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Perceived collective continuity and ingroup identification as defence against death  
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## Abstract

Unique among the animal species, humans are aware that they will ultimately die. Terror management theory (TMT) posits that investing in a social group helps people to manage paralyzing anxiety stemming from death awareness. In line with this proposition, research to date has shown that when reminded of their own mortality, people increase their identification with a relevant group and defend its beliefs, values, and practices. In the reported study, we demonstrate that a mortality salience induction enhances people's perceptions of group temporal endurance – or perceived collective continuity (PCC), as we define it. Enhanced PCC leads, in turn, to enhanced group identification. This is in line with the TMT assumption that death awareness leads people to invest in a social group because this constitutes a *temporally enduring* meaning-system that imbues life with meaning, order, and permanence, and promises death transcendence to those who meet the prescribed standards of value.

Key Words: perceived collective continuity; group identification; terror management theory; symbolic immortality.

Perceived collective continuity and ingroup identification as defence against death awareness

Perhaps unique among the animal species, humans are psychologically aware that they will ultimately die. According to terror management theory (TMT) (Pyszczynski, Greenberg, & Solomon, 2000), mortality awareness conflicts with our instinctual motive for self-preservation, and as a consequence it becomes a terrifying idea that creates intense existential anxiety. How do people manage the potential for terror and paralysing anxiety implied by awareness of the inevitability of death? TMT posits that one possible strategy is to invest in a social group and defend its beliefs, values, and practices. This is because the ingroup constitutes a *temporally enduring* meaning-system, a persistent and continuous collective entity that, as such, imbues life with meaning, order, and permanence, and promises death transcendence to those who meet the prescribed standards of value.

Terror management theorists have produced empirical evidence that people who are reminded of their own mortality enhance their psychological investment in the ingroup. For instance, following a death reminder, people tend to exhibit more ingroup favouritism and identification (Castano, Yzerbyt, Paladino, & Sacchi, 2002), increase pro-social behaviour toward ingroup members (Jonas et al., 2002), and punish group deviants more severely (Rosenblatt et al., 1989). Clearly, these findings are consistent with the proposition that group membership and ascription to cultural worldviews alleviate people from death-related anxiety. However, this research does not show that it is the *continuity* through time of the group's standards of value that affords the group death-transcending properties and therefore drives people to invest in the ingroup. In line with this observation, in this paper we want to demonstrate that mortality salience enhances not

only the degree of group identification but also perceptions of group continuity, and that perceptions of group continuity mediate the effects of mortality salience on group identification.

## Method

### Participants

Eighty-eight Spanish students (17 males and 71 females; mean age = 21.18 years) at the University of Valencia participated in this study in exchange for course credits.

### Design and Procedure

Participants were randomly assigned to either a 'mortality salience' (MS) or a control condition. In the MS condition participants were asked to describe the emotions that the thought of their death arouses in them, and what will happen as they physically die. In the control condition, participants described the emotions that the thought of their next important exam aroused in them, and what will happen as they take such exam.

Following the manipulation, participants completed the state PANAS-X (Watson & Clark, 1994). This is an instrument for mood measurement including a list of 60 emotional states (e.g., cheerful, ashamed, scared). Participants rate the extent to which they feel each specific emotional state, on a five-point scale (1 = very slightly or not at all, 5 = extremely). PANAS-X allows assessment of negative and positive affect, as well as more basic negative emotions (fear, hostility, sadness), positive emotions (joviality, self-assurance, attentiveness), or other affective states (shyness, fatigue, surprise). We used the PANAS-X for two reasons. First, we used it as a distractive task, in order to shift thoughts of death out of focal consciousness, which is known to make death-related thoughts more accessible (Greenberg et al., 1994). Second, we wanted to check if any manipulation effect that might arise could be attributed to mood, rather than to the content of participants' descriptive task.

At this point, participants were asked to complete 18 word fragments using the first word that came into their mind (Arndt et al., 1997). Unknown to them, six of these words could be completed with either death related words (i.e., dead, coffin, skull, deceased, grave, and cranium) or neutral words. This word completion task was used as a manipulation check, in that we expected that death-related words were more readily accessible to participants in the MS condition than to those in the control condition.

Finally, participants filled out a questionnaire including two dependent measures, whose order of presentation was counterbalanced. One measure was Doosje, Ellemers, & Spears (1995) 4-item scale of group identification, with reference to the Spanish national group (“I see myself as a member of the group of Spanish”). Participants rated the extent to which the four statements were true of them on a scale ranging from 1 (not at all) to 7 (very much). The other measure was Sani et al.’s (2007) 12-item scale of perceived collective continuity (PCC). This is an instrument measuring two related dimensions of the perceived temporal continuity of an ingroup, namely perceived *cultural* continuity, i.e. the extent to which the group norms (beliefs, values, customs, mentalities) are seen as transmitted from one generation to another (“Spanish people have passed on their traditions across different generations”), and perceived *historical* continuity, i.e. the extent to which the different ages, periods, and events in the group history are seen as causally interconnected and as forming a coherent and intelligible narrative (“Major phases in Spanish history are linked to one another”). A series of studies conducted in different countries and with samples drawn from diverse populations have demonstrated that the PCC scale has a good internal consistency – alphas are normally in the mid 80s – and a good degree of test-retest reliability (Sani et al, 2007, obtained  $r=.74$  in a sample of Scottish students, with a three week time interval between test and re-rest). Participants

rated the extent to which they disagreed or agreed with each item on a scale ranging from 1 (I totally disagree) to 7 (I totally agree).

## Results

### Manipulation check

An independent *t*-test revealed that, when asked to complete word fragments, participants in the MS condition used more death-related words than participants in the control condition:  $M = 1.93 (.95)$  and  $M = 1.45 (.95)$  respectively,  $t(86) = 2.36, p < .05$ . This confirms that our experimental manipulation was successful.

### Analysis of differences in mood

Two independent *t*-tests showed that participants in the two conditions experienced the same degree of positive affect:  $M = 1.65 (.65)$  for the MS condition and  $M = 1.63 (.56)$  for the control condition,  $t(86) = .19, p > .05$ , and the same degree of negative affect:  $M = 2.35 (.70)$  for the MS condition and  $M = 2.35 (.73)$  for the control condition,  $t(86) = .045, p > .05$ . A series of independent *t*-tests also revealed that participants did not differ on any specific positive or negative emotion, or on specific affective states except 'surprise', for which we obtained the following:  $M = 1.96 (1.12)$  for the MS condition and  $1.30 (.50)$  for the control condition,  $t(86) = 3.56, p < .01$ .

These results confirm that our manipulation did not have any important effect on mood. Therefore, it is unlikely that the effect of manipulation on relevant dependent variables is determined by a mood confound. We can safely assume that the higher degree of surprise reported by participants in the MS condition – which can be explained as a reaction to the very peculiar nature of the task they had to perform (i.e., thinking about death) – did not have any effect on the dependent variables.



### Factor analysis

Before testing our hypotheses, we sought confirmation that the Group Identification construct does not overlap with any of the two PCC sub-scales. We conducted a three-component principal component analysis on the items comprising these variables, using varimax rotation. Results showed that the three components explain 58.31% of variance. Items tapping on perceived cultural continuity loaded generally on the first component, and items concerning perceived historical continuity tended to load on the second component. These items did not cross-load with the third component. Finally, items tapping on Group Identification loaded neatly on the third component, and did not cross-load with any of the other two components. This confirms that Group identification and PCC are independent constructs.

### Hypotheses testing

Two independent *t*-tests tested the hypotheses that death awareness enhances both PCC ( $\alpha = .78$ ) and group identification ( $\alpha = .88$ ). Results were consistent with predictions. That is, PCC scores were higher among participants in the MS condition than among participants in the control condition:  $M = 5.27 (.53)$  and  $M = 4.93 (.58)$  respectively,  $t(81) = -2.76, p < .01$ . Also, participants in the MS condition rated group identification as higher than participants in the control condition:  $M = 5.65 (.82)$  and  $M = 5.18 (1.13)$  respectively,  $t(86) = -2.26, p < .05$ .

Then we tested the hypothesis that the effects of fear of death on group identification are mediated by PCC, using mediation analysis (Baron & Kenny, 1986). First, a regression analysis confirmed the effects of our manipulation (i.e., mortality salience vs. control) on PCC:  $\beta = .29, p < .01$ . Subsequently, a regression analysis assessed the influence of our manipulation on group identification, which was statistically significant:  $\beta = .24, p < .05$ . Then a regression analysis explored the impact of PCC on group identification, which was

also statistically significant:  $\beta = .34, p < .01$ . Finally, a regression analysis with both our manipulation and PCC predicting group identification was conducted. In this case, the effect of PCC on group identification was  $\beta = .31, p < .01$ , while the direct effect of our manipulation on group identification was non-significant:  $\beta = .10, p > .05$ . These results are consistent with a full mediational model and suggest that, as predicted, PCC carries the influence of the experimental condition on group identification. A Sobel (1982) test for the mediational model confirmed that the mediation of PCC was statistically significant:  $1.96, p = .05$ .

However, it could be argued that mortality salience increases group identification as a way to shield the self from the terror of death, and that, in turn, an enhanced group identification inflates the perceived continuity of the group as a way to emphasize the death-transcendence properties of group identification. Therefore we performed a mediation analysis assessing whether group identification mediates the effects of mortality salience on PCC. Obviously, the first three regressions produced the same results as in the mediation analysis for the hypothesised model. However, when we run a regression analysis in which both our manipulation and group identification were simultaneously entered as predictors of PCC, we found that the impact of group identification on PCC was statistically significant, i.e.  $\beta = .29, p < .01$ , and, most important, that the direct path from our manipulation to PCC was significant too:  $\beta = .24, p < .05$ . This unequivocally demonstrates that the effects of mortality salience on PCC are *not* mediated by group identification, a result confirmed by the Sobel test:  $1.76, p > .05$ . The results of the mediation analyses are graphically reported in Figure 1.

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Figure 1

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## Discussion

In his book ‘The Drowned and the Saved’, the Italian writer Primo Levi recounts that, when he was a prisoner in the concentration camp of Auschwitz, he often thought about Dante Alighieri and the days in which he used to immerse himself in the studying of this towering intellectual figure. Because Dante is a central character in the Italian cultural history, Levi’s memories of studying Dante worked as a powerful, evocative reminder of the human group to which Levi belonged and, therefore, of who he was. As he put it, “then and there, [these memories] made it possible for me to re-establish a link with the past, saving it from oblivion and *reinforcing my identity*” (1989, p. 112; italics in the original). Here, it is clear that in order to shield himself against the chronic awareness of death that was typical in the camps, Levi associated himself with past cultural figures representing long-lasting cultural values, which in turn reinforced his sense of belonging and identification with the referent cultural group. This, we believe, is a good illustration of our findings.

The study we have presented confirms that in order to defend themselves from the psychological salience of their own mortality, people enhance the perceived continuity through time of the ingroup, which in turn increases their group identification. This is because the ability to transcend individual existence makes our identification with a group, and its related worldviews, particularly suitable as a defence against the thought of our finite individual existence. Note, however, that the effects of mortality salience on group identification may have other mediators too. For instance, as argued by Castano and Dechesne (2005), since ingroups are generally evaluated positively, group membership may be invoked after death reminders in order to restore self-esteem, which is known to lower when mortality is made salient.

Nonetheless, findings discussed in this paper are theoretically important for at least three reasons. First, they demonstrate a core assumption of TMT – that fear of death leads people to invest in groups *because* group membership affords a sense of permanence and transcendence - in a compelling fashion. This is particularly relevant because, as discussed above, previous research had demonstrated that mortality salience is at the basis of people's investment in groups, but had never directly shown that such investment is in turn based on the temporal continuity, and therefore the death-transcendent properties, of groups.

Second, these results could, to some extent at least, explain the relationship between perceived collective continuity and various well-being indicators, emerged from previous research (Sani, Bowe, and Herrera, 2008). That is, the perception of relevant ingroups as temporally continuous might foster a sense of well-being because such perception constitutes a buffer against fear of death.

Third, our results link with other recent intriguing findings. For instance, Wisman and Goldenberg (2005) found that mortality salience increases the number of children that people plan to have. Along similar lines of research, Fritsche et al. (2007) demonstrated that mortality salience facilitates the accessibility of children-related thoughts, and that the salience of one's own offspring eliminates the typical effects of mortality salience on cultural worldview defence. These findings show that fear of death triggers the pursuing of self-extension in time (the future, in this specific case), and that thinking about our self-extension placates death-related anxiety. The results obtained by Wisman and Goldenberg and by Fritsche and his colleagues, together with our results, converge toward a clear, specific conclusion: fear of death encourages an individual to become part of something larger than him or herself, something that includes and temporally extends the self, in order to achieve a more continuous existence and defy death.

To conclude, humans want to transcend their own circumscribed, limited, tragically contingent individual existences, in order to shield themselves from the unsettling thought of their own mortality. In line with this, our research demonstrates that, when reminded of their own mortality, people will inflate the cultural and historical continuity of the ingroup, and strengthen group identification. This is because groups that extend beyond one's mere personal existence, both backward and forward in time, and that are perceived as long-lasting and *quasi*-eternal entities, are potent symbols of transcendence. Lifton (1983) aptly expressed this idea: "for modes of immortality to be symbolically viable - for individuals to experience their power - they must [...] provide ultimate patterns of continuity (p. 283).

## References

- Arndt, J., Greenberg, J., Solomon, S., Pyszczynski, T., & Simon, L. (1997). Suppression, accessibility of death-related thoughts, and cultural worldview defense: Exploring the psychodynamics of terror management. *Journal of Personality and Social Psychology, 73*, 5-18.
- Baron, R. M., & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Castano, E., & Dechesne, M. (2005). On defeating death: Group reification and social identification as immortality strategies. In W. Strobe & M. Hewstone (Eds.), *European Review of Social Psychology, Vol. 16* (pp. 221-255). Hove, UK: Psychology Press.
- Castano, E., Yzerbyt, V., Paladino, M. P., & Sacchi, S. (2002). I belong, therefore, I exist: Ingroup identification, ingroup entitativity, and ingroup bias. *Personality and Social Psychology Bulletin, 28*, 135-143.
- Doosje, B., Ellemers, N., & Spears, R. (1995). Perceived Intragroup Variability as a Function of Group Status and Identification. *Journal of Experimental Social Psychology, 31*, 410-436.
- Fritsche, I., Jonas, E., Fischer, P., Koranyi, N., Berger, N., & Fleischmann, B. (2007). Mortality salience and the desire for offspring. *Journal of Experimental Social Psychology, 43*, 753-762.
- Greenberg, J., Pyszczynski, T., Solomon, S., Simon, L., & Breus, M. J. (1994). Role of Consciousness and Accessibility of Death-Related Thoughts in Mortality Salience Effects. *Journal of Personality and Social Psychology, 67*, 627-637.

- Jonas, E., Schimel, J., Greenberg, J., & Pyszczynski, T. (2002). The Scrooge effect: Evidence that mortality salience increases prosocial attitudes and behavior. *Personality and Social Psychology Bulletin*, 28, 1342-1353.
- Levi, P. (1989). *The Drowned and the Saved*. New York: Vintage International.
- Lifton, R. J. (1983). *The future of immortality and other essays for a nuclear age*. New York: Basic Books.
- Pyszczynski, T., Greenberg, J., & Solomon, S. (2000). Proximal and distal defense: A new perspective on unconscious motivation. *Current Directions in Psychological Science*, 9, 156-160.
- Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski, T., & Lyon, D. (1989). Evidence for Terror Management Theory: 1. The Effects of Mortality Salience on Reactions to Those Who Violate or Uphold Cultural-Values. *Journal of Personality and Social Psychology*, 57, 681-690.
- Sani, F., Bowe, M., & Herrera, M. (2008). Perceived Collective Continuity and Social Well-being. *European Journal of Social Psychology*, 38, 365-374.
- Sani, F., Bowe, M., Herrera, M., Manna, C., Cossa, T., Miao, X., et al. (2007). Perceived collective continuity: Seeing groups as entities that move through time. *European Journal of Social Psychology*, 37, 1118-1134.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological Methodology 1982* (pp. 290-312). Washington DC: American Sociological Association.
- Watson, D., & Clark, L. A. (1994). *The PANAS-X Manual for the Positive and Negative Affect Schedule-Expanded form*. Des Moines: University of Iowa Press.

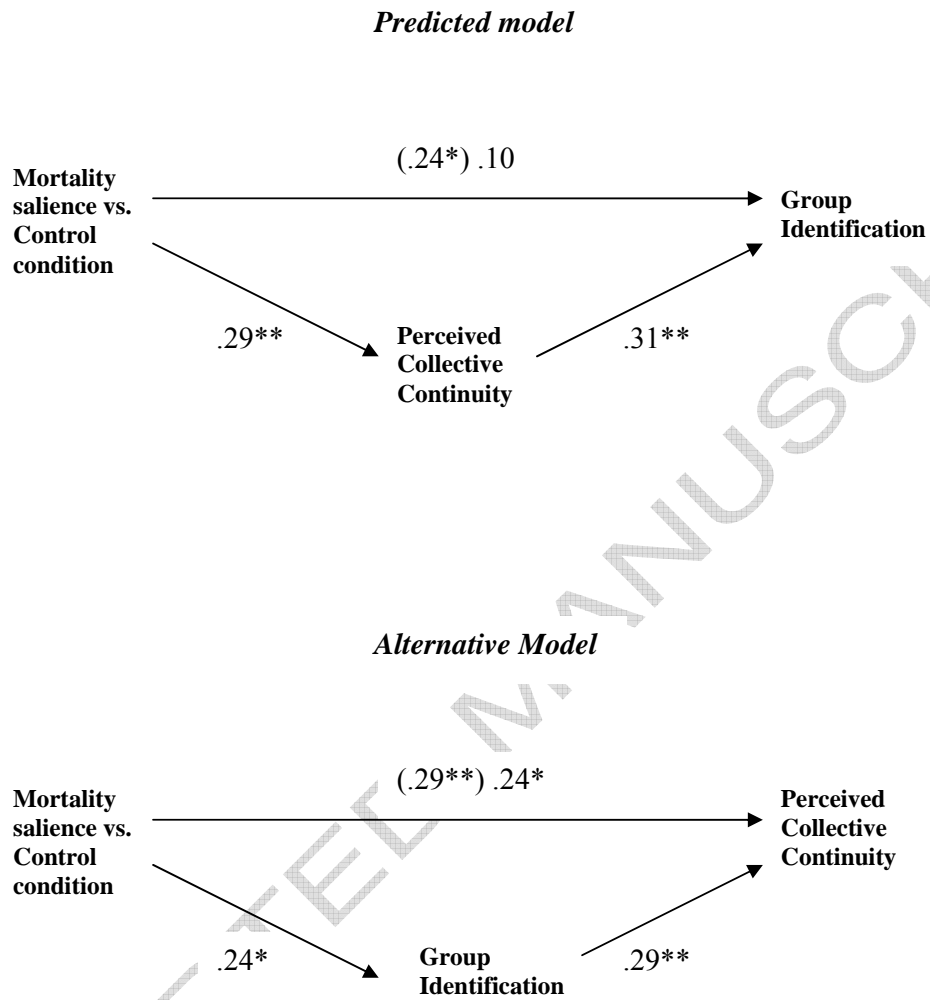
Wisman, A., & Goldenberg, J. L. (2005). From the grave to the cradle: Evidence that mortality salience engenders a desire for offspring. *Journal of Personality and Social Psychology*, 89, 46-61.

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Figure 1. Path analysis of the mediation for both the predicted and the alternative model.



Note: \* $p < .05$ ; \*\*  $p < .01$