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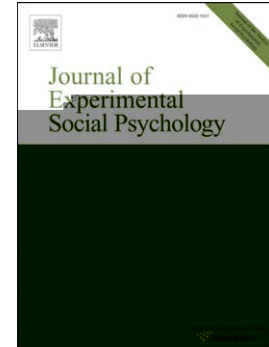
The Aftermath of Destruction: Images of Destroyed Buildings Increase Support for War, Dogmatism, and Death Thought Accessibility

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Running head: AFTERMATH OF DESTRUCTION

The Aftermath of Destruction: Images of Destroyed Buildings Increase Support for War,  
Dogmatism, and Death Thought Accessibility

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## Abstract

Building on terror management theory, we hypothesized that viewing destroyed buildings would increase death thought accessibility and thereby elicit dogmatic belief and hostile worldview defenses. In Study 1, images of destroyed buildings and deadly terrorist attacks elicited greater death-thought accessibility than images of construction sites or intact buildings. Images of destruction also enhanced dogmatic belief (Study 2) and support for military action against Iran (Study 3). Study 4 found that heightened death thought accessibility, but not the accessibility of thoughts of war or national identity, statistically mediated the relationship between visible destruction and worldview defense. Further, although destruction images increased dogmatism, political orientation was not affected by the destruction manipulation nor was political orientation related to death-thought accessibility. Overall, these findings suggest that visibly destroyed infrastructure can motivate increased certainty of beliefs and support for military worldview.

Keywords: terror management; broken windows; death; dogmatism; ideological certainty; conservative shift; worldview defense; war; terrorism; destruction

The Aftermath of Destruction: Images of Bombed Buildings Increase Support for War,  
Dogmatism, and Death Thought Accessibility

And as I looked at those demolished towers in Lebanon, it entered my mind that we should punish the  
with these images and their like as their background, the events of September 11th came  
waste to yours.

- Osama bin Laden, *Address to the American People* (2004)

Remnants of buildings destroyed by human actions and natural disaster are a common feature of the landscape in many parts of the world. When the pillars of the visible world come crumbling down,  
succumb, and if so, where do they turn for solace? One possibility, suggested in the above epigraph, is that visible destruction is closely associated with death, the awareness of which prompts investment in enduring cultural beliefs and values that seemingly defy the test of time.

may help dampen the existential echoes of the visible

Importantly, some have speculated that exposure to destruction may indeed conjure up existential fear and promote aggressive and militaristic responses. For example, Baumgarten (1949) suggested that visible destruction, such as that endured by Warsaw, Poland, during WWII, carries existential implications that emerge indirectly in other activities, such as the production of destruction themes in artistic and political expressions, and that the destroyed

buildings and infrastructure left behind by the war provided a lasting reminder of those deadly implications. Similarly, in a study conducted in Israeli settlements a year and half after the cessation of artillery shelling in the 1967 Arab-Israeli war (Ziv, Kruglanski, & Shulman, 1974), people living in shelled areas expressed more patriotism, covert aggression, and signs of courage than did those living in non-shelled areas.

To our knowledge, the present work is the first experimental research to consider the social psychological repercussions of exposure to signs of destruction, offering a novel opportunity to expand understanding of the naturalistic catalysts of existential insecurity and how people react to such situations. The present research builds from terror management theory (TMT; Greenberg, Pyszczynski, & Solomon, 1986; Greenberg, Solomon, & Arndt, 2008) to examine the possibility that viewing destroyed infrastructure heightens awareness of death effects as well as support for

### *Terror management theory*

TMT contends that human awareness of the inevitability of death creates the potential for existential terror that would undermine adaptive behavior unless effectively managed. One major way people control this anxiety is through the creation and maintenance of cultural worldviews that alleviate their awareness of death. The hope of transcending death literally, through admission to heaven, reincarnation, or some other ethereal existence, is provided by the religious belief systems contained in virtually all cultures. Similarly, people can attain symbolic immortality by weaving themselves into the everlasting fabric of their culture, affecting the lives of others, performing great works, or leaving other marks on the world. Cultural worldviews

prescribe the beliefs and values that serve as the criteria for personal value (i.e., self-esteem) and, consequently, whether one qualifies for either type of immortality.

One important implication of this analysis is that people must maintain certainty regarding their worldview beliefs in order to effectively protect themselves against the awareness of death. Yet research has not directly examined the stressors or reminders of mortality. Rather, studies have focused on a variety of changes in attitudes and actions designed presumably to protect those convictions from threats. TMT posits that because worldviews are inherently fragile social constructions, individuals must protect those beliefs against threatening others and must seek social validation in order to maintain their effectiveness at calming existential fears (Berger & Luckman, 1967). The mere existence of worldviews does not buffer existential fear.

Worldview defense, or death-related thought depends on social validation, then when reminded of mortality (mortality salience), individuals become more unfavorable toward those who threaten it, a protective response tendency known as worldview defense (e.g., Greenberg, et al., 1990). Considerable research has supported this hypothesis, showing that reminders of death affect social allegiances and intergroup hostilities based on cultural demarcations such as race (Greenberg, Schimel, Martens, Solomon, & Pyszczynski, 2001), ethnicity (see Castano, 2004; Motyl et al., 2011), religion (see Vail et al., 2010), political affiliation (e.g., H. A. McGregor et al., 1998), and nationality (e.g., Jonas, Fritzsche, & Greenberg, 2005). Such responses can take the form of harsher evaluations of those who

Pyszczynski et al., 1996), derogation and physical aggression worldview (e.g., Hayes, Schimel & Williams, 2008; H. A. McGregor et al., 1998), and various other responses that undermine the impact of threats to and increase the impact of support of

*Physical destruction as a catalyst for existential motivation*

In recent years, research has shown how the salience of war, terrorism, or other forms of lethal human conflict can activate terror management processes. For example, subliminally priming the terrorist attacks of September 11<sup>th</sup> (2001) elicited greater death thought accessibility than reading news articles about, terrorism can increase both death thought accessibility and worldview defense (Das, Bushman, Bezemer, Kerkhof, & Vermeulen, 2009; Landau, et al., 2004).

Of course, intimations of mortality are not limited to reminders of terrorism. Throughout the world, people frequently encounter environments saddled with reminders of death, such as hospitals, cemeteries, and funeral homes. The Varanasi burial grounds of India, where some 250 public cremations take place each day, are one particularly vivid example. People living near these grounds display chronic worldview defense compared to those living in other regions (Fernandez, Castano, & Singh, 2010). On a more mundane level, passing by funeral homes and cemeteries remind people of death and trigger worldview defenses (Gailliot, et al., 2008; Jonas, et al., 2002; Pyszczynski, et al., 1996). These studies demonstrate that mere exposure to sites with a connection to death is capable of instigating terror management processes.

Broken windows theory (BWT; J. O. Wilson & Kelling, 1982), a prominent criminological perspective, has pointed out that visible signals of deterioration or destruction, such as graffiti, litter, or broken windows on a building or storefront, signal a disorderly descriptive norm (see Cialdini, Reno, & Kallgren, 1990; Cialdini, Kallgren, & Reno, 1991) and thus facilitate the spread of criminal disorder in the area. Indeed, compared to clean and orderly environments, introducing even minor visible displays of disorder (e.g., graffiti, illegally locked bicycles, litter) led to increases in a range of other disorderly and criminal behaviors, such as littering, trespassing, and stealing money out of a post office box (Keizer, Lindenberg, & Steg, 2008). BWT thus highlights important issues about the link between visible infrastructure damage and caustic behavior that TMT may also be able to help inform. The rubble of destroyed buildings and neighborhoods in the wake of natural disasters, war, and terrorism, may serve as reminders of the fleeting and fragile nature of life (Pyszczynski, Greenberg, & Solomon, 2003). R. J. Lifton (2003) noted that almost immediately following 9/11, the pile of rubble that was reserved for the hypocenter of a nuclear explosion or earthquake. He argued that the symbolism of such language reflects the apocalyptic meaning inherent in such devastation and the shocking realization that humans are vulnerable to sudden destruction. In fact, in earlier writings, Lifton undermines the illusion that one is invulnerable to similar environmental hazards – it is more difficult to believe that one will withstand the test of time when one sees his or her infrastructure or environments ravaged by nature and war.

*The present research*



at may serve as a daunting memento of the fragility of human life. Following from this analysis, the purpose of the present research was to determine whether viewing destroyed infrastructure can lead to heightened accessibility of death-related thought, and consequently, heightened dogmatic belief certainty and violent worldview defensive attitudes. In Study 1 we tested whether exposure to images of destroyed buildings would increase death thought accessibility. If this were the case, TMT suggests that viewing such scenes of destruction should increase the certainty with which people hold their worldview beliefs (Study 2) and increase hostile worldview defense, such as support for violent military campaigns against those with threatening worldviews (Studies 3 and 4). Study 4 also assessed the role of death-related thoughts in mediating the link between viewing images of destroyed buildings and subsequent worldview defense.

### STUDY 1

Our initial study assessed whether viewing images of destruction could lead to an increase in death thought accessibility. The target condition exposed participants to a series of images depicting buildings that were damaged or destroyed, as well as three comparison conditions. The first comparison condition depicted images of completely intact buildings, representing a neutral baseline condition. The second comparison condition depicted a construction site, with buildings not fully intact yet clearly not destroyed. The third comparison condition depicted buildings in the process of being destroyed by terrorist/military action. Given previous research showing that terrorism-related stimuli increase death thought accessibility (Das, et al., 2009; Landau et al., 2004), this condition allowed us to see how the effect of the destroyed bu

Stimuli in each of these four conditions (destruction, terrorism, construction, intact) depicted various buildings and architecture in both urban and suburban settings. After viewing these images, participants completed a word-stem completion task designed to assess the accessibility of death-related cognition.

Based on TMT, we were able to make several predictions. First, that the destroyed building condition would yield higher levels of death thought accessibility than the intact condition and the construction condition. Second, the construction condition would not increase death thought accessibility compared to the intact building condition because the construction site buildings were clearly not destroyed. And finally, the terrorist/military action condition was

Participants were 50 undergraduate psychology students (11 male) at the University of Colorado at Colorado Springs (UCCS) with a mean age of 22.84 ( $SD = 5.13$ ) years. Participants in this and all subsequent studies were recruited via an online study sign-up system for either extra course credit or as part of a research participation component of a course.

### *Materials & Procedure*

Upon arrival, participants were told that the study was investigating the relationship between visual and linguistic structural formations. After obtaining informed consent, the experimenter then seated each participant at a computer in a private cubicle and explained how to navigate the computer program and testing packet.

Once familiarized, participants were randomly assigned to guide themselves through one

incomplete or dismantled buildings, but organized and with earthmovers, cranes, scaffolding,

condition depicted buildings being blown up by bombs or crashed into by planes. The remaining 10 images in each condition were evenly spaced throughout the presentation and depicted intact buildings.

Images for each building type condition (i.e., destruction, intact, construction, terrorism) were selected from the following locations: New York, NY; Arlington, VA; New Orleans, LA; and the Gulf Coast; and the countries of Israel and Lebanon. No humans or animals were visible in any of the stimuli images. Images in the destruction condition specifically depicted the

*aftermath* of damage incurred at these locations following bombs, fires, earthquakes, hurricanes, and/or structural collapse; further, care was also taken to make sure that none of the destruction condition stimuli included any overt cues of death (i.e., no bloodstains, gore, etc) to humans or animals. Sample images are presented in the *Appendix*.

After the computerized portion of the study, participants completed a 20-item mood inventory (PANAS; Watson, Clark, & Tellegen, 1988) and a word search distraction task to provide the delay typically needed to find increased death thought accessibility after priming with death-related stimuli (see Pyszczynski, et al., 1999). As in previous research (e.g., Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994; Schimel, Hayes, Williams, & Jahrig, 2007), the accessibility of death-related cognition was assessed using a word-stem completion task<sup>1</sup>. This task presented 25 incomplete word-stems, of which 6 could be completed with either a neutral or a death-related word. For example, GRA\_\_ could be completed as GRANT or GRAVE, and SK\_\_L could be either SKILL or SKULL.

A single-item Likert-type measure of political orientation (1 = *Conservative*, 10 = *Liberal*) was also included to test whether the image manipulation would influence the content of  
le-item liberal-conservative assessments have been widely used in social psychological research to assess and predict socio/political attitudes and outcomes (e.g., Amodio, Jost, Master, & Yee, 2007; Landau, et al., 2004; Nail, Harton, & Decker, 2003; Nail & I. McGregor 2009), and recent studies have demonstrated the single-item measure of political orientation is sensitive to various types of threat (e.g., Bonanno & Jost, 2006; Jost, Napier, et al., 2007).

This and all subsequent studies concluded with a demographic questionnaire which collected information such as age, sex, and education level.

## Results

*Death thought accessibility.* A one-way ANOVA revealed significant differences between conditions on death thought accessibility,  $F(3, 46) = 4.38, \eta^2 = .22, p < .01$ . Pairwise comparisons revealed that the terrorism ( $M = 2.09, SE = .30$ ) and destruction ( $M = 2.33, SE = .28$ ) conditions did not differ from each other,  $t(22) = .59, d = .25, p = .56$ . However, as hypothesized, each of these conditions elicited greater death thought accessibility than the construction ( $M = 1.23, SE = .27$ ) and intact building ( $M = 1.21, SE = .26$ ) conditions, all  $|t| > 2.11, d > .25, p < .01$ . Intact-building conditions,  $t(26) = .04, d = .02, p = .97$ .

*Political orientation.* The single-item measure of political orientation ranged from 1 to 10 (1 = *Conservative*, 10 = *Liberal*), with  $M = 5.02, SD = 2.29$ , meaning the sample had opportunity to shift roughly 2 SD in either the conservative or liberal direction. However, a one-way ANOVA<sup>2</sup> found no effect of condition on political orientation,  $F(3, 45) = 2.09, \eta^2 = .12, p = .12$ . Given this lack of condition effect on political orientation, it was also reasonable to check for a Condition x Political Orientation interaction on death thought accessibility. Following methods prescribed by Aiken and West (1991), condition was dummy coded, political orientation was centered on the mean, and interaction terms were computed; each main effect was entered into the first step and the interaction terms were entered into the second step. No interaction was found ( $F[1, 41] = 1.72, \Delta R^2 = .08, p = .18$ ), neither was there a main effect of political orientation ( $\beta = .21, t[45] = 1.50, p = .14$ ) or even a zero-order correlation between political orientation and death thought accessibility ( $r[48] = .15, p = .29$ ). Yet, while controlling for political orientation, the condition main effects remained as reported above.

*Affect.* A one-way ANOVA revealed no significant effects on positive affect ( $\alpha = .86$ ),  $F(3, 46) = .51$ ,  $\eta^2 = .03$ ,  $p = .68$ , or negative affect ( $\alpha = .81$ ),  $F(3, 46) = 1.28$ ,  $\eta^2 = .08$ ,  $p = .29$ .

### Brief Discussion

In Study 1, viewing images of damaged buildings increased the accessibility of death-related thought compared to both the intact condition and the construction condition. Further, the level of death thought accessibility elicited by the damage condition was no different from that elicited by viewing incidents of deadly terrorist attacks and bombings. Thus, in line with expectations, exposure to destruction appeared to signal a similar type of existential threat at least as manifested in death thought accessibility as that signaled by terrorist activity<sup>3</sup>. Additionally, death thought accessibility in the construction condition, which depicted buildings that were not intact yet were undamaged, did not differ from that observed in the intact building condition.

There was also no effect of exposure condition on political orientation, nor was political orientation associated with death thought accessibility. These findings run counter to claims that thoughts of death produce a shift toward conservative ideology (Jost et al., 2003), a point we will return to in greater depth in the General Discussion section.

### STUDY 2

Given that exposure to images of destruction produced a clear increase in DTA in Study 1, TMT suggests that such image cultural worldviews. As discussed earlier, a substantial amount of research shows that the awareness of death plays an important role in fueling responses designed to protect the worldview from threats, such as intergroup conflict, hostility, and violence. A major assumption in that prior research has been that individuals expressing such worldview defenses do so

because they have become more certain about the veracity of those worldview beliefs. But, although prior research shows that death awareness can motivate responses designed to protect motivates people to increase their certainty regarding their beliefs.

On that point, i prevailing cultural landscape, and that each individual develops his or her own individualized set of worldview beliefs (via unique socialization experiences, etc.) to help them manage death-related cognition (Solomon et al., 1991). Accordingly, a considerable literature shows that the effects of mortality salience on worldview defense outcomes are dependent on the relevance of the worldview domain, or belief, to the individual. For example, in the first empirical report of mortality salience effects, Rosenblatt et al. (1989, Study 2) found that reminders of death motivated people to become more punitive toward alleged prostitutes, but only if prostitution viola -prostitution attitudes if similarly demonstrated the importance of the relevance of the person the cultural worldview in terror management processes (e.g., Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992; Rothschild, Abdollahi, & Pyszczynski, 2009; Schimel, Wohl, & Williams, 2006). Thus, acknowledging that each individual holds a unique set of worldview beliefs, TMT predicts that death-death-denying worldview beliefs, whatever they may be.

Study 2 provided an opportunity to examine this basic but previously untested assumption of TMT. Given that images of destruction increase death thought accessibility, TMT

Importantly, such increased certainty was expected to emerge regardless of the particular content

(Altemeyer, 1996; Altemeyer, 2002). The degree of dogmatism captured by this measure ranges from relatively weak and open-minded/undogmatic beliefs at the low end, to absolute certainty

end (Altemeyer, 1996, p. 201).

Study 2 also further tested the uncertainty-threat model of political conservatism. Whereas TMT would predict that existential threat would motivate dogmatic certainty about content, the uncertainty-threat model of political ideology would predict that individuals would become more politically conservative. Alternatively, if the death-thought inducing destruction condition does not produce a conservative shift (as was suggested in Study 1), the model might instead predict an interaction such that conservatives increased dogmatic certainty about their beliefs and liberals reduce dogmatism about their beliefs.

## Method

### *Participants*

The sample consisted of 49 undergraduate psychology students (14 male) at UCCS, with a mean age of 23.31 ( $SD = 7.56$ ) years.

### *Materials & Procedure*

The procedure for Study 2 was identical to Study 1, with the following exceptions. Participants were randomly assigned to the destruction, intact building, or construction site



similarly high levels of death-thought accessibility. After the image manipulation and PANAS, -item Dogmatism scale ( $\alpha = .91$ ) to assess the extent to which they view their beliefs as absolutely correct (independent of the content of their beliefs). This 9-point Likert-type scale (1 = *very strongly disagree*, 9 = *very strongly agree*)

My beliefs are right and will stand the test of time

As in Study 1, a single-item Likert-type measure of political orientation (1 = *Conservative*, 6 = *Liberal*) was included to test whether the image manipulation would influence

## Results

*Dogmatism.* A one-way ANOVA revealed significant differences among conditions on dogmatism,  $F(2, 46) = 3.92$ ,  $\eta^2 = .15$ ,  $p < .03$ . Pairwise comparisons revealed that the destruction ( $M = 4.15$ ,  $SE$  the construction ( $M = 3.19$ ,  $SE = .31$ ) or intact building ( $M = 3.12$ ,  $SE = .29$ ) conditions, both  $|t| > 2.28$ ,  $d$  building conditions,  $t(31) = .17$ ,  $d = .06$ ,  $p = .87$ .

*Political orientation.* The single-item measure of political orientation ranged from 1 to 6 (1 = *Conservative*, 6 = *Liberal*), with  $M = 3.69$ ,  $SD = 1.09$ . A one-way ANOVA<sup>4</sup> revealed a null effect of condition on political orientation,  $F(2, 45) < 1$ . Given this lack of condition effect on political orientation, we followed Aiken and West (1991) to test for a Condition x Political Orientation interaction on dogmatism. No interaction was found ( $F[2, 42] < 1$ ), but a main effect ( $\beta = -.48$ ,  $t[47] = -3.95$ ,  $p < .001$ ) and zero-order correlation ( $r[47] = -.50$ ,  $p < .001$ ) showed

political orientation was negatively related to dogmatism and the condition main effect remained as reported above.

*Affect.* There were no differences on negative affect ( $\alpha = .77$ ),  $F(2, 46) = 1.29$ ,  $\eta^2 = .05$ ,  $p = .28$ . A one-way ANOVA revealed significant differences on positive affect ( $\alpha = .89$ ),  $F(2, 46) = 9.61$ ,  $\eta^2 = .30$ ,  $p < .001$ . The intact building condition ( $M = 3.23$ ,  $SE = .19$ ) elicited greater positive affect than the destruction ( $M = 2.54$ ,  $SE = .19$ ) or the construction ( $M = 2.03$ ,  $SE = .20$ ) conditions, both  $|t| > 2.5$ ,  $d > .40$ ,  $p < .01$ . The intact building condition elicited greater positive affect than the destruction condition than the construction condition,  $t(31) = 1.85$ ,  $d = .66$ ,  $p = .07$ .

Because of this unexpected effect on positive affect, the analysis on dogmatism was repeated with positive affect as a covariate. Both the ANCOVA and adjusted pairwise comparisons showed the same significant effects described above, all  $ps < .05$ . This suggests that the dogmatism effects were not due to changes in affect.

#### Brief Discussion

As hypothesized, the destruction condition triggered an increase in dogmatic certainty (see Table 1).<sup>5</sup> These findings not only provide some of the first empirical evidence regarding this basic TMT assumption, but they also speak to the terror management consequences of exposure to destruction images. In contrast to studies examining the social implications of terror management worldview defenses (e.g., Gailliot et al., 2008; Greenberg et al., 1990), Study 2 demonstrated that environmental reminders of death increase the dogmatic strength and tenacity with which the worldview beliefs themselves are held.

Additionally, the effect of exposure condition on increased belief certainty was not explained by a shift in political ideology. And although conservatives were more dogmatic than

liberals, the destruction condition increased dogmatism regardless of political ideology. We consider the implications of this finding in greater depth in the General Discussion section.

### STUDY 3

foundation from which to derive existential security, therefore requiring continual social validation from others (see also, Berger & Luckmann, 1967). Consequently, people and cultures respond defensively to such challenges. One of the more dramatic forms of worldview defense is to support the annihilation of those who pose the worldview threat. As Berger and Luckmann findings support this analysis (Hayes, Schimel, & Williams, 2008; see also, Pyszczynski et al., 2003; Niesta, Fritsche, & Jonas, 2008). For example, research has shown that mortality awareness can increase support for the use of lethal military force among Americans and support for martyrdom (terrorist) attacks against the West among Iranian students (Pyszczynski, Abdollahi et al., 2006), for self-sacrifice for England among English students (Routledge & Arndt, 2008), as well as for violent political resistance (Dor, 2006).

Building on these findings, Study 3 explored whether exposure to images of destroyed infrastructure would increase support for violence against a perceived cultural and military enemy. Given the widely publicized concerns over Iranian nuclear and foreign policies during the months prior to Study 3, we operationalized worldview defense as support for aggressive American foreign policy regarding Iran. Given the findings of Study 1, that images of destroyed

buildings increased death thought accessibility, exposure to such images was expected to increase worldview defense in the form of support for aggressive policies toward Iran.

Study 3 again tested whether individuals would become more politically conservative in the destruction condition. But we should note that increased support for military action against Iran would be predicted by both TMT (protecting the American cultural worldview against Iran) and by the uncertainty-threat model of ideology (as a shift toward conservative foreign policy; Nail & I. McGregor, 2009).

## Method

### *Participants*

The sample consisted of 61 undergraduate psychology students (35 male) at University of Missouri-Columbia (MU), with a mean age of 18.84 ( $SD = 1.04$ ) years.

### *Materials & Procedure*

The procedure was identical to that of Study 2 with the following exceptions. Rather than assessing dogmatism, worldview defense was measured using the Commander-in-Chief task developed by Rothschild (2008; see also, Motyl, Pyszczynski, & Hart, 2010). This measure first -in-Chief of the Armed Forces. It is your job to decide when to use your national armed forces (army, navy, and air force) knowing that as a result some innocent -point Likert-type scale to respond to each of 11 items ( $\alpha$

as,

= *definitely not*, 10 = *definitely yes*).

A single-item Likert-type measure of political orientation (1 = *Conservative*, 10 = *Liberal*) was again included.

### Results

*Military action against Iran.* A one-way ANOVA revealed significant differences among conditions on support for military action,  $F(2, 58) = 3.32, \eta^2 = .10, p < .05$ . Pairwise comparisons revealed that the destruction ( $M = 7.55, SE = .37$ ) condition elicited greater support for war against Iran than either the construction ( $M = 6.35, SE = .35$ ) or the intact building ( $M = 6.45, SE = .38$ ) conditions, both  $|t| > d, p < .05$ . The difference between the construction and intact building conditions,  $t(40) = .20, d = .06, p = .84$ .

*Political orientation.* The single-item measure of political orientation ranged from 1 to 10 (1 = *Conservative*, 10 = *Liberal*), with  $M = 5.89, SD = 2.14$ . A one-way ANOVA found no effect of condition on political orientation,  $F(2, 58) < 1$ . Following methods prescribed by Aiken and West (1991), we checked for a Condition x Political Orientation interaction on support for military action. No interaction was found ( $F[2, 55] < 1$ ), but a main effect ( $\beta = -.36, t[60] = -3.06, p < .01$ ) and zero-order correlation ( $r[60] = -.36, p < .01$ ) showed political orientation was negatively related to support for military action against Iran and the condition main effect remained as reported above.

*Affect.* A one-way ANOVA revealed no significant differences on positive affect ( $\alpha = .76$ ) or negative affect ( $\alpha = .66$ ), both  $F_s < 1, \eta^2_s < .02, p_s > .54$ .

### Brief Discussion

The results of Study 3 provided additional support for the present analysis, showing that participants in the destruction condition were more supportive of war against Iran than participants in either the intact-building condition or the construction condition.

## STUDY 4

The present analysis suggests why viewing destruction can encourage support for militaristic worldview defenses. The results from Studies 1 and 3 showed that images of destroyed buildings led to greater death thought accessibility and support for war against Iran. But it remains to be determined whether the effect of visible destruction on militaristic worldview defense can in fact be explained by increased accessibility of death thought.

Research on the cognitive architecture of TMT suggests a strong connection between the accessibility of death related cognition and worldview defense (see Hayes, Schimel, Arndt, & Faucher, 2010, for a review). Across different lines of research, the same conditions that influence death thought accessibility after reminders of death influence worldview defense (e.g., thought accessibility (e.g., Arndt et al., 1997). This work converges in suggesting that worldview defenses are linked to the awareness of death. However, to our knowledge, only one previous study has demonstrated that variations in the accessibility of death-related thought statistically mediates worldview defense. Building on the idea that insurance brand logos can be subtle reminders of mortality, Fransen, Fennis, Pruyn, and Das (2008) found that participants who viewed an insurance company logo (compared to those who did not view this logo) intended to spend greater amounts of money on luxury goods, an increase mediated by greater death thought accessibility.

Further, although Study 1 demonstrated that destruction imagery increases the accessibility of death-related cognition, those images are clearly multidimensional, making it possible that they could also be triggering other types of thoughts. One possibility is that the

destruction images aroused nation-based worldview defense as a result of their resemblance to national identity, reflecting the common association between destruction imagery and patriotic or tim or destructive victor. In this light it is possible that the effects in the prior studies could have stemmed from these types of thoughts (national identity, war) rather than being driven by the activation of death-related thoughts.

Study 4 was therefore designed to assess the role of thoughts of death in mediating the relationship between images of destruction and worldview defense. In addition, we sought to compare the mediational role of death thoughts with that of thoughts of war or national identity, two other types of ideation that these images of destruction might activate that could be plausibly expected to increase worldview defense. We predicted that exposure to destruction and decay would trigger increased death thought accessibility (replicating Study 1) and worldview defense (replicating Study 3). If death-related cognition is indeed a critical catalyst of worldview defense following exposure to destruction images, then death thought accessibility should mediate the relationship between destruction exposure and worldview defense. If, however, thoughts of war or nationalism are the operative agent in these effects, then their accessibility should mediate the relationship between destruction exposure and worldview defense.

Finally, Study 4 again tested whether the destruction condition would influence political ideology and, similarly, whether death thought accessibility would be associated with political conservatism. And as was the case in Study 3, increased support for aggressive anti-terrorism military action was similarly predicted by both the uncertainty-threat model of ideology (as a

shift toward conservative anti-terrorism policy; Nail & I. McGregor, 2009) and by TMT (protecting the American cultural worldview against terrorists).

## Method

### *Participants*

Twenty-six undergraduate psychology students (10 male) at MU participated.

### *Materials & Procedure*

Because the previous studies consistently demonstrated that both the construction condition and the intact building condition did not differ, Study 4 proceeded with only one of these two controls – the construction condition – and therefore did not include the intact building condition. Participants were randomly assigned to the same destruction or construction image conditions used in Studies 1–3. Then, to enhance the generalizability of our findings, death thought accessibility was assessed in Study 4 with a different method than in Study 1: a lexical decision task measuring response latencies to several types of letter strings.

In the lexical decision task, participants were presented with strings of letters, some of which represented a specific type of thought or concept, and asked to judge whether the letters did or did not make a word. A specific type of thought was inferred to be more accessible if the participants made a correct identification of representative words more quickly than neutral words or other types of words. This method has been validated by several prior studies as predicting terror management outcomes or arising from challenges to terror management buffers (see e.g., Arndt, Cook, Goldenberg, & Cox, 2007, Study 3; Bassett, 2005; Koole & Van den Berg, 2005, Study 5; Schimel et al., 2007, Study 3), and converges with other approaches in assessing death thought accessibility (see Hayes et al., 2010 for full review of this and other methods of assessing death thought accessibility). Although other research has validated the



lexical decision task and word-stem completion task (see Hayes et al., 2010), there is need for more research measuring death thought accessibility with methods other than word-stem completion. Thus, using the lexical decision task provides an important opportunity to conceptually replicate the word-stem completion findings from Study 1.

A brief set of practice trials oriented participants to the task, after which they performed stimulus. A blank screen was presented for a 1000 ms interval between each trial. Word types were evenly distributed in the same randomized order across all trials for all participants.

A total of 70 recorded trials were presented, consisting of 30 non-words ( $\alpha = .91$ ; e.g., *nempt, trotm, frub*), 10 neutral words ( $\alpha = .87$ ), 10 death-related words ( $\alpha = .83$ ), 10 war-related words ( $\alpha = .87$ ), and 10 nation-related words ( $\alpha = .85$ ). Each of the four groups of words were chosen such that each group of words was, on average, roughly comparable on character length and frequency of occurrence (Bargh, Chaiken, Govender, & Pratto, 1992). See *Table 1* for the specific words and their frequency. An English language word corpus (British National Corpus, 2007) was used to check the frequency of each word.

Following the lexical decision task, a 5-item Likert-type scale (1 = *very strongly disagree*, 6 = *very strongly agree*) developed by Weise, et al. (2008) was used to record support for militaristic defense of America from terrorism ( $\alpha = .92$ ). Items included statements such as,

we have to stop

A single-item Likert-type measure of political orientation (1 = *Conservative*, 7 = *Liberal*) was again included.

### Results

*Thought accessibility.* Following Schimel et al. (2007), all incorrect responses were excluded from the analyses, producing a satisfactory (87.16%) rate of valid word/non-word identifications. None of the corresponding response latencies were greater than 2000 ms or less than 300 ms, and the assumptions were met for homogeneity of variance,  $F(2, 23) = .28$ , and sphericity,  $\chi^2[2] = 2.07, p > .35$ .

A 2 (condition: destruction vs. construction) x 3 (reaction time [RT]: death words vs. war words vs. nation words) mixed ANCOVA, controlling for baseline reaction times to the neutral words, revealed no main effect for RT type,  $F(2, 46) = .28, \eta^2 = .01, p = .75$ , and a main effect of condition,  $F(2, 23) = 3.45, \eta^2 = .13, p = .08$ . However, this was qualified by a condition x RT type interaction,  $F(2, 46) = 2.96, \eta^2 = .11, p = .06$ . Pairwise comparisons revealed quicker RTs to death words in the destruction condition compared to the construction condition ( $t[25] = -3.01, d = 1.20, p = .006$ ); war word and nation word RTs did not differ by condition, both  $|t| < .50, p > .50$ , quicker than war and nation word RTs (both  $|t| < .50, d < .15, p > .50$ ). Nation word RTs did not differ,  $t(25) = .38, d = .15, p = .71$ . There were no differences between RT for different word types in the construction condition, all  $|t| < .50, d < .15, p > .50$ . Adjusted cell means and standard errors are reported in *Table 2*.

*Mediation analyses.* Methods similar to those recently used by Fransen et al. (2008) were employed to test whether increased death-related cognition accounts for the relationship between condition and worldview defense beyond any effect of war- or nation-related cognition. In the

first step, an independent samples *t*-test replicated Study 3, showing that support for militaristic defense was greater in the destruction condition ( $M = 3.20$ ,  $SD = 1.66$ ) than in the construction condition ( $M = 1.96$ ,  $SD = .98$ ),  $\beta = .44$ ,  $t(25) = 2.37$ ,  $d = .95$ ,  $p = .03$ . The second step, as noted above, showed that death word RTs were faster in the destruction condition than the construction condition, indicating greater accessibility,  $\beta = -.24$ ,  $t(25) = -3.01$ ,  $d = 1.20$ ,  $p = .006$ . Finally, when regressing support for militaristic defense on death word RTs, war word RTs, nation word defense,  $\beta = -1.27$ ,  $t(25) = -2.03$ ,  $d = .81$ ,  $p = .05$  (condition,  $\beta = .21$ ,  $t[25] = 1.03$ ,  $d = .41$ ,  $p = .31$ ; war word RTs,  $\beta = .50$ ,  $t[25] = 1.02$ ,  $d = .41$ ,  $p = .32$ ; nation word RTs,  $\beta = .53$ ,  $t[25] = .98$ ,  $d = .39$ ,  $p = .34$ ). A Sobel test of the reduction of the effect of condition on militaristic defense was significant ( $Z = 1.71$ ,  $p = .04$ ). In a test of reverse mediation, regressing death thought onto condition and support for militaristic defense, condition remained a significant predictor of death word RTs ( $\beta = -.21$ ,  $t(25) = -2.36$ ,  $d = .94$ ,  $p = .03$ ) while militaristic defense did not ( $\beta = -.06$ ,  $t(25) = -.68$ ,  $d = .27$ ,  $p = .50$ ). Condition mediated the effect of viewing destruction on militaristic worldview defense (see *Figure 1*), and not the reverse.

*Political orientation.* The single-item measure of political orientation ranged from 1 to 10 (1 = *Conservative*, 10 = *Liberal*), with  $M = 4.27$ ,  $SD = 1.99$ . A one-way ANOVA found no effect of condition on political orientation,  $F(1, 24) = 2.13$ ,  $\eta^2 = .08$ ,  $p = .16$ . Following Aiken and West (1991), we checked for Condition x Political Orientation interactions on support for militaristic defense and on each type of thought accessibility. No interaction was found on militaristic defense ( $F[1, 22] = 1.28$ ,  $\Delta R^2 = .02$ ,  $p = .27$ ), though there was a main effect such that political orientation was negatively related to support for militaristic defense ( $\beta = -.63$ ,  $t[24] = -$

4.35,  $p < .001$ ). There was no main effect of political orientation on death word RTs, war word RTs, or nation word RTs (all  $\beta$ s  $< .28$ ,  $t[24]$ s  $< 1.41$ ,  $ps > .17$ ), nor was there an interaction on any of these RTs (all  $F[1, 22]$ s  $< 1$ ). In all cases, the condition effects remained as reported above.

*Affect.* A one-way ANOVA revealed no significant differences on positive affect ( $\alpha = .81$ ),  $F(1, 25) = 2.13$ ,  $\eta^2 = .08$ ,  $p = .16$ , or negative affect ( $\alpha = .86$ ),  $F(1, 25) = 1.70$ ,  $\eta^2 = .07$ ,  $p = .21$ .

### Brief Discussion

The results of Study 4 support the hypothesis that death thought accessibility mediates the influence of destruction imagery on worldview defense. The destruction condition increased death thought accessibility compared to the construction condition, but did not affect thought of national identity or war. The destruction condition also subsequently increased worldview defense in the form of support for the aggressive military defense of America from terrorism. A mediation analysis showed that differences in death thought accessibility between the destruction and construction conditions uniquely accounted for the influence of condition on worldview defense.

There was also no effect of exposure condition on political orientation, nor was political orientation associated with death thought accessibility.

### General Discussion

The present research hypothesized that viewing destroyed buildings would enhance ideological certainty and violent worldview defensive attitudes because such scenes of

beliefs and to

aggressively protect those beliefs against threatening others. Four studies converged to support this analysis. Study 1 found that images of visible destruction increased death thought accessibility compared to images of intact buildings and construction sites. Study 2 showed that visible destruction increased the dogmatic certainty with which participants held their worldview beliefs. In Study 3, American students exposed to images of visible destruction were more supportive of military action against Iran. Study 4 conceptually replicated these findings and, importantly, also showed that the increase in death thought accessibility produced by viewing images of destroyed buildings uniquely mediated the increase in support for militarism.

These findings were consistent across two distinct measures of thought accessibility and two separate measures of worldview defense. That the destruction conditions in Studies 1 and 4 affected more frequent completions of death-related word-fragments and led to quicker death

visible destruction does, in fact, increase the accessibility of death-related thought. Second, the measures of anti-Iranian militarism and anti-terrorist militarism used in Studies 3 and 4 converge in showing that exposure to destruction does indeed increase worldview defense, and that this can take the form of increased support for intergroup violence.

The present findings thus suggest that destroyed infrastructure can carry an existential signature, potentially serving as a day-to-day hostile worldview defenses. Given the specific worldview defensive attitudes studied here, the present findings can help to explain how exposure to visible destruction in certain geographical areas, such as in cities suffering severe urban deterioration, the sites of terrorist attacks or military strikes, or even natural disasters, might encourage ideological dogmatism and exacerbate harmful intergroup relations, potentially leading to even more violence and

nd see how we live here,

can arouse a multitude of motivations, the present research points to terror management processes as one motivating force that can play an important role in fuelling hostile and violent intergroup relationships.

#### *Death, destruction, and terror management mechanisms*

As noted earlier, various studies have linked death thought accessibility to worldview defenses (see Hayes et al., 2010). Yet these lines of work have typically relied on an experimental causal chain strategy (see Spencer, Zanna, & Fong, 2005) of demonstrating in some studies that threats to the worldview increase the accessibility of death-related cognition (e.g., Schimel et al., 2007) and in other studies that defending the worldview after mortality salience reduces this accessibility (e.g., Arndt et al., 1997). Study 4 compliments and extends these approaches by showing that variations in the accessibility of death-related thought statistically mediate worldview defense (see also Fransen et al., 2008). Going further, Study 4 shows that the destruction images affected worldview defense through death thoughts only, and not through thoughts of war or national identity. This extends previous findings that terror management effects are specifically due to death thoughts and are not typically aroused by otherwise worrisome, value-focused, or aversive thoughts (Greenberg, et al., 1995; see also, Pyszczynski, Greenberg, Solomon, & Maxfield, 2006).

The present research was designed to determine whether exposure to images of destroyed infrastructure increases death thought accessibility and therefore leads to ideological certainty

and worldview defense, but these studies also raise some generative avenues for future research about the mechanism producing the link between exposure to visibly destroyed environments and death-related thought. We note three possibilities. The first is that scenes of destruction serve as symbolic reminders that one is ultimately vulnerable to existential threat. This entails that destruction, regardless of cause, will elicit death thought accessibility. The second is that visible destruction is a literal reminder of deadly events that may have led to the destruction. The implication of this possibility is that visible destruction would only elicit death thought if the scene is associated with deaths in some way, but would not arouse such cognitions if the scene were not associated with fatal or potentially-fatal circumstances (e.g., normal decay of a building over time). The third possibility is that certain buildings can serve as cultural icons, the destruction of which would c

undermining such buffers via scenes of destroyed iconic buildings would thereby increase the accessibility of death-related thought. Although future research is needed to reveal whether and the present demonstration of these basic processes has important implications for understanding the catalysts and consequences of existential motivation in everyday life.

*Destruction, reconstruction, and the malleability of terror management strategies*

In Studies 3 and 4, images of destruction increased the endorsement of militaristic awareness of mortality need not always produce such conflict escalating outcomes (Vail et al., in press). As just a few examples, when reminded of mortality: people reminded of compassionate religious values became less supportive of violence (Rothschild et al., 2009); people reminded of

Palestinians during times of heightened conflict (Pyszczynski et al., 2010); people become more charitable toward their fellow citizens (Jonas et al., 2002); and empathetic people become more 6).

This suggests that situationally salient, as well as dispositionally active, features of an responses triggered by exposure to visibly destroyed buildings or other similar environments. Thus, the critical insight here is that the destroyed buildings themselves may merely activate the terror management system, whereas the additional social or environmental cues surrounding the destroyed site may have a strong influence on the *form* of the emergent terror management responses. Thus, one interesting possibility here is that contextual imagery promoting compassion, shared humanity, or peace at destroyed sites might guide terror management responses toward those prosocial directives, alleviating or even reversing otherwise aggressive responses (see Motyl, Rothschild, & Pyszczynski, 2009).

wareness of the target of destruction. Specifically, future research might examine whether individuals viewing the destruction of their own (or an infrastructure. In this vein, when told about the encroachment of Bethlehem (the birthplace of Jesus) by Muslims, Christian participants reminded of death were buffered from increased death thought accessibility and worldview defense if they were first informed of the deaths of a plane



infrastructure may in fact attenuate the need for further terror management by reducing the accessibility of death-related cognition.

Moreover, in all four of the present studies, the construction and intact building conditions did not enhance death thought accessibility, dogmatism, or worldview defense. Future research on the broken

to actively support things like reconstruction efforts or humanitarian relief as a straightforward way to eliminate the death-laden qualities of the site. Indeed, one of the interesting aspects of the unprecedented outpouring of support in the immediate aftermath of the

infrastructure. From this perspective, support for humanitarian aid and reconstruction efforts could be viewed as an expression of the existential motivation to eliminate the visual cues of material transience by transforming destroyed sites into construction sites and, ultimately, intact infrastructure again.

In this light, the present findings may help expand strategies to curb terrorism based on BWT (e.g, Kelling & Bratton, 2006; Schneider & Chapman, 2003). Such strategies currently emphasize intensified police attention to minor crimes and misdemeanors as an effort to close the gateway to terrorism, catch terrorists engaged in minor infractions before more serious offenses, and make it more difficult to fund terrorism via illicit activities. The present results suggest that an additional strategy would be to repair or reconstruct the destroyed infrastructure in terrorist-producing, or potentially terrorist-producing, regions rather than further destroying them or simply leaving those areas in shambles.

*Does existential threat motivate ideological certainty or conservative shift?*

Although extant studies have previously demonstrated the impact of death awareness on research has been that individuals expressing such worldview defenses do so because they have become more certain about the veracity of their worldview beliefs. Whereas other prior research areness, those beliefs and allows death thoughts to become accessible (Hayes et al., 2008; Schimel et al., 2007), no research has yet directly tested whether reminders of death can motivate increased some of the first evidence that death concerns do indeed motivate people to directly increase certainty about those beliefs. This supports the assumption that death awareness can lead to uncompromising and hostile intolerance of alternative beliefs or competing ways of life because beliefs.

In a similar vein, Study 2 can also be viewed as offering a novel contribution to research investigating

McGregor, Galliot, Vasquez, & Nash, 2007; I. McGregor, Zanna, Holmes, & Spencer, 2001; I.

McGregor & Marigold, 2003). Such research has primarily dealt with responses to threat

pursuing various personal goals, neither of which directly measure certainty about worldview

beliefs. Thus, Study 2 represents an important contribution because it is the first direct demonstration of ideological dogmatism in response to a mortality-related threat, and therefore speaks to a unique and important set of psychological processes.

Further, the present research helps shed some light on the recent debate over the uncertainty-threat model of political ideology (e.g., Jost, et al., 2003). Proponents of this model argue that mortality reminders represent an existential threat that motivates a shift toward conservative political ideology in an effort to protect the status quo. To the contrary, critics have argued that protection from existential threat can be gleaned by believing more fervently in the along the political spectrum (Anson et al., 2009; Greenberg & Jonas, 2003).

The destruction condition did not produce a shift toward conservative political orientation in any of the present four studies, nor was death thought accessibility associated with political orientation in Studies 1 and 4. Further, in Study 2, although conservatives were more dogmatic than liberals, the destruction condition enhanced ideological dogmatism regardless of political orientation, meaning that all participants—liberal and conservative—became more certain about the veracity of their beliefs<sup>5</sup>. These findings were inconsistent with the uncertainty-threat model prediction that existential threat would motivate political conservatism, or alternatively, in the case of Study 2, that destruction exposure might have increased dogmatism among politically conservative participants and reduced it among liberal participants (because conservatives would become more dogmatically certain about conservative beliefs and liberals less certain about liberal beliefs). Rather, the findings converged with a recent set of experimental studies (Castano et al., 2011) showing that whereas a death reminder motivated conservatives to increase support for conservative policies, it motivated liberals to reject right-wing authoritarian values, reject

conservative policies and rhetoric, and indicate stronger support for liberal social policies and values.

In light of the growing experimental evidence showing that terror management processes lead to ideological certainty, rather than conservative shift, it is perhaps worth taking a closer look at two possible reasons for the theoretical debate. First, research has illustrated a dual set of terror management processes (Pyszczynski et al., 1999), in which conscious death-related thought leads to the perception of vulnerability, whereas non-conscious yet still accessible death-related thought leads to ideological certainty. The uncertainty-threat model predictions were based, in part, on correlations between conservative political orientation and explicit fears of death (Jost et al., 2003; G. D. Wilson, 1973), with some subsequent research on the topic involving non-experimental exposure to traumatic experiences (e.g., Bonanno & Jost, 2006; Nail & I. McGregor, 2009). As Castano et al., (2011) briefly noted, such circumstances likely involve conscious death-related thought, meaning that they do not necessarily inform reactions to non-conscious death awareness. Indeed, the present Studies 1 and 4 appear to be the first to test the association between political ideology and non-consciously accessible death awareness. In Study 1, there was none.

Second, when dealing with non-conscious death-related thought, TMT and the uncertainty-threat model can sometimes make similar predictions regarding some potentially politically charged outcomes (Burke, Kosloff, & Landau, in press). Indeed, Burke et al., (in press) noted that most of the studies often offered as supporting conservative shift deal with political issues (e.g., support for President Bush; anti-terrorism policies) that are multi-dimensional and could be viewed as worldview defenses (e.g., supporting incumbent American

in the present Studies 3 and 4, the uncertainty-threat model would have presumably predicted that those who viewed destroyed buildings would increase support for military action as a shift toward conservative foreign policy (see Nail & I. McGregor, 2009 for a similar example of this interpretation). However, although political orientation may be associated with various ideas about the appropriate extent of military spending and operations, the protection of the American worldview against salient threat is a real and relevant concern to most Americans. Thus, TMT often makes the same prediction, but based on the worldview defense hypothesis. These concerns suggest that worldview defense may sometimes look like conservative shift and vice versa and that future research may help understand the circumstances that produce that similarity.

On that point, it is important to note that the TMT worldview defense prediction depends on the salient or dominant set of worldview beliefs, values, and identities. The hypothesis that American participants would increase support for militarily defending America rests on the protection of an overarching set of worldview beliefs, values, and identities relevant to both liberals and conservatives. But if more specific political beliefs, values, or identities were salient or dominant, TMT might predict that existentially motivated participants would adhere to those beliefs (Castano et al., 2011). Thus, future research might benefit from further investigating the possible role of salient or dominant political worldview characteristics, perhaps comparing instances when none are particularly salient to instances when relevant salient beliefs are issue-specific (e.g., environmental protection), related to party or political orientation (e.g., liberal, conservative), or are broadly related to national/international roles (e.g., American).

*The functional invisibility of culture?*

Another potentially interesting aspect of this research is that it leads to questions about how people respond to a world where the physical environment – our buildings, roads, and other architectural imprints – might visibly remind us of our capacity to be destroyed. Becker (1971; see also Lifton, 1979) posited that part of the answer might lie in turning toward the intangible. If these things can be seen, they may be more immune to the physical perils visible in the natural world. Thus, from this perspective, people, especially those with a heightened awareness of death, may devote themselves more fervently to the relatively invisible, and thereby relatively invulnerable, system of beliefs – including religions as well as secular concepts of nations, science, and the like.

The present studies can be seen as consistent with the idea that the psychological association of visible destruction with death reflects what Lifton (1976, 1979) called the *death wish*. Similarly, Sartre (1956) noted that humankind is aware that even the evidence of its own presence is fragile, and the deterioration of human constructions undermines the perceived persistence of humanity itself. In contrast, Sartre (1956) posits them as fragile and precious and because he adopts a system of protective measures with regard to them. It is because of this ensemble of measures that an earthquake or volcanic eruption can *destroy* these cities or these human constructions. The original meaning and aim of war

In other words, people may increase investment in an *invisible* world, made up of the mental figments, fantasies, and faiths (i.e., cultural beliefs) precisely as a result of being faced with environmental reminders of death and destruction of the *visible, tangible* world. The present violence to defend it are consistent with these ideas. The increase in dogmatic belief observed in the death awareness brought on by the visible hazards of physical existence. The worldview defenses observed in Studies 3 and 4 also suggest an increased psychological reliance on the them. An interesting question raised by the present findings is whether the terror management symbols.

### *Conclusion*

In sum, the present research uses TMT to offer a fresh perspective on some of the motivational implications of visibly destroyed physical surroundings. In these studies, exposure to images of destroyed buildings lead to greater death thought accessibility, which in turn destroyed buildings also boosted their support for violent military aggression against those who might threaten their way of life. These results bear important implications for modern ideological struggles and compromises, as well as for breaking the cycle of violent military and/or insurgent aggression.

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ACCEPTED MANUSCRIPT



## Notes

1. The word fragment measure of death thought accessibility is based on other similar approaches to measuring construct accessibility (e.g., Higgins & King, 1981; Tulving, Schacter, & Stark, 1982). Extant research indicates that death thought accessibility is increased by reminders of mortality, other death associated stimuli, and challenges to terror management buffers (such as threats to the worldview, self-esteem, and close attachments), and is decreased following reminders of mortality and the opportunity to defend these buffers, and further, predicts a number of theoretically specified outcomes (see Hayes et al., 2010). Evidence of discriminant validity is provided by studies showing that theoretically specified conditions (e.g., threats to the worldview) increase death thought accessibility but not the accessibility of other negative cognitions (e.g., Schimel et al., 2007). Moreover, as Hayes et al. recently reviewed, a number of studies have shown convergent validity in finding parallel effects with either a word fragment or lexical decision task measure of death thought accessibility. Such an approach was also used in here with Studies 1 and 4.

It may also be worth noting that the effects of mortality thought on worldview defense outcomes are stronger when people think about their own death, as opposed to the death of others (Greenberg et al., 1994; Nelson, Moore, Olivetti, & Scott, 1997). This points to the critical role of self-relevant death thought accessibility.

2. The degree of freedom for this analysis is reduced because one participant declined to report political orientation.
3. This should not be taken to imply that terrorism and destruction always or even often constitute similar levels of death-related or existential threat. Certainly the levels of both

can vary depending on the intensity of the particular encounter. The important point for present purposes is that both the destruction and terrorism images used here significantly increased the accessibility of death-related cognition above that observed in the control conditions.

4. The degree of freedom for this analysis is reduced because one participant declined to report political orientation.
5. It is useful here to reiterate that the dogmatism scale was made up of ideologically neutral items and *did not* assess belief in any particular ideological stance. Further, although political conservatives have been found to be more dogmatic, such findings do not support the conclusion that dogmatic belief style is simply a reflection of conservative belief content. And finally, Study 2 demonstrated that although dogmatism scores shifted, political ideology/beliefs did not shift as a result of the destruction images. Thus, we do not see empirical support for the possibility that expressing more dogmatic certainty possible that the destruction exposure condition did not affect political ideology because political ideology was measured after the dogmatism scale, and thus the effects of that condition may either have dissipated by the time participants completed the ideology  
eed for further  
defense. However, the same item was included in Study 1, but with no preceding  
opportunity for belief affirmation; there was still no effect on political orientation.

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Appendix

Sample images per condition



Sample destruction condition image



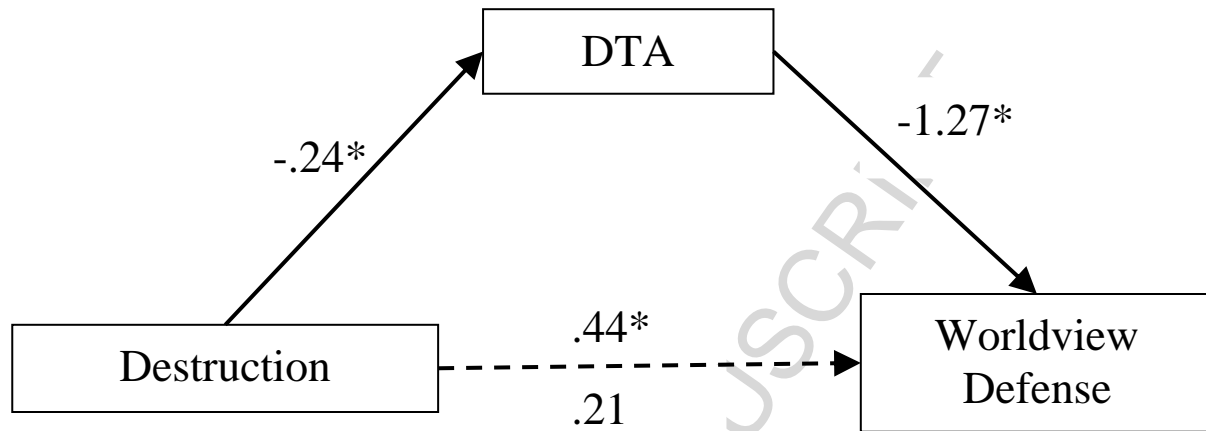
Sample terrorism condition image



Sample construction condition image



Sample intact building condition image



*Figure 1.* Heightened death thought accessibility (DTA; shorter reaction times on death-related lexical decision task trials) uniquely mediated the relationship between exposure to destruction and worldview defense in Study 4.

Note. Numbers represent standardized beta coefficients.  $*p < .05$ .

War words	Frequency	Length	Nation words	Frequency	Length
War	273.44	3	State	186.27	5
Attack	92.51	6	National	127.07	8
Gun	33.81	3	Law	113.50	3
Iraq	31.69	4	President	64.61	9
Bomb	29.53	4	America	52.19	7
Iran	19.84	4	USA	49.63	3
Destroy	19.49	7	Flag	14.88	4
Soldier	17.25	7	Senate	12.97	6
Combat	15.50	6	Anthem	3.09	6
Torture	8.48	7	Patriot	1.87	7
<i>M</i>	54.15	5.1	<i>M</i>	62.61	5.8

Table 1

Word frequency (per million) and character length by word type.

Neutral words	Frequency	Length	Death words	Frequency	Length
Picture	106.27	7	Death	199.07	5
Radio	88.80	5	Dead	118.84	4
Phone	76.79	5	Killed	84.57	6
Chair	73.88	5	Murder	55.86	6
Tree	61.36	4	Buried	24.10	6
Express	49.03	7	Grave	20.66	5
Desk	40.76	4	Coffin	13.65	6
Cloak	6.69	5	Skull	10.05	5
Baseball	4.14	8	Tomb	6.03	4
Magnet	3.19	6	Slay	1.68	4
<i>M</i>	51.09	5.6	<i>M</i>	53.45	5.1

*Note.* All words and non-words were presented in randomized order.



Table 2

Cell Means and Standard Deviations of Reaction Times for Condition X Accessibility Interaction (Study 4)

Condition	Death words		War words			Nation words			
	<i>M</i>	<i>SE</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Destruction	581.30	8.47	12	605.44	9.15	12	601.77	9.63	12
Construction	616.03	7.84	14	612.08	8.47	14	618.26	8.92	14

Note. Lower means signify quicker response latencies (in ms).

### Highlights

- In Study 1, images of destroyed buildings and deadly terrorist attacks elicited greater death-thought accessibility than images of construction sites or intact buildings. Images of destruction also enhanced dogmatic belief (Study 2) and support for military action against Iran (Study 3).
- Study 4 found that heightened death thought accessibility, but not the accessibility of thoughts of war or national identity, statistically mediated the relationship between visible destruction and worldview defense.
- Further, although destruction images increased ideological certainty, political orientation was not affected by the destruction manipulation nor was political orientation related to death-thought accessibility.