Mortality salience and religion: Divergent effects on the defense of cultural worldviews for the religious and the non-religious

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Abstract

Religious and non-religious individuals differ in their core beliefs. The religious endorse a supernatural, divinely inspired view of the world, while the non-religious hold largely secular worldviews. As a result they may respond differently to existential threats. Three studies confirmed this prediction. After a mortality salience (MS) or control prime, Canadian participants read, and responded to, an essay hostile to Western civilization, allegedly written by a radical Muslim student. Results indicated that the non-religious reliably showed the conventional cultural worldview defense by devaluating the content of the message and decreasing support for the civil rights of anti-Western individuals when death was salient. No such effect was found for the religious. Religious and non-religious participants did not differ in self-esteem levels or in death-thought accessibility. These results suggest that a religious stance among believers plays a defensive role against the awareness of death. Copyright © 2008 John Wiley & Sons, Ltd.

Religion has a deep and paradoxical relationship to culture. Religion and culture are cut from the same cloth in that both are psychologically rooted and socially transmitted belief-systems (Atran & Norenzayan, 2004). Furthermore, religious individuals endorse cultural traditionalism and authoritarianism more than secular individuals (Duck & Hunsberger, 1999; Hansen & Norenzayan, 2006). Yet world religions, as belief-systems governed by death-defying supernatural agents, are also capable of uniting people with divergent ethnic and cultural identities in a common transcendental divine message. World religions such as Islam, Catholicism, Buddhism, and even religion as a superordinate social category defined in opposition to secular culture, can rise above ethnic, cultural, and sectarian boundaries. Similarly, civilizational cultures such as Western and Confucian culture have secular features, that are also capable of transcending parochial cultural and ethnic identities and uniting diverse individuals in a core set of secular values, practices, and beliefs.

Debate continues to unfold on whether the cultural differences between civilizations necessarily incline them to violent conflict as cold war ideologies like 'communism' and 'free market democracy' lose their grip as sources of identification (Huntington, 1998; for another view, see Barber, 1996). This historical change in the contours of human conflict raises the question of how religion and civilizational culture relate, and how both relate to intolerance and other sources of violent conflict. Even during the cold war, the most 'religious'-minded individuals on each side were the most supportive of the authorities and institutions that reflected their side's secular ideology (Altemeyer, 1988; McFarland, 1998). Religion and civilizational culture often, but not always, overlap. For example, Christianity and Western culture developed in the same cultural space and share a great deal of common history and values. Yet, instances of perceived clashes between religious and secular civilizational values, even within the same cultural space, are increasingly apparent in the world today.

For example, conservative Christians may sympathize with religious Muslims who, like conservative Christians, base their values on a divine message and also feel culturally assaulted by the contemporary secular West. Following the publication of cartoons caricaturing the Prophet Mohammad, Catholic Church leaders in France criticized the Danish

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newspaper which had published the cartoons, arguing that freedom of expression (a secular value) should not take precedence over religious sensibilities, even the sensibilities of other religions (Duke, Harding, Smith, & Beaumont, 2006). In an extreme illustration of this dilemma, the American religious conservative commentator Pat Buchanan (2004) commented: 'If conservatives reject the ''equality'' preached by Gloria Steinem, Betty Friedan, National Association for the Repeal of Abortion Laws (NARAL), and the National Organization for Women, why seek to impose it on the Islamic world? Why not stand beside Islam, and against Hollywood and Hillary?'

Such perceived clashes of civilizational culture and religious/conservative values are especially interesting when existential threats become salient. How would religious and non-religious individuals respond to a message that affirms religion in general but threatens one's cultural-civilizational identity? In this research, we examine whether existential threats, in particular the awareness of mortality, have different effects on defense of cultural worldviews for these two groups. For non-religious individuals who do not believe in the existence of supernatural agents, a culturally hostile message is uniformly threatening and mortality salience (MS) would be expected to lead to derogation of such a message and its bearer. For those who describe themselves as religious, on the other hand, there are two competing identities or value-systems at stake: a general solidarity with religion and its supernatural outlook, or a specific solidarity with one's civilizational culture. Therefore the religious might respond to existential threat by also derogating a religious other hostile to their culture; alternatively, they might respond by endorsing this religious message, even at the expense of defending their Western cultural worldviews.

TERROR MANAGEMENT THEORY (TMT) AND THE DEFENSE OF CULTURAL WORLDVIEWS

According to TMT (Greenberg, Solomon, & Pyszczynski, 1997; Pyszczynski, Greenberg, & Solomon, 1999; Solomon, Greenberg, Schimel, Arndt, & Pyszczynski, 2004), cultural worldviews, along with the desire to live up to the standards of one's culture (i.e., self-esteem), are psychological defenses against the awareness of death. Thus, heightening such terror (MS) should increase the need to bolster these worldviews. Accordingly, people temporarily aware of death are more inclined to defend their cultural beliefs (see Greenberg et al., 1997; Solomon et al., 2004, for reviews). MS may facilitate the enhancing of one's own cultural beliefs directly, for example, by rewarding a hero who defends cultural worldviews (Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989). However, most TMT studies examine derogation of alternative worldviews or beliefs and those who hold them, since the existence of alternative worldviews is a fundamental threat to the validity of one's own worldview (Greenberg et al., 1997). Typical manifestations of worldview defense under MS include derogating a Jew by Christian participants (Greenberg et al., 1990), and recommending harsher punishment for a prostitute (Rosenblatt et al., 1989).

Despite the large TMT literature supporting the link between MS and cultural worldview defense, relatively less is known about the role of religious identities and beliefs. Although since its inception TMT has posited that religion (particularly belief in literal immortality) serves a defensive role against the terror of death (Dechesne et al., 2003; Jonas & Fischer, 2006; Solomon, Greenberg, & Pyszczynski, 1991), the vast bulk of terror management research has focused on symbolic immortality, manifested through secular forms of cultural defense such as nationalism, racism, and xenophobia.

Recently, Dechesne et al. (2003) examined the role of religious belief in several empirical studies, finding that belief in literal immortality assuages terror of death enough to eliminate the effect of MS on self-esteem concerns and defense of cultural worldviews. Similarly, Jonas and Fischer (2006) found that following MS, affirming intrinsic religiosity reduced death thought accessibility and mitigated the need to bolster secular beliefs. Norenzayan and Hansen (2006) showed that MS increased belief in supernatural agents and in the efficacy of prayer among mostly Christian participants. Importantly, these effects were found even when the supernatural agents were presented in a culturally alien context, such as in newspaper accounts of prayer to a divine Buddha and of shamans channeling ancestral spirits (however, one important exception to this trend was a statement directly assessing belief in the existence of a supernatural Buddha which did not reveal an effect). Moreover, this tendency was *stronger* for participants who were already religious (mostly Christians, none were Buddhist or Shamanist). These effects were most clearly evident for the religious but not the unaffiliated. Since participants in the neutral conditions were mildly resistant to belief in Buddha and Shamanic spirits, and became more favorably disposed only when death was made salient, these findings, along with those of Dechesne et al. (2003) and Jonas

and Fischer (2006), suggest that something about belief in supernatural agents (possibly the meaning and immortality they promise) was operating to assuage the terror of death.

Although these results offer suggestive evidence that religious beliefs such as immortality and devotion to divine agents may play a central role in terror management arguably distinct from defense of secular cultural worldview, Norenzayan and Hansen did not measure cultural worldview defense directly. It may also be argued that results like those of Norenzayan and Hansen may be unique to the evaluation of religious beliefs from which the immanent threat to Christianity and Western civilization generally is not very salient—Buddhists and Shamans are not objects of intense and worried national debate in demographically or historically Christian and Western nations.

The present research addresses this concern by examining directly defensive attitudes towards a religious message by mostly Christians and the non-religious in response to MS. Participants were exposed to MS or a neutral prime, then read an aggressive essay, allegedly written by a Syrian Muslim student, defending Islam in broadly pro-religious terms and attacking Western secular civilization. We picked a message typically associated with militant Political Islam as the target, one particularly likely to arouse a feeling of threat to the cultural and religious beliefs of those living in North America. Therefore this was an especially stringent test of our hypothesis. In Study 1, participants were asked to indicate their agreement with the essay's message and their attitude towards the author. In Study 2, in addition to favorability towards the message and the author, measures of political tolerance for the civil rights of individuals advocating anti-Western attitudes were assessed, as well as the participants' degree of religiosity. Study 3 replicated the findings of the earlier studies, and addressed two alternative explanations that differences in self-esteem or death-thought accessibility may account for the divide between the religious and non-religious. If religious individuals are particularly defensive against civilizational threats under MS, they should derogate the pro-Islam anti-Western message of the essay as much or more than the non-religious under MS. However, if religious participants are responding not only with a heightened defense of Western culture, but also with a superordinate religious stance, they may view the threatening message equivalently in both conditions, or may even increase their approval of the message under MS.

STUDY 1

Method

Participants

Eighty-two university students with a Canadian citizenship participated in the study for partial course credit. Thirty-one participants identified themselves as religious and 49 participants identified themselves as non-religious (e.g., atheist, agnostic, spiritual but not religious). Two participants who identified themselves as Muslim, 2 participants who did not provide information about their religious affiliation, and 1 participant (non-religious) who failed to complete the essay evaluation questionnaire were excluded from further consideration, leaving 77 participants (59 females) in the study, 20 of whom from Christian denominations, 4 Jewish, 2 Buddhist, 2 Sikh, and 1 new age. This left 29 religious participants and 48 non-religious ones. Demographic data were also collected regarding participants' gender, age, religion, and ethnicity.

Religiosity Measure

Religiosity was evaluated as a response to the following question: 'what is your religion?' Participants could choose one of three options: (1) Atheist (2) Spiritual but not religious and (3) Religious. If the participant chose the third option they were asked to specify their religion. Participants who chose 'atheist' or 'spiritual but religious' were classified as non-religious.[1]

MS Treatments

Claiming to be interested in 'naturally occurring phenomena', we asked participants to reflect on their own death in the MS condition. Participants wrote a short essay in reply to two questions commonly used in TMT research (e.g. Greenberg

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[1] 'Spiritual but not religious' participants did not differ from 'atheist' participants in their essay evaluation. The pattern of the results in all three studies did not change if only the participants identified as atheists were included in the non-religious group (i.e., excluding 'spiritual but not religious' participants).

et al., 1997): (1) In the space below, jot down, as specifically as you can, what will physically happen to you when you die. (2) In addition to the physical description, write in some detail about the feelings that the thoughts of your own dying arouse in you. In another condition (control) participants wrote a short essay about their favorite TV program as a reply to the following two questions: (1) In the space below, write a paragraph about what happens to you when you watch TV. (2) Write in some detail about the feelings that thoughts of watching TV arouse in you.

Affect

Participants' mood was measured using the PANAS (Watson, Clark, & Tellegen, 1988) a 20 item self-report measure to which participants responded on 5- point scales.

Cultural Worldview Defense

Participants received a questionnaire containing a set of instructions, which were supplemented with the experimenter's explanation regarding the task. Participants read that they would be asked to evaluate a narrative written by an exchange student studying in Canada. On the next page they found a copied hand-written essay. The essay conveyed an attack on Western culture, predicting its demise, and the eventual victory of Islamic civilization (see Appendix). In addition, the participants responded to four questions assessing their reaction to the message in the essay as well as the author: (1) How much do you agree with the author? (2) How much would you like to be friends with the author? (3) How much do you want the ideas of the author to be publicized? (4) How much would you oppose the author teaching your (future) children? Participants provided their evaluations on 9-point scales (1 = not at all, 9 = very much).

Procedure

Participants read that the study contains a few unrelated short measures that the experimenter wishes to test in order to establish reliability. The first task was a traditional MS versus control manipulation. It was followed by a measure of affect (PANAS, Watson et al., 1988). Participants then completed a 10-min filler task (Pyszczynski et al., 1999). Following the evaluation the experimenter introduced the worldview defense measure as a third, unrelated task designed to explore intercultural perceptions by investigating students' evaluations of essays written by exchange students. All participants were told that they will read an essay written by a 21-year-old Syrian exchange student. Finally, participants completed the demographic questionnaire. The participants were then thoroughly debriefed and probed for suspicion. None of them expressed suspicion regarding the independence of the tasks or the authenticity of the target essay. The entire study was conducted in English.

Results

We measured positive evaluation of the essay by reversing the fourth item and combining the ratings on the four essay's evaluation questions into a single score with higher scores indicating more positive evaluations ($\alpha = .67$). A 2 (MS vs. control) × 2 (religious vs. non-religious) between subject analysis of variance (ANOVA) was conducted on the composite score of the essay evaluation questions. The analysis revealed no significant main effects ($ps > .5$). However, it identified the expected significant interaction between religiosity and MS ($F(1,73) = 9.56$, $p < .01$, $\eta_p^1 = 0.116$). Simple effects analyses were conducted to identify the source of the interaction.

As Figure 1 shows, among the non-religious participants the usual MS effect was observed ($t(46) = 2.61$, $p = .01$, Cohen's $d = 0.77$). Participants primed with their own death evaluated the author and the essay less favorably ($n = 29$, $M = 14.59$, SD = 5.74) compared with participants in the control condition ($n = 19$, $M = 19.00$, SD = 5.69). Among religious participants, although the participants who were primed with their own death ($n = 9$, $M = 17.67$, SD = 4.58) provided more *positive* ratings compared with participants who were not reminded of their death ($n = 20$, $M = 14.10$,
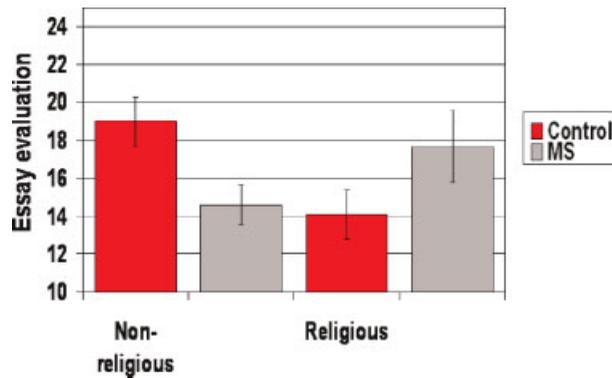
Figure 1.   The effect of mortality salience and religiosity on evaluations of a message favoring Political Islam (Study 1)

SD = 6.10), the difference was not significant ($t(27) = 1.54$, *ns,* Cohen's $d = 0.66$). The MS prime did not influence positive or negative affect. Neither affect nor gender had a significant effect on the dependent variable, nor did they did interact with MS or religiosity.

STUDY 2

Religiosity can be viewed as a continuum as well as a dichotomous variable. Like many other personal and social characteristics the importance of religion to one's identity can fluctuate considerably between individuals. In Study 2 we explored the relationship between the individual's subjective religious identification and the endorsement of a message of the essay used in Study 1. In addition, we included a measure of political tolerance that indicated to what degree participants were willing to respect the author's civil liberties.

Method

Participants

One hundred and fifteen university students with Canadian citizenship participated in the study for partial course credit. Fifty-six participants identified themselves as religious (33 of them from Christian denominations) and 58 participants identified themselves as non-religious (e.g., atheist, agnostic, spiritual but not religious). Six participants who identified themselves as Muslim and 1 participant who did not provide information about her religious affiliation, and 1 participant (non-religious) who did not complete the Political Tolerance Scale (Sullivan, Pierson, & Marcus, 1982) were excluded from further consideration, leaving 107 participants (87 females) in the study, 57 of them non-religious, 33 from Christian denominations, 5 Jewish, 5 Buddhist, 5 Sikh, 1 Hindu, and 1 New Age.

Materials

The same materials used in Study 1 were also used in this study (i.e., MS and control manipulations, PANAS, agreement with the essay, and demographics). Two additional measures were also included. The first measure was the previously validated *Political Tolerance Scale* (PTS: Sullivan et al., 1982). The measure consisted of six items (three reverse coded) about restricting the civil rights of the author using items such as 'people like the author should be banned from being political leader of your country' and 'people like the author should be allowed to teach in public schools'. Participants provided ratings on 9-point Likert scales. The second measure assessed, on a 9-point scale, to what extent is

the participants' religion important to their identity. To reduce suspicion regarding the study hypothesis being about religion, participants were asked to evaluate the importance of their other demographic identities as well (e.g., gender, ethnicity) in a similar fashion.

Procedure

The procedure was similar to the one in Study 1. The filler task was a memory task designed to create a cognitive load. The PTS was inserted after the essay evaluation questionnaire and the questions that identified the importance of the various demographics to the participant identity were individually inserted immediately following the demographic question.

Results

Essay Evaluations

We combined the scores of the four essay evaluation questions into a single score ($\alpha = .71$). A 2 (MS vs. control) \times 2 (religious vs. non-religious) between subject ANOVA was conducted on the composite score of the essay evaluation questions. The analysis revealed that across conditions religious participants ($M = 17.28$, SD $= 5.88$) provided significantly more positive evaluation of the essay compared to the non-religious participants ($M = 14.91$, SD $= 6.16$), $F(1,103) = 4.78$, $p = .03$, $\eta_p^1 = 0.044$. This main effect was qualified by a marginally significant interaction between MS and religiosity $F(1,103) = 2.88$, $p = .09$, $\eta_p^1 = 0.027$. Simple effects analyses were conducted to identify the source of the interaction.

As Figure 2 shows, among the non-religious participants the conventional MS effect was observed ($t(55) = 2.04$, $p < .05$, Cohen's $d = 0.54$). Participants primed with their own death evaluated the essay less favorably ($n = 25$, $M = 13.08$, SD $= 6.18$) compared with participants in the control condition ($n = 32$, $M = 16.34$, SD $= 5.85$). Among religious participants, although the participants who were primed with their own death ($n = 27$, $M = 17.59$, SD $= 5.19$) provided more *positive* ratings compared with participants who were not reminded of their death ($n = 23$, $M = 16.91$, SD $= 6.71$), the difference was not significant ($t(48) < \mid 1\mid$).

As an alternative way of investigating the role of religiosity in the evaluation of the essay message, we correlated participants' rating of the importance of religion to their identity with the essay evaluation composite. First, we correlated the two variables in the control condition using Spearman rho, which makes no assumptions about normality of the distribution. The correlation was not significant ($\rho(55) = .12$, $p > .3$) indicating no observable association between the importance of one's religion to his/her identity and the essay evaluation. Next, we correlated the variables in the MS condition. A significant moderate positive correlation ($\rho(52) = .29$, $p < .05$) was found suggesting that when death is
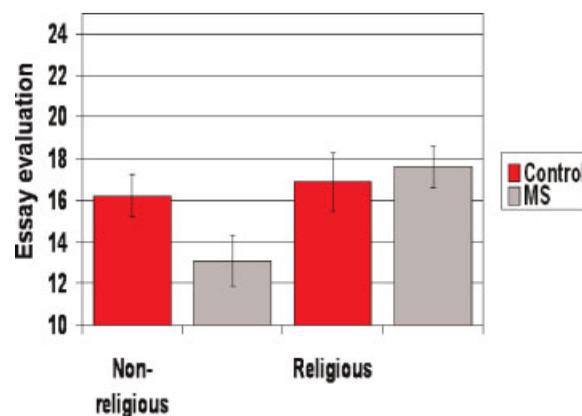

Figure 2.   The effect of mortality salience and religiosity on evaluations of a message favoring Political Islam (Study 2)
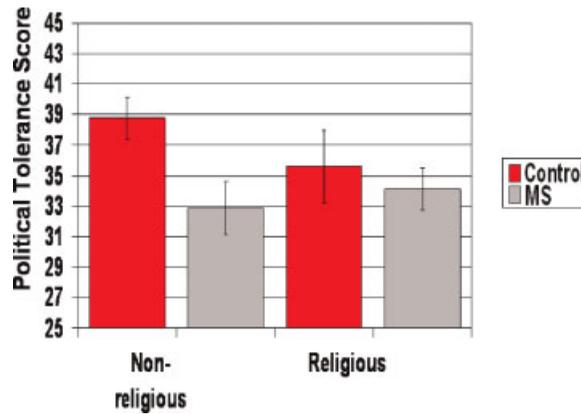
Figure 3. The effect of mortality salience and religiosity on political tolerance towards individuals favoring Political Islam (Study 2)

salient, the more important people's religion is to their identity, the more positively they evaluated the anti-Western pro-religion essay.

Political Tolerance Scale

The six-item PTS (Sullivan et al., 1982) and the items' ratings were aggregated to create a single score ($\alpha = .82$). To assess whether political tolerance was affected by MS and religiosity we conducted a similar 2×2 *ANOVA* using the scores on the PTS as the dependent variable. The analysis revealed that participants who were primed with thoughts of their own death ($M = 33.52$, SD $= 7.78$) showed significantly less tolerance towards the author compared to the participants who were directed to think about a TV show ($M = 37.44$, SD $= 9.39$) $F(1,103) = 4.79$, $p < .05$, $\eta_p^1 = 0.044$. The main effect for religiosity and the interaction were not significant ($ps \ge .2$, see Figure 3). Although the non-significant interaction ($\eta_p^1 = 0.016$) allows for the lumping together of religious and non-religious participants in this instance, visual inspection of Figure 3 suggested that the effect was reliable for the non-religious, but not for the religious. The simple effect of MS was indeed significant for the non-religious, $t(55) = 2.54$, $p = .01$, Cohen's $d = 0.71$, but not for the religious, $t < \mid 1 \mid$, although the trend for the religious this time was in the direction of less support for anti-Western individuals. In addition, we found that although the correlation between the PTS and the essay evaluation under MS was moderate ($\rho(52) = .31$, $p < .05$), the PTS did not correlate with the item that assessed the importance of one's religion to one's identity ($\rho(52) = .05$, $p > .5$). Neither affect nor gender had a significant effect on the dependent variable, nor did they interact with MS or religiosity.

STUDY 3

The data from Study 2 partially replicated and extended the results of Study 1. However, the results were only marginally significant providing weaker replication than desired. In Study 3, we replicated and refined the findings of Study 1 and 2. We also investigated two potential alternative explanations for our findings. One alternative explanation is that religious participants have higher self-esteem and are therefore less affected by the MS manipulation[2] (Harmon-Jones, Simon, Greenberg, Pyszczynski, Solomon, & McGregor, 1997). Alternatively, the MS manipulation could have made death-related cognitions more available to non-religious participants than to religious participants, rendering religious individuals less susceptible to the MS manipulation.

[2]We wish to thank one of the reviewers for suggesting this alternative explanation.

Method

Participants

Ninety-five university students with Canadian citizenship participated in the study for partial course credit. Forty-seven participants identified themselves as religious and 45 participants identified themselves as non-religious (e.g., atheist, agnostic, spiritual but not religious). Three participants who identified themselves as Muslim were excluded from further consideration, leaving 92 participants (67 females) in the study, 38 from Christian denominations, 2 Jewish, 4 Buddhist, 2 Sikh, and 1 New Age.

Materials

The same materials used in Study 1 were also used in this study (i.e., MS and control manipulations, PANAS, agreement with the essay, and demographics). Two additional measures were also included. This first was the previously validated *Self-esteem Scale* (SE: Rosenberg, 1965). The measure consists of 10 items (5 reverse coded). The second was a measure of *Death thought accessibility*, adapted from Greenberg, Pyszczynski, Solomon, Simon, and Breus (1994). Participants completed a set of 20 word fragments by filling in missing letters. Eight of the 20 words could be completed by either neutral or death-related words. For example, participants saw the letters __RAVE and could complete the word with a neutral term *brave* or with the death-related term *grave*. The rest of the words served as fillers.

Procedure

The procedure was similar to the one in Study 1. The filler task was a cognitive task. The SE scale was administered before the MS manipulation and the death thought accessibility immediately after the essay evaluations.

Results

Self-Esteem Evaluations

We combined the scores for the 10 items of SE ($\alpha = .68$). An independent *t*-test was conducted to evaluate potential differences in self-esteem between the religious and non-religious participants. The analysis did not find significant differences $t(90) < 1$. Self-esteem did not correlate with essay evaluations, neither across all conditions, $r(92) = -.07$, $p = ns$, nor in the control condition only, $r(49) = -.12$, $p = ns$. Therefore self-esteem was not a covariate in the statistical analyses.[3]

Essay Evaluations

We combined the scores of the four essay evaluation questions into a single score ($\alpha = .63$). A 2 (MS vs. control) $\times$ 2 (religious vs. non-religious) between subject ANOVA was conducted on the composite score of the essay evaluation questions. The analysis revealed that participants who were exposed to MS (estimated marginal means*: M = 15.74*, SD = 6.30) provided a significantly less favorable evaluation of the essay compared to participants in the control condition (*M = 18.16*, SD = 5.39), $F(1,87) = 3.73$, $p = .05$, $\eta_p^1 = 0.044$. This main effect was qualified by a significant interaction between MS and religiosity $F(1,87) = 3.92$, $p = .05$, $\eta_p^1 = 0.043$ (see Figure 4). Simple effects analyses were conducted to identify the source of the interaction.

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[3]However, a separate analysis that included self-esteem in an ANCOVA produced identical results.
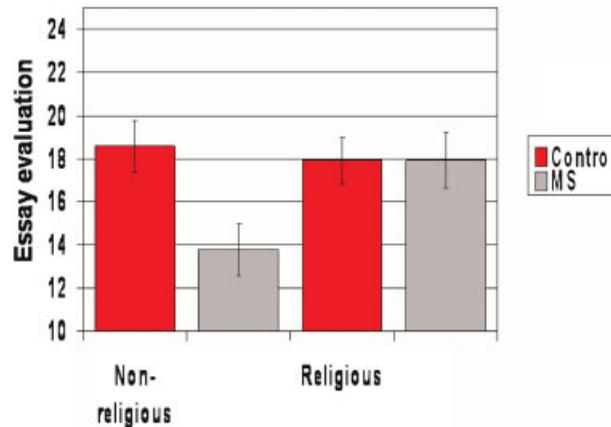
Figure 4.   The effect of mortality salience and religiosity on evaluations of a message favoring Political Islam (Study 3)

Among the non-religious participants the conventional MS effect was observed ($t(42) = 2.72$, $p = .009$, $\eta_p^1 = 0.155$). Participants primed with their own death evaluated the essay less favorably ($n = 20$, $M = 13.83$, SD $= 6.04$) compared with participants in the control condition ($n = 28$, $M = 18.52$, SD $= 5.34$). Among religious participants, no effect of MS was found, $t < 1$. The essay evaluation of the participants who were primed with their own death ($n = 27$, $M = 17.95$, SD $= 5.99$) was the same as the evaluations of the participants who were not reminded of their death ($n = 23$, $M = 17.89$, SD $= 5.51$).

Death Thought Accessibility

To explore the potential differences of the cognitive accessibility of death-related thoughts among religious and non-religious participants we counted the number of death-related word completions (DWC). A 2 (MS vs. control) \times 2 (religious vs. non-religious) between subject ANOVA was conducted on DWC. The analysis revealed that participants who were exposed to MS ($M = 3.81$, SD $= 1.30$) provided significantly more DWC compared to participants in the control condition ($M = 3.10$, SD $= 1.37$), $F(1,88) = 6.81$, $p = .01$, $\eta_p^1 = 0.072$. However, neither a main effect for religiosity nor an interaction (Fs < 1, η_p^1s < 0.01) was observed suggesting similar death thought accessibility for religious and non-religious participants.

The results of Study 3 largely replicated those of Study 1 and Study 2: MS reliably decreased support for an anti-Western message for the non-religious, but not so for the religious, who showed no significant change in their assessment of the message.

GENERAL DISCUSSION

In this paper, we examined the influence of religious and civilizational identity on the defense of cultural worldviews when death is salient. We found that under conditions where a worldview-threatening message is framed in terms of a religious stance, religious and non-religious participants responded to MS differently. The latter consistently showed the conventional derogation of a culturally threatening message, as shown in Terror Management research, whereas the religious showed no significant change, and if anything, their responses were in the direction of increased approval of the message, even though it contradicted their own Western civilizational interests and advocated a shift that could arguably threaten their religious way of life. Furthermore, the importance of religion to personal identity was a *positive* predictor of endorsement of a pro-faith but civilizationally threatening message.

We interpret these findings to indicate the following: for the religious, there are two distinct, competing stances that are being activated simultaneously in response to such messages. One is a divinity-oriented religious stance and the other is a secular cultural stance. For the non-religious, in contrast, only the latter stance is accessed in response to MS. As a result of the activation of two conflicting stances, the religious showed no significant effect of MS, whereas the non-religious did.

An alternative account is that the essay was perceived to be less threatening to the religious to begin with. As a result the religious need not have responded with conventional worldview defense in the MS condition. This account predicts that in the control condition, the religious should have approved the essay more so than the non-religious. However this was not the case. In Study 1, the religious in the control condition were in fact *less* favorable towards the essay, and in the control conditions of Studies 2 and 3, there were no statistically reliable differences between the religious and the non-religious for the essay evaluations or for the political tolerance measure. Thus, this alternative account was not supported by the data.

Other alternative accounts for the results were addressed in Study 3. One such account maintains that high self-esteem pacifies death concerns (Harmon-Jones et al., 1997). Religious participants may have higher self-esteem and thus do not need to resort to worldview defense to manage their existential anxiety. This alternative account was not supported by the data in Study 3, in which the analyses controlled for self-esteem. Another account is that the MS prime was less successful for the religious, perhaps because the latter are chronically buffered against the threat of mortality awareness. However this alternative account was not supported either: the MS prime seemed to elevate the accessibility of death-related cognitions in a similar manner for both religious and non-religious participants.

This is not to say that the religious will always respond to existential threats with a religious stance that transcends their secular cultural identity. To the extent that a supernatural defensive strategy (such as belief in God or immortality) is non-salient or unavailable, then the religious will likely respond to these threats by bolstering their cultural worldviews and derogating culturally foreign others and values. For example we expect, with Terror Management Theorists, that the religious, when given the opportunity to defend their coreligionists and derogate those of other religions, would be expected to do so as a defensive strategy against reminders of death (Greenberg et al., 1990). However, matters would be different when the opportunity to use a supernatural strategy, anchored on divine agents with the promise of meaning, transcendence, and immortality, is presented together with the opportunity for secular cultural worldview defense. In this case, the religious and the non-religious should diverge in their defensive strategies. The religious may even employ a supernatural strategy more readily than a secular cultural worldview bolstering strategy, even if secular values are clearly under threat. Paradoxically, then, the religious who face reminders of death may derogate religious others, even though they may be less likely to derogate other religious beliefs. In the remainder of this paper, we discuss the implications of this insight for further elaborations and refinements of TMT, by considering the roles of religion, as well as multiple worldview defense strategies in existential social psychology.

The Multiplicity of Worldview Defense Strategies

People negotiate multiple values and memberships in social groups that reflect on their identity. For example, a person can be a woman, Asian, and politically liberal, and a reminder of one identity rather than another can affect their behavior under certain circumstances (e.g., Pittinsky, Shih, & Ambady, 1999). Similarly, people also hold competing beliefs and values. It is not uncommon, for instance, for people to fervently believe in the sanctity of human life while also supporting capital punishment. Psychologists have studied the effects of competing beliefs and attitudes on behaviors extensively (e.g., Cooper & Croyle, 1984). Although 'worldviews' as defined by TMT are constructed of such competing and often inconsistent attitudes, beliefs, and coaltional identities, we know relatively less about how and when these competing constructs are activated in response to mortality awareness. However, some empirical research in TMT has begun to address the multiplicity of worldviews. Arndt, Greenberg, & Cook (2002), for example, found that MS activated different worldview-relevant constructs among men and women–men showed higher accessibility of nationalistic constructs, whereas women showed higher accessibility of romantic constructs. Arndt, Greenberg, Schimel, Pyszczynski, & Solomon (2002) showed that MS does not always increase ingroup identification. Death-aware participants disidentified with their ethnicity and gender if these identifications were threatening to the self-concept. Our results add to such findings, suggesting that a broader, more diverse, and more precise conceptualization of worldview defense strategies may be necessary since worldviews refer to complex, and even paradoxical wholes.

When existential threats are salient, several competing beliefs and values may be called upon to defend against such threats. Which particular response will eventually prevail may be contingent on a number of factors. Even a 'religious worldview' is not a unitary construct—it includes, at the least, a devotional aspect, which independently predicts religious tolerance, and a coalitional aspect, that predicts religious intolerance (Hansen, 2007; Hansen & Norenzayan, 2006). Depending on the situational availability or relative dominance of these competing aspects of religiosity in individuals,

MS may increase or decrease tolerance towards cultural or religious others. In this paper we have demonstrated one such complexity but there are many other potentially competing beliefs, values, and coalitional tendencies, outside of the realm of religion that can be relied on when awareness of death is salient.

Limitations and Conclusion

While we maintain that the best interpretation of our findings is that religious individuals, unlike the non-religious, engage the awareness of death with competing cultural worldviews, we acknowledge that we did not directly measure this multiplicity of worldviews. Future research can address this limitation by assessing favorability towards Western secular values and towards religious values independently. A related issue is the extent to which the target essay threatened Christian beliefs, an ambiguity which can be removed by assessing perceptions of the message. Another limitation of this research is that we used a single-item measure assessing religious identification. Although such a measure can be criticized on methodological grounds, we note that in past research this measure showed good predictive validity, being strongly and positively related to more elaborate multiple-item measures of religious devotion (e.g., Hansen, 2007; Norenzayan & Hansen, 2006). We also note that we found the predicted results even with a simple one-item measure of religiosity which can be easily used in future research alongside other related measures.

Despite these limitations, these results highlight the importance of considering religion in studies in existential social psychology, particularly when the cultural worldviews under examination are intertwined with religious beliefs (as they often are). Had we not examined religious and non-religious participants separately, we would have obtained no significant effect of MS on the defense of cultural worldviews in three of the four dependent variables across the three studies.

Despite the rise of science and affluent societies in the last century, and religion's predicted demise, religion continues to thrive in the world in most cultures and for most people, with the possible exception of Europe (Lester, 2002). A social psychology that is attuned to the psychological origins and consequences of religion, and especially religion's role in creating meaning and attenuating existential threats, is therefore a ripe area of inquiry for future research.

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APPENDIX: THE TARGET ESSAY

Essays and Impressions

The passage copied below was taken from several essays written on world cultures by Syrian college students studying English. The essay here was written by Jamil, a 21-year-old student from Damascus. Please read through it and answer the questions that follow.

Islam and the West

The problem with the Western world is the lack of faith. It is for that exact reason that the West will never triumph over the Islamic world. A person with faith is by definition a stronger person than one who has nothing to look up to beyond themselves. The West has a lot to offer economically to try to fill the void in people's hearts, but ultimately will fall behind

in a true cultural war against a culture that offers conviction, offers hope for something bigger than more money or empty pleasures. Religion in the west does not offer real comfort and a true path for their believers as they do in the nations of Islam, and the important values are neglected in the West and emphasized in the Islamic world.

History shows that cultures, which offered monetary and quality of (material) life advantages at the expense of true spiritual path, eventually fell before religious passion (e.g., Greece and Rome). And we all know that history repeats itself. The signs that the wheel is starting to turn are already around us.