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The Role of Perceived Collective Anger and Fear on Policy Support in Response to Terrorist Threat

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THE ROLE OF PERCEIVED COLLECTIVE ANGER AND FEAR ON POLICY
SUPPORT IN RESPONSE TO TERRORIST THREAT

A Dissertation Presented

by

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ABSTRACT

THE ROLE OF PERCEIVED COLLECTIVE ANGER AND FEAR ON POLICY
SUPPORT IN RESPONSE TO TERRORIST THREAT

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The current research investigates how the perceived emotional responses of a majority of Americans to 9/11 (i.e., collective anger and fear) affect individuals' support for governmental policies, in particular, military intervention, anti-immigration policy, and restricting civil liberties. Study 1 found that perceived collective anger was associated with support for military intervention and anti-immigration policy, and that those effects of perceived collective anger on policy support were significantly driven by individuals' own anger. Study 2 showed that experimentally manipulated collective anger (i.e., exposure to the majority's anger relative to the minority's anger) had marginal effects on support for anti-immigration policy and restricting civil liberties, and individuals' own anger mediated the marginal effect of collective anger on support for restricting civil liberties. Participants exposed to either the majority's or minority's fear supported anti-immigration policy and restricting civil liberties as strongly as did those exposed to the majority's anger. Implications and limitations of these findings were discussed.

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CHAPTER 1

THEORETICAL BACKGROUND

Introduction

In response to the September 11, 2001 terrorist attacks on the World Trade Center and the Pentagon, the U.S. government moved quickly to take an action against terrorism. The Bush Administration launched the bombing of Afghanistan, and the Congress passed the USA PATRIOT Act allowing law enforcement powers to detain foreign nationals or immigrants suspected of terrorism. Although some U.S. citizens criticized the foreign policy of the U.S. government, these actions were largely supported by a majority of U.S. citizens. According to national polls conducted in the month immediately following the 9/11 attacks, 82-91 % of Americans approved of the Bush administration's military action against terrorism and 55-79 % of Americans showed their willingness to sacrifice some civil liberties to fight terrorism (Huddy, Khatib, & Capelos, 2002). Anti-immigrant sentiments also became evident. A public opinion survey showed that 58 % of respondents endorsed decreasing immigration levels after the 9/11 attacks, compared to 41 % in the survey conducted prior to the attacks (Gallup Poll, 2008).

How did a majority of Americans come to support anti-terrorism policies? Since 9/11, many studies have focused on the role of the U.S. citizens' emotional responses to the attacks in supporting the governmental policies (e.g., Cheung-Blunden & Blunden, 2008a, 2008b; Sadler, Lineberger, Correll, & Park, 2005; Skitka, Bauman, Aramovich, & Morgan, 2006; Skitka, Bauman, & Mullen, 2004; Small, Lerner, & Fischhoff, 2006). For example, Americans whose emotional responses were dominated by anger tended to endorse military action and reject humanitarian efforts, compared to other emotions such

as fear and sadness (Sadler et al., 2005).

In addition to individual Americans' own emotional responses to 9/11, their political opinions may be influenced by other Americans' emotional responses. How do Americans respond to governmental counter-terrorism policies when most other Americans seem angry about the 9/11 attacks? Does this perception lead them to support military intervention? Recent work has suggested that perceptions of the majority's emotions following a certain group-level event can affect individual group members' attitudinal, and behavioral responses to the event in the direction of perceived collective emotions (Bar-Tal, 2001; Bar-Tal, Halperin, & de Rivera, 2007). Particularly relevant is Conejero and Etxebarria's (2007) study, conducted after the terrorist attacks in Madrid on March 11, 2004, which showed that individuals' own negative emotional responses to the attacks and their perception of prevalent negative emotions (e.g., anger, fear) in their society predicted their avoidant behavior toward Muslims or Basques.

In sum, while many studies have demonstrated the effects of individuals' own emotional responses to the 9/11 terrorist attacks on their attitudes and judgments (e.g., Sadler et al., 2005; Skitka et al., 2006; Skitka et al., 2004; Small et al., 2006), little is known about how perceptions of Americans' collective emotional responses contribute to shaping individual Americans' post 9/11 emotions and policy support. In the current research, I investigate how perceived collective emotional responses to 9/11 affect individuals' emotions and attitudes. This research examines these issues to better understand the psychological mechanisms underlying the tendency for people to support governmental counter-terrorism policies following the 9/11 terrorist attacks.

Emotional Responses to Group Threat

Researchers have long recognized the important role of emotions in group life (e.g., Freud, 1921/1953; Le Bon, 1895; McDougall, 1920/1973). Moscovici (1986) also argued that when individuals are in a group, they are more likely to respond to a group event, by being prompted from their emotional impulses.

Focusing more specifically on individuals' psychological process within a group, Intergroup Emotions Theory (IET; Mackie, Devos, & Smith, 2000; Smith, 1993, 1999) postulates that when group membership is salient, the situations or events related to one's group are appraised and experienced by individuals on a group basis even if they have no direct effect on individual group members. Also, research on IET suggests that specific emotions triggered by different appraisals of situations or events induce differentiated action tendencies (Mackie et al., 2000; Smith, Seger, & Mackie, 2007). Individuals who perceive the ingroup as strong are more likely to experience anger toward the outgroup and to show desire to take action against it (Mackie et al., 2000).

In addition to individuals' own emotions which are derived from their group membership, recent work has suggested that individuals' attitudes and behaviors are affected by their perceptions of others' emotions. Indeed, work by Bar-Tal (2001; Bar-Tal et al., 2007) has argued that collective emotional responses – that is, perceptions of the group's prevailing emotional responses to group events – can affect individual group members' emotional, attitudinal, and behavioral responses to these events (see also Conejero & Etxebarria, 2007). By perceiving others' emotions, people may grow to experience the same emotions or use them as guides for their own attitudes and behaviors.

Specific Emotional Responses to Terrorist Threat

Public opinion polls found that anger was the dominant emotional response to the

9/11 terrorist attacks. A national poll found that 37% of Americans reported anger as their primary emotion, 24 % chose sadness, and 6 % chose fear (NBC News/Wall Street Journal Poll, September 12, 2001). Similarly, another poll showed that anger and frustration topped the list (26%), compared to 21% who mentioned sorrow or sadness and 7% who chose fear as their best described emotional response to 9/11 (Los Angeles Times Poll Alert, September 16, 2001). Research has found that individuals' anger response to 9/11 is a strong predictor of support for counter-terrorism policies, in particular, military intervention against terrorism (e.g., Cheung-Blunden & Blunden, 2008a; Sadler et al., 2005).

Although fear was reported by only a minority of people for their primary response to 9/11, its effects were evident in many people's sense of vulnerability. In a nationwide study, 52% of respondents reported that the terrorist attacks had shaken their sense of personal safety and security a great deal or some (Huddy, Feldman, Taber, & Lahav, 2005). Also, 86% reported that they were very or somewhat concerned about future terrorist attacks and 68% reported concerns on potential harm to themselves and their friends and family as a result of terrorism. Supporting this, individuals experiencing fear in response to 9/11 perceive higher risk of future events rather than anger (Lerner, Gonzalez, Small, & Fischhoff, 2003). Hence, many researchers have focused on the effects of anger and fear in response to the 9/11 attacks on Americans' post 9/11 attitudes and behaviors (e.g., Sadler et al., 2005; Skitka et al., 2006; Skitka et al., 2004; Small et al., 2006).

Anger

Anger can be conceptualized as resulting from appraisals that someone else is responsible for an aversive event and that the self has a strong position relative to that person (Frijda,

Kuipers, & ter Schure, 1989; Mackie et al., 2000; Smith & Lazarus, 1993). In intergroup contexts, research has shown that anger triggered by a threat to the ingroup leads to a desire to take an action against outgroup members (Devos, Silver, Mackie, & Smith, 2002). Being reminded of 9/11, anger felt by Americans tends to be directed primarily at the terrorists and their affiliated groups (Sadler et al., 2005).

Anger may therefore underlie why many Americans supported governmental policies endorsing military intervention following the attacks (Cheung-Blunden & Blunden, 2008a, 2008b; Lerner et al., 2003; Sadler et al., 2005). For example, Cheung-Blunden and Blunden (2008b) showed that Americans experiencing anger about the 9/11 terrorist attacks endorsed military action and rejected humanitarian efforts. In another study, anger evoked by the 9/11 terrorist attacks led people to support vengeful policies more strongly and conciliatory policies less strongly (Lerner et al., 2003).

Individuals experiencing anger also tend to support domestic policies of counter-terrorism. Being reminded of 9/11, angry individuals reported that they changed their attitudes more negatively toward new immigrants, Arab Americans, and those who live in Islamic or Middle Eastern countries, compared to their attitudes prior to 9/11 (Skitka et al., 2004). Similarly, the more individuals' emotional responses were dominated by anger, the stronger their support for severe reduction of immigration from the Middle East (Sadler et al., 2005).

Though not directly related to attitudes toward the outgroup, anger is also associated with support for domestic surveillance or restriction of civil liberties. Angry individuals tend to endorse fewer constraints on law enforcement, making it easier to obtain warrants for searches, seizures, and surveillance (Sadler et al., 2005). Moreover, people experiencing anger have been shown to believe that the Bush administration had

not gone far enough on restricting civil liberties to fight terrorism (Skitka et al., 2004).

Fear

In contrast to anger, when one perceives the self to be weak relative to another, fear is the more likely emotional response to a threat (Mackie et al., 2000). Intergroup situations eliciting fear response may prompt a motive of protection by escaping from or avoiding an opposing outgroup, while anger may lead to take an action against the outgroup (Devos et al., 2002). Compared to strong evidence supporting the relationship between anger and counter-terrorism policy support, however, evidence on the relationship between fear and counter-terrorism policy support is less clear. Several studies found that individuals' fear responses to 9/11 were negatively or not significantly associated with support of military intervention against terrorism (Huddy et al., 2005; Sadler et al., 2005; Skitka et al., 2006). On the other hand, some positive relations of fear to a desire for vengeance or support for military action have been found (Cheung-Blunden & Blunden, 2008a; Skitka et al., 2004). Despite this variation, when the effects of anger and fear are examined together, anger is a stronger predictor than fear of support of military intervention against terrorism or opposition of conciliatory policy (Cheung-Blunden & Blunden, 2008a; Lerner et al., 2003; Skitka et al., 2004).

Fear is also associated with support of domestic counter-terrorism policy. Individuals who experience higher levels of fear are more likely to report that their attitudes toward new immigrants (Arab Americans) and people living in Middle East were more negatively changed after 9/11 (Skitka et al., 2004). However, compared to anger, fear was weakly associated with support for anti-immigration policy (see Lerner et al., 2003; Sadler et al., 2005). Additionally, one study found that fear was positively associated with support for restricting civil liberties to fight terrorism as strongly as anger

(Skitka et al., 2004), and another study showed that fear was unrelated to support for restricting civil liberties while anger was significantly associated with support for this policy (Sadler et al., 2005).

In sum, anger and fear appear to predict attitudes and behaviors under terrorist threat, yet more work is needed to understand the role each plays. The general trend, however, is that anger seems to lead to support of international and domestic counter-terrorism policies more strongly than fear.

Collective Emotional Responses

Each individual may experience emotional responses on behalf of their group, but collective emotional responses are distinct from these individuals' group-based emotional responses. Collective emotional responses can be defined as emotions that are perceived to be shared by a majority of group members in response to group-level events (see Bar-Tal et al., 2007; de Rivera & Páez, 2007; Fernández-Dols, Carrera, de Mendoza, & Oceja, 2007). This definition of collective emotion is distinct from group-based emotion as defined by IET, which instead refers to the emotions individual group members experience on behalf of their group. Group-based emotions are *felt* by group members in response to group events as a result of their identification of a group, while collective emotional responses are *perceived* by group members (see Bar-Tal et al., 2007; de Rivera, 1992). Both concepts are based on the same assumption that individuals may experience emotions in response to a group event regardless of its consequence on their personal life. However, the concept of collective emotional response focuses on the role of perceiver that individuals play within a group, rather than the role of group member who feels an emotional bond with a group.

Collective emotional responses may be perceived when group members focus their attention on a specific event that is meaningful to the group (see de Rivera, 1992, Smith & Crandell, 1984), or when the group celebrates a collective success, laments a tragedy, or suffers a common threat (Conejero & Etxebarria, 2007). Under group threat, individuals may also inaccurately estimate the nature or intensity of other people's emotional responses. Researchers have suggested several different reasons underlying this misperception such as self-interest (Miller, & McFarland, 1999) or the availability of and exposure to information (O'Gorman 1986; Prentice & Miller, 1993; Shamir & Shamir, 1997). For example, people's perceptions of specific issues may be correlated with the prominence of media coverage on those issues (Shamir & Shamir, 1997). Being reminded of terrorist attacks, people may overestimate other people's fear and anger, biased by extensive media coverage using repetitive images and emotional-laden language (Cho et al., 2003). Indeed, in response to the terrorist attacks in Spain, people perceived others to experience negative emotions (e.g., anger, fear) more intensely than they themselves experienced (Conejero & Etxebarria, 2007).

Potential Mechanisms for the Effects of Collective Emotions

How do collective emotional responses affect individuals' attitudes and behaviors? First, a group member may be influenced by other members' expressed emotions through emotional contagion. Emotional contagion can be defined as the tendency to automatically mimic and synchronize others' displayed emotions, which consequently leads to convergence emotionally (Hatfield, Cacioppo, & Rapson, 1994). Although most of the evidence for emotional contagion has derived from interpersonal relationships, several studies have suggested that transmission of emotions can occur within groups (e.g., Barsade, 2002; Totterdell, Kellett, Teuchmann, & Briner, 1998).

Second, perceptions of group members' shared emotions may exert normative influence on individual group members. Social influence research has shown that when individuals perceive their private attitudes to be different from the majority's attitudes, they change their attitudes and behaviors in the direction of the perceived group norm (e.g., Miller & McFarland, 1991; Miller, Monin, & Prentice, 2000; Sabini, Cosmas, Siepmann, & Stein, 1999; Sul & Wan, 1987). For example, in Prentice and Miller's (1993) study of attitude change among college students, male students shifted their attitudes toward alcohol drinking in the direction of what they believed other students felt about drinking. Although past research has focused on these processes in the context of attitudes or judgments, it is plausible that the same principle would apply in the context of emotions.

Evidence for the Effects of Collective Emotions

Whether through emotional contagion or normative processes, research suggests that perceived collective emotional responses affect individuals' attitudes and behaviors through changing their emotional responses to group events. To date, however, little research has examined how collective emotional responses to group-level events affect individual group members' emotions and attitudes. To the author's knowledge, only one published study examined the influence of collective emotions on individuals' attitudes. Conejero and Etxebarria (2007) conducted a study immediately following the terrorist attacks in Madrid, Spain on March 11, 2004. They investigated relationships between individuals' own emotional responses to the attacks and their perceptions of collective emotional responses to the attacks. They found that respondents generally perceived others to experience both positive and negative emotions more intensely than they

themselves experienced. Pooling these emotions, the results showed that, overall, individuals' negative emotional responses predicted avoidance of Muslims and Basques, yet the addition of negative collective emotional responses only slightly increased the prediction of these avoidant tendencies.

Although the study by Conejero and Etxebarria (2007) examined collective emotional responses in the context of terrorist threat, there are important limitations to this work. First, drawing on findings from post 9/11 research (e.g., Cheung-Blunden & Blunden, 2008a; Lerner et al., 2003) and Intergroup Emotions Theory (e.g., Devos et al., 2002), we must consider the differentiated effects of distinct negative collective emotions, such as collective anger and fear. Second, Conejero and Etxebarria (2007) examined relationships among the variables only using questionnaire responses, whereas experimental manipulations of collective emotional responses are necessary to provide direct evidence of the effects of collective emotional responses on policy support.

The Current Research

In the current research, I use both survey and experimental methods to address the question of whether Americans' perception of collective anger and fear responses to 9/11 can influence their support for counter-terrorism policies. In Study 1, using correlational data, I first examine whether perceived collective emotional responses are distinct from individuals' own emotional responses to 9/11. I also test whether perceived collective emotional responses are associated with counter-terrorism policy support, using correlational (Study 1) and experimental (Study 2) research designs. Drawing from the findings from post 9/11 studies and research on collective emotions, I propose that perceived collective anger and fear will increase individuals' support for counter-terrorism policies. More specifically, I expect that perceived collective anger will be

associated with counter-terrorism policy support more strongly than fear. I further examine whether perceived collective anger and fear predict counter-terrorism policy support above and beyond the contribution of individuals' own anger and fear.

CHAPTER 2

STUDY 1: CORRELATIONAL TESTS OF PERCEIVED COLLECTIVE EMOTIONAL RESPONSE EFFECTS

Design and Hypotheses

The goal of Study 1 is to provide an initial test of the relationships between collective- and individual-level emotions in response to the 9/11 terrorist attacks and the effects of perceived collective anger and fear on people's support for counter-terrorism policies. I propose the following hypotheses:

Hypothesis 1: Perceived collective emotional responses to 9/11 will be distinct from individuals' own emotional responses to 9/11. Drawing from Intergroup Emotions Theory (Mackie et al., 2000), I hypothesize that collective anger and fear will be distinguishable from individuals' own anger and fear respectively, and that anger will be distinct from fear at both individual and collective levels.

Hypothesis 2: Despite their distinguishability, perceived collective emotional responses to 9/11 will be associated with individuals' own emotional responses. Based on the emotional contagion (Hatfield et al., 1994) and social influence literatures (e.g., Miller & McFarland, 1991), I predict positive correlations between collective anger and own anger, and between collective fear and own fear.

Hypothesis 3: Perceived collective emotional responses will predict counter-terrorism policy support. Based on recent work on collective emotions (e.g., Conejero & Etxebarria,

2007) and post 9/11 research (e.g., Cheung-Blunden & Blunden, 2008a; Lerner et al., 2003), I hypothesize that perceived collective anger and fear will both predict individuals' support for counter-terrorism policies, yet that perceived collective anger will be a stronger predictor of policy support than fear.

Methods

Participants and Procedure

Participants were 137 undergraduate students at the University of Massachusetts Amherst. Data collection was conducted from March to July, 2009. Participants were approached at the end of class time by permission of the class teacher, and asked whether they would like to participate in the study for course credit. They were informed that participation in the study was voluntary and completely anonymous. Questionnaire completion took approximately 20-30 minutes. Questionnaires included measures about one's own and most Americans' emotional responses to 9/11, policy support, and demographic questions. The order of one's own and most Americans' emotional responses was counterbalanced. All participants received credit as partial fulfillment of their research experience requirement. Six non-U.S. citizens were excluded from all analyses because the current research concerned Americans' responses to terrorist threat. The final sample consisted of 77 women and 54 men. Participants' ages ranged from 18 to 33 ($M = 19.8$, $SD = 2.57$).

Materials

Emotional Response Measures

To assess collective emotional responses to 9/11, a question modified from Conejero and Etxebarria (2007)'s study was used. Participants rated how strongly they perceive most

Americans feel each emotion when reminded of the 9/11 attacks. They were presented with a list of eight emotional items with four items to assess collective anger (angry, irritated, outraged, mad) and four items to assess collective fear (fearful, scared, afraid, frightened). They responded to each item on a 7-point scale ranging from 1 (*Not at all*) to 7 (*Very much*). Cronbach alphas for perceived collective anger ($\alpha = .85$), and collective fear ($\alpha = .97$) were high.

Participants were also asked to report how strongly they feel each emotion when reminded of the 9/11 attacks. They were presented with the same list of eight emotional items measuring individuals' own anger and fear. They responded to each item on a 7-point scale ranging from 1 (*Not at all*) to 7 (*Very much*). Cronbach alphas were highly reliable for individuals' own anger ($\alpha = .93$) and own fear ($\alpha = .99$).

A maximum likelihood factor analysis with an oblimin rotation on all sixteen emotion items was conducted in order to test whether perceived collective emotions are distinct from individuals' own emotions.¹ When a four-factor solution was enforced, factor loadings after oblimin rotation showed that all own fear items loaded on the first factor ($> .94$), all perceived collective anger items loaded on the second factor ($> .49$), all perceived collective fear items loaded on the third factor ($> -.86$), and all own anger items loaded on the fourth factor ($> .75$). The four factors accounted for 88% of the variance.² Also, the correlations between the four factors were less than $\pm .60$ (.18, -

¹ In order to examine the distinguishability of emotional items, instead of a varimax rotation, I ran factor analysis with an oblimin rotation, which allowed the factors to be correlated and provided the correlation matrix between the factors.

² For the second factor, the factor loadings of perceived collective anger items were .75, .50, .97, and .82. Also, when no number of factors was specified, a three-factor solution was extracted such that factor loadings after oblimin rotation showed that all own fear items loaded on the first factor ($> .93$), and all perceived collective fear items loaded on the second factor ($> -.83$), all perceived collective anger items and all own

.58, .31, -.44, .57, -.19), suggesting the distinguishability of emotional items.

Policy Support Measures

To assess participants' policy support, a total of 11 items have been modified from prior research (Crowson, DeBacker, & Thoma, 2005; Danso, Sedlovskaya, & Suanda, 2007; Pyszczynski et al., 2006) tapping three domains of counter-terrorism policies.

Military Intervention

Four items assessed participants' support for military intervention against terrorism. Participants responded on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) to items such as "In order to protect security at home, it is necessary to take military action to destroy terrorist networks around the world." High scores on this measure reflect greater support for military intervention against terrorism ($\alpha = .93$).

Anti-Immigration

Support for anti-immigration policies was assessed by four additional items (e.g., "There are too many immigrants from the wrong sorts of places being admitted to the United States these days"). All response scales ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). High scores represent greater support for anti-immigration policies ($\alpha = .77$).

Restriction of Civil Liberties

To assess the support for restriction of civil liberties, participants were asked to respond

anger items loaded together on the third factor ($> .58$), accounting for 83% of the variance.

three items rated on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). For example, participants were asked to respond to statements such as “It is sometimes necessary for the government to curb the civil rights of American citizens in order to protect the country against terrorist threats.” Higher values on this measure represented stronger support for restriction of civil liberties to fight against terrorism ($\alpha = .80$).

A maximum likelihood factor analysis with a varimax rotation on all eleven policy items was conducted. This analysis yielded a three-factor solution, showing that all military intervention items loaded strongly on the first factor ($> .74$), all anti-immigration items loaded strongly on the second factor ($> .55$), and all civil liberties items loaded strongly on the third factor ($> .66$). The three factors accounted for 72% of the variance.

Results

Distinctiveness of Perceived Collective Emotional Responses

Table 1 shows the means and standard deviations for the emotion and policy measures. An analysis of variance revealed no significant effects of question order, $F_s < 1.7$, indicating that mean scores on the variables were not significantly affected by question order.

Of primary interest was whether perceived collective emotional responses were distinct from individuals’ own emotional responses to 9/11 (Hypothesis 1). In addition to the factor analysis described earlier, I followed procedures used by Smith et al. (2007) to test this distinctiveness at the mean levels. The emotion data were submitted to a 2 (emotion level: individual vs. collective, between-subjects) \times 2 (emotion type: anger vs.

fear, within-subjects) mixed ANOVA.³ This analysis revealed a significant main effect of emotion level, $F(1, 129) = 22.52, p < .001$. Participants reported more intense collective anger ($M = 5.34, SD = 1.14$) and fear ($M = 5.19, SD = 1.41$) in most Americans than their own anger ($M = 4.76, SD = 1.64$) and fear ($M = 3.80, SD = 1.53$). There was also a significant main effect of emotion type, $F(1, 129) = 15.17, p < .001$, such that reported anger ($M = 5.06, SD = 1.43$) was stronger than fear ($M = 4.51, SD = 1.62$). As shown in Figure 1, there was also a significant interaction between emotion type and level, $F(1, 129) = 8.13, p < .01$, showing that the own-collective difference was greater in relation to fear (*Mean Difference* = 1.26) than in relation to anger (*Mean Difference* = .80). Thus, as predicted, perceived collective emotional responses had significantly different profiles from individuals' own emotional responses to 9/11.

Table 1
Means and Standard Deviations of Variables in Study 1

Variable	<i>M</i>	<i>SD</i>
Collective Anger	5.46	1.11
Own Anger	4.66	1.56
Collective Fear	5.14	1.37
Own Fear	3.88	1.73
Military Intervention	3.56	1.57
Anti-Immigration	2.97	1.34
Restricting Civil Liberties	3.35	1.40

³ I analyzed the first set of emotional responses by each participant (one's own or perceived collective emotional responses, depending on the order counterbalancing) because the second set of emotion questions might be biased by the first set of data, leading people to anchor their latter responses on the former ones or to seek different answers than they have just provided in response to the first set of questions (see Smith et al., 2007 for a similar approach).

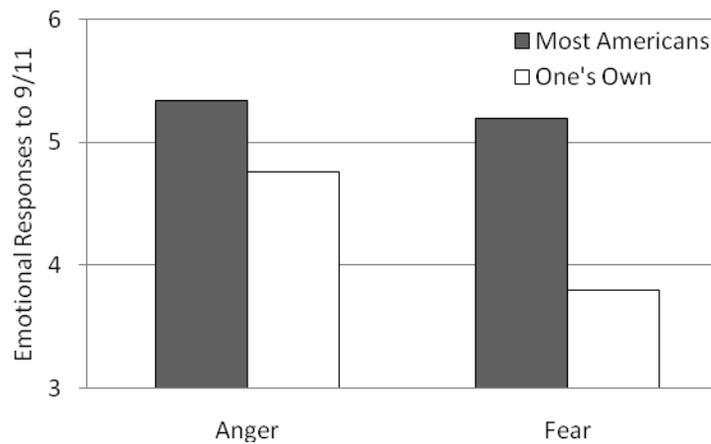


Figure 1. Collective and own emotional responses to 9/11 in Study 1

Relations between Collective and Own Emotional Responses

Table 2 shows the correlations between collective and own emotional responses to 9/11, to test whether they were associated with each other (Hypothesis 2). As predicted, perceived collective anger was strongly associated with individuals' own anger, $r(131) = .67, p < .001$, and perceived collective fear was also strongly associated with individuals' own fear, $r(131) = .67, p < .001$.

There were marginal differences in the strength of correlation coefficients between the groups of participants who received own emotion questions first and collective emotion question first. The correlation between collective anger and own anger was marginally stronger in the group exposed to collective emotion questions first, $r(67) = .76$, than in the group exposed to own emotion questions first, $r(64) = .58, z = 1.87, p = .06$. Likewise, the correlation between collective fear and own fear was marginally stronger in the group exposed to collective emotion questions first, $r(67) = .75$, than in the group exposed to own emotion questions first, $r(64) = .56, z = 1.90, p = .057$.

Table 2
Correlations between Collective and Own Emotional Responses in Study 1

Variable	1	2	3	4
Total ($n = 131$)				
1. Collective Anger				
2. Own Anger	.67***			
3. Collective Fear	.43***	.21**		
4. Own Fear	.30***	.44***	.67***	
Own-question first ($n = 64$)				
1. Collective Anger				
2. Own Anger	.58***			
3. Collective Fear	.43***	.05		
4. Own Fear	.24	.30**	.56***	
Collective-question first ($n = 67$)				
1. Collective Anger				
2. Own Anger	.76***			
3. Collective Fear	.44***	.38***		
4. Own Fear	.35**	.58***	.75***	

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

In addition, the results showed significant relations between collective anger and own fear, $r(131) = .30, p < .001$, and between collective fear and own anger, $r(131) = .21, p < .01$. These relations were, however, only significant among the participants exposed to collective emotion questions first: Perceived collective anger was significantly correlated with own fear, $r(67) = .35, p < .01$, and perceived collective fear with own anger, $r(67) = .38, p < .001$ among participants exposed to collective emotion questions first, while those correlations were marginally or not significant among participants exposed to the own emotion questions first, $r(64) = .24, p = .06, r(64) = .05, p > .71$, respectively.

In sum, consistent with predictions, perceived collective anger and fear were distinguishable, yet significantly associated with individuals' own anger and fear,

respectively. Also, perceived collective anger was associated not only with individuals' own anger, but with their own fear, and in a similar vein perceived collective fear was associated not only with individuals' own fear and but with their own anger. These relations between collective- and individual-level emotions were stronger among the participants exposed to collective emotion questions first.

Relations between Collective and Own Emotional Responses and Policy Support

Table 3 shows the correlations among individuals' own and perceived collective emotional responses and policy support measures. Perceived collective anger was significantly correlated with support for military intervention, $r(131) = .33, p < .001$, and anti-immigration policy, $r(131) = .19, p < .05$, but not with support for restricting civil liberties, $r(131) = .10, p = .24$. Perceived collective fear was not significantly correlated with any policy measures, $rs < .10$, ns. Also, groups with different question orders generally showed similar patterns of correlations between perceived collective emotional responses and policy measures (see Table 3).

Compared to perceived collective emotional responses to 9/11, individuals' own emotional responses were strongly associated with counter-terrorism policy support. In particular, individuals' own anger was significantly correlated with all three counter-terrorism policies (all $rs > .27$, all $ps < .05$). This pattern tended to be stronger among participants exposed to collective-question first, than those exposed to own-question first. At the same time, individuals' own fear was significantly associated with all policy measures among those responding to collective-question first ($rs > .26, ps < .05$), but not associated with any policy measures among those responding to own-question first (see Table 3).

Table 3
Correlations between Emotional Responses and Policy Support in Study 1

Policy Support	Anger		Fear	
	Collective	Own	Collective	Own
Total ($n = 131$)				
Military Intervention	.33***	.50***	.07	.16
Anti-Immigration	.19*	.36***	.05	.19*
Restricting Civil Liberties	.10	.32***	.10	.26**
Own-question first ($n = 64$)				
Military Intervention	.27*	.46***	-.02	-.12
Anti-Immigration	.05	.27*	-.02	.07
Restricting Civil Liberties	-.00	.32*	.00	.13
Collective-question first ($n = 67$)				
Military Intervention	.39***	.56***	.17	.42***
Anti-Immigration	.31**	.47***	.09	.26*
Restricting Civil Liberties	.20	.33**	.19	.35**

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

Predictive Value of Perceived Collective Emotional Responses

In order to test whether perceived collective anger and fear uniquely predict each policy outcome and whether collective anger is a stronger predictor than collective fear

(Hypothesis 3), I built a regression model for each policy outcome, entering perceived collective anger and fear simultaneously.⁴ Perceived collective anger predicted military

⁴ In the following analyses, I report the regression results using total sample ($n = 131$) instead of using groups with different question orders since there were no significant interactions between question order and collective emotional responses in predicting each policy outcome. Both groups showed similar patterns of results, except that collective

intervention, $\beta = .36$, $t(128) = 3.94$, $p < .001$, and anti-immigration, $\beta = .21$, $t(128) = 2.13$, $p < .05$. However, perceived collective fear did not uniquely predict either of these policy outcomes. Moreover, neither collective anger nor collective fear predicted support for restricting civil liberties (see Table 4).

Table 4
Standardized Coefficients from Regressions Using Collective Emotions to Predict Policy Support in Study 1

Emotion	Counter-Terrorism Policy		
	Military Intervention	Anti-Immigration	Restricting Civil Liberties
Collective Anger	.36***	.21*	.07
Collective Fear	-.09	-.04	.07
R^2	.11**	.04†	.02

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Further, using a hierarchical regression model, I examined whether perceived collective emotional responses predict each policy outcome independently of individuals' own emotional responses. By entering collective anger and fear in the first step and individuals' own anger and fear in the second step, I tested whether perceived collective emotional responses remain significant predictors for each policy outcome once individuals' own emotional responses are included in the model. As presented in Table 5, when individuals' own emotional responses were entered in the second step, the effects of collective anger on military intervention and anti-immigration were no longer significant, $ps > .75$. Instead, individuals' own anger was the only significant predictor of

anger was a significant predictor of anti-immigration in the group with the collective-question first, $\beta = .34$, $t(64) = 2.56$, $p < .05$, while it was not significant in the group with own-question first, $\beta = .07$, $t(61) = .51$, $p = .61$.

all three policy outcomes (see Table 5).

Table 5
Standardized Coefficients from Hierarchical Regressions Using Collective and Own Emotional Responses to Predict Policy Support in Study 1

Military Intervention	Step 1		Step 2	
Collective Anger	.36***	(<i>t</i> = 3.94)	-.04	(<i>t</i> = -.31)
Collective Fear	-.09	(<i>t</i> = -.94)	.04	(<i>t</i> = .30)
Own Anger			.57***	(<i>t</i> = 4.62)
Own Fear			-.11	(<i>t</i> = -.87)
<i>R</i> ² change				.15***
Total <i>R</i> ²		.11***		.26***
Anti-Immigration	Step 1		Step 2	
Collective Anger	.21*	(<i>t</i> = 2.13)	-.08	(<i>t</i> = -.60)
Collective Fear	-.04	(<i>t</i> = -.43)	-.05	(<i>t</i> = -.37)
Own Anger			.40**	(<i>t</i> = 3.02)
Own Fear			.07	(<i>t</i> = .51)
<i>R</i> ² change				.10***
Total <i>R</i> ²		.04		.14***
Restricting Civil Liberties	Step 1		Step 2	
Collective Anger	.07	(<i>t</i> = .77)	-.21	(<i>t</i> = -1.62)
Collective Fear	.07	(<i>t</i> = .71)	.02	(<i>t</i> = .17)
Own Anger			.40**	(<i>t</i> = 3.03)
Own Fear			.13	(<i>t</i> = .98)
<i>R</i> ² change				.13***
Total <i>R</i> ²		.02		.14***

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

Lastly, focusing particularly on the effects of perceived collective anger on policy support, I examined whether perceived collective anger predicts each policy outcome above and beyond the contribution to prediction made by individuals' own anger. By entering collective anger in the first step and individuals' own anger in the second step, I tested whether the contribution of perceived collective anger remains significant in

predicting each policy outcome once individuals' own anger is included in the model. As shown in Table 6, when individuals' own anger was entered in the second step, the effects of collective anger on military intervention and anti-immigration policy were not significant. Instead, individuals' own anger was the only significant predictor of all three policy outcomes (see Table 6).

Table 6
Standardized Coefficients from Hierarchical Regressions Using Collective and Own Anger to Predict Policy Support in Study 1

Military Intervention	Step 1	Step 2
Collective Anger	.33*** ($t = 3.91$)	-.02 ($t = -.18$)
Own Anger		.52*** ($t = 5.01$)
R^2 change		.15***
Total R^2	.11***	.25***
Anti-Immigration	Step 1	Step 2
Collective Anger	.19* ($t = 2.16$)	-.10 ($t = -.93$)
Own Anger		.43*** ($t = 3.93$)
R^2 change		.10***
Total R^2	.04*	.14***
Restricting Civil Liberties	Step 1	Step 2
Collective Anger	.10 ($t = 1.18$)	-.20 ($t = -1.79$)
Own Anger		.45*** ($t = 4.06$)
R^2 change		.11***
Total R^2	.01	.12***

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

In sum, perceived collective anger was positively associated with counter-terrorism policies of military intervention and anti-immigration, while perceived collective fear was not significantly associated with any of the counter-terrorism policies. However, the effects of perceived collective anger were not significant once individuals' own anger was entered, suggesting that the significant effects of collective anger on

policy outcomes are driven by individuals' own anger.

Discussion

Study 1 provided initial evidence for the effects of perceived collective emotional responses to 9/11 on counter-terrorism policy support. The results showed that individual- and collective-level emotional profiles were not only distinguishable structurally, but also differed in overall mean levels (Hypothesis 1). Consistent with prior research (Conejero & Etxebarria, 2007), participants also perceived higher levels of anger and fear in most Americans compared to their own anger and fear responses to 9/11.

Second, as predicted, perceived collective emotional responses to 9/11 were strongly associated with individuals' own emotional responses (Hypothesis 2). In addition, correlations between collective- and individual-level anger, and between collective- and individual-level fear, were stronger among participants responding to the collective emotion questions first. These results suggest that when primed to think about collective emotions, people may be more likely to associate collective emotional responses with their own emotional responses. Such relations between collective- and individual-level emotions are consistent with research on emotional contagion (Hatfield et al., 1994) and social influence literatures (e.g., Miller & McFarland, 1991).

Third, perceived collective anger was strongly associated with counter-terrorism policy support, which was consistent with Hypothesis 3, while perceived collective fear was not significantly associated with any of the counter-terrorism policies. The more anger participants perceived in most Americans in response to 9/11, the stronger support they showed for military intervention and anti-immigration policy. However, the role of individuals' own anger should be considered in examining the effects of perceived collective anger on policy support. The effects of perceived collective anger on support

for military intervention and anti-immigration policy were not significant once individuals' own anger was entered.

Fourth, the relations among perceived collective emotions, individuals' own emotions, and counter-terrorism policy support tended to be stronger in the group exposed to collective emotion questions first than in the group exposed to own emotion question first. Particularly, individuals' own fear was significantly correlated with policy outcomes among those who received collective emotion questions first, while it was not among those who received own emotion questions first. That is, individuals' own fear became associated with counter-terrorism policy support after they think about most Americans' emotional responses to 9/11. It is possible that individuals' fear of personal harm becomes characterized fear of group harm by exposure to collective emotional responses to a group threat. In a similar vein, distinguishing personal fear (i.e., fear of personal harm) from sociotropic fear (i.e., fear of group threat), Breckenridge and Zimbardo (2007) argued that sociotropic fear is predictive of counter-terrorism policy support, but personal fear is not.

Although the results of Study 1 generally supported the predictions, there are a number of unanswered questions. First, given the nature of correlational research, it is hard to ensure that collective emotional responses have causal (direct or indirect) effects on counter-terrorism policy support. To provide direct evidence for this, it is necessary to conduct an experimental study, by manipulating participants' perceptions of Americans' collective emotional responses. Second, the results showed that either perceived collective anger or collective fear was associated with both individuals' own anger and own fear. This suggests that either a high level of perceived collective anger or collective fear may increase individuals' own anger and fear together, whereas either a low level of

perceived collective anger or fear may decrease both own anger and fear. However, this should be examined by an experimentally designed study. To address these issues, I therefore conducted Study 2, using experimental manipulations of collective anger and fear.

CHAPTER 3

STUDY 2: EXPERIMENTAL TESTS OF COLLECTIVE EMOTIONAL RESPONSE EFFECTS

Design and Hypotheses

The results of Study 1 provided initial evidence for the effect of perceived collective anger on counter-terrorism policy support. In order to make a stronger case for the effect of collective anger and to contrast it to the effect of collective fear, it is necessary to demonstrate more fully the causal link between collective anger and policy support. To accomplish this goal, I manipulate collective anger and fear, by presenting participants with the results of a national poll designed to represent the current emotional states of American population in response to 9/11. People view the majority as reflecting social reality (Mugny & Perez, 1991). Thus, individuals should perceive Americans' collectively shared emotions only when they believe that the majority of Americans feel the emotions. In contrast, when individuals see that certain emotions are shared by only a minority of Americans, they should not perceive the emotions as collectively shared by most Americans. Thus, collective anger and fear are manipulated by presenting national poll results representing emotional responses among the majority of Americans, and their effects are compared to manipulations representing emotional responses among a minority of Americans. Consistent with the predictions and findings in Study 1, I examine the following hypotheses in Study 2:

Hypothesis 1: Participants exposed to the majority's anger will show higher levels of own anger than those exposed to the minority's anger. In the same way, participants exposed

to the majority's fear will show higher levels of own fear than those exposed to the minority's fear.

Hypothesis 2: Participants exposed to the majority's anger will support counter-terrorism policies more strongly than those exposed to the minority's anger.⁵

Hypothesis 3: The effect of collective anger on counter-terrorism policy support will be stronger than the effect of collective fear.

Hypothesis 4: The effect of collective anger on counter-terrorism policy support will be mediated by individuals' own anger.

Methods

Participants

A total of 174 undergraduates of the University of Massachusetts Amherst took part in a study purportedly concerned with attitude and emotion. Participants were recruited through the Psychology Department's subject pool and received a research credit for their participation. The data were collected from April to July, 2009. Five non-U.S. citizens were excluded because of the focus of this research on Americans' responses to 9/11. In addition to the five non-U.S. citizens, three U.S. citizens who reported that their ethnicity was Arab or Middle Eastern were excluded in the following analyses. Their mean scores for counter-terrorism policy support substantially lower

⁵ No prediction was made for the effect of collective fear on counter-terrorism policy support because of no significant finding of the relation between collective fear and policy support in Study 1.

compared to other ethnic groups of U.S. citizens. The final sample included 84 women and 82 men. Participants' ages ranged from 18 to 31 ($M = 20.27$, $SD = 1.87$).

Procedure and Materials

When participants entered the laboratory, they were randomly assigned to one of four experimental conditions (i.e., anger-majority, anger-minority, fear-majority, fear-minority). To manipulate participants' perceptions of collective anger and fear in response to 9/11, I used fictitious results of a national poll on people's emotional responses to 9/11. For example, participants in the anger-majority condition received the following fictitious news article:

Majority of Americans feel angry when thinking about 9/11, national poll finds

According to a recent national poll, a majority of Americans feel angry when they think about 9/11 terrorist attack. The latest national poll, conducted in 2009, finds that 85% of Americans feel angry "a great deal" (75%) or "a moderate amount" (10%) when they think about 9/11. Only 5% say that a reminder of the terrorist attacks does not lead them to feel angry at all.



In the anger-minority condition, participants received the same information but replacing "angry" by "not angry" and changing figure indices accordingly. Parallel manipulations were used in the fear-majority and fear-minority conditions. Following the

manipulations, participants across all conditions were asked to respond to a series of questions concerning emotional responses to 9/11 and counter-terrorism policy support. Lastly, they were debriefed and thanked for their participation.

Manipulation Checks

Two manipulation check measures were used. First, a single-item question was used to assess whether participants interpreted the data presented accurately or not. Participants in the anger conditions, for example, were asked to respond to the following question, “According to the national poll in your reading, do a majority of Americans feel “angry” or “not angry” when they think about 9/11?” In the fear conditions, participants received the same question but replacing “angry” by “fearful.” As a second manipulation check, I measured collective emotion responses to 9/11 with the same items used in Study 1 to assess collective anger and fear ($\alpha = .91$, $\alpha = .98$, respectively).

Own Emotional Response Measures

To assess the effects of manipulations on individuals’ own emotions, I measured individuals’ own anger and fear in response to 9/11 with the same items used in Study 1 ($\alpha = .90$, $\alpha = .99$, respectively).

Policy Support Measures

The same policy measures were used as in Study 1, and each constituted a reliable scale (military intervention: $\alpha = .92$; anti-immigration: $\alpha = .86$; restriction of civil liberty: $\alpha = .82$). As in Study 1, the same maximum likelihood factor analysis with a varimax rotation showed that all military intervention items loaded strongly on the first factor ($> .76$), all anti-immigration items loaded strongly on the second factor ($> .64$), and all civil liberties items loaded strongly on the third factor ($> .68$). The three factors accounted 81% of the variance.

Results

Prior to data analyses, seven participants were excluded because they incorrectly interpreted the manipulations they received.⁶ All analyses reported below were conducted on the remaining sample ($n = 159$).

Manipulation Checks

The effectiveness of the manipulations of collective emotions was examined in two ways: 1) by comparing levels of perceived collective emotion in the corresponding majority and minority conditions (e.g., anger-majority vs. anger-minority); and 2) by comparing perceived collective emotion across emotion conditions (e.g., anger-majority vs. fear-majority). For example, if the manipulations of collective anger were successful, I should find a significant difference in participants' perceived collective anger between the anger-majority and –minority conditions such that the participants in the anger-majority condition perceive a higher level of anger in most Americans than those in the anger-minority condition. Also, the participants' perceived collective anger in the anger-majority condition should be stronger than in the fear-majority condition.

First, I conducted an independent-samples t test for perceived collective anger across the two anger conditions. As predicted, the results showed that the participants in the anger-majority condition ($M = 5.56$, $SD = .96$) perceived greater collective anger than did those in the anger-minority condition ($M = 4.02$, $SD = 1.50$), $t(78) = 5.48$, $p < .001$.

The manipulations of collective fear were checked in a similar way. An independent-samples t test revealed that the participants in the fear-majority condition ($M = 5.61$, SD

⁶ These participants were equally distributed across the experimental conditions. One participant in the anger-majority condition, two in the anger-minority condition, two in the fear-majority condition, and two in the fear-minority condition incorrectly recognized the collective emotion information they received.

= .93) perceived greater collective fear than did those in the fear-minority condition ($M = 4.27$, $SD = 1.66$), $t(77) = 4.37$, $p < .001$.

Table 7
Perceived Collective Emotional Responses by Conditions in Study 2

Emotion	Collective Anger		Collective Fear	
	Majority	Minority	Majority	Minority
Perceived Collective Emotional Responses to 9/11				
Anger	5.56 (.96) _a	4.02 (1.50) _b	5.49 (.85) _a	5.13 (1.07) _a
Fear	5.38 (1.08) _a	4.49 (1.30) _b	5.61 (.93) _a	4.27 (1.66) _b

Note. All scales ranged from 1 to 7. Values are given as means, SD within parentheses. Subscripts should be interpreted within rows only; means with the same subscript do not differ from each other at the level of .05.

One way analyses of variance (ANOVAs) comparing all four conditions also revealed significant differences in perceived collective anger and fear across the conditions, $F(3, 155) = 16.01$ and 10.37 , $ps < .001$. As seen in Table 7, Tukey post-hoc tests indicated that while perceived collective anger in the anger-majority condition differed from the anger-minority condition, it did not differ from the fear-majority and -minority conditions. Unexpectedly, participants in both fear-majority and -minority conditions perceived anger in most Americans as much as did those in the anger-majority condition, showing higher levels of perceived anger than the anger-minority condition. Additionally, while perceived collective fear in the fear-majority condition was significant stronger than the fear-minority condition, it did not differ from the anger-majority condition (see Table 7). Participants in the anger-majority condition perceived fear in most Americans as much as did those in the fear-majority condition.⁷

⁷ These unexpected results made it hard to differentiate one condition from others in terms of self-reported perceived collective emotions. However, compared with their

In sum, as expected, participants exposed to the majority's emotion perceived the corresponding emotion in most Americans more strongly than did those exposed to the minority's emotion. However, unexpectedly, participants in both the fear-majority and –minority conditions perceived collective anger as strongly as those in the anger-majority condition. Also, collective fear was perceived by participants in the anger-majority condition as strongly as those in the fear-majority condition. In other words, high levels of both collective anger and fear were reported in the majority conditions (i.e., anger- and fear-majority conditions), while low levels of both collective anger and fear were reported only in the anger-minority condition.

Own Emotional Responses

I then tested whether the manipulations of collective emotional responses affected individuals' own emotional responses. First, to test Hypothesis 1, I conducted an independent-samples *t* test across the anger-majority and –minority conditions for individuals' own anger. As predicted, participants in the anger-majority condition ($M = 4.93$, $SD = 1.57$) reported greater own anger in response to 9/11 than did those in the anger-minority condition, ($M = 3.82$, $SD = 1.60$), $t(77) = 3.11$, $p < .01$. However, an ANOVA comparing all four conditions revealed other significant differences in own anger across the conditions, $F(3, 153) = 4.12$, $p < .01$. Tukey post-hoc tests indicated that own anger of participants in the anger-majority condition did not differ from that of participants in the fear-majority and –minority conditions (see Table 8).⁸

primary comparison conditions (i.e., minority conditions), the manipulations of collective emotions proved to be successful. In the following analyses, I used experimentally manipulated collective emotions or exposure to the majority's or a minority's emotions, for collective emotion manipulations, differentiating them from perceived collective emotions.

⁸ Although a Tukey post-hoc test indicated a marginal significant difference in own

Table 8
Own Emotional Responses by Conditions in Study 2

Emotion	Collective Anger		Collective Fear	
	Majority	Minority	Majority	Minority
Individuals' Own Emotional Responses to 9/11				
Anger	4.93 (1.57) _a	3.82 (1.60) _b	4.72 (1.27) _a	4.60 (1.53) _{ab}
Fear	4.20 (1.86) _a	3.82 (1.76) _a	4.29 (1.88) _a	3.39 (1.58) _a

Note. All scales ranged from 1 to 7. Values are given as means, SD within parentheses. Subscripts should be interpreted within rows only; means with the same subscript do not differ from each other at the level of .05.

Similarly, I conducted an independent-samples *t* test across the fear-majority and –minority conditions for individuals' own fear. As predicted, participants in the fear-majority condition ($M = 4.29$, $SD = 1.88$) reported greater own fear in response to 9/11 than did those in the fear-minority condition, ($M = 3.39$, $SD = 1.58$), $t(76) = 2.29$, $p < .05$. However, an ANOVA comparing all four conditions revealed only marginal differences, $F(3, 153) = 2.13$, $p < .10$, such that participants' own fear in the fear-majority condition did not differ from that of participants in the anger-majority and minority conditions (all $ps > .11$).⁹

Policy Support

To test whether collective anger leads to counter-terrorism policy support (Hypothesis 2), I first conducted independent samples *t* tests comparing scores on the policy measures for participants in the anger-majority condition with those on the anger-minority condition. Second, I conducted ANOVAs comparing all four conditions to test anger between the anger-minority and fear-minority conditions ($p = .095$), independent samples *t* tests showed its significant difference, $t(79) = 2.24$, $p < .05$.

⁹ Unlike the results of Tukey post-hoc tests, independent samples *t* tests showed the significant difference in own fear between the anger-majority and the fear-minority conditions, $t(78) = 2.10$, $p < .05$. No other significant differences were found.

whether counter-terrorism policy support in the anger-majority condition was stronger than in the fear conditions (Hypothesis 3).

An independent samples t test revealed marginal effects of collective anger on support for anti-immigration policy, $t(78) = 1.80, p = .076$, and restricting civil liberties, $t(78) = 1.73, p = .089$. Participants in the anger-majority condition supported anti-immigration policy and restricting civil liberties marginally more strongly than did those in the anger-minority condition (see Table 9 for Means and SDs).

Table 9
Policy Support by Conditions in Study 2

Policy Support	Collective Anger		Collective Fear	
	Majority	Minority	Majority	Minority
Military Intervention	3.41 (1.36) _a	3.39 (1.74) _a	3.68 (1.36) _a	3.68 (1.40) _a
Anti-Immigration	2.71 (1.45) _{ab}	2.14 (1.35) _b	3.12 (1.57) _a	2.80 (1.35) _{ab}
Restricting Civil Liberties	3.16 (1.55) _{ab}	2.57 (1.52) _b	3.33 (1.39) _{ab}	3.58 (1.55) _a

Note. All scales ranged from 1 to 7. Values are given as means, SD within parentheses. Subscripts should be interpreted within rows only; means with the same subscript do not differ from each other at the level of .05.

Also, an ANOVA was conducted to compare scores on the policy measures for participants in the anger-majority condition with those on the fear conditions. The results revealed significant differences across the conditions in support for anti-immigration policy, $F(3, 155) = 3.18, p < .05$, and restricting civil liberties, $F(3, 155) = 3.28, p < .05$. As seen in Table 9, Tukey post-hoc tests indicated that participants' support for anti-immigration policy in the fear-majority condition ($M = 3.12, SD = 1.57$) was stronger than in the anger-minority condition ($M = 2.14, SD = 1.35$), and their support for restricting civil liberties in the fear-minority condition ($M = 3.58, SD = 1.55$) was

stronger than in the anger-minority condition ($M = 2.57, SD = 1.52$) (both $ps < .05$).¹⁰ Participants' support for anti-immigration policy and restricting civil liberties in the anger-majority condition did not differ from the fear-majority and fear-minority conditions (see also Figure 3).

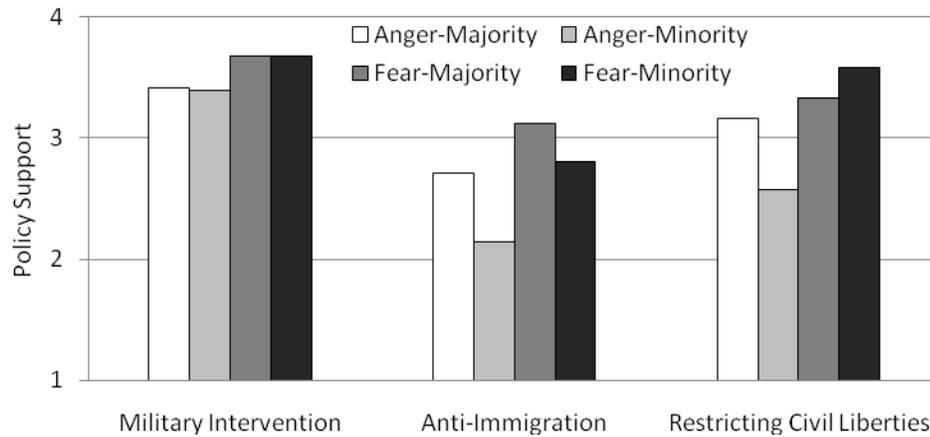


Figure 2. Policy support by conditions in Study 2

In sum, collective anger had a marginal effect on counter-terrorism policy support. Participants who were exposed to the majority's anger were more likely to support anti-immigration policy and restriction of civil liberties than did those exposed to the minority's anger. Unexpectedly, participants exposed to collective fear – whether from a majority or minority – showed stronger support for anti-immigration policy and restricting civil liberties.

Mediation Analyses

¹⁰ Although Tukey post-hoc tests indicated significant difference in support for anti-immigration policy between the fear-majority and anger-minority conditions and significant difference in support for restricting civil liberties between the fear-minority and anger-minority condition, independent samples t tests revealed that participants in the fear-majority condition supported anti-immigration policy, $t(76) = 2.95, p < .01$, and restricting civil liberties, $t(76) = 2.32, p < .05$, more strongly than did those in the anger-minority condition, and that participants in the fear-minority condition did too, $t(79) = 2.21, p < .05, t(79) = 2.96, p < .01$, respectively.

Using the Baron and Kenny (1986) technique, I then tested whether the effects of collective anger on support for anti-immigration and restricting civil liberties may be mediated by individuals' own anger (Hypothesis 4).¹¹

Using participants in the anger conditions, collective anger was coded as 1 for the anger-majority condition and 0 for the anger-minority condition. Collective anger was a marginally significant predictor of support for anti-immigration policy, $\beta = .20$, $t(79) = 1.80$, $p = .076$, and collective anger predicted individuals' own anger, $\beta = .33$, $t(78) = 3.11$, $p < .01$. However, support for anti-immigration policy was not predicted by own anger, $\beta = .09$, $t(78) = .79$, ns. Thus, individuals' own anger did not mediate the effect of collective anger on support for anti-immigration policy.

Next, I performed a parallel analysis to predict support for restricting civil liberties (see Figure 4). Collective anger marginally predicted support for restricting civil liberties, $\beta = .19$, $t(79) = 1.73$, $p = .089$, and as shown earlier, collective anger predicted individuals' own anger, $\beta = .33$, $t(78) = 3.11$, $p < .01$. Moreover, own anger predicted support for restricting civil liberties, $\beta = .35$, $t(78) = 3.24$, $p < .01$. When both collective anger and own anger were entered as predictors of support for restricting civil liberties, own anger was significant, $\beta = .32$, $t(78) = 2.82$, $p < .01$, but collective anger was not, $\beta = .08$, $t(78) = .68$, ns. A Sobel test (1982) revealed significant mediation ($z = 2.09$, $p < .05$).

In sum, the mediation analyses showed that individuals' own anger mediated the marginal effect of collective anger on support for restricting civil liberties, but not for anti-immigration policy.

¹¹ Here I conducted mediation analyses for support for anti-immigration policy and restricting civil liberties not for support for military intervention since collective anger manipulations did not affect support for military intervention in Study 2.

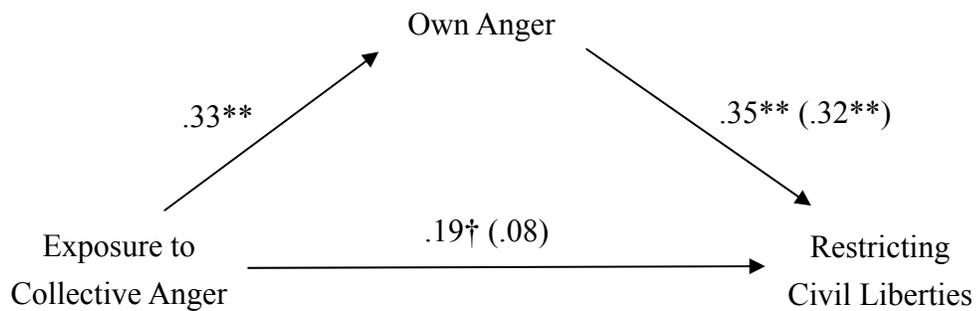


Figure 3. Own anger as mediator for effects of collective anger on support for restricting civil liberties in Study 2. Coefficients in parentheses represent parameter estimates for a regression model containing both predictors.

† $p < .10$. ** $p < .01$.

Moderation Analyses

In addition to mediation analyses, I explored the moderating role of individual's own emotions between perceived collective emotions and counter-terrorism policy support. Given that the effects of collective emotions can be either moderated or mediated by individuals' own emotions, both mediation and moderation analyses may help to find how collective emotions affect individuals' support for counter-terrorism policies. First, I examined whether the effects of collective emotions on policy support were moderated by individuals' own anger. Participants were assigned to either the high or low anger group on the basis of a median split of the distribution of individuals' own anger ($Mdn = 4.75$). 2 (own anger: low vs. high) \times 2 (collective anger: majority vs. minority) ANOVAs revealed no significant interactions between collective anger and own anger for military intervention, $F(1, 75) < 1$, *ns*, anti-immigration policy, $F(1, 75) < 1$, *ns*, and restricting civil liberties, $F(1, 75) = 2.28$, $p = .14$. No other effects approached significance except a main effect of own anger on restricting civil liberties, $F(1, 75) = 5.08$, $p < .05$, showing that high-anger participants supported for restricting civil liberties more strongly than did low-anger counterparts. Similarly, 2 (own anger: low vs. high) \times 2

(collective fear: majority vs. minority) ANOVAs revealed no significant interactions between collective anger and own anger, all $F_s < 1$, *ns*. There were main effects of own anger on anti-immigration policy, $F(1, 74) = 10.43$, $p < .01$, and restricting civil liberties, $F(1, 74) = 8.50$, $p < .01$, showing that high-anger participants supported for these policies more strongly than did low-anger counterparts.

Next, I examined the moderating effects of individuals' own fear in the relationship between collective emotions and counter-terrorism policy support. Participants were assigned to either the high or low fear group on the basis of a median split of the distribution of individuals' own fear ($Mdn = 4.00$). 2 (own fear: low vs. high) $\times 2$ (collective anger: majority vs. minority) ANOVAs revealed no significant interactions between collective anger and own fear for military intervention, anti-immigration policy, and restricting civil liberties, all $F_s < 1$, *ns*. No other effects approached significance except main effects of own fear on military intervention, $F(1, 75) = 5.34$, $p < .05$, and restricting civil liberties, $F(1, 75) = 14.16$, $p < .001$, showing that high-fear participants supported for these policies more strongly than did low-fear counterparts. Similarly, 2 (own fear: low vs. high) $\times 2$ (collective fear: majority vs. minority) ANOVAs revealed no significant interactions between collective fear and own fear, all $F_s < 2.54$, *ns*. No other effects approached significance except that there was a marginal main effect of own fear on support for restricting civil liberties, $F(1, 74) = 3.42$, $p = .069$, showing that high-fear participants supported for restricting civil liberties more strongly than did low-fear counterparts.

In sum, there were no significant interactions between individuals' own emotions and collective emotions. These insignificant results in turn supported the original postulate that individuals' own emotions mediate the effects of collective emotions on

their policy support.

Discussion

Using experimental manipulations, Study 2 provided additional support for some results of Study 1. First, consistent with the findings of Study 1 showing positive correlations between perceived collective and own emotional responses to 9/11, Study 2 showed that experimentally manipulated collective anger increased perceivers' own anger (Hypothesis 1) as did collective fear. These findings suggest that individuals exposed to collective emotional responses tend to shift their emotional response in the direction of what they perceive to be the emotional responses of the collective. Furthermore, Study 2 provided causal evidence on whether either collective anger or collective fear affects both individuals' own anger and own fear. Although Study 1 found that either perceived collective anger or collective fear was associated with both individuals' own anger and own fear, it was unknown how each perceived collective anger and collective fear increases or decreases either or both individuals' own anger and own fear. Study 2 showed that either exposure to the majority's anger or the majority's fear led to high levels of both own anger and own fear. On the other hand, exposure to the minority's emotion decreased individuals' own emotion which corresponded only to the presented emotion. That is, participants exposed to the minority's anger reported a low level of own anger only, whereas those exposed to the minority's fear reported a low level of own fear only.

Second, collective anger manipulations had marginal effects on support for anti-immigration policy and restricting civil liberties (Hypothesis 2), and individuals' own anger mediated the marginal effect of collective anger on support for restricting civil

liberties (Hypothesis 4). While perceived collective anger was significantly associated with support for military intervention and anti-immigration policy in Study 1, experimentally manipulated collective anger had marginal effects on support for anti-immigration policy and restricting civil liberties in Study 2. In addition, the prediction that participants exposed to the majority's anger supported counter-terrorism policies than those exposed to the majority's fear (Hypothesis 3) was not supported. Participants' support for counter-terrorism policies (i.e., anti-immigration policy, restricting civil liberties) was as strong in the fear-majority condition as in the anger-majority condition. However, this is not surprising in that participants exposed to the majority's fear showed high levels of perceived collective and own anger as strong as those exposed to the majority's anger.

Third, Study 2 provided interesting findings about how individuals perceive collective anger and fear when exposed to either of them. The results showed that participants exposed to either the majority's anger or fear reported high levels of both perceived collective anger and fear. On the other hand, participants exposed to the minority's anger showed low levels of both perceived collective anger and fear, while participants in the fear-minority condition reported a low level of perceived collective fear, but a high level of perceived collective anger. However, the findings that perceived collective anger and perceived collective fear vary together under the anger-majority and fear-majority conditions make it hard to interpret some effects of collective emotion manipulations on counter-terrorism policy support. For example, since participants exposed to the majority's anger perceived high levels of both collective anger and collective fear, it cannot be sure whether increased support for counter-terrorism policies results from a high level of perceived collective anger or collective fear. On the other

hand, the findings of their unparalleled relation between the anger-minority and fear-minority conditions, provides an explanation about why individuals exposed to the minority's fear support counter-terrorism policies. Since exposure to the minority's fear lessens participants' perception of collective fear, but not their perception of collective anger, their enduring perception of a high level of collective anger may cause strong support for counter-terrorism policies.

CHAPTER 4

GENERAL DISCUSSION

Post-September 11 national polls found that a majority of Americans supported governmental counter-terrorism policies such as military intervention, restricting civil liberties, and anti-immigration (e.g., Gallup Poll, 2008; Huddy et al., 2002). Witnessing this widespread support, many researchers have explored social psychological explanations for the links between terrorist attacks and counter-terrorism policy support, with a focus on the role of individuals' own emotions, particularly anger and fear in response to 9/11. Moving beyond an understanding of the role of individual-level emotional responses in counter-terrorism policy support (e.g., Cheung-Blunden & Blunden, 2008a, 2008b; Sadler et al., 2005), the present studies examined how perceived collective emotions affect individuals' own emotions as well as their policy support in response to 9/11.

Influence of Collective Emotional Responses on Policy Support

Consistent with past research (i.e., Conejero & Etxebarria, 2007), Study 1 found that perceived collective emotional responses (i.e., perceived collective anger) did not predict support for counter-terrorism policies independent of individuals' own emotional responses (i.e., own anger). Instead, the findings of Study 1 and 2 suggest that perceived collective anger may exert an indirect influence on counter-terrorism policy support through its effects on individuals' own anger. Using self-reported measures, Study 1 showed that perceived collective anger predicted military intervention and anti-immigration policy support. Furthermore, Study 2 showed that experimentally-manipulated collective anger had marginal effects on support for anti-immigration policy

and restricting civil liberties, and that individuals' own anger mediated the marginal effect of collective anger on support for restricting civil liberties. It should be noted that the effects of collective anger manipulations on support for counter-terrorism policies may not be equivalent to the effects of perceived collective anger on support for those policies. Since exposure to the majority's anger in Study 2 increases both collective anger and collective fear at the perceptual level, the effects of experimentally manipulated collective anger on support for anti-immigration policy and restricting civil liberties may not result from perceived collective anger only. However, with respect to support for anti-immigration policy, given the findings of Study 1 showing that perceived collective anger, not perceived collective fear, was significantly associated with support for anti-immigration policy, perceived collective anger is more likely to increase counter-terrorism policy support than perceived collective fear. Nevertheless, it cannot be sure whether perceived collective anger and/or fear involves increased support for restricting civil liberties.

In addition to the effects of experimentally manipulated collective anger on support for anti-immigration policy and restricting civil liberties, Study 2 found the effects of exposures to the majority's and the minority's fear on support for those policies. Like those exposed to the majority's anger, individuals exposed to the majority's fear reported high levels of both perceived collective anger and fear, which makes it hard to determine whether perceived collective anger or fear increases support for anti-immigration policy and restricting civil liberties. Again, based on the findings of significant relation between perceived collective anger (not fear) and support for anti-immigration policy in Study 1, it seems more possible that perceived collective anger as a result of exposure to the majority's fear involves increase support for anti-immigration

policy. However, no plausible explanation is possible to determine whether the effect of exposure to the majority's fear on support for restricting civil liberties can be derived from perceived collective anger and/or fear. Nevertheless, with respect to the effects of exposure to the minority's fear on support for anti-immigration policy and restricting civil liberties, perceived collective anger must play a role in support for both policies since perceived collective anger, not perceived collective fear, is heightened as a consequence of exposure to the minority's fear.¹²

Emotional Dynamics in Perceived Collective Emotional Responses

To the author's knowledge, the current research is the first to examine the effects of collective anger and fear separately. Study 1 found the close relationship between perceived collective anger and fear in response to 9/11. Furthermore, Study 2 showed that individuals exposed to either the majority's anger or fear perceived high levels of both collective anger and fear. It is possible that, when faced with a group threat such as 9/11, individuals witness a great deal of anger and fear in others and thereby associate one with the other. However, there were unparalleled results when individuals were exposed to the minority's emotion. Individuals exposed to the minority's anger perceived low levels of both collective anger and fear, while those exposed to the minority's fear perceived a low level of collective fear, but a high level of collective anger. When either anger or fear in response to a group threat is widespread in public, individuals' increased perception of one collective emotion can be easily transferred to the perception of the other emotion. However, when either anger or fear is not salient in public, individuals seem reluctant to extend their perception of low collective fear to collective anger, but not from collective

¹² This, in turn, suggests that perceived collective anger may increase support for restricting civil liberties in the anger-majority and fear-majority condition.

anger to collective fear. That is, individuals who initially perceive a low level of collective anger may automatically assume a low level of collective fear, but those who initially perceive a low level of collective fear may not decrease their perception of collective anger without perceiving a low level of collective anger by themselves.

Consistent with emotional convergence literature (e.g., Barsade, 2002; Hatfield et al., 1994; Totterdell et al., 1998), the perceptions of collective emotions as a result of the exposures to the collective emotions affect individuals' own emotions. The emotional change in individuals' own anger and fear showed similar patterns of the change in their perceptions of collective anger and fear.¹³

Intra-Group Emotional Process as a Potential Mechanism for Collective Actions

Social psychological literature has documented perceptual discrepancy between oneself and a majority of others in attitudes and behaviors, when there is actually remarkable agreement within the group (e.g., Miller & McFarland, 1991; Prentice & Miller, 1996 for a review). Consistent with the findings of Conejero and Etxebarria (2007), Study 1 showed that individuals believe that most Americans experience anger and fear in response 9/11 more intensely than do they themselves experience. Although future studies are needed to examine this by using a nationally representative sample of U.S. citizens, it is likely to appear because of external factors such as repetitive imagery of damage and emotional-laden messages in post-September 11 news coverage (Cho et al., 2003; Scheufele, Nisbet, & Ostman, 2005). A nationwide study found that 85% of

¹³ Individuals' perceptions of collective emotions and their own corresponding emotions tended to vary together. One difference is that there was no significant difference in individuals' own fear between the anger-majority ($M = 4.20$, $SD = 1.86$) and anger-minority conditions ($M = 3.82$, $SD = 1.76$), $t(77) = .93$, $p = .35$, while there was significant difference in individuals' perception of collective fear between these conditions (see Table 6).

respondents watched TV news coverage about the 9/11 attacks in the week following the attacks more than 1 hour per day, and that exposure to TV news coverage about the 9/11 was associated with anxiety about future terrorism during the 6 months following the attacks (Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002). Study 2 furthermore demonstrated the effects of exposure to the majority's anger on individuals' own anger and their support for anti-immigration policy and restricting civil liberties. Taken together, if individuals are reminded of collective anger in response to 9/11, which is mistakenly perceived to be more intense than their own, they may intensify their own anger and shift their support for counter-terrorism policies in the direction where their misperception of collective anger guides. Thus, the collective actions developed through this process could be more extreme and homogenous.

Limitations

There are limitations to these findings. First, there was no control group which can be compared with both effects of manipulations of collective anger and fear in Study 2. The primary goal of Study 2 was to demonstrate the effects of collective anger (i.e., the majority's anger) on counter-terrorism policy support. Here, the anger-majority condition was first directly compared with the anger-minority condition to test the effects of collective anger on individuals' own emotions and their support for counter-terrorism policies. Then, the anger-majority condition was compared with the fear-majority condition to test whether the effects of collective anger were stronger than those of collective fear. The assumptions underlying these predictions were that participants exposed to the minority's emotions would show the baselines of perceived collective emotions (low levels of collective emotions), and that manipulations of collective emotions (i.e., the majority's emotions) would increase participants' perceived collective

emotions compared to the baselines. Also, collective emotion manipulations were supposed to affect participants' perceptions of the corresponding collective emotions only. However, it turned out those were not the case. Participants exposed to collective anger, for example, reported high levels of perceived collective anger as well as collective fear. This did not mean that the manipulations were failures, because it may be due to the nature of collective emotional responses to 9/11. Future studies should address this issue in more detail to better understand the nature of collective emotional responses to a group threat.

Second, the data of the current research were collected in 2009, eight years after the 9/11 terrorist attacks. Many people who supported counter-terrorism policies, in particular, military intervention in Iraq in 2003 may have changed their opinions in the meanwhile. Also, people who felt intense anger or fear right after 9/11 may not feel the same extent of the feeling any longer. However, the main focus of the current research is to examine the relationships among collective emotional responses, own emotional responses, and counter-terrorism policy support (Study 1), and to demonstrate the effects of collective emotional responses on individuals' own emotional responses and their support for counter-terrorism policies by experimental manipulations (Study 2). Although the time that has passed since 9/11 may affect those relationships and effects of the current research, its findings can be still meaningful in that reminding 9/11 affects individuals living at the present moment.

CHAPTER 5

CONCLUSION

The current research provided evidence on the effects of perceived collective anger in response to the September 11th terrorist attacks on counter-terrorism policy support. Although much research has emphasized the effects of individual-level emotional responses to a group threat on their group-based decisions such as governmental policy support (e.g., Cheung-Blunden, & Blunden, 2008a, 2008b; Lerner et al., 2003; Sadler et al., 2005), few studies to date have attempted to understand how individual group members shape their emotional and attitudinal responses to a group threat in intra-group emotional contexts. The current findings suggest that, in response to a group threat such as 9/11, individuals are affected by others' emotions and shift their policy support in the direction of what the collective emotional responses guide. To the extent that this process is grounded in overestimated public emotions, individuals' rational decision-making could be potentially undermined. Overall, the current research contributes to better understanding of individuals' group-based attitudes and behaviors, by providing a broader framework of intra-group emotions.

APPENDIX A

MEASURES IN STUDY 1

“When thinking about 9/11, to what extent do you think most Americans feel each of the following emotions?”

Perceived collective emotional responses to 9/11 (8 items)

1. angry, irritated, outraged, mad
2. fearful, scared, afraid, frightened

“When thinking about 9/11, to what extent do you feel each of the following emotions?”

One’s own emotional responses to 9/11 (8 items)

1. angry, irritated, outraged, mad
2. fearful, scared, afraid, frightened

Policy support: Military intervention items (4 items)

1. In order to protect security at home, it is necessary to take military action to destroy terrorist networks around the world
2. It is entirely appropriate to engage in preemptive attacks on countries or terrorist groups that may pose a threat to the United States in the future.
3. The best way of defending the United States is sometimes to engage in military action against countries or terrorist groups that may pose a serious threat to our country in the future.
4. The United States should engage in military intervention to fight against terrorism.

Policy support: Anti-immigration policy items (4 items)

1. There are too many immigrants from the wrong sorts of places being admitted to the United States these days.
2. It is about time the United States closes its borders to all immigrants.
3. Immigrants take jobs away from Americans.
4. New immigrants are more often involved in criminality than average.

Policy support: Anti-immigration policy toward Arabs items (4 items)

1. The U.S. should severely reduce immigration from the Middle East.
2. The U.S. government should deport Arab Americans.

3. If immigration continues as its present rate, Arab culture threatens to overwhelm American culture.
4. American society is negatively impacted through the continued influx of immigration from the Middle East.

Policy support: Restriction of civil liberties items (3 items)

1. It is sometimes necessary for the government to curb the civil rights of American citizens in order to protect the country against terrorist threats.
2. Freedom of speech is very desirable in our democratic country, but not under national emergence such as terrorist attacks or war.
3. Under the situation threatening national security, we should sacrifice our liberty because otherwise we all might be in danger.

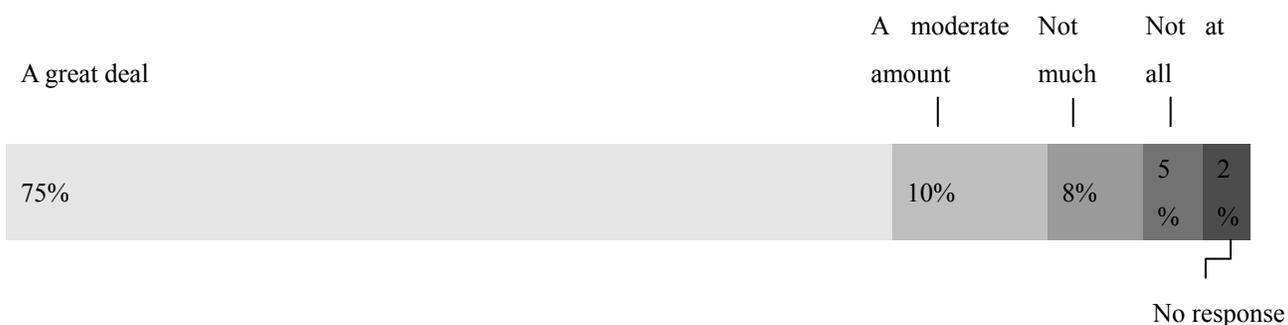
APPENDIX B

MANIPULATIONS OF COLLECTIVE ANGER AND FEAR USED IN STUDY 2

(Anger-Majority)

Majority of Americans feel angry when thinking about 9/11, national poll finds

According to a recent national poll, a majority of Americans feel angry when they think about 9/11 terrorist attack. The latest national poll, conducted in 2009, finds that 85% of Americans feel angry “a great deal” (75%) or “a moderate amount” (10%) when they think about 9/11. Only 5% say that reminding the terrorist attacks does not lead them to feel angry at all.



(Anger-Minority)

Majority of Americans not angry when thinking about 9/11, national poll finds

A majority of Americans do not feel angry when they think about the 9/11 terrorist attacks. The latest national poll, conducted in 2009, finds that Americans feel angry “not at all” (75%) or “not much” (10%) when they think about 9/11. Only 5% say that remembering the terrorist attacks leads them to feel angry a great deal.



(Fear-Majority)

Majority of Americans fearful when thinking about 9/11, national poll finds

According to a recent national poll, a majority of Americans feel fearful when they think

about 9/11 terrorist attack. The latest national poll, conducted in 2009, finds that Americans feel fearful “a great deal” (75%) or “a moderate amount” (10%) when they think about 9/11. Only 5% say that the 9/11 terrorist attacks do not lead them to feel angry at all.



(Fear-Minority)

Majority of Americans not fearful when thinking about 9/11, national poll finds

A majority of Americans do not feel fearful when they think about the 9/11 terrorist attacks. The latest national poll, conducted in 2009, finds that Americans feel angry “not at all” (75%) or “not much” (10%) when they think about 9/11. Only 5% say that remembering the terrorist attacks leads them to feel fearful a great deal.



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