates were similar to those obtained in recent RDD surveys using a different sampling frame but similar methodology (Steeh, Kirgis, Cannon, and DeWitt 2001; Losch et al. 2002).

Emotions Questions

The second and third waves of the study included batteries of questions focused on emotional responses to a number of targets: anti-American terrorists, Saddam Hussein, a war with Iraq, and anti-war protesters (in wave 3 only). Respondents were presented with three items designed to measure anxiety – nervous, scared, and afraid – and three to measure anger – angry, hostile, and disgusted – in response to each target. For the Iraq war and anti-war protesters respondents were also asked to report three positive emotion items – enthusiastic, proud, and hopeful. Respondents were asked to report how much (very, somewhat, not very, and not at all) a given target had made them feel each emotion. The items for anger, anxiety, and positive emotions were intermixed for each target. Overall, respondents reported a total of 9 (anxiety, anger, and positive) emotions towards the Iraq war, and anti-war protesters, and 6 emotions (anxiety, anger) towards Saddam Hussein and terrorists. As noted by Spezio and Adolphs (this volume) our use of the term affect is consistent with much social science research but differs from standard neuroscience usage in which an affective response entails physiological signals.

Nine emotions towards President Bush were also assessed in the survey. They are not reported in detail here because they comprised an unusually tight single negative-positive factor, making it impossible to separate anger from anxiety, or negative from positive emotions. This raises an important question about how reliably different emotions can be distinguished. As noted earlier, there are situations in which distinct positive and negative dimensions collapse into one, as happened for Bush (cohering into Watson, Tellegen and colleagues' first level bipolar dimension; Tellegen et al. 1999). Of the three conditions noted above under which this collapse can occur, a combination of high levels of negative emotion and post-decisional consistency could help to explain strong bipolar reactions to President Bush. Many Americans had made a decision about Bush in the 2000 presidential election. More importantly, Bush was widely disliked at the time by Democrats, and strong Democratic negativity towards him may have fueled equally strong defensive support for him among Republicans, resulting in the single bipolar positive-negative reaction observed in our data. There has been too little research to fully understand the conditions under which anger and anxiety are separable (as opposed to forming a single negative

dimension). It is clear from our data that complex, negative objects such as war and terrorism elicit diverse negative reactions.

The Structure of Emotional Responses

One of the crucial debates underlying recent research on emotions is the extent to which specific negative emotions such as anger and anxiety go together, or can be clearly differentiated. We tackle this issue first, by focusing on the structure of negative emotions towards the different targets: the war, terrorists, Saddam, and anti-war protesters. We begin with a confirmatory factor model in which each constellation of negative and positive emotions (anger, anxiety, and enthusiasm) is treated as a latent emotion factor and the correlations among the latent factors estimated to better determine their dimensional structure. Estimated correlations among distinct emotions can be biased by systematic measurement error because of respondents' tendency to report feeling all or no emotion, potentially attenuating the negative link between positive and negative feelings (Green, Goldman, and Salovey 1993). To get around this, we included a response set factor in each model.

Estimation of the response factor was not completely straightforward. In general, identification of models with a common response set factor is difficult when items share the same response format. A standard approach is to force each item to load equally on the response set factor, leaving only the factor variance to be estimated. In these data, even the variance could not be estimated simultaneously with the other parameters. To deal with this, we estimated a series of factor models with different fixed values for the response set factor variance. This procedure was designed to determine the response set variance that best minimized the fit functions. For both waves 2 and 3, the best fit in factor models suggested a response set variance that was about one-eighth the size of the variance of the emotion factors. Importantly, values for the response set variance well above and below this value had little substantive effect on the results. None of the conclusions we draw are changed significantly by fixing the variance of the response set factor somewhat higher or lower.

We used the Mplus program to estimate all confirmatory factor models (Muthen and Muthen 2004). Mplus models the relationships between the latent variables and discrete indicators as ordered probit functions to avoid the questionable assumption that the (four) response categories for the emotion items are continuous. Treating discrete response categories as continuous can produce misleading fit statistics and, with skewed response distributions, inconsistent parameter estimates.

Specificity of Negative Emotions

To get at the underlying structure of emotions concerning the war and terrorism, we estimated two separate models (one in each wave), testing the existence of distinct emotion factors (positive, anxiety, anger) for each target. The correlations among the latent emotion factors *within* each target are shown in Table 1, for both waves 2 and 3. The correlations among latent emotion factors *across* targets are shown in Table 2, for waves 2 and 3. The correlations from the wave 2 model are thus split across Tables 1 and 2. The same holds for correlations from the wave 3 model. In both waves, all individual items load highly on their respective target-emotion factor (e.g., anger, hostility, and disgust towards Saddam Hussein). These specific item loadings have been omitted in order to conserve space. The overall fit statistics for the two models are very good.

Several findings emerge from these two tables. First, the models shown in Table 1 confirm the modest negative relationship between positive and negative emotions observed in typical two dimensional valence models after correction for measurement error (around -.45). This link is essentially confirmed in the current study, with very similar estimated correlations among the emotion factors in the two waves. The correlations between positive emotions and the two negative emotions range from a weaker value of -.31 (anxiety and enthusiasm for the war in wave 3) to a stronger negative link of -.53 (anger and enthusiasm for the war in wave 2). In general, the modest negative link between positive and negative emotions indicates that Americans felt a mix of both positive and negative emotions about the Iraq war.

The correlations for anti-war protesters in wave 3 are a little less straightforward as seen in Table 1. The estimated correlation of positive emotions with anxiety is not significantly different from zero (-.03) while the correlation between positive emotions and anger is -.89. Thus positive emotions and anger

toward anti-war protesters are virtually bi-polar while anxiety is a relatively distinct response, pointing to an important distinction between anger and anxiety.

*** INSERT TABLE 1 ABOUT HERE ***

Second, there is a clear distinction in reported feelings of anxiety and anger across the different targets, ranging from a high of .64 for the Iraq war in wave 2 to a low of .39 for anti-war protesters in wave 3 (as seen in Table 2). These correlations indicate that anger and anxiety are positively related, but far from synonymous, as expected. To confirm that anger and anxiety are indeed distinct negative emotions, we also estimated two models (one for wave 2 and one for wave 3) in which a single negative emotions factor was specified for the 3 anxiety and the 3 anger items for each target, and compared the results to models with a distinct latent factor for anxiety and anger. In both waves 2 and 3 the separate anger and anxiety model was a much better fit to the data than a single negative emotions model. This demonstrates that Americans had related but distinct feelings of anger and anxiety towards the war, terrorists, Saddam Hussein, and anti-war protesters.

Generality of Anxiety Across Targets

Data presented in Table 2 yields one more intriguing finding. Anxiety tends to generalize across the different targets to a greater extent than does anger, consistent with related evidence that anxiety may be a basic response that colors reactions to events very generally (Huddy et al 2002; Berenbaum et al 1995). In both waves, anxiety towards terrorists, Saddam, and the Iraq war are strongly correlated. The mean correlations are .72 in wave 2 and .70 in wave 3. In wave 3, there is also evidence that anxiety toward anti-war protesters correlates with anxiety toward the other three targets, albeit at somewhat lower levels. As a further test of the generality of anxiety, we estimated a second confirmatory factor model for each wave that replaced the correlations among the anxiety factors with a second-order, generalized anxiety factor. In both waves, anxiety toward terrorists, Saddam, and the war loaded in excess of .8 on the generalized anxiety factor. In wave 3, anxiety toward anti-war protesters had a loading of .52 on generalized anxiety.

*** INSERT TABLE 2 ABOUT HERE ***

Sizeable positive correlations among the anxiety factors are even more impressive when the cognitive links between these targets are scrutinized more closely. It is reasonable to expect that people who feel negatively toward Saddam and terrorists will have relatively few negative feelings towards the Iraq war, resulting in a negative correlation among anxiety items.³ But *anxiety* about the war bears a strong *positive* relationship to anxiety toward terrorists and Saddam, indicating that individuals tend to feel anxious about all three targets: the war, Saddam and terrorists. Similarly, individuals who feel negatively about anti-war protesters should feel much less negative about the war and this is indeed observed among positive emotions. Those who felt positive about the war felt very few positive emotions about anti-war protesters, as shown in Table 2. But once again, the correlation between anxiety toward these same two targets is positive (+.38), indicating that respondents who felt anxious about the war also felt anxious about war protesters.

In contrast to the substantial correlations among the anxiety factors, anger is a more fine-grained and target-specific emotion. As seen in Table 2, anger toward the war is virtually uncorrelated with anger toward terrorists and Saddam (and anti-war protesters in wave 3). Reactions to the other targets—Saddam, terrorists, and anti-war protesters – are more likely to elicit negative feelings among those who support the war, and indeed go together more tightly. This is seen in the modest positive correlations among anger towards all three targets in Table 2. These patterns more neatly fit logical expectations that negative feelings towards Saddam, terrorists, and protesters go together. But there is no evidence of a general anger factor comparable to the general anxiety factor that cuts across diverse objects.

Analysis of the dimensions underlying feelings towards the Iraq war and related objects indicate that anger and anxiety are distinct emotional responses. The two negative feelings are moderately correlated, suggesting the possibility of a general negative emotion dimension. However, anger and anxiety cannot be reduced to a single dimension of negative emotion for any of the examined targets.

³ The correlations between anger toward terrorists and Saddam and *positive* emotions toward the war are approximately +.3 in both waves.

There is also some hint in these analyses that anxiety and anger comprise qualitatively different emotional responses, with anxiety but not anger generalizing across intellectually diverse targets.

Political Consequences of Anxiety and Anger

We now turn to a direct comparison of the effects of anxiety and anger, drawing exclusively on data from wave 2 which was collected in October, 2002, some months before the war began. We avoid use of data from wave 3 for these purposes because we are interested in the link among emotions, the perceived risks of war, and support for it. Once the war had begun in March (corresponding to wave 3 of our data) its associated risks became more readily apparent. Thus, we do not present the findings from wave 3, although they are very similar to those presented here for wave 2.

We examine the impact of anxiety and anger on the three distinct political factors discussed above: interest and motivation, perceived risks associated with the war and support for it, and the depth of cognitive processing underlying attitudes towards the war. In each analysis, anxiety is measured as the combination of anxiety towards Saddam Hussein and terrorists, and anger is measured as anger towards the same two targets. Anxiety and anger towards the war were excluded from both measures because it seemed circular to include them as predictors of war support. Moreover, anger towards the war was only weakly related to anger towards Saddam and terrorists as shown in Table 2. Both scales are constructed to vary between 0 and 1.⁴

Political Motivation and Media Involvement

We first examine the effects of anxiety and anger on attention to the Iraq war and media news consumption. We consider three dependent variables. Respondents' self-reported amount of thought to the war was assessed with a scale formed from six questions. The first asked "Over the last week or two, how much thought have you given to a possible war with Iraq?" The other five questions asked "How much thought have you given to the effects of U.S. military action in Iraq on:" "the U.S. economy", "the

⁴ Both the anxiety and anger scales have large estimated reliabilities. The reliability (coefficient alpha) of the anxiety scale is .91; it is .85 for anger. The correlation between anxiety toward terrorists and Saddam in the confirmatory factor analysis is .76 and the comparable correlation for anger is .66.

threat of terrorism to the U.S.”, “the situation in the Middle-East”, “the help we would get from U.S. allies in the war on terrorism”, and “on Saddam Hussein’s willingness to use weapons of mass destruction against U.S. troops?” The estimated reliability of this scale is .82 and is constructed to range from 0 to 1. The second variable is a single question that asked respondents how often they had talked to friends, family, co-workers, or neighbors about a possible war with Iraq (very often, somewhat often, not very often, or not at all). Responses were recoded to range from 0 (not at all) to 1 (very often). The final variable is a scale formed from two questions: the number of days in the past week respondents reported watching national TV news, and reading about national events in a newspaper. This measure was rescaled to range from 0 to 1. In addition to the effects of anxiety and anger, regressions also examine the impact of age, education, gender, race/ethnicity, party identification, ideological identification, and authoritarianism on attention and media exposure.⁵ These results are shown in Table 3. All multivariate analyses rely on regression analysis.

*** INSERT TABLE 3 ABOUT HERE ***

In past research, anxiety has typically predicted political interest and attention. This relationship is replicated in these data. Individuals who felt anxious about Saddam and terrorists thought and talked more than others about the war. They were not, however, significantly more likely than non-anxious individuals to watch TV or read a daily newspaper, although findings are in the right direction and almost reach statistical significance.

We had been uncertain as to whether anger would stimulate political attention over and above the effects of anxiety. Some studies have found that general negative affect causes heightened vigilance to threatening stimuli. There is some support for this prediction in Table 3. Angry individuals were more likely to think about the war and consume news media than non-angry individuals, although they were no more likely to talk about the war, as seen in Table 3. Thus, increasing levels of anxiety and anger are

⁵ Age is an ordinal variable coded in 10-year intervals, education is coded in years, gender is coded 0 if male and 1 if female, race/ethnicity is composed of three dummy variables for black, Hispanic, and other (with white as the excluded category), party identification and ideology are standard seven-category measures recoded to range from 0 to 1 with 1 indicating Republican and conservative identifications respectively, and authoritarianism is a three item scale ranging from 0 to 1 (see Feldman and Stenner 1997).

both consistently related to higher levels of involvement and attention. On thinking and talking, the coefficient for anxiety is substantially larger than that for anger; it is roughly comparable for media attention, suggesting that anxiety may be a greater stimulus to political attention than anger. Nonetheless, both variables remain significant predictors for 2 of the 3 indicators of motivation and attention.⁶

Several other variables consistently influence political involvement. Older people were substantially more engaged with the war than younger people; they thought significantly more about it and more frequently watched or read the news. Women were significantly less likely than men to have consumed news media, thought, or talked about the war; authoritarians also paid less attention to the war than non-authoritarians. In addition, increased education enhanced media attention, Hispanics were more likely than Anglos to think about the war, and blacks talked about it more often than did others.

Overall, our results are consistent with theoretical models of the effects of negative affect on attention. Both negative emotions considered here – anxiety and anger – have broadly similar effects on attention to politics. As both emotions increase, respondents are more likely to report thinking about the Iraq war, talking about it, and, to a more limited extent, attending to national news TV and newspapers.

Perceived Risks and Support for the Iraq War

Our second test of the differing effects of anger and anxiety focus directly on the Iraq war; in this instance, our predictions were more clear cut. Anger and anxiety were expected to have opposite effects: anxiety was expected to elevate the perceived risks of the war and promote opposition to it, whereas anger was thought to minimize perceived risk and promote war support. To assess the war's perceived risks, respondents were asked about their concerns that a war in Iraq would: "hurt the U.S. economy", "increase the threat of terrorism against the U.S.", "make the situation in the Middle-East less stable," and "decrease help for U.S. allies in the war on terrorism". These four questions were combined into a measure of risk assessment that ranges from 0 to 1 to gauge the total number of potential risks perceived

⁶ The coefficients indicate the estimated change in the dependent variable as each emotion varies from its lowest possible score (no reported anxiety or anger) to its highest possible score.

by the respondent.⁷ The risk Saddam Hussein posed to the United States and its allies was included as a second measure of perceived risk. The threat posed by Saddam was assessed by combining the perceived risk that he would attack the United States with weapons of mass destruction (WMD), use WMD against neighbors in the Middle-East, and the likelihood that he actively supports anti-U.S. terrorist groups. The three items form a reliable scale ($\alpha=.71$).

We also constructed a measure of support for the war from four questions: “How strongly do you favor or oppose U.S. military action against Iraq?”; “How strongly do you favor or oppose U.S. military action against Iraq even if it means the U.S. armed forces might suffer a substantial number of casualties?”; “How strongly do you favor or oppose U.S. military action against Iraq without the support of the United Nations?”; and “How strongly do you favor or oppose sending large numbers of U.S. ground troops into Iraq?” Responses to these four questions have a mean inter-item correlation of .76 ($\alpha=.92$). The results of the three regression equations are shown in Table 4.

*** INSERT TABLE 4 ABOUT HERE ***

Consider perceived risk first. Increased anxiety about Saddam and terrorists is associated with a heightened perception that the war in Iraq involved substantial risks, consistent with our initial prediction. The coefficient for anxiety is significant and large. In contrast, anger has the opposite effect. In line with much past research, anger lowers the perceived risk of deploying military troops in Iraq. Its effects are also sizeable. Anxious people not only view the war as risky, they are also more likely to view Saddam as a threat. In the case of Saddam, angry people share the same view. Anger increases the perception that Saddam posed a risk, perhaps because this perception boosted support for the war and military action. Thus, the effects of anxiety and anger go together but for different reasons. Anxiety promoted the perception that the war was risky *and* Saddam posed a threat to the U.S. and his neighbors, consistent with the general effects of anxiety on heightened risk perceptions. In contrast, anger diminished the

⁷ We do not report a reliability coefficient for this scale because it is not designed to tap a single latent construct but rather simply count up the number of distinct perceived risks, which do not necessarily scale together.

perceived risk inherent in a war with Iraq but boosted the threat posed by Saddam; both perceptions are consistent with support for military action against Iraq.

The link between anger and action is further borne out by the opposing effects of anxiety and anger on support for the war. Anxious people were more likely to oppose the war whereas angry people were more in favor of it. Overall, the pattern of findings presented in Table 4 is consistent with earlier predictions that anxiety increases perceptions of risk and promotes risk aversion while anger reduces sensitivity to risk and motivates support for action against a threatening source.

As expected, Republicans, conservatives and authoritarians were substantially less likely than Democrats, liberals or non-authoritarians respectively to see risks in a war with Iraq, more likely to view Saddam as a threat, and more likely to support military intervention. Older people, women, and minorities were less supportive of the war while conservatives and high authoritarians were more supportive.

Thoughtful Cognitive Processing

Anger and anxiety were predicted to have opposite effects on respondents' depth of thought about the Iraq war. Anger was expected to produce less thoughtful information processing, whereas anxiety was expected to increase the amount of effort put into thinking about the war. Findings presented so far in Table 3 provide partial support for this hypothesis: as seen earlier in that table, anxiety substantially increased thought about the war. But anger also significantly increased the amount of thought given to the war, at odds with the notion that angry people process information less carefully. Before rejecting the notion that anger promotes superficial cognitive processing, it is important to take a closer look at this hypothesis since self-reported thought about the war tells us little or nothing about the depth or quality of that thought.

To further test the impact of anxiety and anger on thoughtfulness, we examined the degree to which respondents based their opinions on the Iraq war on factual information about Iraq. In essence, we view a strong connection between information about Iraq and estimates of the risks and support for the war as indicative of thoughtful processing. In contrast, opinions derived in the absence of information are viewed as based on less thoughtful processing. To test that relationship, two interaction terms – between

anxiety and information, and anger and information -- are added to the regression equations presented in Table 4. Information is assessed as the number of correct responses given to five objective questions about Iraq: the name of one country that shares a border with Iraq; the capital city of Iraq; the name of the middle-eastern TV network that broadcast statements by Osama bin Laden and Al Qaeda; the name of the ruling political party in Iraq; and the name of the major ethnic group that lives in the north of Iraq. Responses to these five questions go together very strongly with a mean tetrachoric correlation of .78. The information scale varies from 0 to 5 with a mean of 1.8 and a mode of 1 correct answer. For this analysis, information was recoded to range from 0 to 1 (5 correct answers).

*** INSERT TABLE 5 ABOUT HERE ***

Findings from these enhanced regression analyses, presented in Table 5, lend support to our original hypothesis that angry individuals hold less thoughtful opinions about the war than others. As seen in Table 5, there is a large interaction between anger and information for all three war-linked attitudes. Among the least angry, those who knew more about Iraq saw greater risks associated with military action before the onset of the war, viewed Saddam as less of a threat than the less knowledgeable, and were more likely to oppose the war than those who were less informed. Among angry individuals, however, these effects disappear almost completely (as seen by numerically combining the coefficient for information with that of the interaction between information and anger). The effects of information among angry individuals are close to 0 for all three dependent variables in Table 5. This implies that the opinions of angry individuals were simply unrelated to their knowledge of Iraq. Information acquired about Iraq by non-angry individuals in the build up to the war influenced their view of Saddam and the war's risks but had absolutely no impact on the opinions of those who were angry with Saddam and terrorists.

We had also expected anxious individuals to hold more thoughtful positions on the war. There is slight support for this, although findings do not reach significance. The effects of information increase modestly as anxiety increases. For example, the coefficient for information in the equation predicting the perceived risks of the war increases from .35 among the least anxious to .46 among the most anxious. The

interaction between anxiety and information almost reaches significance for attitudes towards the war in a two-tailed test and would be significant in a one-way test. Thus, there is weak but tentative support for the hypothesis that anxiety increases thoughtfulness. Taken together, our findings suggest that anger increases self-reported thought but decreases thoughtfulness. In contrast, anxiety increases thought and may marginally increase thoughtfulness.⁸

Discussion

Overall, the findings from this study strongly vindicate the differentiation of negative affect into distinct emotions such as anger and anxiety, and pose a clear challenge to the two-dimension valence model in which all negative emotions are viewed as a single entity. Anger and anxiety are related. But they are also distinct, and have strikingly different political consequences. Consider perceptions of risk and support for the Iraq war. Anger leads to a reduced perception of the war's risks and promotes support for military intervention. In contrast, anxiety heightens risk perception and reduces support for the war. As a consequence, a combined measure of negative affect lends no insight whatsoever into public opinion on the war (in analyses not shown here), leading to the erroneous impression that negative emotions mattered neither one way or the other in shaping war support. The reality could not be more different. It is not unduly dramatic to view the balance between Americans' feelings of anger and anxiety as the key to understanding the future trajectory of public support for the war in Iraq.

The differing political effects of anxiety and anger go hand in hand with other responses that bolster the hypothesized link between anger and a propensity toward action, and anxiety and a proclivity for greater caution. As noted, angry people tend to minimize the risk of action, whereas anxious people elevate it. Lower levels of perceived risk among angry people likely facilitate steps toward potentially

⁸ Our results may seem at odds with Brader and Valentino's (this volume) findings that Hispanic prejudice equally influenced angry and anxious responses to immigration. It is difficult to compare the two sets of findings, however, because Brader and Valentino do not test the greater hypothesized influence of prejudice on immigration attitudes among angry than anxious respondents. A stronger connection between prejudice and immigration views among angry than anxious respondents would be consistent with the link observed in our data between anger and less effortful political reasoning.

risky action, as noted by Lerner and Keltner (2001). On the other hand, elevated perceptions of risk are inclined to heighten a sense of caution and raise the threshold for taking risky actions.

Anger also minimized the connection between knowledge about Iraq and opinions on the war, suggesting that anger may facilitate the adoption of opinions designed to propel action by ignoring contrary information about possible risks. Angry people were not less well informed about Iraq; they scored roughly the same as non-angry individuals on the 5-item knowledge quiz in October, 2002. But the effects of information on support for the war were quite different among angry and non-angry Americans. Knowledge had very specific effects among non-angry individuals: it diminished their sense that Saddam posed an imminent threat and heightened the perceived riskiness of the war. In contrast, angry individuals held the same amount of information about Iraq but it did not undermine their support for the war or increase the war's perceived risks as it did for others. We view this as evidence that angry individuals put less effort into thinking about the war consistent with past research on the effects of anger (Lerner, Goldberg and Tetlock 1998; Lerner and Tiedens *in press*; Tiedens 2001; Bodenhausen et al 1994; Tiedens and Linton 2001), but it could also indicate more effortful counter-arguing on their part. We are unable to test between these alternatives in this study.

Evidence that anger counteracted the negative impact of factual knowledge on war support is somewhat at odds with Schreiber's (this volume) contention that sophisticates employ different neural mechanisms to think about politics. Schreiber argues that sophisticates rely on the "default state network" used to think about social life more generally to process political information, rendering their political judgments less effortful. Evidence in our data that anger reduces the intellectual effort put into thinking about politics by sophisticates and non-sophisticates alike challenges Schreiber's conclusion by raising questions about the pervasiveness of sophistication differences. Non-angry sophisticates do draw different conclusions than non-sophisticates about the necessity of a war with Iraq. But even this difference is not necessarily consistent with Schreiber's position since it could arise from effortful processing among sophisticates who connect general information about the Middle-East with arguments against going to war with Iraq.

We had also expected anxiety to increase thoughtfulness about the war because of the well-known link between anxiety, heightened threat sensitivity, and risk avoidance. There is clear evidence that anxious individuals saw the war as more risky and were more reluctant to support military action. But evidence that anxious people engaged in more thoughtful information processing was mixed at best. On the one hand, anxiety increased self-reported thought about the war and heightened conversations with others about it. This suggests greater attention to the war. There was only weak evidence, however, that anxious people relied more heavily than others on factual knowledge to decide their position on a war with Iraq. Information reduced support for the war among anxious individuals (a finding that almost reached significance) consistent with the predictions of affective intelligence theory (Marcus et al 2000). But this effect was confined to support for the war overall. Well-informed non-anxious individuals were just as likely as the anxious to see the war as risky and view Saddam as a threat.

In conclusion, our findings raise serious concerns about the prevailing two-dimensional valence model of emotion. According to this model, all negative emotions should work in similar fashion, although various researchers concede that specific emotions can have somewhat divergent effects in particular instances (Cacioppo et al 1999; Watson et al 1999). But none of the two-dimensional models come close to explaining why two specific negative emotions such as anxiety and anger have competing and diametrically opposed effects on political attitudes. A functional neuroscience approach in which anger is associated with approach and anxiety with avoidance, or cognitive appraisal theories that posit a link between anger and greater action and anxiety and caution are a much better fit to our findings, and those of others (Carver 2004; Lerner and Tiedens *in press*). . Ultimately, more research is needed to flesh out the various effects of distinct negative emotions, and explain why anger and anxiety are so closely associated in self-report data yet have such distinct consequences.

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Table 1

Correlations Among Latent Emotion Factors *Within* Distinct Targets

	October 2002	
	<i>Anger</i>	<i>Anxiety</i>
Iraq War:		
<i>Positive Emotions</i>	-.53	-.41
<i>Anxiety</i>	.64	
Terrorists:		
<i>Anxiety</i>	.43	
Saddam:		
<i>Anxiety</i>	.56	
	March-June 2003	
	<i>Anger</i>	<i>Anxiety</i>
Iraq War:		
<i>Positive Emotions</i>	-.43	-.31
<i>Anxiety</i>	.58	
Protesters:		
<i>Positive Emotions</i>	-.89	-.03
<i>Anxiety</i>	.39	
Terrorists:		
<i>Anxiety</i>	.44	
Saddam:		
<i>Anxiety</i>	.54	

Note: Entries are maximum likelihood estimates of the correlations among the emotion factors. Entries in the top panel are from a single model estimating all target-emotion factors in wave 2. This same model was used to generate estimates in the top panel of Table 2. Entries in the bottom panel are from a single model estimating all target-emotion factors in wave 3. This same model was used to generate estimates in the bottom panel of Table 2. Both models include a response set factor.

Table 2**Correlations Among Latent Emotions Factors *Across* Distinct Targets**

	October 2002			
	<i>Protesters</i>	<i>Terrorists</i>	<i>Saddam</i>	<i>General</i>
Anxiety:				
<i>Iraq War</i>		.68	.73	.87
<i>Terrorists</i>			.76	.84
<i>Saddam</i>				.91
Anger:				
<i>Iraq War</i>		.07	.15	
<i>Terrorists</i>			.66	
	March-June 2003			
	<i>Protesters</i>	<i>Terrorists</i>	<i>Saddam</i>	<i>General</i>
Anxiety:				
<i>Iraq War</i>	.38	.69	.68	.82
<i>Protesters</i>		.43	.48	.52
<i>Terrorists</i>			.74	.84
<i>Saddam</i>				.86
Anger:				
<i>Iraq War</i>	-.09	.19	.26	
<i>Protesters</i>		.46	.45	
<i>Terrorists</i>			.63	
<i>Positive Emotions</i>				
<i>Iraq War</i>	-.71			

Note: Entries in the first three columns are maximum likelihood estimates of the correlations among the emotion factors. Entries in the first three columns of the top panel are from a single model estimating all target-emotion factors in wave 2. This same model was used to generate estimates in the top panel of Table 1. Entries in first three columns of the bottom panel are from a single model estimating all target-emotion factors in wave 3. This same model was used to generate estimates in the bottom panel of Table 1. Entries in the last column are from two separate models (one for wave 2 and another for wave 3) in which anxiety is a function of a single, second-order anxiety factor (replacing the correlations among the anxiety factors). All models include a response set factor.

Table 3**The Effects of Anxiety and Anger on Motivation and Media Attention:
Wave 2 (October 2002)**

	<u>Thinking</u>	<u>Talking</u>	<u>Media Attention</u>
Anxiety	.21 (.03)	.16 (.04)	.07 (.04)
Anger	.12 (.03)	.06 (.05)	.11 (.04)
Age	.025 (.004)	.012 (.007)	.081 (.006)
Education	.005 (.003)	-.001 (.004)	.015 (.004)
Female	-.08 (.01)	-.08 (.02)	-.14 (.02)
Race/Ethnicity			
Black	.02 (.03)	.10 (.04)	.07 (.04)
Hispanic	.06 (.03)	.08 (.05)	.02 (.04)
Other	-.04 (.03)	-.06 (.05)	.01 (.05)
Party ID (Rep)	.03 (.02)	.02 (.03)	.03 (.03)
Ideology (Cons)	-.02 (.02)	-.04 (.04)	.01 (.03)
Authoritarian	-.05 (.02)	-.09 (.03)	-.10 (.03)
Constant	.34 (.05)	.45 (.08)	-.05 (.07)

Note: All entries are unstandardized regression coefficients with standard errors in parentheses. Coefficients in bold are at least twice the size of their standard error.

Table 4

**The Effects of Anxiety and Anger on Perceived Risks and War Support:
Wave 2 (October 2002)**

	<u>Risk</u>	<u>Saddam Threat</u>	<u>War Support</u>
Anxiety	.17 (.04)	.07 (.03)	-.17 (.04)
Anger	-.25 (.04)	.26 (.03)	.41 (.04)
Age	.008 (.006)	-.009 (.004)	-.029 (.006)
Education	.009 (.004)	-.004 (.003)	-.007 (.004)
Female	.01 (.02)	.04 (.01)	-.06 (.02)
Race/Ethnicity			
Black	.03 (.03)	-.10 (.03)	-.19 (.03)
Hispanic	.03 (.04)	-.08 (.03)	-.15 (.04)
Other	.05 (.04)	-.10 (.03)	-.14 (.04)
Party ID (Rep)	-.14 (.03)	.06 (.02)	.21 (.03)
Ideology (Cons)	-.06 (.03)	.10 (.02)	.16 (.03)
Authoritarian	-.06 (.03)	.06 (.02)	.11 (.03)
Constant	.45 (.07)	.49 (.05)	.32 (.07)

Note: All entries are unstandardized regression coefficients with standard errors in parentheses. Coefficients in bold are at least twice the size of their standard error.

Table 5**The Effects of Anxiety and Anger on Perceived Risks and War Support:
The Added Effects of Political Information, Wave 2 (October 2002)**

	<u>Risk</u>	<u>Saddam Threat</u>	<u>War Support</u>
Anxiety	.12 (.06)	.11 (.04)	-.10 (.06)
Anger	-.07 (.06)	.13 (.05)	.25 (.06)
Information	.35 (.10)	-.31 (.07)	-.06 (.02)
Anxiety*Information	.11 (.12)	-.12 (.09)	-.04 (.02)
Anger*Information	-.47 (.13)	.36 (.10)	.09 (.03)
Age	.006 (.006)	-.007 (.004)	-.027 (.006)
Education	.006 (.004)	-.000 (.003)	-.004 (.004)
Female	.03 (.02)	.02 (.01)	-.08 (.02)
Race/Ethnicity			
Black	.04 (.03)	-.11 (.03)	-.21 (.03)
Hispanic	.03 (.04)	-.08 (.03)	-.15 (.04)
Other	.06 (.04)	-.11 (.03)	-.15 (.04)
Party ID (Rep)	-.14 (.03)	.07 (.02)	.22 (.03)
Ideology (Cons)	-.04 (.03)	.09 (.02)	.15 (.03)
Authoritarian	-.05 (.03)	.05 (.02)	.10 (.03)
Constant	.35 (.07)	.57 (.05)	.41 (.07)

Note: All entries are unstandardized regression coefficients with standard errors in parentheses. Coefficients in bold are at least twice the size of their standard error.