Journal of Interpersonal Violence

The Meaning of Collective Terrorist Threat: Understanding the Subjective Causes of Terrorism Reduces Its Negative Psychological Impact

Peter Fischer, Tom Postmes, Julia Koeppl, Lianne Conway and Tom Fredriksson

The online version of this article can be found at:
http://jiv.sagepub.com/content/26/7/1432

Additional services and information for **Journal of Interpersonal Violence** can be found at:

Email Alerts: http://jiv.sagepub.com/cgi/alerts

Subscriptions: http://jiv.sagepub.com/subscriptions

Reprints: http://www.sagepub.com/journalsReprints.nav

Permissions: http://www.sagepub.com/journalsPermissions.nav

Citations: http://jiv.sagepub.com/content/26/7/1432.refs.html

>> Version of Record - Apr 7, 2011

OnlineFirst Version of Record - Jun 28, 2010

What is This?

The Meaning of Collective Terrorist Threat: Understanding the Subjective Causes of Terrorism Reduces Its Negative Psychological Impact

Peter Fischer,[1] Tom Postmes,[2] Julia Koeppl,[3] Lianne Conway,[4] and Tom Fredriksson[4]

Abstract

This article hypothesized that the possibility to construct intellectual meaning of a terrorist attack (i.e., whether participants can cognitively understand why the perpetrators did their crime) reduces the negative psychological consequences typically associated with increased terrorist threat. Concretely, the authors investigated the effect of intellectual meaning (induced by providing additional information about potential economic, cultural, and historical reasons for the terrorist attack) on perceived terrorist threat and associated emotional well-being. Study 1 revealed that pictures of terrorist attacks elicited less experienced terrorist threat when they were presented with background information about the terrorists' motives (meaning

[1]University of Graz, Graz, Austria
[2]University of Groningen, Groningen, Netherlands
[3]University of Munich (LMU), Munich, Germany
[4]University of Exeter, Exeter, UK

Corresponding Author:
Peter Fischer, Institute of Psychology, Social Psychology, Karl-Franzens-University, Social Psychology Unit, 8010 Graz, Austria
Email: peter.fischer@uni-graz.at

provided) rather than without additional background information (no meaning provided). Study 2 replicated this effect with a different manipulation of terrorist threat (i.e., newspaper article) and clarified the underlying psychological process: Participants in the high terror salience condition with meaning provided experienced less terrorist threat and thus more emotional well-being in the face of crisis than participants in the high terror salience condition without meaning provided. Theoretical and practical implications in the context of psychological health and mass media effects are discussed.

Keywords

community violence, spirituality and violence, war

> Greater is our terror of the unknown.
>
> Titus Livius, Roman author and historian, 59 B.C.-A.D. 17

Since a series of devastating terrorist attacks (e.g., the attacks on the World Trade Center on September 11, 2001; the Madrid train bombings in March, 2004; or the 7/7 bombings in London, 2005), international fundamentalist terrorism emerged as one of the most highly recognized security threats in the Western world. Although it is highly unlikely for the individual to become a victim of terrorism (because of extremely low base rates), most of us feel elevated levels of terrorist threat whenever we are reminded about terrorism and associated potential threat (e.g., by newspaper articles, pictures of attacks, or political discussion about counterterrorist measures; see Fischer, Greitemeyer, Kastenmüller, Frey, & Osswald, 2007).[1]

Previous research has shown that subjectively perceived terrorist threat affects a broad variety of personal and collective psychological variables, including reduced emotional well-being (Fischer, Greitemeyer, Kastenmüller, Jonas, & Frey, 2006; Fredrickson, Tugade, Waugh, & Larkin, 2003), elevated levels of posttraumatic stress (PTS; Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002), or symptoms of depression (Schuster et al., 2001; for an overview, see also Fischer & Ai, 2008). On a collective level, terrorist threat leads to reduced consumer spending, change of political opinions toward more conservatism (Jost, Glaser, Kruglanski, & Sulloway, 2003), and crisis in financial markets (e.g., Lerner, Gonzalez, Small, & Fischhoff, 2003). Most tragically, Gigerenzer (2004) even found that after the 9/11 attacks, fatal car accidents significantly increased because people avoided travelling by airplane.

Altogether, terrorism research shows that increased levels of perceived terrorist threat can have dramatic effects on personal and collective psychological responses (Fischer & Ai, 2008; Fischer et al., 2007). Hence, it is important to detect ways to reduce subjectively experienced terrorist threat and its negative psychological consequences. The present research investigates whether the detrimental impact of terrorism on subjectively experienced terrorist threat and associated emotional well-being depends on whether individuals can intellectually make sense (intellectual meaning) of the terrorists' crime. In other words, does additional information provided about why the terrorists committed their crime (e.g., historical, economic, or cultural reasons) buffer the negative psychological consequences of terrorist threat?

Meaning and Coping With Terrorist Threat

Research on meaning consistently revealed that the ability to make sense of negative experiences helps to cope with adversity (Frankl, 1963; McIntosh, Silver, & Wortman, 1993; Updegraff, Silver, & Holman, 2008). This positive coping effect of meaning has been found for a broad variety of extreme adversities, such as coping with the horrifying experiences as a prisoner in a Nazi concentration camp (Frankl, 1963), loss of family members (Davis, Nolen-Hoeksema, & Larson, 1998), loss of a child by the sudden infant death syndrome (McIntosh et al., 1993), severe injuries (Bulman & Wortman, 1977), experiences of violence (Currier, Holland, & Neimeyer, 2006), and terrorism (Updegraff et al., 2008). The positive effects of meaning on coping with adversity have been mainly explained by two processes: (a) meaning provides people with an increased sense of control and security (Heider, 1958; Kelley, 1967), which makes the world more predictable (Roese & Olson, 1996), and (b) meaning attenuates the emotional intensity of unexpected events (Wilson, Centerbar, Kermer, & Gilbert, 2005; Wilson, Gilbert, & Centerbar, 2003; for an overview, see also Updegraff et al., 2008).

Most studies on meaning and coping have been conducted in context of personal trauma such as bereavement and illness. In contrast, research on meaning and coping with "symbolic threats" (Updegraff et al., 2008, p. 710), such as terrorism with its broad negative personal and collective implications, is in its infancy (for an exception, see Updegraff et al., 2008, who found in a longitudinal study that finding meaning in terrorism is associated with reduced levels of PTS symptoms). Especially, great issues of causality exist, as most previous studies have been conducted on a correlational basis (e.g., by using cross-sectional or longitudinal designs; see Updegraff et al., 2008). To address this issue, the present research experimentally (causally)

investigates the impact of intellectual meaning (i.e., whether participants can understand the reasons for a terrorist attack) on subjectively experienced terrorist threat and emotional well-being.

The Present Research

We investigated whether providing a rationale for a terrorist attack (which enables individuals to construct intellectual meaning of this kind of collective threat) reduces its potential negative impact on subjectively perceived terrorist threat and emotional well-being (which is strongly tied to mental health-related impacts of terrorist threat; Fischer & Ai, 2008; Fischer et al., 2006). This is a new type of research question as most previous studies on meaning and coping with adversity addressed personal meaning, reflecting more on the growth and personal benefit aspects of coping processes (cf. Updegraff et al., 2008). In contrast, the present research addresses coping processes associated with a collective threat such as terrorism. In addition, previous research has been mainly conducted on a correlational basis, which makes it impossible to definitely determine cause and effect. The present research addresses these issues.

In the following studies, collective terrorist threat was induced either by pictures or newspaper articles of terrorist attacks. In addition, we manipulated whether participants received background information about the terrorists' motives and reasons (rationale for the attack provided) or not (rationale for the attack not provided). We expected that providing a rationale for the attack helps individuals to construct intellectual meaning of the terrorist attacks, which in turn reduces their subjectively experienced terrorist threat as well as the negative effect of terrorism on emotional well-being. Two studies tested these hypotheses.

Study 1

The first study was designed to test whether there is first evidence that providing a rationale for a terrorist attack (i.e., providing meaning by information about the motives of the terrorists) alleviates the negative impact of terror salience on perceived terrorist threat and emotional well-being.

Method

Participants and design. Sixty students from the University of Exeter (30 women and 30 men; ages ranging from 18 to 49; $M = 25.67$, $SD = 8.55$)

participated in this study.[2] The experimental procedure was approved by the ethics committee of the University of Exeter. The study consisted of a one-factorial design with three between-participant conditions (high terror salience with rationale for the attack vs. high terror salience without rationale for the attack vs. nonterror salience). Participants were randomly assigned to the experimental conditions.

Material and procedure. Participants were approached on the University campus and asked whether they would be willing to participate in a study on terrorism. Participants were asked not to participate in the study if they or family members previously became personally involved in terrorist attacks. First, participants were either exposed to pictures of the 7/7 London Bombings in July, 2005 (high terror salience condition without rationale for the attack) or nonterror related pictures (nonterror salience). In a third condition, participants were exposed to the same pictures of the London Bombings mentioned above, but additionally received a short paragraph that explained potential motives of the perpetrators (e.g., social, economic, and cultural marginalization of Islamic countries by Western society) of the London Bombings (high terror salience condition with rationale for the attack).[3]

After the manipulation of the independent variable, participants answered on three items to what extent they feel personally threatened by terrorism (i.e., perceived terrorist threat). The following items were used on a scale from 1 (*not at all*) to 5 (*extremely*): "To what extent do you feel personally threatened by terrorism?" "To what extent do you feel your loved ones are personally threatened by terrorism?" and "How likely do you think it is that you will be involved in a terrorist attack?" Because these items highly correlated (*r*s ranging between .37 .and 71, all *p*s < .01), they were collapsed to a scale of "perceived terrorist threat" (α = .79). Afterwards, participants reported their currently experienced positive and negative emotions on the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988) as well as for explorative reasons control items on general mental health. Finally, participants were thoroughly debriefed, and it was assured by a personal talk that no one left with negative emotions.[4]

Results and Discussion

Check for interfering effects. Participants' age or gender did not significantly interact with the experimental conditions, all *F*s < 1.

Perceived terrorist threat. For an overview, see Table 1. The overall ANOVA received marginal significance, $F(2, 57) = 2.86$, $p = .065$, $\eta^2 = .09$. Post hoc tests (least significant difference) revealed that participants in the high terror

Table 1. Means and Standard Deviations (in Parentheses) of Perceived Terrorist Threat, Negative Emotions, Positive Emotions, and Emotional Well-Being (i.e., Difference of Positive Minus Negative Emotions) as a Function of Experimental Condition in Study 1

	Dependent Measures			
Experimental Condition	Perceived Terrorist Threat	Negative Emotions	Positive Emotions	Emotional Well-Being
Low terror salience	1.69 (0.80)	1.41 (0.35)	2.21 (0.88)	0.80 (0.80)
High terror salience with meaning	1.68 (0.67)	1.77 (0.46)	2.22 (0.52)	0.45 (0.72)
High terror salience without meaning	2.20 (0.87)	2.06 (0.81)	2.31 (0.65)	0.30 (1.16)

salience/high-meaning condition ($M = 1.68$, $SD = 0.67$) reported lower levels of perceived terrorist threat than participants in the high terror salience/low-meaning condition ($M = 2.20$, $SD = 0.87$; $p = .04$). Moreover, participants in the high terror salience/high-meaning condition did not feel significantly more threatened by terrorism than participants in the nonterror salience control condition ($M = 1.69$, $SD = 0.80$; $p = .97$). However, participants in the high terror salience/low-meaning condition felt significantly more threatened than participants in the control condition ($p = .04$).

Emotional well-being. Two participants did not complete the emotions measure, leaving only 58 participants for the following analyses. Preliminary analyses revealed no significant overall effect for the difference value between positive and negative emotions, $F < 1.56$, which might be due to the fact that there was no significant effect for positive emotions, $F < 1$. However, there were interesting findings for negative emotions, which are reported below. The overall ANOVA for negative emotions was significant, $F(2, 55) = 5.27$, $p = .008$, $\eta^2 = .16$. Post hoc tests (least significant difference) revealed that participants in the high terror salience/low-meaning condition ($M = 2.01$, $SD = 0.83$) reported higher levels of negative emotions than participants in the control group ($M = 1.41$, $SD = 0.35$; $p = .002$). However, this comparison with the control group was considerably attenuated (but still significant) for the high terror salience/high-meaning condition ($M = 1.77$, $SD = 0.46$; $p = .049$). No further significant effects occurred. Although negative emotions and perceived terrorist threat significantly correlated ($r = .44$, $p = .001$), no significant mediation was found for the effect of meaning on negative emotions via perceived terrorist threat.

Study 1 provided first evidence that the level of subjectively experienced terrorist threat depends on whether participants can understand why the terrorists committed their crime. When a rationale for the terrorist attack (i.e., background information about the motives of the terrorists, which helps to construct intellectual meaning) was provided, participants felt less threatened by terrorism than when no rationale was provided. A similar effect was found for experienced negative emotions. A limitation of Study 1 was that we did not find any effects of meaning on positive emotions and that we found no significant difference in experienced negative emotions between the high terror salience/high-meaning and the high terror salience/low-meaning condition.

Study 2

The aims of Study 2 were (a) to replicate the findings of Study 1 with a more subtle verbal manipulation of terrorist threat (i.e., newspaper articles about terrorism) and (b) to shed light on the underlying psychological processes related to the interplay between terror salience, meaning, perceived terrorist threat, and emotional well-being.

Method

Participants and design. Sixty students from the University of Exeter (30 women and 30 men; ages ranging from 17 to 82; $M = 26.85$, $SD = 14.81$) participated in this study.[5] The experimental procedure was approved by the ethics committee of the University of Exeter. The study consisted of a one-factorial design with three between-participant conditions (high terror salience with rationale for the attack vs. high terror salience without rationale for the attack vs. nonterror salience). Participants were randomly assigned to the experimental conditions.

Material and procedure. Participants were recruited using the same procedure as in Study 1. First, participants in the high terror salience condition read a short newspaper article about the 7/7 terrorist attacks carried out in London, July, 2005.[6] Participants in the high terror salience condition with rationale for the attack received the same extra background information for the motives of the perpetrators as used in Study 1; participants in the high terror salience condition without rationale for the attack did not receive such extra background information about the terrorists' motive. Participants in the nonterror salience control condition read a short newspaper article about the daily life in Exeter, United Kingdom.

Table 2. Means and Standard Deviations (in Parentheses) of Perceived Terrorist Threat, Negative Emotions, Positive Emotions, and Emotional Well-Being (i.e., Difference of Positive Minus Negative Emotions) as a Function of Experimental Condition in Study 2

	Dependent Measures			
Experimental Condition	Perceived Terrorist Threat	Negative Emotions	Positive Emotions	Emotional Well-Being
Low terror salience	3.03 (0.38)	1.42 (0.31)	2.17 (0.69)	0.74 (0.71)
High terror salience with meaning	2.75 (0.79)	1.78 (0.59)	2.56 (1.00)	0.78 (1.01)
High terror salience without meaning	3.25 (0.55)	1.79 (0.58)	2.05 (0.50)	0.26 (0.56)

Afterwards, to measure perceived personal and collective threat, participants were asked the following items on a scale from 1 (*not at all*) to 5 (*extremely*): (a) "Terrorism is a great concern for the British government" (collective threat) and (b) "How likely do you think it is that you will be involved in a terrorist attack?" (personal threat). On a theoretical basis, both items were averaged to a scale of "perceived terrorist threat" (both items did not significantly correlate, which is consistent to the perspective that collective threat and personal threat are two distinct facets of terrorist threat, which at the end, however, belong together to one overall experience of terrorist threat). Next, we measured positive and negative emotions by the PANAS (Watson et al., 1988). Afterwards, for explorative reasons, participants answered control items on their general mental health (no significant findings were found for these items). Finally, the debriefing procedure was the same as in Study 1.

Results and Discussion

Check for interfering effects. Participants' sex or age was not significantly associated with the dependent variables nor interacted with the experimental conditions, all Fs < 1.74, all ps > .18.

Perceived terrorist threat. For an overview, see Table 2. An overall ANOVA was significant, $F(2, 57) = 3.53$, $p = .04$, $\eta^2 = .11$. Post hoc tests (least significant difference) revealed that participants in the high terror salience/high-meaning condition ($M = 2.75$, $SD = 0.79$) reported lower levels of perceived terrorist threat than participants in the high terror salience/low-meaning condition ($M = 3.25$, $SD = 0.55$; $p = .01$). No further significant effects occurred.

Emotional well-being. To enable later mediation tests, as an indicator of emotional well-being we computed the difference value between reported positive minus negative emotions. The overall ANOVA was marginally significant, $F(2, 57) = 2.69$, $p = .076$, $\eta^2 = .09$. Post hoc tests (least significant difference) revealed that participants in the high terror salience/high-meaning condition ($M = 0.78$, $SD = 1.01$) reported higher levels of emotional well-being than those in the high terror salience/low-meaning condition ($M = 0.26$, $SD = 0.56$; $p = .04$). No difference in emotional well-being occurred between participants in the high terror salience/high-meaning condition and the nonterror salience control condition ($M = 0.74$, $SD = 0.71$; $p = .89$), whereas participants in the high terror salience/low-meaning condition reported marginal significantly lower levels of emotional well-being ($p = .058$).

Mediational analyses. In the following, we tested whether differences in the level of perceived terrorist threat mediate the effect of our meaning manipulation (high vs. low meaning) on emotional well-being. To test this potential mediation effect, a bootstrapping analysis based on 1,000 bootstraps was run (Preacher & Hayes, 2004). Results showed a significant direct effect of meaning on emotional well-being, $t = -1.99$, $p = .05$, which was reduced to non-significance, $p = .22$, when controlling for the possible mediator perceived terrorist threat, which then was still marginally significant, $p = .058$. However, the indirect effect only approached significance (Lower Limit 95% CI = -0.54; Upper Limit 95% CI = 0.07; $p > .05$). Hence, perceived terrorist threat only partially mediated the effect of meaning on emotional well-being.

General Discussion

Two studies investigated the effect of the possibility to construct intellectual meaning on perceived terrorist threat and its effects on associated emotional well-being. Study 1 revealed that pictures of terrorist attacks elicited less subjective threat and less emotional well-being when they were presented with, rather than without, background information about the terrorists' potential economic, historical, and social motives. Study 2 replicated this effect with an alternative manipulation of terror salience (i.e., newspaper article about a terrorist attack). It also could be shown that the effect of terror salience on emotional well-being was partially mediated by different levels of perceived terrorist threat.

Implications and Limitations

Our findings have important theoretical and practical implications. First of all, from a theoretical perspective, the present studies are the first ones that

causally showed the stress-buffering effect of intellectual meaning on perceived threat. Previous studies mostly investigated this phenomenon on a correlational basis in the clinical context. So far, to the best of our knowledge, no research did directly manipulate meaning in the context of terrorist threat. On the basis of the present results, we can say that the possibility to construct intellectual meaning for an adverse event causally reduces its negative psychological impact.

Moreover, our series of studies is the first showing the stress-buffering effect of intellectual meaning. Most previous studies addressed the positive impact of personal meaning (i.e., the personal growth and benefit aspects) of coping with threat and trauma (Updegraff et al., 2008). The present studies took a new approach and showed that positive effects of meaning can also be found when meaning is provided on a rather intellectual basis (i.e., providing motives and a rationale for a terrorist attack). However, a limitation of the present set of studies is that we did not measure to what extent participants really constructed meaning of the described terrorist attacks. Future research should address this point and employ measures of intellectual meaning construction.

Another limitation of the present research is that the effect of meaning on emotional well-being was mainly driven by negative emotions in Study 1, whereas it was mainly driven by positive emotions in Study 2. A reason for that finding might be that terror salience was induced by different stimuli across both studies. In Study 1, we used pictures and in Study 2 fictive newspaper articles. Previous research has shown that pictures of terrorist attacks lead to more pronounced negative psychological reactions than newspaper articles about the same attack (see Fischer et al., 2007). Accordingly, our visual manipulation of terrorist threat might have been more strongly associated with negative emotional responses than the text manipulation of terrorist threat. It would be a fruitful endeavor for future research to distinguish between cognitive and affective reactions (including potential emotional distinction processes) to terrorist threat as a function of different emotional qualities of different terror salience manipulations.[7]

Another limitation of the previous studies is that we did not measure our dependent variables before we manipulated the independent variables. Thus, we cannot indicate the effect sizes for actual changes in these dimensions as a function of our experimental manipulation. Future research should take that into account.

From a practical perspective, the present findings suggest that mental health practitioners should consider the construction of meaning as a possible way to buffer against the traumatizing effects of large-scaled social threats

like terrorism. Finally, the present research also has important implications for media psychology. We showed that the frightening effect of terrorist threat can be altered by the way media reports about terrorism. Media reports that are rather one sided and thus do not mention the potential motives of the perpetrators are rather counterproductive in calming down the public. Focusing on both, the victims' pain as well as the potential reasons of the perpetrators might be a better way in limiting the undoubtedly negative psychological consequences of terrorist threat.

Declaration of Conflicting Interests

Funding

Notes

1. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.
2. This study was conducted in context of a 3rd-year project at the University of Exeter, United Kingdom.
3. The original formulation of the meaning manipulation can be requested by the first author.
4. In a pilot study, we tested whether background information about terrorists' potential motives indeed enables participants to construct increased levels of meaning (i.e., ability to make sense of the attack) with regard to the terrorist attack. We separated the manipulation check from the main studies to prevent potential demand effects. **Method:** Seventy-three students from the University of Graz (55 women and 18 men; ages ranging from 18 to 43; $M = 25.67$, $SD = 22.96$) participated in this study in context of a social psychology lecture. The study consisted of a one-factorial design with three between-participant conditions (high terror salience with rationale for the attack vs. high terror salience without rationale for the attack vs. nonterror salience control group). Participants were randomly assigned to the experimental conditions. First of all, participants were either exposed to a picture of the 7/7 London Bombings in July, 2005 (i.e., bus without roof; high terror salience condition without rationale for the attack) or nonterror related pictures (i.e., picture of a football game; nonterror salience). In a third condition, participants were exposed to the same pictures of the London Bombings mentioned above, but additionally received a short paragraph that explained potential motives of

the perpetrators (e.g., social, economic, and cultural marginalization of Islamic countries by Western society) of the London Bombings (high terror salience condition with rationale for the attack). Afterwards, participants indicated to what extent they can understand why the terrorists conducted the attack on the following items on a scale from 0 (*not at all*) to 10 (*very much*): "I can understand why the terrorists conducted this attack," "The attacks make sense for me," and "I can understand the reasons why the terrorists committed this terrorist attack" ($\alpha = .72$). Afterwards, participants were debriefed. **Results on Meaning:** The overall ANOVA was significant, $F(2, 57) = 5.81$, $p = .005$, $\eta^2 = .14$. Post hoc tests (least significant difference) revealed that participants in the high terror salience/high-meaning condition ($M = 2.65$, $SD = 0.97$) reported more understanding for the attacks than those in the high terror salience condition without meaning manipulation ($M = 1.79$, $SD = 1.19$; $p = .006$) and the low terror salience control group ($M = 1.69$, $SD = 1.05$; $p = .003$). To conclude, our manipulation of meaning in context of terrorism is successful and can be used in the following study as a valid manipulation of meaning of terrorism.

5. This study was conducted in context of a 3rd-year project at the University of Exeter, United Kingdom.

6. The text of the newspaper article was the following: "Four suicide bombers struck in central London on Thursday 7 July, killing 52 people and injuring more than 770. The coordinated attacks hit the transport system as the morning rush hour drew to a close. Three bombs went off at or around 0850 BST on underground trains just outside Liverpool Street and Edgware Road stations, and on another travelling between King's Cross and Russell Square. The final explosion was around an hour later on a double-decker bus in Tavistock Square, not far from King's Cross" (BBC News, http://news.bbc.co.uk/).

7. We want to thank anonymous reviewers for their helpful comments on a previous draft of this article.

References

Bulman, R. J., & Wortman, C. B. (1977). Attributions of blame and coping in the "real world": Severe accident victims react to their lot. *Journal of Personality and Social Psychology, 35*, 351-363.

Currier, J. M., Holland, J. M., & Neimeyer, R. A. (2006). Sense-making, grief, and the experience of violent loss: Toward a mediational model. *Death Studies, 30*, 403-428.

Davis, C. G., Nolen-Hoeksema, S., & Larson, J. (1998). Making sense of loss and benefiting from the experience: Two construals of meaning. *Journal of Personality and Social Psychology, 75*, 561-574.

Fischer, P., & Ai, A. (2008). International terrorism and mental health: Recent research and future directions. *Journal of Interpersonal Violence, 23*, 339-361.

Fischer, P., Greitemeyer, T., Kastenmüller, A., Frey, D., & Osswald, S. (2007). Terror salience and punishment: Does terror salience induce threat to social order? *Journal of Experimental Social Psychology, 43*, 964-971.

Fischer, P., Greitemeyer, T., Kastenmüller, A., Jonas, E., & Frey, D. (2006). Coping with terrorism: The impact of increased salience of terrorism on mood and self-efficacy of intrinsically religious and non-religious people. *Personality and Social Psychology Bulletin, 32*, 365-377.

Frankl, V. (1963). *Man's search for meaning.* New York: Washington Square Press.

Fredrickson, B. L., Tugade, M., Waugh, C., & Larkin, G. (2003). What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology, 84*, 365-376.

Gigerenzer, G. (2004). Dread risk, September 11, and fatal traffic accidents. *Psychological Science, 15,* 286 -287.

Heider, F. (1958). *The psychology of interpersonal relations.* New York: Wiley.

Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin, 129*, 339-375.

Kelley, H. H. (1967). Attribution theory in social psychology. In D. Levine (Ed.), *Nebraska symposium on motivation* (pp. 129-238). Lincoln: University of Nebraska Press.

Lerner, J. S., Gonzalez, R. M., Small, D. A., & Fischhoff, B. (2003). Effects of fear and anger on perceived risks on terrorism: A national field experiment. *Psychological Science, 14*, 144-150.

McIntosh, D. N., Silver, R. C., & Wortman, C. B. (1993). Religion's role in adjustment to a negative life event: Coping with the loss of a child. *Journal of Personality and Social Psychology, 65*, 812-821.

Preacher, K. J., & Hayes, A. F. (2004). *SPSS and SAS procedures for estimating indirect effects in simple mediation models. Behavior Research Methods, Instruments, and Computers, 36,* 717 -731.

Roese, N. J., & Olson, J. M. (1996). Counterfactuals, causal attributions, and the hindsight bias: A conceptual integration. *Journal of Experimental Social Psychology, 32*, 197-227.

Schuster, M. A., Stein, B. D., Jaycox, L. H., Collins, R. L., Marshall, G. N., Elliott, M. N., et al. (2001). A national survey of stress reactions after the September 11, 2001, terrorist attacks. *New England Journal of Medicine, 345*, 1507-1512.

Silver, R., Holman, A., McIntosh, D., Poulin, M., & Gil-Rivas, V. (2002). Nationwide longitudinal study of psychological response to September 11. *Journal of American Medical Association, 288*, 1235-1244.

Updegraff, J. A., Silver, R. C., & Holman, E. A. (2008). Searching for and finding meaning in collective trauma: Results from a national longitudinal study of the 9/11 terrorist attacks. *Journal of Personality and Social Psychology, 95*, 709-722.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.

Wilson, T. D., Centerbar, D. B., Kermer, D. A., & Gilbert, D. T. (2005). The pleasures of uncertainty: Prolonging positive moods in ways people do not anticipate. *Journal of Personality and Social Psychology, 88*, 5-21.

Wilson, T. D., Gilbert, D. T., & Centerbar, D. B. (2003). Making sense: The causes of emotional evanescence. In I. Brocas & J. Carrillo (Eds.), *The psychology of economic decisions. Volume 1: Rationality and well being* (pp. 209-233). New York: Oxford University Press.

Bios

Peter Fischer is a professor of social psychology at the University of Graz. His main research interests are pro- and antisocial behavior, terrorism, self-regulation, and decision making.

Tom Postmes is a professor of social psychology at the University of Groningen and University of Exeter. His research and teaching is concerned with communication via Internet, group processes within and between groups, and social identity. Awards include a postdoctoral fellowship of Royal Netherlands Academy of Arts and Sciences (1998) and a research fellowship of the ESRC (2003). With Jolanda Jetten, he edited "Individuality and the group: Advances in social identity" (Sage, 2006).

Julia Koeppl is a PhD student at the University of Munich (LMU) and a research fellow at the University of Sussex. She received her master's degree in psychology in 2007 from the University of Regensburg.

Lianne Conway received her master's degree in psychology from the University of Exeter. She is pursuing a non-academic career.

Tom Fredriksson received his master's degree in psychology from the University of Exeter. He is pursuing a non-academic career.