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# Need for Closure and the Social Response to Terrorism

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It has been long contended that terrorism is a form of psychological warfare with the aim of advancing political objectives through the spreading of fear. The present set of five studies explored the relation between need for closure and the social response to terrorism. We found support for the notion that reminders of terrorist attacks elevate the need for closure and that the need for closure may enhance ingroup identification; interdependence with others; outgroup derogation; and support for tough and decisive counterterrorism policies and for leaders likely to carry out such policies. The implications of this research for the claims of terrorist ideologues regarding the efficacy of terrorism are discussed.

Terrorism is generally considered a form of psychological warfare that aims to advance political objectives through the spreading of fear. As Brian Jenkins (1975), a terrorism expert, has famously put it, “terrorists want a lot of people watching, not a lot of people dead” (p. 15).

But how exactly is the tactic of terrorism supposed to work? Classic ideologues of terrorism, such as 19th-century Mikhail Bakunin and Peter Kropotkin or the 20th-century ideologue Carlos Marighela, have argued that terrorism destabilizes the state and unmasks its

impotence, paving the way to the political alternative that the terrorists offer. Other terrorist ideologues have argued for what McCauley (2006) called “Jujitsu Politics.” By attacking a perceived enemy, terrorists wish to provoke a strong response. In fact, they hope to elicit so large a response that it can be labeled immoral. This lends credence to the terrorists’ claims that the perceived enemy is in the moral wrong and can help build support among constituents for their objective. A strong response also has the advantage of stretching the opponent’s material and human resources, with the potential to bankrupt their will and/or their banks. A third possible objective of terrorist ideologues is to simply instigate a specific policy change, such as to pressure a nation to withdraw troops from a territory.

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Each of the foregoing explanations regarding the efficacy of terrorism assumes that the threat of terrorism fosters a sense of psychological insecurity. Consistent with the terrorists' ideologies, psychological research conducted in the aftermath of 9/11 (Schlenger et al., 2002) and the Oklahoma City bombings (Pfefferbaum et al., 2001) found that individuals' levels of stress and fear increased following these major terrorist attacks, suggesting that terrorism does indeed result in feelings of insecurity. This state of insecurity may contain multiple, interrelated components, including of a lack of safety and uncertainty. Although a lack of safety should lead to the need for safety, uncertainty should lead to the need for closure. In this article, we focus our investigation on the uncertainty component of insecurity, with the prediction that the threat of terrorism leads to elevated levels of the need for cognitive closure, defined as the aversion toward uncertainty and ambiguity, with a preference for firmness and stability in beliefs and expectations (Kruglanski & Webster, 1996).

The need for closure is a particularly important variable to study because prior research suggests that need for closure engenders *support* for one's group and its leadership rather than undermining it. In a recent review (Kruglanski, Pierro, Mannetti, & DeGrada, 2006), support was found for the notion that heightened need for closure leads to a syndrome of "group centrism," including pressures toward uniformity, rejection of opinion deviates, ingroup favoritism, outgroup derogation, and the endorsement of autocratic leadership. Therefore, based on research on the need for closure, we would expect that elevated need for closure would lead to increased rallying around the flag.

Indeed, terrorism seems to lead to increased group cohesion and increased feelings of aggressiveness toward threatening outgroups. For example, terrorist attacks conducted by Palestinian extremists increased negative stereotyping of Arab groups by Israelis (Bar-Tal & Labin, 2001). In response to the threat of terrorism, Americans became more religious (Schuster et al., 2001), participated in more group functions (Schuster et al., 2001), displayed the American flag to a greater extent (Skitka, 2005), and professed an increased trust in government (Chanley, 2002). Other studies have found elevated levels of aggression following 9/11 (Argyrides & Downey, 2004). Even reminders of 9/11, such as the 1-year anniversary of that event, have been found to increase levels of aggression after they had declined (Argyrides & Downey, 2004).

The foregoing findings are consistent with the notion that individuals cling to their leadership when threatened, a tendency known as the "rally effect" (Mueller, 1973). For instance, President Bush's approval ratings rose from 51% in the Gallup poll of September 10, 2001, to a remarkable 86% in the next poll on September 15, 2001, and their magnitude tracked the DHS-issued

color-coded warning of possible terrorist attacks (Willer, 2004). The rally effect is not unique to President Bush. Following the Iranian attack on the U.S. embassy in 1979, President Carter's approval ratings surged to 69% and remained elevated 2 months after the attack.

Research from the perspective of social identity theory (Tajfel & Turner, 1979) and self-categorization theory (Turner, 1985) suggests the same general account: Identification with one's group is thought to provide the individual with a self-schema, which is well defined and positively valenced, reducing aversive uncertainty. Accordingly, uncertainty evoking events should increase identification with the ingroup. In addition, differentiation between ingroups and outgroups should be sharper when group identification is a crucial concern: The threat to the ingroup should increase its importance as a protective entity, increasing its distinction from the outgroup.

Of particular present relevance, Hogg's (2000) theorizing suggests that the motivation to reduce uncertainty accounts for the social identity theory and self-categorization theory effects. Thus, studies based on Hogg's theory have found that an induction of uncertainty increases identification with entitative groups (Hogg, Sherman, Dierselhuis, Maintner, & Moffitt, 2007). Additional research has shown that individuals who experience high degrees of uncertainty will identify with both low-status and high-status groups in an effort to reduce uncertainty (Reid & Hogg, 2005).

Although the findings just described are suggestive, they do not bear directly on issues of insecurity or need for closure as neither variable was specifically assessed in the research being referred to. Furthermore, the "group centrism" research conducted in the need for closure tradition (Kruglanski et al., 2006) had little direct relation to terrorism; it employed a variety of innocuous laboratory tasks, far removed from the fear-arousing effect that the specter of a terrorist attack may produce. The lone exception was work by Bar-Tal and Labin (2001), who found that high need for closure was associated with negative perceptions of Palestinians following an attack on Israel by Palestinian extremists.

In short, a gap in knowledge exists concerning the actual relations between terrorism, need for closure, and the social response to terrorism. To address it, we conducted several studies aimed at exploring these relations more directly. If need for closure is found to play an important role in driving the social response to terrorism, this would provide important evidence for a possible psychological process underlying such a response.

## THE PRESENT RESEARCH

Our studies aim to explore the relationship between a potential surge in need for closure in reaction to

the threat of terrorism, and the subsequent social psychological response based on that need. Need for closure is conceptualized as the desire for a quick and firm answer to a question and the aversion toward ambiguity (Kruglanski, 2004; Webster & Kruglanski, 1994). This conceptualization suggests that high need for closure individuals would strive to develop strong beliefs, form clear-cut impressions, and classify objects and events into sharply defined categories in order to experience certainty and avoid ambiguity. Pertinent to the present concerns, high need for closure is assumed to increase the quest for shared social reality (Hardin & Higgins, 1996), enhancing the tendency to identify with one's ingroup that constitutes a shared reality "provider" (Kruglanski et al., 2006).

Need for closure may be aroused situationally by events that make salient the *benefits of closure* (such as the necessity to act in the face of threat) and the *costs of lacking closure* but also reflects (relatively) stable individual differences in need for closure assessed by a scale developed for that purpose (Webster & Kruglanski, 1994). Need for closure is assumed to exert similar effects irrespective of whether it was assessed as an individual difference variable or manipulated situationally. In support of this hypothesis, previous research has found convergent need for closure effects on a wide range of variables regardless of whether this motivation was operationalized situationally or dispositionally (for a review, see Kruglanski, 2004).

We conducted five studies to investigate the relation between need for closure and the social response to terrorism. To test the basic tenet of terrorist ideologues' reasoning, our first empirical question was whether the threat of terrorism indeed produces an elevated need for closure (Studies 1 and 2). In turn, need for closure should prompt an attitudinal response favoring actions believed to restore certainty and involving security concerns for the ingroup. Thus, in response to the threat of a terrorist attack, high need for closure individuals should identify more strongly with the ingroup and exhibit more negative attitudes toward members of outgroups perceived as potentially supportive of terrorism (Study 1). In addition to negative perceptions of outgroups, we predicted that specific U.S. counterterrorist policies, including controversial ones at apparent odds with individual rights and humanistic concerns, would receive a stronger endorsement from individuals high (vs. low) on the need for closure (Studies 3 and 4). Study 4 tests the additional prediction that the endorsement of such counterterrorist policies by high need for closure persons should lead to their greater optimism about the eventual defeat of terrorism (hence, restoration of certainty). Finally, we explored the possibility that the more pronounced support for national leadership exhibited by high (vs. low) need for closure individuals will be

restricted to decisive (albeit rigid) leadership perceived as more likely to promote closure, and that high (vs. low) need for closure persons will be less supportive of an open-minded leader with the potential to perpetuate uncertainty (Study 5).

If this pattern of results is found, it would suggest that the terrorist ideologues were *correct* in their assertion that the threat of terrorist attacks is psychologically unsettling, and induces insecurity. However, the predicted pattern of results regarding an increase in group solidarity is *inconsistent* with the aim of some terrorists to destabilize the state and to encourage social change away from current leadership and policy. Finally, the predicted reactions to terrorist attacks are *consistent* with the ideologues who strive to elicit an extreme response from their targets in the form of "jujitsu politics."

## STUDY 1

Study 1 was designed as an initial test of several hypotheses about need for closure and the social response to terrorism. Our first study was carried out with a sample of elderly individuals from the Netherlands. The first goal in this research was to test the relation between a sense of insecurity fostered by the threat of terrorism and the need for closure. We reasoned that a salient outgroup associated with terrorism in the participants' vicinity would jeopardize their feelings of safety and instill in them a sense of insecurity translated into a heightened need for closure. In this study, we used the objective percentage of Muslims living in one's neighborhood as a proxy for the salience of a threatening outgroup. Because Dutch respondents are known to associate Muslims with terrorism, we hypothesized that a greater percentage of Muslims in the participants' neighborhood would elevate their need for cognitive closure.

In addition, we sought to investigate the link between need for closure and ingroup identification. Need for closure should lead to increased ingroup identification because it increases the need for a shared social reality, which is satisfied by a cohesive group. Previous research has provided evidence that manipulating need for closure leads to increased preference for homogenous and self-resembling groups (Kruglanski, Shah, Pierro, & Mannetti, 2002) and conformity pressures (De Grada, Kruglanski, Mannetti, & Pierro, 1999). Therefore, we predicted that need for closure should be positively related to ingroup identification. Finally, we wanted to investigate the link between need for closure and negative perceptions of the outgroup, with the prediction that higher levels of need for closure would be associated with more negative perceptions of Muslims.

## Method

### *Participants*

We approached 110 participants in the three largest cities in the Netherlands (32 from Amsterdam, 37 from Rotterdam, and 41 from The Hague), of which 64 were female and 46 were male. To avoid a student population, and to reflect the fact that a large proportion of the general population in Holland is relatively old, we chose to focus on an elderly sample. We therefore specifically contacted elderly people, but we selected only those who were both physically and mentally able to get out on the street by themselves. The age of our participants ranged from 50 to 97, with a mean of 82. Participants were approached at homes for the elderly where they were residents. No effects of gender appeared on any of our dependent variables; hence, this factor is not considered further.

### *Materials and Procedure*

Participants responded to a questionnaire titled “The Perception and Experience by Elderly People of Cultural Relations.” In the introduction, all participants were reminded of both the international and national context of terrorism. Specifically, we mentioned the 9/11 attacks on several targets in the United States and the killing of the nationally famous Dutch Islam critic and film director Theo van Gogh by Islamic terrorists in November 2004. The questionnaire included the scales assessing need for closure, identification with the Dutch ingroup, neighborhood in which the participant lived, and perceptions of the Muslim outgroup.

*Percentage of muslims in participants’ neighborhood.* Participants indicated the neighborhood in which they lived. Using these responses, we used indicators from the Central Office of Statistics affording a reliable measure of the actual percentage of Muslims in each participant’s neighborhood. Across the different neighborhoods in which our participants resided, these percentages ranged from 0.2% to 24.6%, with a mean of 10.2% ( $SD = 7.9\%$ ).

*Need for cognitive closure.* We measured the need for closure with six items, derived from the larger Need for Closure Scale (Dutch translation of the Webster & Kruglanski, 1994, instrument). Sample items include “I don’t like situations that are uncertain” and “I feel uncomfortable when someone’s meaning or intention is unclear to me.” All items were answered on a 5-point Likert scale with response alternatives ranging from 1 (*totally disagree*) to 5 (*totally agree*). Cronbach’s alpha for this scale was .61.

*Identification with the dutch ingroup.* This scale was measured with two items: “I feel attached to the Netherlands” and “I am happy to be Dutch.” Items were derived from a scale by Doosje, Ellemers, and Spears (1995). Both items were answered on a 5-point Likert scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). These two items were highly correlated ( $r = .64$ ,  $p < .001$ ).

*Perception of islamic outgroup.* We used a “feeling thermometer” to assess participants’ impressions of the Islamic outgroup (see, e.g., Esses, Haddock, & Zanna, 1993). The response could range between “0” degrees (*extremely unfavorable*) and “100” degrees (*extremely favorable*).

## Results and Discussion

We conducted a series of linear regression analyses to test our hypotheses. Our first objective was to test the link between insecurity as reflected by the percentage of Muslims in one’s neighborhood and need for closure. Consistent with our hypothesis, we found that the percentage of Muslims significantly predicted the need for closure,  $\beta = .285$ ,  $F(1, 108) = 9.54$ ,  $R^2 = .08$ ,  $p < .01$ . Next, we tested the hypothesis that need for closure predicts ingroup identification and outgroup perceptions. Need for closure was positively related to ingroup identification,  $\beta = .524$ ,  $F(1, 108) = 40.90$ ,  $R^2 = .28$ ,  $p < .001$ , and need for closure was negatively related to impressions of the Muslim outgroup,  $\beta = -.291$ ,  $F(1, 108) = 9.98$ ,  $R^2 = .09$ ,  $p < .01$ .

These results are consistent with our conceptual analysis. In many European states, Muslims are perceived as members of a foreign culture associated with terrorism. Their presence in one’s neighborhood may thus undermine the indigenous residents’ (European Dutch) sense of security, thus elevating their need for closure. In line with this analysis, the percentage of Muslims in one’s neighborhood was positively related to the need for closure. It seems that the perceived threat of terrorism elevates the need for closure. In principle, the correlational nature of these data leaves open the direction of causality issue between the threat variable and the need for closure variable, and it allows that both variables are the consequence of some third factor. The best way to address this problem would be to experimentally manipulate the threat variable and to subsequently measure the need for closure variable. Our second study was designed to do just this.

In addition, Study 1 provided evidence that need for closure prompts individuals to rally around the ingroup; this is attested to by the positive correlation between need for closure and ingroup identification and by the

negative correlation between need for closure and impressions of the Muslim outgroup, which conceptually replicates the relation between need for closure and “group centrism” (Kruglanski et al., 2006), under conditions wherein need for closure is heightened by the presence of threat. This suggests that high (vs. low) need for closure individuals are more protective of their ingroup and are biased in its favor, raising the possibility that individuals with a high (vs. low) need for closure would be more severe in their attitudes toward a threatening outgroup, which in the U.S. context might translate into support for tough counterterrorism policies. The latter hypothesis was specifically examined in our third study.

## STUDY 2

Our second study was designed to experimentally test the prediction that the threat of terrorism increases the need for closure. Hence, Study 2 examined the effects of confrontations with a reminder of the 9/11 terrorist attacks on the need for closure. Specifically, we exposed American participants to a slide show that reminded them of the terrorist attacks on September 11, 2001, and measured their subsequent responses to the Need for Closure Scale. Even though this scale was developed to tap a relatively stable trait variable, and was shown to exhibit reasonable test–retest reliability, we assumed that a particularly powerful situational reminder of the threat of terrorism would sufficiently affect participants’ recollections so as to yield elevated scores on this measure.

### Method

#### *Participants*

Sixty-three undergraduates at the University of Maryland (42 female, 21 male) participated in the study for partial course credit. The age of participants ranged from 18 to 27, with a mean age of 20. There were no significant effects of gender on any of the dependent variables. Therefore, the gender factor is omitted from further discussions.

#### *Materials and Procedure*

Participants were randomly assigned to view either a slide show containing pictures and text depicting the 9/11 terrorist attacks or a 7-min control video containing a message about the advantages of working at Google. Each participant watched the appropriate visual presentation in a private room. After watching the video, each participant was taken to another lab room to complete a measure of state affect (Watson, Clark,

& Tellegen, 1988) and the short form of the Need for Closure Scale (Pierro & Kruglanski, 2006). The affect measure was used as a filler task between the visual presentation and completion of the Need for Closure Scale.

*9/11 stimulus.* The 9/11 slide show was meant to remind participants of the terrorist attacks on the World Trade Center. It included 43 pictures accompanied by text describing in detail the events that occurred. The slide show covered various aspects of the event including close-up depictions of buildings, victims, survivors, and rescue workers. For instance, a portion of the text stated, “Some 25 minutes apart, the towers crumble to the ground, entombing thousands still trapped inside”; “The infernos surpass 1,500 degrees”; and “Burned, bleeding, sheathed in dust, the survivors emerge.” The slideshow took approximately 7 min to watch.

*Control video.* A video designed to communicate to engineers why they should work for Google was used as a neutral control stimulus. This video was selected because of the neutrality of work facilities as a subject matter and the general familiarity with the Google company, which should foster relatively neutral responses. This presentation was similar in length to the critical 9/11 slide show, lasting 7 min 21 s. It included audio and video sequences describing the facilities at Google.

*State affect.* Participants completed the Positive and Negative Affect Schedule (Watson et al., 1988), a widely used 20-item scale that reflects two independent dimensions of positive and negative affect. Example adjectives include “interested” and “excited” for positive affect and “distressed” and “nervous” for negative affect. Instructions asked participants to indicate the extent to which they experienced the affect described by each adjective “right now, that is, at the present moment.” All items were answered on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) and were averaged to create a composite score. Cronbach’s alpha was .88 for positive affect and .81 for negative affect.

*Need for cognitive closure.* Participants completed the 14-item short form of the Need for Closure Scale (Pierro & Kruglanski, 2006). Example items include “In case of uncertainty, I prefer to make an immediate decision, whatever it may be” and “Any solution to a problem is better than remaining in a state of uncertainty.” All items were answered on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Items were averaged to form a composite score. Cronbach’s alpha for this scale was .80. Participants whose mean response to two lie items, “I have never

hurt another person's feelings" and "I have never been late for work or for an appointment," exceeded the midpoint of the scale were excluded from subsequent data analysis.

## Results and Discussion

We predicted that participants would score higher on the Need for Closure Scale after watching the 9/11 stimuli than after watching the control video about the facilities at Google. This prediction was confirmed as we found that participants scored significantly higher on the Need for Closure Scale in the 9/11 condition ( $M = 3.38$ ,  $SD = .67$ ) than in the control condition ( $M = 3.01$ ,  $SD = .61$ ),  $F(1, 50) = 4.24$ ,  $\eta^2 = .08$ ,  $p < .05$ . Of importance, there were no significant differences between the two conditions on positive or negative affect. In addition, there were no significant differences between the two conditions on any single affect item.

These data suggest that the need for closure is heightened following a terrorist attack. A brief reminder in a lab setting of a troubling terrorist event was capable of elevating participants' need for closure, as assessed by a scale normally designed to tap stable individual differences. This is consistent with terrorist ideologues' claims that terrorist events result in a sense of insecurity, which psychologically includes an elevation of the need for cognitive closure. It is important to note that the manipulation did not tease apart the specific aspects of terrorism that may arouse the need for closure (e.g., mortality salience, threat from an outgroup). Nonetheless, it provides direct evidence that the specific threat of terrorism evokes heightened need for closure.

## STUDY 3

The aim of our third study was to replicate and extend the findings from Study 1 linking need for closure to ingroup identification and negative impressions of the outgroup. To do this, we used an American sample, and we operationalized our variables differently. Whereas in Study 1, we examined individuals' identification with their specific national group (i.e., with the Netherlands), in the present study we looked at the degree to which persons perceive themselves as generally interdependent with (and hence attached to) others. In this way, we hoped to replicate the relation found in Study 1 between need for closure and identification with the ingroup as operationalized via individuals' interdependent self-construal, allowing us to study the psychological tendency to act as a collective independent from any specific national category.

Second, insofar as negative perceptions of the outgroup may lead to animosity toward a threatening

outgroup, we expected that in the U.S. context this may translate into support for tough counterterrorism measures. Because Study 1 found a relation between need for closure and negative perceptions of the outgroup, we predicted that need for closure will be positively related to support for tough counterterrorism.

## Method

### Participants

Participants were recruited by e-mail to participate in a study concerning their opinions on various topics. They were nonpaid volunteers contacted through an informal network of social connections. The researchers sent an initial message to students, friends, and family members. Each of these was asked to participate in the study and to forward the link to as many individuals as they would like, with the assurance of complete anonymity. All participants were unaware of the research topic and the hypothesis of the study. Our recruitment procedures yielded a sample of 192 adults, of which 131 were female and 59 male. The participant sample included individuals from 25 states. Their age ranged from 18 to 72, with a mean age of 36. Ninety-four percent of the sample was registered to vote, and all those who registered indicated their intention to vote in the next presidential election. The study was carried out between December 23, 2005, and January 23, 2006. One hundred seventy-four participants were European American (90.6%), 3 participants were African American (1.6%), 6 participants were Asian American (3.1%), 7 participants were of other ethnicities (3.6%); 2 participants did not report their ethnicity.

### Materials and Procedure

Participants arrived at the Internet survey via a link provided in the recruitment message. They first completed a measure of interdependent self-construal and subsequently responded to the Need for Closure Scale. Finally, they filled out a questionnaire measuring their attitudes toward specific counterterrorism tactics that enjoyed prominence in the news media at the time.

*Interdependent self-construal.* Participants completed the 12-item interdependent self-construal scale (Singelis, 1994). Sample items include "It is important for me to maintain harmony within my group" and "I will sacrifice my self interest for the benefit of the group I am in." All items were answered on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Items were averaged to form a composite score (Cronbach's  $\alpha = .69$ ).

*Need for cognitive closure.* Participants completed the shortened Need for Closure Scale (Pierro & Kruglanski, 2006) already described in connection with Study 2 (Cronbach's  $\alpha = .82$ ).

*Support for tough counterterrorism tactics.* Participants responded to 12 items tapping their support for various counterterrorism tactics. Items included, "I think Congress ought to renew the Patriot Act without any changes," "I think George W. Bush is the best man to lead the country," "I support the U.S. role in the war on terrorism," "Terrorism should be fought by any means necessary," "National security is more important than individual rights," "Current laws are too lenient to fight terrorism," "I am willing to give up some liberties to win the war on terror," "The CIA should be able to torture prisoners in order to win the war on terror," "The military should be able to torture prisoners in order to win the war on terror," "It is wrong for the U.S. to maintain secret prisons in foreign countries (reverse scored)," "The proposed ban on prisoner torture hinders the government's ability to collect intelligence on terrorists" and "Without the PATRIOT Act, the country would be less safe." All items were answered on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Cronbach's alpha for this scale was .93.

## Results and Discussion

We predicted that need for closure would be positively related to interdependent self-construals as well as support for counterterrorism tactics. Linear regression analysis revealed that need for closure significantly predicted interdependent self-construal,  $\beta = .17$ ,  $F(1, 190) = 5.91$ ,  $R^2 = .03$ ,  $p < .05$ . We also found that need for closure significantly predicted support for tough counterterrorist tactics,  $\beta = .236$ ,  $F(1, 190) = 11.24$ ,  $R^2 = .06$ ,  $p < .001$ .

In summary, the data of Study 3 conceptually replicate the link between need for closure and ingroup identification, tapped via an indirect measure of the degree to which individuals perceive themselves as interdependent with others. We also found that need for closure was associated with negative attitudes toward the outgroup (that in the U.S. context expressed itself in support for severe counterterrorism measures). This finding echoes a related result of Study 1, namely, that need for closure was associated with negative attitudes towards the Muslim outgroup among Dutch respondents.

## STUDY 4

Studies 1 and 3 found that need for closure leads to negative attitudes toward a threatening outgroup and support for severe counterterrorism measures. In turn,

such support may create a sense of optimism that the threat of terrorism will be averted. Our next study was designed to investigate this possibility. Specifically, Study 4 was designed to replicate the relation between need for closure and support for counterterrorism policies (found in Study 3) and to investigate the additional implication that such support will instill in individuals high on the need for closure a sense of optimism about the future, and an expectancy of personal safety from terrorism.

To examine these processes at a moment when the issues of terrorism and counterterrorism were particularly salient, Study 4 was conducted immediately following a major, widely discussed terrorist attack. Toward this purpose, American participants completed the appropriate questionnaires in the 2 weeks following the London transit bombing of July 2005. Our specific predictions were that (a) the need for closure would be positively related to support for the Bush administration's counterterrorism policies, (b) need for closure would be positively related to optimism about future safety from terrorism, and (c) support for the Bush administration's counterterrorism policies would mediate the relationship between need for closure and optimism about future safety.

## Method

### Participants

Participants were recruited from two college campuses in the Washington, DC, area during the 2 weeks following the London Transit Bombing of July 2005. One hundred two students from the University of Maryland and 102 students from Howard University volunteered to participate (137 female, 62 male, 5 did not report their gender). Some participants were recruited from various undergraduate classes, and others were approached in public areas of the university campuses, including the student union, outside spaces, and the library. Students who agreed to participate were asked to complete a packet of questionnaires. Participants' ages varied from 18 to 50, with a mean age of 22. One hundred twenty-two participants were African American (60%), 42 participants were European American (21%), 14 participants were Asian American (7%), 13 participants were Hispanic American (6%), and 13 were of other ethnicities (6%). No significant differences on any of our dependent variables emerged as a function of gender, age, or ethnicity. Hence, these variables are not considered further.

### Materials and Procedure

Participants who agreed to complete the questionnaires were asked to complete the questionnaire independently, without discussing their responses with

others. The questionnaire packet contained the need for closure scale, a scale tapping support for the Bush administration's counterterrorism policies, and a scale measuring optimism about future safety from terrorism.

*Need for cognitive closure.* Participants completed the shortened Need for Closure Scale (Pierro & Kruglanski, 2006), the same as used in Studies 2 and 3. Cronbach's alpha for this scale was .70.

*Support for the Bush administration's counterterrorism policies.* Four items assessed participants' support for the Bush administration's counterterrorism policies: "I support the USA's role in the war on terror," "I think George W. Bush is the best man to lead the country in the long run," "Terrorism should be fought by any means necessary," and "I think congress ought to renew the Patriot Act without any changes." All items were answered on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Cronbach's alpha for the scale was .63.

*Optimism about future safety from terrorism.* Five items assessed participants' optimism about future safety from terrorism: "Safety in subway, bus, and train travel will improve dramatically as a result of the London subway and bus bombings"; "Safety in airline travel will improve dramatically as a result of the London subway and bus bombings"; "The United States will be able to capture Osama bin Laden"; "The risk of terrorist attacks in the U.S. has decreased as a consequence of the war in Iraq"; and "I am confident that our military, civilian police, and homeland security personnel will be able to prevent future terrorist attacks inside the U.S." Answers to all items were recorded on a 6-point Likert scale with response alternatives ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Cronbach's alpha for this scale was .64.

## Results and Discussion

### *Preliminary Analysis*

There were no significant differences between the two universities (Howard University and University of Maryland) on any of our dependent variables. We thus combined the two university samples.

### *Mediational Analysis*

We hypothesized that need for closure would predict support for tough counterterrorism policy as well as optimism about future safety from terrorism. These predictions were supported in our data. Specifically, we

found that need for closure significantly predicted optimism about future safety from terrorism,  $\beta = .17$ ,  $F(1, 199) = 5.33$ ,  $R^2 = .03$ ,  $p < .05$ , and support for tough counterterrorism policy,  $\beta = .34$ ,  $F(1, 189) = 24.61$ ,  $R^2 = .12$ ,  $p < .001$ . In addition, we hypothesized that support for counterterrorism policy would mediate the relationship between need for closure and optimism. Following the method recommended by Baron and Kenny (1986), we found that the putative mediator, support for tough counterterrorism, uniquely predicted optimism about future safety from terrorism,  $\beta = .51$ ,  $t = 7.01$ ,  $p < .001$ . However, when controlling for support for counterterrorism, need for closure no longer significantly predicted optimism,  $\beta = .004$ ,  $t = .132$ ,  $p = .90$ . Finally, a Sobel (1982) test found that support for counterterrorism policy significantly mediated the relationship between need for closure and optimism about future safety from terrorism,  $Z = 4.43$ ,  $p < .001$ .

Alternative mediational models, inconsistent with our theoretical analysis, could also be proposed and tested. We tested each possible mediational model and did not find mediation in any other case. For example, need for closure did not mediate the relation between support for counterterrorism and optimism about future safety, and optimism about future safety did not mediate the relation between need for closure and support for counterterrorism.

The results of Study 4 replicate the finding (of Study 3) that need for closure is positively related to support for tough counterterrorism policies. In addition, we found that support for counterterrorism policies leads to greater optimism about future safety from terrorist attacks. When decisions are made about uncertain situations, those high on the need for closure are motivated to support policies that can promise to deliver closure. To the extent that the threat of terrorism undermines closure and elevates the need for closure (as the results of Studies 1 and 2 suggest), support for resolute counterterrorist policies should fulfill the need for closure, resulting in optimism. Our findings seem consistent with this general interpretation.

## STUDY 5

Our research so far finds that need for closure is associated with support for policies and leadership that are in place. Before concluding that need for closure leads to support for government leadership, it is important to address a possible moderating factor that may qualify our findings. Note that in Studies 3 and 4, support for governmental policies meant also support for firm and resolute policies (tough counterterrorism policies) that may seem to promise a restoration of stability and closure. The question, therefore, is whether the relation

between need for closure and support for group leadership will hold when leadership is conceptually separated from a resolute decision making style. If what matters is that the leadership appears to be an effective "closure provider," then it is conceivable that the need for closure would exhibit a negative relation with support for leadership if it appears irresolute and likely to perpetuate uncertainty and ambiguity.

Relevant to the present concerns, Landau et al. (2004) and Cohen, Oglivie, Solomon, Greenberg, and Pyszczynski (2005) found that mortality salience manipulations increased support for President Bush and decreased support for John Kerry portrayed by political opponents as indecisive ("flip-flopper"). Landau et al. and Cohen et al. also showed that mortality salience and reminders of terrorism function in a similar manner, and indeed, some recent work argues that mortality salience may increase the need for closure (Dechesne & Kruglanski, 2004). Therefore, the work of Landau et al. and Cohen et al. provides a preliminary test of the idea that those high in the need for closure will support a decisive leader and decrease support for an open-minded leader. Nonetheless, the Landau et al. and Cohen et al. results are merely suggestive, as their studies did not explore what particular features of each leader were appealing to participants. As Bush and Kerry differ in many ways apart from the decisiveness dimension, it is difficult to know exactly what leader characteristics prompted the participants' judgments. To overcome this limitation, the current study asks participants to rate their support for descriptions of an unknown leader, thereby removing the influence of any prior notions about a particular candidate.

## Method

### *Participants*

Eighty-five undergraduates at the University of Maryland participated in this study for partial course credit. Fifty-four participants were female and 28 were male. Three participants did not report their gender. Participants ranged in age from 18 to 28 years, with a mean age of 19 years. Gender did not exert any effects, and therefore it is not discussed further.

### *Materials and Procedure*

Participants first completed the shortened Need for Closure Scale. Next, they received written instructions introduced as follows: "Though the 2008 presidential election is two years away, candidates are starting to prepare their campaigns. One potential candidate is described below." Participants were randomly assigned to receive a description of a candidate as either open-minded or decisive. Candidates were described in gender

neutral terms and were not associated with any political party in order to reduce the likelihood that participants would recall actual political candidates. Participants were asked about their support for the potential candidate and a manipulation check assessing the perceived decisiveness of the leader was included among the dependent measures.

*The decisive leader.* The description of the decisive leader read,

One potential candidate for the 2008 Presidential election has been described as stable and consistent. This candidate is a decisive leader capable of making quick decisions. In addition, this candidate holds firm beliefs. This candidate believes in standing up for and defending one's own perspective while ensuring that a decision is made. Because of these beliefs, this candidate thinks that government policy and plans should be decided on quickly and followed through to completion.

*The open-minded leader.* The description of this leader read,

One potential candidate for the 2008 Presidential election has been described as flexible and adaptive. This candidate is a questioning leader capable of seeing multiple perspectives. In addition, this candidate believes in challenging ideas. This candidate believes in the practice of an open debate of ideas and values a diversity of viewpoints. Because of these beliefs, this candidate thinks that government policy and plans should be changed according to the best available information.

*Need for cognitive closure.* Participants completed the shortened Need for Closure Scale (Pierro & Kruglanski, 2006), as used in Studies 2, 3, and 4. Cronbach's alpha for this scale was .74.

*Support for the candidate.* Support for the candidate was assessed by means of seven items. Three items, responded to on a 9-point Likert scale with response alternatives ranging from 1 (*strongly disagree*) to 9 (*strongly agree*), stated, "This candidate would make a good president," "I would approve of this candidate as a leader," and "This candidate is the right person to lead the country." One item with response alternatives ranging from 1 (*not at all favorably*) to 9 (*extremely favorably*) stated, "How favorably do you view this candidate?" Two items with response alternatives ranging from 1 (*not at all*) to 9 (*very much*) stated, "To what extent do you admire this candidate?" and "How much confidence would you have in this candidate as a leader?" Finally one item, with the response alternatives

ranging from 1 (*not at all likely*) to 9 (*extremely likely*) stated, "How likely is it that you would vote for this candidate?" The average of these items served as a composite score. Cronbach's alpha for the open-minded leader was .95 and for the decisive leader was .97.

*Decisiveness of candidate.* The perceived decisiveness of each political candidate was assessed using three items, serving as a manipulation check. The three items were "This candidate is a decisive leader," "This candidate was confident in her or his decisions," and "This candidate avoided ambiguity." These items were answered on a 9-point Likert scale with the response alternatives ranging from 1 (*strongly disagree*) to 9 (*strongly agree*). The average of these scores was computed to arrive at a composite score. Cronbach's alpha for this scale was .69 for the decisive leader and .86 for the open-minded leader.

## Results and Discussion

### Manipulation Check

To check our manipulation of the decisiveness of the political candidate, we conducted a one-way analysis of variance comparing the two groups on ratings of the candidate's decisiveness. The decisive leader was rated as significantly more decisive ( $M=6.9$ ) than the open-minded leader ( $M=4.4$ ),  $F(1, 83) = 59.7$ ,  $\eta^2 = .42$ ,  $p < .001$ . In addition, the open-minded leader ( $M=5.91$ ) received a significantly higher level of support overall than the decisive leader ( $M=4.83$ ),  $F(1, 83) = 8.36$ ,  $\eta^2 = .09$ ,  $p < .01$ .

Next, we tested the predicted interaction between the description of the political candidate and need for closure. We tested the two-way interaction between need for closure and decisiveness of the leader using a linear regression with the decisiveness manipulation entered as a dummy variable. The predicted two-way interaction between need for closure and decisiveness of the leader was significant,  $\beta = 2.07$ ,  $t = 3.74$ ,  $p < .001$ . In the decisive leader condition, need for closure was positively related to support for the leader,  $\beta = .44$ ,  $F(1, 41) = 9.79$ ,  $R^2 = .20$ ,  $p < .01$ . When the leader was described as open-minded need for closure was negatively related to support for the candidate,  $\beta = -.31$ ,  $F(1, 41) = 4.24$ ,  $R^2 = .09$ ,  $p < .05$ .

The results from Study 5 suggest that need for closure does not lead to indiscriminant support for any leader but rather for a leader regarded as decisive. In fact, need for closure was negatively related to support for an open-minded leader. That is, participants high on the need for closure seem to support decisive leadership that promises to provide the necessary closure. However, participants low on the need for closure seem to prefer

a leader who is flexible and adaptive and who does not adhere to a belief system or a course of action come what may.

## GENERAL DISCUSSION

Terrorist ideologues have articulated arguments for the efficacy of terrorism as a tactic of psychological warfare. The most basic tenet of their argument has been that terrorism impacts the society targeted by the attack by creating an aversive psychological state of insecurity. As the ideologues of terrorism intuited correctly, our data imply that acts of terrorism instill in individuals an elevated need for cognitive closure (Studies 1 and 2).

Although terrorist ideologues agree on the initial psychological impact of terrorist attacks, there is divergence of opinions among the ideologues regarding the resulting perceptions and behaviors of individuals in the targeted group. One possibility offered by the ideologues is that the aversion toward uncertainty will result in a reluctance to support the current leadership who was ineffective in preventing the terrorist attack. This would destabilize the state and open the door to a political alternative. The second possibility is that the elevated aversion toward uncertainty would lead to a rallying around the flag and an aggressive defense of the group. This would play into the strategy of "jijitsu politics" in which the terrorists desire to elicit an over-response from the targets of their attacks. The third potential objective of terrorist ideologues involves an attempt to induce a specific policy change.

The data presented here suggest that, rather than undermining support for government as Bakunin, Kropotkin, and Marighela predicted, need for closure arousal may enhance the feelings of solidarity among group members (Studies 1 and 3), often manifesting itself in negative attitudes toward outgroups (Studies 1, 3, and 4), and support for tough counterterrorism tactics (Studies 3 and 4). As Study 4 further found, support for tough counterterrorism may account for the relation between need for closure and optimism about future safety from terrorism. These findings are consistent with the expectations of terrorist ideologues who wish to evoke a strong response from their perceived enemies. Such "rallying around the flag" was shown to lead to bias against outgroups and the use of costly counterterrorism strategies (e.g., the use of military warfare and torture). This also suggests that acts of terrorism could lead to reactance against the terrorists' wishes, and attempts to show solidarity and strength in the face of threat rather than conceding to their demands for policy change.

Even though the terrorist ideologues who argued for the destabilization model may have been imprecise

regarding the use of terrorist tactics to undermine leadership, their intuition may not have been completely off the mark. Specifically, our results suggest that although the need for closure may prompt a “rally effect” and support for the leadership of one’s group, these tendencies may be importantly qualified by the perceived potential of the leadership to restore certainty and closure. In this vein, Study 5 results suggest that though need for closure is positively related to support for a decisive leader, it is negatively related to support for an indecisive one. Put simply, need for closure is positively related to support for individuals or activities that seem likely to provide closure and is negatively related to support for individuals and activities that seem likely to undermine closure. It is possible then, that acts of terrorism and the resulting elevation in the need for closure could lead to a destabilization of the state in conditions in which the leader is perceived to be less decisive.

It is also of interest that whereas a leader whose style seems decisive and resolute, and hence whose leadership may be appealing in times of uncertainty, may lose support in circumstances where such leadership did not result in the expected restoration of stability and closure. This is not to suggest that a failure of a decisive leader would necessarily prompt a preference for an open-minded one. Instead, a failure of a given (decisive) course of action may dispose individuals to support an alternative albeit equally “decisive” course. These matters could be profitably investigated in future research.

Similarly, if standing up against the demands for policy change made by terrorists is likely to result in more, rather than less, uncertainty, then in those cases terrorism could lead to concessions. For example, when the use of a specific policy (e.g., the use of troops in a region) does not foster the sense of security desired, the strategy may be abandoned if such abandonment is thought to reduce the threat of terrorism.

## CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

Our data suggest that the psychological variable of need for closure may play an important role in the psychological processes stimulated by the threat of terrorism. The motivation to reduce aversive uncertainty seems to be driving individuals to form protective belief systems that allow for psychological closure. As such, individuals increase group identification concerns and are more supportive of actions designed to protect the ingroup. This may help explain previous research which has found that the threat of terrorism may lead people to hold more negative attitudes toward outgroups

(Bar-Tal & Labin, 2001), become religious (Schuster et al., 2001), participate in more group functions (Schuster et al., 2001), display national symbols to a greater extent (Skitka, 2005), increase trust in the government (Chanley, 2002), and become more aggressive (toward outgroups; Argyrides & Downey, 2004).

Overall, our data suggest that an individual, microlevel epistemic motivation such as the need for closure may play an important role in mediating broad, macrolevel, societal phenomena such as those involved in personal, and societal responses to terrorism with far reaching political implications.

Future research is needed to better understand the nature of the relationships among the concepts of insecurity, uncertainty, need for safety, and need for closure. In the present research, we found that the threat of terrorism leads to increased need for closure. Yet we cannot be sure of why this is the case, as it remains possible that that safety concerns, mortality salience, or some other variable could be driving this effect, rather than uncertainty. Therefore, future research could profitably explore the mediating mechanism(s) for this effect and the interrelations among these constructs.

Although the present data show that dispositional need for closure can lead to optimism about future safety when strong counterterrorism measures are perceived to be taken, it is not clear that situational inducements of the need for closure would have the same effect. It is possible that the elevations in need for closure in times of threat lead to optimism as a way of buffering the threat, thereby restoring a sense of closure. Indeed, past research on the need for closure has found identical relations between the need for closure and other variables when need for closure is operationalized according to trait scales and situational inducements (Kruglanski, 2004). Future research could explore whether the need for closure induced by terrorist attacks leads to similar optimism as has been found here with dispositional need for closure.

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