



## **Ideology, Fear of Death, and Death Anxiety**

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*Ideological beliefs have long attracted the attention of social psychologists, who have investigated their genesis as well as their influence on a host of social phenomena. Conservatism, from the Motivated Social Cognition framework, stems from epistemic and existential needs of the individual, and notably the fear of death. However, Terror Management Theory proposes a view of conservatism and its contrary, liberalism, as equivalent cultural worldviews, equally fit to fulfill such needs. In the present contribution, results are presented from five studies, which test the contrasting hypotheses derived from these two perspectives. A new perspective is considered that accounts for these and previous findings.*

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For years Joe Berlin has struggled to understand how it is possible that his son Scott holds conservative beliefs and supports the Republican Party. Then, one day, Scott is brought to the hospital in an emergency and a brain tumor is found. Apart from his relief that the cancer is benign, Joe feels vindicated: he had always suspected that his son's political beliefs were grounded in some pathological condition, and now he has been proven right (Allen, 1996). Similar views are held by conservatives about liberals. House majority leader Dick Armey caused a mini scandal during a speech in Florida by declaring that: "Liberals are, in my estimation, just not bright people" (Johnson, 2004, p. 16).

Since Adorno and his collaborators' efforts to establish a link between rearing practices, personality development, and ideological beliefs in the 1950s (Adorno, Frenkel-Brunswick, Levinson, & Sanford, 1950), scholarly interest in the psychology of ideology has fluctuated but has flourished anew in the 1990s (e.g., Altemeyer, 1998) and continues to spark controversy (e.g., Ray, 1988). Recently, the debate has been reinvigorated by the publication of a meta-analysis by Jost, Glaser, Kruglanski, and Sulloway (2003), who attempt to explain conservatism by proposing a theoretical framework which includes both dispositional and contextual factors and takes into account the impact of sociocognitive motives (Kruglanski, 1989). Such motives, they argue, fall into three main categories: epistemic, ideological, and existential. One of the existential motives, fear of death, is of specific interest for our purposes here.

Are variations in the extent to which individuals are afraid of dying related to their ideological beliefs? Jost and colleagues argue that this is indeed the case and review empirical evidence in support of this claim. First, conservatism seems to go hand in hand with fear of death, as shown by a positive correlation between the Fear of Death Scale and the C-scale (Wilson, 1973), as well as in positive correlations between these two variables obtained, more recently, in other samples (Jost, Fitzsimons, & Kay, 2004). Second, when reminded of death, individuals display behaviors that have a conservative flavor. For instance, laboratory research has shown that when death-related thoughts are made salient, participants support higher fines for a prostitute (Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989) and harsher punishment for criminals (Florian, Mikulincer, & Hirschberger, 2001).

Building on this evidence, Jost and colleagues argued that conservative ideology is better suited to appease individuals' fear of death. Central to these authors' claim about the relationship between fear of death and ideology is the concept of uncertainty. Although Jost and his colleagues do not explicitly make this transition, they do question whether the effects of death priming are due specifically to death primes or rather to a more cognitive and less existential motive, namely uncertainty avoidance (see Jost, Fitzsimons, & Kay, 2004, p. 268), as some research findings suggest (e.g., McGregor, Zanna, Holmes, & Spencer, 2001). Indeed, in the Motivated Social Cognition (MSC) framework, uncertainty is considered one of the environmental stimuli that, in combination

with social cognitive motives, would trigger conservative responses (Jost et al., 2003).

This rationale questions a central tenet of another theoretical perspective, which places existential concerns at the very center of the human condition, and within which most of the research investigating the effects of death primes has been conducted.

### *Terror Management Theory*

Terror Management Theory (TMT, Greenberg, Pyszczynski, & Solomon, 1986; for a recent review see Solomon, Greenberg, & Pyszczynski, 2004) is a general theory of human behavior in which existential concerns occupy central stage. The theory stems primarily from the work of Becker (1973) and Rank (1950), and their emphasis on the impossibility of the human condition. We humans struggle between the god-like characteristics of our mental capacities and the shortcomings of our physical body, which will inevitably decay and die. How do we manage to go through our days with the knowledge of our condition? TMT argues that in order to buffer the anxiety that derives from the awareness of the inevitability of one's death, individuals will imbue their universe with meaning and strive to place themselves in the center of that universe—or at least to get a decent seat. This occurs through the development of cultural worldviews and the establishment and maintenance of self-esteem (Greenberg, Solomon, & Pyszczynski, 1997).

A key hypothesis put forward in TMT is that “if a psychological structure provides protection against the potential terror engendered by knowledge of mortality, then, reminders of mortality should increase the need to maintain that structure” (Greenberg et al., 1997, p. 78). To test this hypothesis, one only needs to remind individuals that they are going to die and then see what happens. Results from a number of studies have shown that, compared to participants in the control condition, participants who are primed or otherwise asked to ponder their mortality, value behaviors consistent with their cultural worldview more, and strongly denigrate individuals who behave contrary to such views (for reviews, see Solomon, Greenberg, Pyszczynski, Snyder, & Forsyth, 1991; Greenberg et al., 1997; Solomon et al., 2004). Reminding people of the inevitability of their own death makes them more concerned with self-esteem and more likely to cling to their cultural worldviews. Does it also make them more conservative? Now that we have reviewed TMT, we can address this question in more detail.

### *Ideology and Death*

The effects observed in mortality salience studies have been interpreted in the framework of the cultural worldview defense. Since one's cultural worldview serves as a buffer against the anxiety of death, it makes sense that it is enhanced when mortality is made salient. However, several of these effects can also be

interpreted as a move towards more conservative views. In a critique of the effects of death primes on cultural worldviews, Wicklund (1997) argued that such effects are tantamount to “an authoritarian manner of dealing with threats: One’s known, trusted position is correct; those who don’t abide by that system are excluded (cf. Adorno et al., 1950)” (p. 57). Take for instance the higher fines for a prostitute observed among MS participants in a series of studies by Rosenblatt et al. (1989) or the harsher punishment for criminals following mortality salience primes (Florian et al., 2001). In both cases, it would seem that mortality causes a shift to conservatism. Even more striking are the results of Landau et al. (2004b), who in a study on the preference for the 2004 U.S. presidential election found that death primes led to increased liking and support for President Bush, even among self-declared Democrats. On further reflection, however, these results may be less unequivocal than they may appear. President Bush is a multidimensional stimulus, and thus the increased support for him under mortality salience might be due to a variety of factors. The authors themselves interpret these findings in terms of charisma, arguing that under mortality salience individuals prefer a strongly charismatic leader (Landau et al., 2004b). He was also the incumbent, that is, the most prominent ingroup member, and this may be the reason why he receives more support when death-thoughts are made salient (Castano, Yzerbyt, Paladino, & Sacchi, 2002). The conjecture that participants’ increased support for President Bush under mortality salience might not reflect a shift towards conservatism is also supported in the fact Landau et al. (2004b) did not report any mortality salience effect on a single-item measure of political orientation.

Surely, pondering one’s demise is likely to have a variety of consequences on the individual’s cognition, emotion, and behavior. And thus it could simply be true that death primes enhance conservative tendencies, as the MSC approach suggests, as well as cultural worldviews, as TMT argues. The problem with this conciliatory view is that ideological beliefs are a component of one’s worldview, and an important one. Therefore, according to TMT, when individuals are primed with death they should not all become more conservative, but rather become more conservative or more liberal depending on their original beliefs. Pyszczynski, Abdollahi, Solomon, Greenberg, Cohen, & Weise (2006) found increased support for extreme military violence against potential threats under mortality salience among conservative Americans. However, this effect did not hold for liberals. Moreover, McCann (2008) reports that, in the period of 1977 until 2004, death sentences and executions in the United States were higher in more threatened conservative states than in less threatened conservative states, whereas they were lower in more threatened liberal states than in less threatened liberal states. In other words, even under threat, here understood as a proxy of mortality salience, liberal states did not behave more (but less) conservative.

Since central to the liberal ideology is the value of tolerance, liberals under mortality salience should show *less* of a preference for the similar over the dissimilar other, while conservative participants should show *more* of a preference for the

similar compared to the dissimilar other. Greenberg, Simon, Pyszczynski, and Solomon (1992, Exp. 1) tested this hypothesis by asking liberals and conservatives who were either in MS or control condition to evaluate a target who held similar or dissimilar views. Results showed the expected polarization pattern for conservative participants but an opposite, though nonsignificant pattern among liberals. However, since the similarity of the target to the participant was manipulated along the ideology dimension itself (i.e., for liberals the dissimilar other was somebody holding conservative views), it is unclear whether liberals increased tolerance towards diversity *or* shifted their attitudes toward conservatism as a consequence of thinking about their own mortality. A second study (Greenberg et al., 1992, Exp. 2) suggests that the former might be the case: mortality salience led to *less* negative judgments of a critique of the United States when tolerance was primed.

To recap, MSC and TM theorists both agree with the claim, and empirical evidence supports the conjecture, that conservatives are likely to embrace conservative ideology even more strongly when mortality is made salient. They disagree, however, on the effect of mortality salience among liberals. Do they become more liberal as TMT argues, or do they become more conservative, as the Motivated Social Cognition perspective put forward by Jost et al. (2003) would hold? To provide an empirical answer to this question, five studies were carried out.

### Study 1

People who define themselves as conservative tend to be more authoritarian (Altemeyer, 1998). As a matter of fact, authoritarianism is often used as a proxy for conservatism (Jost et al., 2004). Therefore, a straightforward test of the key hypothesis we outlined above is whether liberals become more or less authoritarian when primed with death-related thoughts. The most well-known and empirically sound measure of authoritarianism is the Right-Wing Authoritarianism Scale (RWA), developed by Altemeyer (1998), and we thus decided to use it as our dependent variable. We measured political ideology of our participants, asked them to answer the RWA scale, primed them with death (MS condition) or with a neutral prime (TV, NMS control condition), and then, by means of a methodological subterfuge, asked them to complete the RWA scale anew.

#### *Participants*

Twenty-five participants were recruited and offered \$3 for participating in the study. All participants were female university students.

#### *Procedure and Materials*

The study was computer-assisted and participants answered questions either by clicking on buttons that appeared on the screen (biographical and ideology

questions) or by clicking on a line and then clicking on a button at the bottom right corner of the screen, to continue to the next screen. Participants first indicated their age, gender, nationality, and political ideology (1 = liberal; 5 = conservative). Then the RWA scale was introduced as a scale measuring people's view about society and its organization. Each of the 34 items appeared one at a time on the computer screen. Next, participants answered 15 questions about death or 15 questions about TV (Rosenblatt et al., 1989). To answer both sets of questions participants clicked on a continuum anchored with Strongly disagree/Strongly agree, and the program recorded a value between 0 and 100, corresponding to the response indicated by the participant. As it is customary when supraliminal mortality salience manipulations are used, this was followed by four word-search tasks which served as a distraction task (Greenberg, Pyszczynski, Solomon, & Simon, 1994).<sup>1</sup>

Upon completion of this task, a "system-failure" message appeared on the screen. On a black screen that was to imitate an MS-DOS type environment, the wording "system-failure" appeared and an identical line appeared again several times after a simulated prompt. At this time, as anticipated, all participants called the experimenter in. The experimenter looked concerned and pressed the enter key several times. After a few additional system failure messages, the computer displayed the message "checking for data integrity . . .", then at 2 seconds distance each, the line "biographical data . . . OK" and "View of society . . . ERROR!" The program then allegedly gave the option to reload the "View of society" part, and the experimenter, very apologetically, asked the participant whether she was kind enough to answer the questions concerning the view of society anew, given that data had been lost—all participants agreed to do so. The program then reposed each question to participants, who answered them in the same way they had done before. The order of the questions was identical. The use of a continuum (as opposed to a Likert-type scale) helped reducing the chances that participants would recall precisely their answer and repeat it.

### *Results and Discussion*

Consistent with our expectations due to the population within which we recruited our participants (a notoriously liberal institution) the vast majority of our sample self-identified as liberal (13 people indicated 1, eight indicated 2, and four indicated 3 on the scale labeled 1 = liberal/5 = conservative). We thus discarded from further analyses the four persons who scored 3 (midpoint of the scale) and computed analyses on the remaining 21 individuals (11 in the MS condition and 10 in the NMS condition).

<sup>1</sup> More word-search items are customarily used as a distraction task, but because of the simulated system error that followed, we considered that a shorter distraction task was necessary.

Internal reliability of the RWA scale was very high (RWA1,  $\alpha = .89$ ; RWA2  $\alpha = .91$ ). RWA2 scores were then regressed on RWA1, and the residuals were analyzed to ascertain whether they varied depending on the condition. A  $t$ -test comparing the residual means for the MS to the NMS condition was significant,  $t(19) = 2.12$ ,  $p < .05$ . The mean difference was in the expected direction, with negative residuals for the MS condition ( $M = -1.53$ ) and positive residuals for the NMS condition ( $M = 1.68$ ). A conceptually similar test was also carried out, by computing an ANOVA with condition (MS vs. NMS) as between-participant factor and RWA (RWA1 vs. RWA2) as within-participant factor. Replicating the finding of the analysis on residuals, this revealed a marginally significant interaction effect,  $F(1, 19) = 3.45$ ,  $p < .07$ . Whereas a TV prime did not cause a reliable change in RWA scores ( $M_s = 24.2$  and  $23.6$ ), after being primed with death participants scored lower on the RWA scale ( $M = 17.3$ ) than they did before being primed ( $M = 20.9$ ).

The pattern of results supports the view that inducing mortality salience among self-defined liberals leads them to *reject* more strongly authoritarian views and to espouse more strongly non-authoritarian (liberal) views.<sup>2</sup> This finding seems to support a TMT perspective, and particularly Greenberg et al.'s interpretation of earlier data (Greenberg et al., 1992). One may argue, however, that such a finding might be specific to the dependent variable we adopted, namely the RWA scale. This scale has fairly extreme items and may thus represent conservative views which are too extreme for liberals to agree with, even in conditions in which mortality has been made salient.<sup>3</sup> A second study was thus conducted, which was a conceptual replication of Study 1 but made use of a different dependent variable and with a simpler design.

## Study 2

### *Participants*

Thirty-seven participants were approached in the building of the university or around it and agreed to participate in a study in exchange for \$3. Eighteen were males, and 19 were females.

### *Procedure and Materials*

Upon arrival at the lab, accompanied by one of the recruiters, participants were welcomed by the experimenter and randomly assigned to either the MS or

<sup>2</sup> We computed further analyses by considering liberal and authoritarian items separately, but found no reliable difference in the pattern of results.

<sup>3</sup> We are grateful to John Jost for pointing this out to us and for providing us with the items used in Study 2.

the control condition. They were instructed that the study would be computer-assisted and were invited to sit in front of a computer inside a cubicle. They were told to contact the experimenter, who remained just outside the cubicle for the duration of the study, in case of need. The study began with a few introductory screens, which explained to participants how to navigate the study and answer questions. Then participants were asked to indicate their gender, age, and political ideology (this time a 9-point scale was used; 1 = liberal; 9 = conservative) by clicking on the appropriate level of a scale that appeared below or next to each question. Depending on the condition, they were then presented with the same scales (regarding mortality or TV) used in Study 1. They then completed 15 word searches (distraction task), after which they were asked to indicate their degree of support with eight policies (Affirmative Action policies, Stricter sentencing for drug offenders, Tighter immigration restrictions, Stem cell research, Government-sponsored national health care, Maintaining tax breaks for large corporations, Protecting large budgets for police departments, Legalization of same-sex marriages) on a 7-point scale (1 = oppose; 7 = support). The questions were the same used by Jost et al. (2004) to measure support for liberal/conservative tendencies. Participants were then thanked for their participation, debriefed, paid, and released.

### *Results and Discussion*

As in Study 1, our sample was mostly liberal. The only three participants, out of 37, who classified themselves as conservatives (i.e., above the midpoint of the scale) were eliminated from the analysis, leaving a sample of 34. After reversing four items which were negatively phrased, we checked for internal consistency of the eight-item scale that constituted our dependent variable. Three items (Affirmative Action, Maintaining Tax Breaks for Large Corporations, and Protecting Large Budgets for Police Departments) had low item-total correlations ( $<.35$ ) and were thus not included in the final composite score ( $\alpha = .73$ ,  $M = 2.28$ ,  $SD = 1.22$ ). The remaining items, however, were still representative of the various aspects of conservatism. Contrary to Study 1, in which all participants were female, our sample comprised of an equal number of males and females, and we thus included Gender as a between-participants factor together with Mortality Salience (MS vs. NMS) in an ANOVA which used the above-mentioned score as the dependent variable. The only significant effect was the main effect of Mortality Salience,  $F(1, 30) = 4.48$ ,  $p < .05$ . Means revealed that participants in the MS condition scored lower than participants in the NMS condition ( $M_s = 1.84$  and  $2.70$ , respectively). Consistent with the findings of Study 1, this result yields support for the hypothesis that liberals display less support for conservative policies after contemplating their own death. Importantly, this finding was obtained with a different dependent variable than that used in Study 1.



### Study 3

The two previous studies looked at the effects of mortality salience on agreement or disagreement with general statements about values (Study 1) or about policies (Study 2). In Study 3 we tested the same hypothesis by looking at the impact of mortality salience on the support for specific actions to be taken with respect to issues that have an ideological flavor, namely welfare, abortion, and the pledge of allegiance. Specifically, Study 3 looks at whether liberals in the mortality salience condition would agree less with such policies when presented from a conservative standpoint (e.g., welfare hurts the economy) and whether they would show less support for a politician that endorses such views.

#### *Participants*

Forty-two participants were paid \$6 to take part in the study. One participant was excluded because he was not a U.S. citizen, as the scenarios used were unlikely to be equally meaningful for non-U.S. citizens.

#### *Material and Procedure*

As in previous studies, participants indicated their gender, age, and nationality and positioned themselves on a 7-point ideology scale (1 = liberal; 7 = conservative). They then answered the 15 questions about death (MS condition) or about TV (NMS control condition) followed by the distraction-task, a 10-item word-search task. After the distraction the dependent variable was measured. Participants were presented with various statements. The first one read: "Some people believe most social service programs are unnecessary and should be abolished. They argue that America allows opportunity for everyone, and therefore programs that distribute aid to the poor only increase complacency and hurt the overall economy." Next, two questions measured their opinion about the statement: "Do you agree or disagree?" (1 = disagree, 7 = agree); "Would you support a politician who says that programs that distribute aid to the poor only increase complacency and hurt the overall economy?" (1 = No, I would not; 7 = Yes, I would). The questions were repeated for a second scenario in which abortion was considered as an immoral practice and for a third scenario which focused on the importance of keeping the reference to God in the pledge of allegiance.

#### *Results and Discussion*

As in the previous studies, we eliminated from analyses nine participants who placed themselves on the midpoint of the ideology scale and one participant indicating 6 (quite conservative). Analyses were conducted on the remaining 31 participants, who could be classified as liberals. To assess the effects on agreement

and support for conservative policies, participants' answers to these two questions for each of the three scenarios were used as the dependent variable and organized into two within-participants factors (Question: Agreement vs. Support; Scenario: Welfare vs. Abortion vs. Pledge of Allegiance). The model was also comprised of two between-participants factors, Mortality Salience (MS vs. NMS) and Gender. A main effect of Scenario emerged,  $F(1, 27) = 3.56, p < .05$ . Participants showed more support and agreement with the Pledge of Allegiance scenario ( $M = 2.83$ ) than the Welfare and Abortion scenarios ( $M = 1.95$  and  $1.66$ , respectively). The only other effect that reached significance was that of Mortality Salience,  $F(1, 27) = 4.68, p < .04$ . Participants in the MS condition showed less agreement and support for these policies ( $M = 1.84$ ) than did participants in the NMS condition ( $M = 2.47$ ). Consistent with results of Study 1 and 2, among liberals, a mortality salience manipulation led to *less* agreement with and support for policies that have a conservative flavor.

### Study 4

Studies 1 to 3 yield evidence that after being reminded of their death, liberal participants convey opinions that are more, rather than less, liberal. One possible shortcoming of these studies is that participants could clearly see that their ideological position was under scrutiny, and this may have influenced the findings. In Study 4, therefore, we decided to further test the effects of mortality salience on a different, less transparent dependent dimension linked to political ideology, namely the support for creationist versus evolutionary views of humanity. This topic is currently being heavily debated in contexts ranging from education to entertainment (Lewontin, 2005) and has been shown to clearly differentiate liberals from conservatives (Pew Research Center for the People and the Press, 2005).

As noted above, studies 1 to 3 focused on liberals, as this is the group for which TMT and MSC hold contrasting hypotheses. A more complete investigation of the research question, however, would come from looking at both liberals and conservatives within the same study. Therefore, Study 4 was conducted outside the university population, with the aim of recruiting both liberals and conservatives.

### *Participants*

Thirty-three participants volunteered to take part in the study. They were recruited through personal connections by one of the research assistants in the lab.

### *Material and Procedure*

Participants were told that they were being asked to participate in two short studies. The first study was described as an assessment of personality style and attitudes, whereas the second aimed to obtain their opinion on an essay written

by honors students at a liberal arts college. Both alleged studies were computer-assisted. Participants first completed demographic questions which included gender, age, and political ideology (1 = liberal, 5 = conservative). After completing a series of measures that were collected for exploratory purposes and will not be discussed here, participants were randomly assigned to either the mortality salience or the control condition. Participants in the MS condition were instructed as follows: "Please briefly describe the emotions that the thoughts of your own death arouse in you. Type, as specifically as you can, what you think will happen to you as you physically die and once you are physically dead." The control condition (NMS) consisted of a similar question, but about dental pain. After the manipulation, participants filled out the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) to create a delay and then moved on to what was presented as the second study. They were instructed to read the essay that was going to be presented to them which was randomly selected from a pool of essays written by undergraduate students. They were also informed that they would be asked a few questions about the essay. All participants learned that the title of the selected essay was "The most important things I have learned about human nature," but the essay varied depending on the condition. In one condition, which we will refer to as "creationist," the essay stressed the differences between humans and animals; in the other condition, which we will refer to as "evolutionist," the essay stressed similarities. Participants then answered six questions about the author of the essay (e.g., "How much do you think you would like this person?"; "How intelligent do you believe this person to be?"; "How knowledgeable do you believe this person to be?"; "Is this person's opinion well-informed?"; "How much do you agree with this person's opinion?"; "From your perspective, how valid do you think this person's opinion is of the topic they discussed?") on a 9-point scale (1 = not at all; 9 = very much). Once they finished, participants were thanked and fully debriefed.

### *Results and Discussion*

The six questions pertaining to the evaluation of the person writing the essay were averaged into a composite score ( $\alpha = .94$ ). Overall, participants conveyed an average evaluation of the person ( $M = 5.07$ ,  $SD = 2.10$ ). Consistent with our prediction, our sample comprised both liberals and conservatives. In other words, the variable measuring political ideology displayed a distribution much less skewed than in the previous studies ( $M = 2.56$ ;  $SD = 1.31$ ) and it was therefore used as a predictor, after being centered, in a moderated multiple regression together with Mortality Salience (MS vs. NMS), Essay (creationist vs. evolutionist), and all the products between these predictors, using the evaluation of the essay as criterion and gender and age as covariates. Apart from a marginally significant effect of political ideology,  $F(1, 23) = 3.29$ ,  $p < .08$ , indicating that the more conservative the less the liking for the target ( $\beta = -.41$ ), the only other effect that reached

**Table 1.** Study 4. Judgment of the Author of the Essay as a Function of the Type of Essay, Political Ideology, and Experimental Condition

		Liberals		Conservatives	
		MNS	MS	MNS	MS
Essay	Creationist	6.76 <sub>ab</sub>	4.86 <sub>ab</sub>	4.00 <sub>a</sub>	7.01 <sub>b</sub>
	Evolutionary	4.74 <sub>a</sub>	7.21 <sub>b</sub>	4.42 <sub>ab</sub>	2.61 <sub>a</sub>

*Note.* Means with different subscripts within each ideology group (Liberals and Conservatives) differ at  $p < .08$  or less.

significance was the three-way interaction,  $F(1, 23) = 9.10, p < .01$ . Estimated means for the four conditions were thus computed for rather liberal levels of political ideology (1 SD below the mean) and for rather conservative levels of political ideology (1 SD above the mean). Results are displayed in Table 1. Among liberals, the person writing the creationist essay was liked non-significantly more in the control than in the mortality salience condition, whereas the evolutionary essay was liked more in the mortality salience condition, as compared to the control condition. Among conservatives, a very different pattern emerged. Whereas the creationist essay was liked more in the mortality salience condition as compared to the control condition, the evolutionary essay was liked more in the control condition than in the mortality salience condition, although the latter comparison was not significant. This pattern is consistent with the findings of the previous studies, and it further demonstrates that while both liberals and conservatives react to mortality salience manipulations, the nature of their reaction is clearly different. It is also noteworthy that the effects of the mortality salience manipulation were stronger for the essay that was mostly relevant given a cultural worldview. Among liberals, this was the evolutionary essay; among conservatives, the creationist essay.

**Study 5**

Study 5 aimed at investigating MS effects on a central dimension on which Conservative and Liberal thinking differ, namely, tolerance. As we noted above, previous findings show liberals' increased liking for a target who was different on the political dimension (that is, he was a conservative) under mortality salience. Such a finding can be interpreted as evidence that liberals became more conservative, as opposed to, as Greenberg et al. (1992) argue, that they became more tolerant. In the present study, however, the target to be liked/disliked is somebody who criticizes the United States. Such an essay presents an interesting dilemma to the individual. On the one hand, the author is critical of the United States, and it is thus to be expected that a harsher critique should emerge in mortality salience. Depending on what social identity (American or liberal/conservative) is most salient, such an effect may appear independently from the individual's ideology or might be

moderated by it. That is, conservatives are expected to criticize and dislike the target more harshly in the MS condition, whereas for liberals the opposite may be true. The pattern among liberals may be due to two reasons. First, it seems reasonable to expect that a self-critical attitude, at both the individual and group level, is more likely to be found among liberals than conservatives. This is what Republicans often refer to when saying that liberals are not patriotic, or, in the 2008 presidential campaign, that they are “anti-American.” Second, the effect might be due to the increased tolerance that is prompted, among liberals, by the MS prime.

### *Participants*

Participants were 48 university students from New York City, recruited in areas in which a more balanced distribution on the critical ideological variable could be expected. A requirement for participation was that they be U.S. citizens. Participants were asked if they would like to take part in a social psychology study that would compensate them with \$5 for their participation.

### *Materials and Procedure*

Upon entrance to one of the computer labs in the library, participants were seated in front of a computer and given a consent form and asked to read and sign it. If they decided to participate in the study, it was explained that the study would be entirely computer assisted. Participants were then randomly assigned to one of two conditions (MS vs. MNS), and asked to begin the experiment. The experimenter was always in proximity should participants have had any questions.

Participants completed a series of demographic questions, which included age, gender, and ideology (1 = most liberal and 7 = most conservative), before being asked to answer 15 questions about death (MS condition) or 15 questions about TV (NMS). This was followed by two distraction tasks, namely the PANAS (Positive and Negative Affect Schedule) and the Rosenberg’s Self-Esteem scale. Participants were then instructed to read a bogus essay written by an American student which was very critical of the United States and then were asked the following questions: agreement with the author (“Do you agree or disagree with the statements made by the author?”; “Do you share the opinion of the author?”; “Do you support the opinion of the author?”); evaluation of the author (“How much do you like the author?” and how much the author is “intelligent,” “moral,” “knowledgeable,” and “adjusted”); overall quality of the essay (“The essay was written by the student to be published in the university newsletter; do you think that the essay is well written and clear enough to be accepted for publication?” “Do you think the essay is worth publishing?”); indirect tolerance (“Do you think this essay would be of interest to the students?”); and direct tolerance (“Do you think that students should be allowed to read this particular opinion about the US?”).

### Results

A moderated regression analysis with manipulation and political ideology as independent variables was computed on each of the dependent variables listed above. For agreement with the author's statements, the analysis revealed no significant interaction,  $F(1, 44) = 0.34, p > .50$ , but two main effects. The more liberal participants were, the more they agreed with the author ( $\beta = -.59, p < .001$ ). Participants expressed more agreement in the mortality salience ( $M = 3.41$ ) than in the control condition ( $M = 2.43$ ),  $F(1, 44) = 6.75, p = .01$ . Since this main effect was somewhat unexpected, for exploratory purposes we looked at condition effects for liberals and conservatives, separately (adopting the 1SD rule to identify these two groups). This revealed that conservatives were slightly, and nonsignificantly, more in agreement in the MS ( $M = 2.24$ ) as compared to the NMS condition ( $M = 1.41$ ). Given the extreme score in the NMS condition, this result could be considered the consequence of a regression toward the mean, rather than a psychologically meaningful effect. Liberals, on the other hand, showed a substantial and significant difference between MS and NMS conditions ( $M_s = 4.69$  and  $3.36$ , respectively,  $t(44) = 2.25, p < .02$ ).

For evaluation of the author, the main effect of condition was not significant,  $F(1, 44) = 0.00, p > .90$ , although the main effect of political ideology was,  $F(1, 44) = 12.96, p < .001$ , with liberal participants liking the author more ( $\beta = -0.46, p < .001$ ). The interaction showed only a trend toward significance,  $F(1, 44) = 2.35, p = .13$ , with liberals liking the author more in the mortality salience ( $M = 4.20$ ) than in the control condition ( $M = 3.69$ ), whereas it was the opposite direction for conservatives ( $M_s = 2.55$  and  $3.03$ ). However, these differences among liberals and conservatives did not reach statistical significance ( $ps > .25$ ). With respect to the participants' assessment of the essay quality, the main effect of condition,  $F(1, 44) = 0.00, p > .90$ , and the interaction,  $F(1, 44) = 0.09, p > .70$ , were not significant. There was a trend for the main effect of political ideology,  $F(1, 44) = 2.19, p = .15$ , with liberals tending to judge the essay as being of higher quality ( $\beta = -0.21$ ).

Finally, to assess the effects on tolerance, an ANOVA with type of tolerance (indirect vs. direct) as a within-individuals factor and condition (mortality salience vs. control) and political ideology as between-individuals factors was conducted. The two-way interactions and the main effects of condition and political ideology were not significant ( $F_s < 1.5, ps > .25$ ), but the main effect of type of tolerance and the three-way interaction were ( $F_s > 14.5, ps < .001$ ). For direct tolerance, there was an interaction between manipulation and political ideology,  $F(1, 44) = 8.61, p < .01$ , whereas this was not the case for indirect tolerance,  $F(1, 44) = 2.14, p > .15$ . Liberals tended to express more direct tolerance in the mortality salience ( $M = 6.81$ ) than in the control condition ( $M = 5.79$ ),  $t(44) = -1.68, p = .10$ , whereas this effect went into the opposite direction for conservatives,  $t(44) = 2.49, p = .02$  ( $M_s = 5.26$  and  $6.78$ , respectively).

### *Discussion*

Study 5 looked at the joint impact of political ideology and a mortality prime on the liking of the author of an essay that was critical of the United States (i.e., the ingroup) and of liking the essay itself. The overall pattern is consistent with the rationale that when mortality is made salient individuals who are at the liberal end of the political spectrum react differently than those who are at the conservative end of such a spectrum. A significant interaction emerged for a measure of direct tolerance, showing that, whereas liberals tended to show greater tolerance toward the author of the essay, conservatives showed the opposite pattern.

Although the effects that we obtained were fairly small or pointing to a trend, the overall pattern of results of this study is clearly consistent with an important moderating role of political ideology on the effect of mortality primes on ideology and its correlates. Furthermore, the results of this study complement and reinforce those that had emerged from the previous four studies presented here.

### **General Discussion**

Research on Terror Management has repeatedly shown how much pondering of one's own demise makes people more concerned with their own cultural worldviews and with loyalty to their own ingroup (for reviews, see Castano & Dechesne, 2005; Castano, Yzerbyt, & Paladino, 2004; Solomon et al., 2004). Since these phenomena have a conservative flavor, one may argue that fear of death makes people more conservative. Indeed, Jost et al. (2003) argued that fear of death, as an existential motive, may help distinguish between liberals and conservatives: the latter would be those who are most fearful, and they are conservative because such an ideology is better suited to buffer such a fear.

This view, however, clashes with the interpretation of findings observed in mortality salience experiments by Terror Management theorists, who argue that contemplating death leads people to more strongly cling to their worldviews, no matter what these are. In other words, mortality salience would make liberals more liberal and conservatives more conservative. The studies presented here aimed at providing an empirical answer to this question.

The picture emerging from our studies seems to support the Terror Management perspective. Indeed, when primed with death, liberals score lower on RWA (Study 1), show less support for conservative policies and more support for liberal policies (Study 2), and show less agreement with and less support for politicians arguing for conservative policies (Study 3). Furthermore, we found that when liberals and conservatives are primed with death and then asked to rate a value-laden essay, conservatives moved towards more conservative opinions, while liberals, if anything, moved in the opposite direction (Study 4). Finally, because of the central role of tolerance in differentiating the conservative from the liberal view, we reported findings showing that a mortality salience prime leads liberals to



become more tolerant and conservatives to become less tolerant and that tolerance in turn accounted for the interaction effect of the mortality salience prime and political affiliation on other dependent variables (Study 5).

The convergence of results across these five experiments is noticeable, especially in light of the fact that different dependent variables were used, thus considerably strengthening the significance of the findings—which are also compelling given the variety of mortality salience manipulations used.

### *Clinging to One's Ideology: An Automatic Process?*

*Liberal* and *conservative* are multidimensional concepts, which tend to vary in their meaning depending on which dimension is most salient (e.g., social vs. fiscal issues), and likely evolve over time. In our studies we focused on proxies for conservatism: Right-Wing Authoritarianism and support for policies and beliefs that are unambiguously related to one's position on the liberal/conservative continuum, as well as tolerance. On these variables, following mortality salience manipulations, we found a differentiation of attitudes, rather than a move towards the conservative end.

The nature of this effect deserves further consideration. It is important to ascertain whether this effect emerges in the absence of awareness, among participants, of what is being measured. It is possible that the distal defenses triggered by death-related stimuli enhance the need of the individual to act congruently with his or her cherished ideological position, in a manner that is entirely unconscious and automatic. Or, that the distal defenses are unconscious, but not automatic, and that for the effects to occur on the measures of ideological beliefs, the latter must be recognized as such. If the latter is true, the effect should only occur when transparent measures are used (i.e., the participant realizes that it is views that are relevant to her ideology that are being assessed). This would not reduce the significance of the present findings, but it would certainly qualify the nature of the effect.<sup>4</sup>

In Studies 1 to 3, the intent of the various measures used as dependent variables was apparent. In other words, they had strong face validity. In Study 4, a first attempt to investigate this issue was made by using a dependent variable that was less transparent—participants rated an essay which supported evolutionary *versus* creationist claims. Nonetheless, in this study, the same polarization trend was found among liberals. Study 5 used a scenario that was likely to be perceived as relevant to one's ideological beliefs, but the focus was on tolerance, which, although it is a core value of liberals more than of conservatives, is something that is highly regarded as important in American society as a whole.

<sup>4</sup> This should not be confounded with awareness of the process—i.e., such mortality salience effects are still distal defense mechanisms.



Further research is needed, however, which would use dependent variables that are even less transparent than that we used in Study 4. Of course, the difficulty with this is that less transparent measures may be more weakly related to what we commonly understand to be conservatism *versus* liberalism. Indeed, an issue with measurement of conservative *versus* liberal tendencies derives directly from the lack of clear conceptualization of these concepts.

### *Fear of Death versus Existential Anxiety*

Research stemming from TMT has shown that when mortality is made salient, individuals engage in two kinds of behaviors depending on whether the concept is in the focus of attention or has already been transferred to the subconscious. When death is still in the focus of attention, individuals think of strategies that supposedly would delay death, like adopting a good diet or engaging in physical exercise. These defense strategies are called *proximal* (Pyszczynski, Greenberg, & Solomon, 1999). On the contrary, when the concept of death is accessible but out of the focus of attention, individuals engage in the cultural worldview defense we described above. TMT refers to this alternative strategy as *distal*, inasmuch as it bears no rational relationship to death. After all, one is unlikely to prolong his life by fining prostitutes more harshly (cf. Rosenblatt et al., 1989). This distinction may be useful to understand the apparent contradiction between the findings presented here and the positive correlation between conservatism and self-reported fear of death. Whereas the former is likely of the same nature as other numerous findings obtained in MS studies, the latter is clearly a correlation between two deliberate thoughts.

To understand this apparent contradiction, closer attention should be paid to differences between *fear* and *anxiety*. Both terms are used in research stemming from Terror Management Theory apparently to signify the same phenomenon, but fear and anxiety correspond to two very different experiences (e.g., May, 1977). Existential therapist Rollo May claims that anxiety is ontological; it “is the experience of the threat of imminent nonbeing” (1983, p. 109). While anxiety strikes at the core of one’s self-esteem, he argues, fear is a threat to the periphery of one’s existence: “It can be objectivated, and the person can stand outside and look at it” (1983, p. 110). Fear can be more intense, but it dissipates rather quickly once the source is out of sight, while anxiety has a much more profound and longer-lasting effect.<sup>5</sup> This distinction can be valuable to understand a possible difference between fear of death and the anxiety elicited by death stimuli. Conservatives may be more *fearful* of death, as some data suggest and as Jost et al.’s Motivated Social Cognition model contends, but this does not necessarily imply that they experience greater *anxiety* when presented with death

<sup>5</sup> Curiously, May uses one of the favorite control conditions in mortality salience studies, a visit to a dentist, as an example of fear-inducing situation, different from an anxiety-inducing situation.

stimuli or that a conservative ideology may better serve as an *anxiety-buffer* mechanism.<sup>6</sup>

### *The Status of Tolerance in the Debate about Ideology*

Central to the notion of liberalism, and therefore to the distinction between liberalism and conservatism, is the concept of tolerance. Therefore, one may expect that tolerance would be enhanced when mortality is made salient. As noted above, previous findings are not easily interpretable (Greenberg et al., 1992), but the pattern that emerged in Study 5 supports the TMT hypothesis that a central tenet of the cultural worldview should be enhanced under mortality salience. Accordingly, we found that whereas among liberals a mortality prime increased tolerance, among conservatives the opposite is true. It should be noted, however, that it was only direct tolerance, and not indirect tolerance to be sensitive to the manipulation and ideological beliefs. This difference is an interesting one, for it suggests that liberals may react as expected by TMT only when it is clear that they are conveying an answer that reveals their tolerance.

Although tolerance was only one way in which we addressed our research question, we believe that this construct deserves greater attention in Terror Management Theory. For one thing, we would benefit from a more refined theoretical articulation of the concept of tolerance and the relationship between tolerance in the political sense (e.g., for nonnormative sexual behaviors) and tolerance for ambiguity from a cognitive perspective. The two are related (i.e., conservatives tend to score higher on Need for Closure (NFC); Jost et al., 2004), yet they are clearly distinguishable from a conceptual standpoint.

Research stemming from TMT has investigated the moderating role of a concept closely related to tolerance for ambiguity, namely Need for Closure (NFC; Webster & Kruglanski, 1994) as well as Personal Need for Structure (PNS; Neuberg & Newsom, 1993), and has shown that high-NFC/PNS react to mortality salience differently than low-NFC/PNS (Dechesne & Kruglanski, 2004; Landau et al., 2004a; Landau, Solomon, Greenberg, Pyszczynski, & Martens, 2006). These results do not speak directly to the issue of tolerance, particularly if understood in political terms. They are, however, suggestive of the fact that individual differences like open-mindedness and need for structure moderate the effects of mortality salience, rather than the latter simply enhancing such psychological needs.

<sup>6</sup> Differentiating between fear of death and existential anxiety has repercussion on the way in which we understand the control conditions in mortality salience experiments. On the one hand, if a distinction à la May is retained, then the control conditions seem inappropriate, inasmuch as they control for reading time or, at best, for fear. On the other, the distinction between ontological anxiety and fear may be precisely what TMT is arguing for, despite the fact that in our opinion this is not entirely clear at this point.

### Concluding Remarks

In recent years, research on the psychology of ideology has been reinvigorated by the work of Jost and colleagues (2003), who discuss, among other factors, the role of fear in pushing people toward conservative ideologies. In their analysis, they include fear of death, which within Terror Management Theory has been theorized as making people cling to their ideology, rather than making everybody more conservative.

We believe, however, that the two views may be less incompatible than they appear to be. Specifically, we argue that fear of death may not be equated with death-related anxiety. As we have noted, fear is somewhat controllable, and one of its consequences may well be an enhanced need for security, for instance, at the epistemological level. Anxiety, however, particularly when understood as the ontological anxiety that we believe Terror Management Theory is concerned with, may have a completely different set of consequences, notably in terms of clinging to one's worldview. Although ideology is a relevant variable in the processes addressed by each perspective, the function and role played might be very different.

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